

**NOVEMBER 22, 2016
MCLEOD COUNTY
BOARD MEETING WILL
BE HELD AT
THE GLENCOE CITY
CENTER
1107 11TH STREET E
GLENCOE, MN**

**McLEOD COUNTY
BOARD OF COMMISSIONERS
PROPOSED MEETING AGENDA
NOVEMBER 22, 2016**

1 9:00 CALL TO ORDER

PLEDGE OF ALLEGIANCE

Recognition of Ray Bandas' retirement and presentation of a plaque in appreciation for his thirty-seven years of service to the McLeod County Highway Department from June 18, 1979 through December 16, 2016.

2 9:01 CONSIDERATION OF AGENDA ITEMS*

3 9:02 CONSENT AGENDA*

- A. November 1, 2016 Meeting Minutes and Synopsis.
- B. November 8, 2016 Meeting Minutes and Synopsis.
- C. November 4, 2016 Auditor's Warrants.
- D. November 10, 2016 Auditor's Warrants.
- E. Authorize the purchase of gift basket for annual Association of Minnesota Counties conference from Crow River Winery.
- F. Appoint Emily Ward to the McLeod County Extension Committee as a youth member.
- G. Set a bid closing date for the 2017 Official McLeod County Newspaper and Second Publication for January 3, 2017 by 4:30 PM with the award scheduled for Friday, January 6, 2017.
- H. Approve printing of the 2015 Financial Statement to McLeod Publishing Inc. for the amount of \$730.
- I. Adopt Resolution 16-CB-36 FY2017 Grant Program Authorization.
- J. Adopt Resolution 16-CB-37 CAP Grant Authorization.
- K. Approve payment to McLeod County Dare and Hunger Free McLeod's Backpack program in an amount not to exceed \$5,000 for the final reimbursement of the Penny per Pound program for PET plastic collected from March 2016 to December 2016.
- L. Approve 30 day notice to Adult Training & Habilitation Center (Watertown, MN) to discontinue recycling management oversight of the Douglas Kugler Eco-Site effective January 1, 2017.

4 PAYMENT OF BILLS - COMMISSIONER WARRANT LIST*

5 PAYMENT OF BILLS - ADDITIONAL MISCELLANEOUS BILLS TO BE PAID BY AUDITORS WARRANTS*

6 9:05 SOCIAL SERVICES – Social Worker Brenda Sandquist

- A. Congratulate Region 6 Minnesota Social Service Association's Child Foster Parents of the Year – Todd and Sarah Randall.

7 9:10 CENTRAL MN JOBS AND TRAINING - Workforce Development Coordinator Cathy Baumgartner, Placement Specialist Jodi Grams, Regional Supervisor Colleen McNab and Regional Manager Eric Day

- A. Annual Update.

8 9:25 HUMAN RESOURCES – Director Mary Jo Wieseler

- A. Consider recommendations from the November 15, 2016 Personnel Committee.*

9 9:30 INFORMATION TECHNOLOGY – Director Vince Traver

- A. Consider approval to renew our Enterprise Licensing Agreement with Microsoft (MS) for a term of three years quote from SHI quote #12456593 for the cost of \$45,234 annually.*

McLeod County completed a six year agreement with Microsoft and has to renew the licensing agreement with them. This allows McLeod County to use MS outlook for mail, SQL server databases, MS Server Operating Systems, allow people to connect to our environment, etc. MS no longer does six year agreements so this is a three year agreement with an annual cost. The numbers have been looked several times to get the best cost for what is needed to be in compliance for the licenses that are used at McLeod County and to remain allowing end users access to the software needed.

- B. Consider approval to accept proposal from UHL (Maple Grove, MN) for security and surveillance project base option for a cost of \$172,369.*

Meeting has been held with UHL and McLeod County is satisfied with the product UHL will use for the door security and for the camera surveillance. Information Technology and Building Maintenance have met with the Budget Committee and believe the money for this proposal would be coming from some left over funds that were allocated to the HHS building after all the items have been completed there.

Additional proposals received: NAC (Vadnais Heights, MN) \$399,500 and Honeywell (Golden Valley, MN) \$421,354.

10 9:45 JAIL – Administrator Kate Jones

- A. Consider approval to purchase a new copier from Metro Sales Inc. (Mankato, MN) at a cost of \$9,201 with funding coming from the 2016 Jail budget.*

11 9:50 SHERIFF DEPARTMENT – Deputy Sheriff Tim Langenfeld

- A. Approval to enter into a contract with the City of Stewart for police services for 2017 for a total of \$107,174.10.*

Due to ongoing negotiations, a one year contract was agreed to instead of the normal 2 year agreement.

12 9:55 PARKS – Director Al Koglin

- A. Consider approval to award bid to install 4 inch plastic tile around inner circle of fairgrounds and along 4H building to Luedke Contracting (Hutchinson, MN) at a cost of \$13,973.*

Pools of water are currently forming by building entrances after heavy rains and during snow thawing causing a safety concern when the public has to cross these areas to enter a building.

Additional bid received: Hjerpe Contracting (Hutchinson, MN) \$19,957.

13 COUNTY ADMINISTRATION

- Review of Commissioners Calendar
 - Commissioner reports of committee meetings attended since November 8, 2016.
- A. Consider approval for fee schedule Public Hearing on 12/20 at 9:30 a.m.*
- B. Consider authorizing the Auditor/Treasurer to create a dedicated fund for Fairgrounds capital repair projects and allocate \$100,000 from reserves in 2016. Thereafter schedule annual review of the Fairgrounds fund to determine if additional money should be set aside for this account.*
- C. Consider approval to set next Solid Waste Advisory Committee (SWAC) meeting for December 21st, 2016 at 9:30 am in the Solid Waste Large Conference Room.

14 CLOSED MEETING

Discuss negotiations with City West Holdings for tax petitions filed for the payable years 2014, 2015 and 2016.

15 CLOSED MEETING

Continuation of County Administrator Pat Melvin's performance evaluation.

OTHER

Open Forum
Press Relations

RECESS

Next board meeting December 1, 2016 at 4:30 p.m. at the Glencoe City Center.

**McLEOD COUNTY
BOARD OF COMMISSIONERS
PROPOSED MEETING MINUTES – November 1, 2016**

CALL TO ORDER

The regular meeting of the McLeod County Board of Commissioners was called to order at 9:00 a.m. by Chair Paul Wright at the Glencoe City Center. Commissioners Nies, Shimanski, Nagel and Krueger were present. County Administrator Patrick Melvin, Administrative Assistant Donna Rickeman and County Attorney Michael Junge were also present.

PLEDGE OF ALLEGIANCE

At the request of the Board Chair, all present recited the Pledge of Allegiance.

CONSIDERATION OF AGENDA ITEMS

- A) Add under Administration Item B: Consider setting closed session to discuss 2017 negotiations for November 8th following the board meeting.

Nagel/Krueger motion carried unanimously to approve the agenda as revised.

CONSENT AGENDA

- A) October 18, 2016 Meeting Minutes and Synopsis.
- B) October 14, 2016 Auditor's Warrants.
- C) October 14, 2016a Auditor's Warrants.
- D) October 18, 2016 Auditor's Warrants.
- E) October 21, 2016 Auditor's Warrants.
- F) Approve renewal of the Annual Support Plan between AWS (Chippewa Falls, WI) and McLeod County Solid Waste for the maintenance and product support of the scale software used to collect recycling and HHW data for the annual cost of \$2,500.
- G) Approve reinstatement of the Household Hazardous Waste Facility hours to Monday through Friday 8am to 4pm.
- H) Approve setting Solid Waste Advisory Committee (SWAC) meeting for November 14th @ 9:30 am at the Solid Waste Facility.

Krueger/Nies motion carried unanimously to approve the consent agenda.

PAYMENT OF BILLS – COMMISSIONER WARRANT LIST

General Revenue Fund	\$49,867.06
Road & Bridge Fund	\$4,171.81
Solid Waste Fund	\$59,957.65

Shimanski/Krueger motion carried unanimously to approve payment of bills totaling \$113,996.52 from the aforementioned funds.

ROAD AND BRIDGE –Highway Engineer John Brunkhorst

- A) John Brunkhorst gave an update on State Aid Projects 43-603-30, 43-603-31, and 43-615-14 which are 2017 reconstruction projects on County State Aid Highway 3 (between County Road 1 and the Carver County line) and County State Aid Highway 15 (from County Road 22 to Highway 7).

Work has begun on acquiring right-of-way for the projects. There are 64 parcels of property involved and negotiations have begun on behalf of the county with property owners along the two roads. Acquisition of the right-of-way will cost about \$67,000 per mile, about 6.5 percent of the total project cost which is anticipated to be \$6,000,000.

The goal is to get the projects out for bid in April or May of 2017, with construction beginning that summer and running into 2018. This timeline may be impacted if the county has to go to condemnation (eminent domain) to acquire right-of way.

ENVIRONMENTAL SERVICES – Environmental Technician Emily Gable

- A) Emily Gable requested adoption of Resolution 16-CB-35 relating to the Minnesota Pollution Control Agency (MPCA) Clean Water Partnership; Authorizing the County to borrow up to \$300,000 from the MPCA and to lend money to eligible participants to fund projects for the control and abatement of water pollution (through the upgrade of failing septic systems).

Previous loans for septic upgrades within this watershed have been very successful; McLeod County has a need for this money to help homeowners with low-interest loan money for the replacement or upgrade of existing failing systems in the Crow River Watershed.

Krueger/Shimanski motion carried unanimously to adopt 16-CB-35 relating to the Minnesota Pollution Control Agency (MPCA) Clean Water Partnership; Authorizing the County to borrow up to \$300,000 from the MPCA and to lend money to eligible

participants to fund projects for the control and abatement of water pollution (through the upgrade of failing septic systems).

- B) Emily Gable requested approval of general obligation note for the low-interest loan project (SRF 0306).

Nies/Krueger motion carried unanimously to approve general obligation note for the low-interest loan project (SRF 0306).

HUMAN RESOURCES – Director Mary Jo Wieseler

- A) Mary Jo Wieseler requested approval to hire a full-time Correctional Officer (grade 15) due to resignation.

Nagel/Shimanski motion carried unanimously to hire full-time Correctional Officer (grade 15) due to resignation.

PIONEERLAND LIBRARY – Head Librarians Jackie Fountain and Katy Hilner

- A) Jackee Fountain, head librarian for Glencoe and Brownton, and Katy Hilner, head librarian for Hutchinson and Winsted appeared before the board to give an update on McLeod County libraries.

In the past year the following have been improvements made to the libraries: new display cases, new shelving, additional audio books, large print books, additional teen books, upgraded computers, additional tablets and installed wireless.

Brownton Library includes: open 20 hours a week, 5 public computers, 57 children's programs, 13 young adult programs and 12 adult programs.

Glencoe Library includes: open 48 hours a week, 19 public computers, 227 children's programs, 19 young adult programs and 57 adult programs.

Hutchinson Library includes: open 58 hours a week, 13 public computers, 93 children's programs, 17 young adult programs and 45 adult programs.

Winsted Library includes: open 21 hours a week, 3 public computers, 55 children's programs and 4 adult programs.

JAIL – Administrator Kate Jones

- A) Kate Jones requested approval to implement an Upgrade to Jail portion of the Sheriff's Office Records System. There is no cost for the upgrade itself; however Law Enforcement Technology Group (LETG) does have a cost for

configuration and training up to \$5000.00 with funding coming from the 2016 Jail budget.

LETG has been implementing their new jail module which is a much more robust and user friendly format throughout their customer base. McLeod County has been on the waiting list for this for over a year. This additional functionality will be covered under the same comprehensive maintenance and support plan which applies to the rest of the currently installed LETG solution. There are no additional maintenance costs with the upgrade.

Shimanski/Nies motion carried unanimously to approve an upgrade to Jail portion of the Sheriff's Office Records System at a cost of \$5,000 with funding coming from the 2016 Jail budget.

PARKS – Director Al Koglin

- A) Al Koglin requested approval to purchase a new Ferris 72 inch zero turn mower including trade in from L&P Supply (Hutchinson, MN) for \$5,500 with funding coming from the 2016 Parks budget.

Additional quote: Midwest Machinery Company (Glencoe, MN) including trade in of \$5,700.

Krueger/Nagel motion carried unanimously to approve the purchase a new Ferris 72 inch zero turn mower including trade in from L&P Supply (Hutchinson, MN) for \$5,500 with funding coming from the 2016 Parks budget.

COUNTY ADMINISTRATION

- A) Pat Melvin requested approval to add Joe Nagel to the voting delegates for Association of Minnesota Counties (AMC).

Krueger/Nies motion carried unanimously to add Joe Nagel to the voting delegates for Association of Minnesota Counties (AMC).

- B) Pat Melvin requested approval to set closed session to discuss 2017 negotiations for November 8th following the board meeting.

Nies/Nagel motion carried unanimously to approve setting a closed session to discuss 2017 negotiations for November 8th following the board meeting.

CLOSED SESSION

Krueger/Nagel motion carried unanimously to close the meeting at 11:31 a.m. to conduct County Administrator Pat Melvin's performance evaluation.

Nagel/Krueger motion carried unanimously to open the meeting at 12:49 p.m.

Nies/Nagel motion carried unanimously to adjourn at 12:50 p.m. until 9:00 a.m. November 8, 2016 at the Trailblazer Transit Building.

ATTEST:

Paul Wright, Board Chair

Patrick Melvin, County Administrator

McLEOD COUNTY
BOARD OF COMMISSIONERS
SYNOPSIS – November 1, 2016

1. Commissioners Wright, Shimanski, Krueger, Nies and Nagel were present.
2. Nagel/Krueger motion carried unanimously to approve the agenda as revised.
3. Krueger/Nies motion carried unanimously to approve the consent agenda including October 18, 2016 Meeting Minutes and Synopsis; October 14, 2016 Auditor's Warrants; October 14, 2016a Auditor's Warrants; October 18, 2016 Auditor's Warrants; October 21, 2016 Auditor's Warrants; Approve renewal of the Annual Support Plan between AWS (Chippewa Falls, WI) and McLeod County Solid Waste for the maintenance and product support of the scale software used to collect recycling and HHW data for the annual cost of \$2,500; Approve reinstatement of the Household Hazardous Waste Facility hours to Monday through Friday 8am to 4pm; Approve setting Solid Waste Advisory Committee (SWAC) meeting for November 14th @ 9:30 am at the Solid Waste Facility.
4. Shimanski/Krueger motion carried unanimously to approve payment of bills totaling \$113,996.52 from the aforementioned funds.
5. Krueger/Shimanski motion carried unanimously to adopt 16-CB-35 relating to the Minnesota Pollution Control Agency (MPCA) Clean Water Partnership; Authorizing the County to borrow up to \$300,000 from the MPCA and to lend money to eligible participants to fund projects for the control and abatement of water pollution (through the upgrade of failing septic systems).
6. Nies/Krueger motion carried unanimously to approve general obligation note for the low-interest loan project (SRF 0306).
7. Nagel/Shimanski motion carried unanimously to hire full-time Correctional Officer (grade 15) due to resignation.
8. Shimanski/Nies motion carried unanimously to approve an upgrade to Jail portion of the Sheriff's Office Records System at a cost of \$5,000 with funding coming from the 2016 Jail budget.
9. Krueger/Nagel motion carried unanimously to approve the purchase a new Ferris 72 inch zero turn mower including trade in from L&P Supply (Hutchinson, MN) for \$5,500 with funding coming from the 2016 Parks budget.
10. Krueger/Nies motion carried unanimously to add Joe Nagel to the voting delegates for Association of Minnesota Counties (AMC).
11. Nies/Nagel motion carried unanimously to approve setting a closed session to discuss 2017 negotiations for November 8th following the board meeting.
12. Krueger/Nagel motion carried unanimously to close the meeting at 11:31 a.m. to conduct County Administrator Pat Melvin's performance evaluation.
13. Nagel/Krueger motion carried unanimously to open the meeting at 12:49 p.m.

Complete minutes are on file in the County Administrator's Office. The meeting adjourned at 12:50 p.m. until November 8, 2016.

Attest:

Paul Wright, Board Chair

Patrick Melvin, County Administrator

DRAFT

**McLEOD COUNTY
BOARD OF COMMISSIONERS
PROPOSED MEETING MINUTES – November 8, 2016**

CALL TO ORDER

The regular meeting of the McLeod County Board of Commissioners was called to order at 9:00 a.m. by Chair Paul Wright at the Glencoe City Center. Commissioners Shimanski, Nagel and Krueger were present. Commissioner Nies had an excused absence. County Administrator Patrick Melvin, Administrative Assistant Donna Rickeman and County Attorney Michael Junge were also present.

PLEDGE OF ALLEGIANCE

At the request of the Board Chair, all present recited the Pledge of Allegiance.

CONSIDERATION OF AGENDA ITEMS

Nagel/Krueger motion carried unanimously to approve the agenda.

CONSENT AGENDA

- A) October 28, 2016 Auditor's Warrants.
- B) Approve out of state travel for Highway Engineer to attend the National Association of County Engineers (NACE) annual conference April 9-13, 2017 in Cincinnati (OH). Approximate cost including early bird registration, hotel, and airfare is \$1,700.
- C) Approve increasing the guardian/conservator compensation from the current \$15/hr with a monthly cap of \$100 and after 3 months a monthly cap of \$60 with no mileage reimbursement to \$150 per month effective January 1, 2017 and re-evaluate the situation in 12 months. This increase is estimated to result in an additional \$25,000 expense.
- D) Approve renewal of shared services agreement between McLeod County Public Health and Southwestern Minnesota Adult Mental Health Consortium for the contract period of November 1, 2016 – August 28, 2017. McLeod County Public Health provides medication education to meet Adult Rehabilitation Mental Health Services (ARMHS) criteria.
- E) Approve 2017 contract for Registered Nursing Services between McLeod County Public Health and McLeod Treatment Programs at a contracted hourly rate of \$61.46. This is a continuation of the current contract.

Contract renewal and rate was approved by MTP Board of Directors on October 17, 2016. 2017 contracted hourly rate of \$61.46 is an increase from

the current rate of \$44.00, which has been in place and unchanged for many years. This increased rate was recommended and approved by the McLeod County Public Health Advisory Committee when Public Health fees were reviewed early this year.

The following items were revised or removed from the Consent Agenda prior to approval:

1. Revise item D to: Approve increasing the guardian/conservator compensation from the current Tier 1 monthly cap of \$60 for less intensive and less detailed services and Tier 2 monthly cap of \$100 for more intensive and more detailed services to \$150 per month for both Tiers effective January 1, 2017 and re-evaluate the situation in 12 months. This increase is estimated to result in an additional \$25,000 expense.
2. Remove and move to Item E under Administration: Approve 2017 contract for Registered Nursing Services between McLeod County Public Health and McLeod Treatment Programs at a contracted hourly rate of \$61.46. This is a continuation of the current contract.

Contract renewal and rate was approved by MTP Board of Directors on October 17, 2016. 2017 contracted hourly rate of \$61.46 is an increase from the current rate of \$44.00, which has been in place and unchanged for many years. This increased rate was recommended and approved by the McLeod County Public Health Advisory Committee when Public Health fees were reviewed early this year.

Nagel/Krueger motion carried unanimously to approve the consent agenda.

PAYMENT OF BILLS – COMMISSIONER WARRANT LIST

General Revenue Fund	\$36,356.09
Road & Bridge Fund	\$111,931.48
Solid Waste Fund	\$35,505.94

Shimanski/Krueger motion carried unanimously to approve payment of bills totaling \$183,793.51 from the aforementioned funds.

CONTEGRITY GROUP – Construction Manager Sam Lauer

- A) Sam Lauer with Contegrity informed the Board due to nice stretch of weather rapid progress is being made. Load-bearing walls for the first floor of the jail addition are done, the lower level floors have been poured, and the topping is ready for the first floor.

Sam also reported that the contractors will be able to use natural gas from the permanent service line to heat the addition during the remaining construction, rather than having to use liquid propane which will save significantly on heating costs over the winter.

Judd Avenue between 10th and 11th streets, located east of the Courthouse parking lot, is close to being opened. The first two lifts have been paved and the third will be paved in the spring. New road should be ready for traffic once appropriate signage is put in place.

ASSESSORS OFFICE – Assessor Sue Schulz

- A) Sue Schulz requested approval to hire Michael Bownik Appraisals Inc. (White Bear Lake, MN) to conduct an appraisal for Menards Tax Court at a cost of \$12,850 with funding coming from general reserves.

Assessor currently is recommending \$40 a square foot for payable years 2014, 2015 and 2016.

Nagel/Shimanski motion carried unanimously to approve hiring Michael Bownik Appraisals Inc. (White Bear Lake, MN) to conduct an appraisal for Menards Tax Court at a cost of \$12,850 with funding coming from general reserves.

Nagel/Krueger motion carried unanimously to approve setting a closed session following the November 22nd board meeting to discuss negotiations with City West Holdings for tax petitions filed for the payable years 2014, 2015 and 2016.

DEPARTMENT OF NATURAL RESOURCES – Area Wildlife Supervisor Joe Stangel

- A) Joe Stangel notified the board that McLeod County Chapter of Pheasants Forever has recently donated 45 acres of land in Section 29, Lynn Township to the Minnesota DNR, Division of Wildlife to become a state wildlife management area (WMA). Payment in Lieu of Property Taxes (PILT) will be \$386.26 per year.

This area has many diverse habitat features that will enhance wildlife populations. The Ras-Lynn WMA and corresponding private habitat is the counties premiere pheasant and white-tailed deer hunting destination. The area will be open to public hunting with restrictions worked out with property owners only for firearms, trapping, and nature observation.

SHORT ELLIOT HENDRICKSON (SEH) – Project Manager Chuck Vermeersch

- A) Chuck Vermeersch gave an update to the board on County Ditch 20 and County Ditch 22. County Ditch 22 tile flows into the recently replaced County Ditch 20 tile. Hutton Drainage, the contractor, began the project back in mid-August by boring and jacking a new 12" tile crossing Highway 15. That work was completed, however; since that time 10 to 12 inches of rain has been received which has prevented further work on the tile replacement.

From May 2016 to November 1, 2016 the project area has received 28 inches of precipitation. Due to the large watershed being drained, the undersized pipe and shallow pipe grades, the system is very slow to drain. County Ditch 20 and County Ditch 22 pipes were not upsized because of wetland and permitting issues. The petitioners opted to go with replacement of the existing system as this would at least provide a more reliable tile that would not require frequent repair as the old tile did.

At this time, the system will continue to be monitored to verify it is still draining. Once the water has receded enough, the replacement of County Ditch 22 tile will be completed. However, with the amount of water there is to pass, it will take some time for the project to dry out enough to complete the replacement. It is likely the project will not be completed this year.

A letter with the above information and more details will be sent out to property owners.

COUNTY ADMINISTRATION

- A) Pat Melvin requested approval to hire a Household Hazardous Waste Technician (grade 17) to fill vacancy in Solid Waste Department due to promotion.

Wright/Shimanski motion carried unanimously to hire a Household Hazardous Waste Technician (grade 17) to fill vacancy in Solid Waste Department due to promotion.

- B) Pat Melvin requested approval to set closed session for continuation of Pat Melvin's performance review for November 22nd following the board meeting.

Krueger/Shimanski motion carried unanimously to approve setting a closed session to have continuation of Pat Melvin's performance review for November 22nd following the board meeting.

- C) Pat Melvin led discussion on future consent agenda items. It was discussed and agreed upon to allow Pat Melvin as County Administrator to use more discretion when putting things on the agenda.

- D) Pat Melvin notified the board of the upcoming Legislative Round Table Discussion, Thursday, November 17th 8:00 am to Noon at University of Minnesota, Morris.
- E) Commissioner Shimanski requested approval of 2017 contract for Registered Nursing Services between McLeod County Public Health and McLeod Treatment Programs at a contracted hourly rate of \$61.46 with the noted change to Section B Item 13 to state “Monitor and evaluate RN Contract budget, not to exceed \$10,509.66 for 2017”. This is a continuation of the current contract.

Contract renewal and rate was approved by MTP Board of Directors on October 17, 2016. 2017 contracted hourly rate of \$61.46 is an increase from the current rate of \$44.00, which has been in place and unchanged for many years. This increased rate was recommended and approved by the McLeod County Public Health Advisory Committee when Public Health fees were reviewed early this year.

Nagel/Shimanski motion carried unanimously to approve the 2017 contract for Registered Nursing Services between McLeod County Public Health and McLeod Treatment Programs at a contracted hourly rate of \$61.46.

CLOSED SESSION

Nagel/Krueger motion carried unanimously to close the meeting at 10:22 a.m. to discuss 2017 labor negotiations.

Shimanski/Krueger motion carried unanimously to open the meeting at 11:25 a.m.

Krueger/Shimanski motion carried unanimously to recess at 11:26 a.m. until 9:00 a.m. November 22, 2016 at the Glencoe City Center.

ATTEST:

Paul Wright, Board Chair

Patrick Melvin, County Administrator

McLEOD COUNTY
BOARD OF COMMISSIONERS
SYNOPSIS – November 8, 2016

1. Commissioners Wright, Shimanski, Krueger, Nies and Nagel were present.
2. Nagel/Krueger motion carried unanimously to approve the agenda.
3. Nagel/Krueger motion carried unanimously to approve the consent agenda including October 28, 2016 Auditor's Warrants; Approve out of state travel for Highway Engineer to attend the National Association of County Engineers (NACE) annual conference April 9-13, 2017 in Cincinnati (OH); Approve increasing the guardian/conservator compensation from the current Tier 1 monthly cap of \$60 for less intensive and less detailed services and Tier 2 monthly cap of \$100 for more intensive and more detailed services to \$150 per month for both Tiers effective January 1, 2017 and re-evaluate the situation in 12 months; Approve renewal of shared services agreement between McLeod County Public Health and Southwestern Minnesota Adult Mental Health Consortium for the contract period of November 1, 2016 – August 28, 2017.
4. Shimanski/Krueger motion carried unanimously to approve payment of bills totaling \$183,793.51 from the aforementioned funds.
5. Nagel/Shimanski motion carried unanimously to approve hiring Michael Bownik Appraisals Inc. (White Bear Lake, MN) to conduct an appraisal for Menards Tax Court at a cost of \$12,850 with funding coming from general reserves.
6. Nagel/Krueger motion carried unanimously to approve setting a closed session following the November 22nd board meeting to discuss negotiations with City West Holdings for tax petitions filed for the payable years 2014, 2015 and 2016.
7. Wright/Shimanski motion carried unanimously to hire a Household Hazardous Waste Technician (grade 17) to fill vacancy in Solid Waste Department due to promotion.
8. Krueger/Shimanski motion carried unanimously to approve setting a closed session to have continuation of Pat Melvin's performance review for November 22nd following the board meeting.
9. Nagel/Shimanski motion carried unanimously to approve the 2017 contract for Registered Nursing Services between McLeod County Public Health and McLeod Treatment Programs at a contracted hourly rate of \$61.46.
10. Nagel/Krueger motion carried unanimously to close the meeting at 10:22 a.m. to discuss 2017 labor negotiations.
11. Shimanski/Krueger motion carried unanimously to open the meeting at 11:25 a.m.

Complete minutes are on file in the County Administrator's Office. The meeting recessed at 11:26 a.m. until November 22, 2016.

Attest:

Paul Wright, Board Chair

Patrick Melvin, County Administrator

DRAFT

***** McLeod County IFS *****



POOL
11/4/16 11:24AM

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Print List in Order By:	2	1 - Fund (Page Break by Fund)	Page Break By:	1	1 - Page Break by Fund
		2 - Department (Totals by Dept)			2 - Page Break by Dept
		3 - Vendor Number			
		4 - Vendor Name			

Explode Dist. Formulas Y

Paid on Behalf Of Name
on Audit List?: N

Type of Audit List: D D - Detailed Audit List
S - Condensed Audit List

Save Report Options?: N

***** McLeod County IFS *****



POOL

11/4/16 11:24AM

1 GENERAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

	<u>Vendor Name</u>	<u>Rpt</u>	<u>Warrant Description</u>	<u>Invoice #</u>	<u>Account/Formula Description</u>	
	<u>No. Account/Formula</u>	<u>Accr</u>	<u>Amount</u>	<u>Service Dates</u>	<u>Paid On Bhf #</u>	<u>On Behalf of Name</u>
0	DEPT			...		
	2811 CNA GROUP LONG TERM CARE					
132	01-000-000-0000-2048		535.18	LONG TERM CARE GENERAL FUND		Long Term Care Payable
				11/01/2016 11/30/2016		
	2811 CNA GROUP LONG TERM CARE		535.18	1 Transactions		
	690 UNIVERSITY OF MINNESOTA					
28	01-000-000-0000-2010		250.00	SUMMER INSTITUTE RS & LS		Unclaimed Property
	690 UNIVERSITY OF MINNESOTA		250.00	1 Transactions		
0	DEPT Total:		785.18	...	2 Vendors	2 Transactions
31	DEPT			COUNTY ADMINISTRATOR'S		
	1886 BMO					
30	01-031-000-0000-6241		360.00	STAR TRIBUNE	1627	Printing And Publishing
	1886 BMO		360.00	1 Transactions		
31	DEPT Total:		360.00	COUNTY ADMINISTRATOR'S	1 Vendors	1 Transactions
75	DEPT			CENTRAL SERVICES-CHARGE BACKS		
	1886 BMO					
49	01-075-000-0000-6338		5.88	MENARDS	1650	Motor Pool Expenses
50	01-075-000-0000-6338		9.00	KWIK TRIP	1650	Motor Pool Expenses
	1886 BMO		14.88	2 Transactions		
75	DEPT Total:		14.88	CENTRAL SERVICES-CHARGE BACKS	1 Vendors	2 Transactions
76	DEPT			CENTRAL SERVICES-COUNTY WIDE		
	1886 BMO					
51	01-076-000-0000-6205		6.80	USPS	1650	Postage And Postal Box Rental
52	01-076-000-0000-6205		174.05	USPS	9909	Postage And Postal Box Rental
	1886 BMO		180.85	2 Transactions		
	5906 CENTURYLINK					
5	01-076-000-0000-6203		307.47	LOCAL SVC	313623769	Communications
4	01-076-000-0000-6203		2,455.62	LOCAL SVC	314019358	Communications
	5906 CENTURYLINK		2,763.09	2 Transactions		



POOL

11/4/16 11:24AM

1 GENERAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name Account/Formula	Rpt Accr	Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
8	11580 CENTURYLINK 01-076-000-0000-6203		640.67	LONG DISTANCE 10/21/2016 11/20/2016	320439462	Communications
9	01-076-000-0000-6203		38.65	LONG DISTANCE 10/21/2016 11/20/2016	320439462	Communications
	11580 CENTURYLINK		679.32	2 Transactions		
24	5771 NU-TELECOM 01-076-000-0000-6203		1,483.65	EXT PRI SW B1	81854811	Communications
	5771 NU-TELECOM		1,483.65	1 Transactions		
76	DEPT Total:		5,106.91	CENTRAL SERVICES-COUNTY WIDE	4 Vendors	7 Transactions
91	DEPT 1886 BMO			COUNTY ATTORNEY'S		
29	01-091-000-0000-6612 1886 BMO		790.00 790.00	AMAZON.COM	1643 1 Transactions	Capital - \$100-\$5,000 (Inventory)
91	DEPT Total:		790.00	COUNTY ATTORNEY'S	1 Vendors	1 Transactions
103	DEPT 1886 BMO			COUNTY ASSESSOR'S		
72	01-103-000-0000-6402		80.68	AMAZON.COM	9891	Office Supplies
71	01-103-000-0000-6450		22.86	BEEN VERIFIED	9891	Subscriptions
73	01-103-000-0000-6612		990.00	AMAZON.COM	9891	Capital - \$100-\$5,000 (Inventory)
74	01-103-000-0000-6612 1886 BMO		495.00 1,588.54	AMAZON.COM	9891 4 Transactions	Capital - \$100-\$5,000 (Inventory)
103	DEPT Total:		1,588.54	COUNTY ASSESSOR'S	1 Vendors	4 Transactions
117	DEPT 1886 BMO			FAIRGROUNDS		
31	01-117-000-0000-6402		34.93	EXPRESSION VINYL	1700	Office Supplies
32	01-117-000-0000-6402		32.19	JO-ANN	1700	Office Supplies
33	01-117-000-0000-6402		9.62	WALMART	1700	Office Supplies
34	01-117-000-0000-6402		254.23	WALMART	1700	Office Supplies
35	01-117-000-0000-6425		5.36	SEARS	1700	Repair And Maintenance Supplies

***** McLeod County IFS *****



POOL
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1 GENERAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No. Account/Formula	Accr	Amount	Service Dates	On Behalf of Name
			Paid On Bhf #	
1886 BMO		336.33	5 Transactions	
117 DEPT Total:		336.33	FAIRGROUNDS	1 Vendors 5 Transactions
201 DEPT			COUNTY SHERIFF'S OFFICE	
1886 BMO				
40 01-201-000-0000-6456		145.82	AMAZON.COM	1585 Shooting Supplies For Firearms Program
41 01-201-206-0000-6360		150.00	MN BCA	1585 Training - Patrol
42 01-201-206-0000-6360		75.00	MN BCA	1585 Training - Patrol
43 01-201-206-0000-6360		250.00	MN BCA	1585 Training - Patrol
44 01-201-206-0000-6360		250.00	MN BCA	1585 Training - Patrol
1886 BMO		870.82	5 Transactions	
11580 CENTURYLINK				
10 01-201-000-0000-6203		70.82	LONG DISTANCE	320439462 Communications
			10/21/2016 11/20/2016	
11580 CENTURYLINK		70.82	1 Transactions	
5771 NU-TELECOM				
27 01-201-000-0000-6203		143.68	111-2290 SPEC ACC VOICE	81877739 Communications
			11/01/2016 11/30/2016	
5771 NU-TELECOM		143.68	1 Transactions	
201 DEPT Total:		1,085.32	COUNTY SHERIFF'S OFFICE	3 Vendors 7 Transactions
251 DEPT			COUNTY JAIL	
1886 BMO				
38 01-251-000-0000-6327		50.98	MILLS FLEET FARM	1528 General Auto Maintenance
36 01-251-000-0000-6461		41.16	AMAZON.COM	1528 Inmate Supplies
37 01-251-000-0000-6461		64.48	AMAZON.COM	1528 Inmate Supplies
1886 BMO		156.62	3 Transactions	
251 DEPT Total:		156.62	COUNTY JAIL	1 Vendors 3 Transactions
485 DEPT			COUNTY PUBLIC HEALTH NURSING	
1886 BMO				
75 01-485-000-0000-6810		114.84	FITBIT INC	9549 Refunds And Reimbursements
77 01-485-000-0000-6350		5.92	WALMART	9556 Other Services & Charges

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1 GENERAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor	Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No.	Account/Formula	Accr	Service Dates	Paid On Bhf #	On Behalf of Name
76	01-485-000-0000-6402		AMAZON.COM	9556	Office Supplies
78	01-485-000-0000-6402		MENARDS	9556	Office Supplies
79	01-485-000-0000-6402		AMAZON.COM	9556	Office Supplies
81	01-485-000-0000-6402		AMAZON.COM	9556	Office Supplies
80	01-485-000-0000-6451		AMAZON.COM	9556	Books
1886	BMO	560.97			7 Transactions
11580	CENTURYLINK				
11	01-485-000-0000-6203	67.51	LONG DISTANCE	320439462	Communications
			10/21/2016	11/20/2016	
11580	CENTURYLINK	67.51			1 Transactions
485	DEPT Total:	628.48	COUNTY PUBLIC HEALTH NURSING	2 Vendors	8 Transactions
520	DEPT		COUNTY PARK'S		
5906	CENTURYLINK				
7	01-520-000-0000-6203	65.86	525 CARETAKER OFFICE PHONE	313540758	Communications
6	01-520-000-0000-6203	89.31	525 SHOP	314102204	Communications
5906	CENTURYLINK	155.17			2 Transactions
5771	NU-TELECOM				
25	01-520-000-0000-6203	41.23	PIEPENBURG 587-2082	81854811	Communications
5771	NU-TELECOM	41.23			1 Transactions
520	DEPT Total:	196.40	COUNTY PARK'S	2 Vendors	3 Transactions
603	DEPT		COUNTY EXTENSION		
1886	BMO				
39	01-603-000-0000-6351	257.95	NATIONAL 4-H COUNCIL	1668	After School Program
1886	BMO	257.95			1 Transactions
603	DEPT Total:	257.95	COUNTY EXTENSION	1 Vendors	1 Transactions
1	Fund Total:	11,306.61	GENERAL REVENUE FUND		44 Transactions



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3 ROAD & BRIDGE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name Account/Formula	Rpt Accr	Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
0	DEPT			...		
133	2811 CNA GROUP LONG TERM CARE 03-000-000-0000-2048		131.01	LONG TERM CARE HIGHWAY FUND 11/01/2016 11/30/2016		Long Term Care Payable
	2811 CNA GROUP LONG TERM CARE		131.01	1 Transactions		
0	DEPT Total:		131.01	...	1 Vendors	1 Transactions
105	DEPT			COUNTY SURVEYING & GIS		
	1886 BMO					
57	03-105-000-0000-6336		427.02	INN ON LAKE SUPERIOR	9937	Meals, Lodging, Parking & Miscellaneous
58	03-105-000-0000-6336		284.68	INN ON LAKE SUPERIOR	9937	Meals, Lodging, Parking & Miscellaneous
59	03-105-000-0000-6336		142.34	INN ON LAKE SUPERIOR	9937	Meals, Lodging, Parking & Miscellaneous
	1886 BMO		854.04	3 Transactions		
105	DEPT Total:		854.04	COUNTY SURVEYING & GIS	1 Vendors	3 Transactions
330	DEPT			HIGHWAY ADMINISTRATION		
	1886 BMO					
60	03-330-000-0000-6245		110.00	VP MINNESOTA TRANSPORT	9929	Dues And Registration Fees
56	03-330-000-0000-6205		54.35	USPS	9937	Postage And Postal Box Rental
53	03-330-000-0000-6245		215.00	U OF M CONT LEARNING	9937	Dues And Registration Fees
54	03-330-000-0000-6245		600.00	MINNESOTA STATE COLLEGE	9937	Dues And Registration Fees
55	03-330-000-0000-6245		1,150.00	MINNESOTA STATE COLLEGE	9937	Dues And Registration Fees
	1886 BMO		2,129.35	5 Transactions		
330	DEPT Total:		2,129.35	HIGHWAY ADMINISTRATION	1 Vendors	5 Transactions
340	DEPT			HIGHWAY EQUIPMENT MAINTENANCE		
	1083 WEX BANK					
93	03-340-000-0000-6455		477.20	UNLEADED FUEL-OCTOBER	47423474	Motor Fuels And Lubrication
95	03-340-000-0000-6455		18.06-	MISC PREV PER REBATE	47423474	Motor Fuels And Lubrication
94	03-340-000-0000-6567		1,727.53	DIESEL FUEL OCTOBER	47423474	Diesel Fuel & Tax
	1083 WEX BANK		2,186.67	3 Transactions		
340	DEPT Total:		2,186.67	HIGHWAY EQUIPMENT MAINTENANCE	1 Vendors	3 Transactions

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 3 ROAD & BRIDGE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

	<u>Vendor Name</u>	<u>Rpt</u>	<u>Warrant Description</u>	<u>Invoice #</u>	<u>Account/Formula Description</u>
	<u>No. Account/Formula</u>	<u>Accr</u>	<u>Amount</u>	<u>Service Dates</u>	<u>Paid On Bhf #</u>
					<u>On Behalf of Name</u>
3	Fund Total:		5,301.07	ROAD & BRIDGE FUND	12 Transactions

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5 SOLID WASTE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No. Account/Formula	Accr	Amount	Service Dates	On Behalf of Name
			Paid On Bhf #	
391 DEPT				SOLID WASTE TIP FEE
1886 BMO				
96 05-391-000-0000-6145		234.98	ARAMARK	1550 Uniform Allowance
99 05-391-000-0000-6145		56.35	ARAMARK	1550 Uniform Allowance
100 05-391-000-0000-6145		39.51	ARAMARK	1550 Uniform Allowance
102 05-391-000-0000-6243		409.83	ARAMARK	1550 Public Education
1886 BMO		740.67		4 Transactions
11580 CENTURYLINK				
12 05-391-000-0000-6203		6.21	LONG DISTANCE	320439462 Communications
			10/21/2016 11/20/2016	
11580 CENTURYLINK		6.21		1 Transactions
391 DEPT Total:		746.88	SOLID WASTE TIP FEE	2 Vendors 5 Transactions
393 DEPT				MATERIALS RECOVERY FACILITY
1886 BMO				
97 05-393-000-0000-6145		587.22	ARAMARK	1550 Uniform Allowance
1886 BMO		587.22		1 Transactions
11580 CENTURYLINK				
13 05-393-000-0000-6203		8.90	LONG DISTANCE	320439462 Communications
			10/21/2016 11/20/2016	
11580 CENTURYLINK		8.90		1 Transactions
664 LENTSCH TRUCKING				
130 05-393-000-0000-6269		790.00	RECYCLABLES PICKED UP	Contracts
131 05-393-000-0000-6269		4,030.00	RECYCLED MATL SHIPPING	Contracts
664 LENTSCH TRUCKING		4,820.00		2 Transactions
393 DEPT Total:		5,416.12	MATERIALS RECOVERY FACILITY	3 Vendors 4 Transactions
397 DEPT				HOUSEHOLD HAZARDOUS WASTE
1886 BMO				
98 05-397-000-0000-6145		86.14	ARAMARK	1550 Uniform Allowance
101 05-397-000-0000-6145		39.51	ARAMARK	1550 Uniform Allowance
1886 BMO		125.65		2 Transactions

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5 SOLID WASTE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor	Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No.	Account/Formula	Accr	Service Dates	Paid On Bhf #	On Behalf of Name
14	11580 CENTURYLINK 05-397-000-0000-6203		LONG DISTANCE 10/21/2016 11/20/2016	320439462	Communications
	11580 CENTURYLINK		1 Transactions		
397	DEPT Total:		HOUSEHOLD HAZARDOUS WASTE	2 Vendors	3 Transactions
5	Fund Total:		SOLID WASTE FUND		12 Transactions



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11 HUMAN SERVICE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name Account/Formula	Rpt Accr	Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
420	DEPT			INCOME MAINTENANCE		
	1886 BMO					
47	11-420-600-0002-6336		67.81	GRANDVIEW LODGE	9531	Meals Lodging & Parking - Director
46	11-420-600-0007-6336		481.22	ARROWWOOD	9531	Meals Lodging & Parking-Financial Workr:
45	11-420-640-0010-6336		200.02	BEST WESTERN PLUS	9531	Meals Lodging & Parking Expense
	1886 BMO		749.05		3 Transactions	
	11580 CENTURYLINK					
15	11-420-600-0010-6203		289.35	LONG DISTANCE	320439462	Communications/Postage
				10/21/2016 11/20/2016		
	11580 CENTURYLINK		289.35		1 Transactions	
	2811 CNA GROUP LONG TERM CARE					
134	11-420-000-0000-2048		210.41	LONG TERM CARE WELFARE FUND		Long Term Care Payable
				11/01/2016 11/30/2016		
	2811 CNA GROUP LONG TERM CARE		210.41		1 Transactions	
420	DEPT Total:		1,248.81	INCOME MAINTENANCE	3 Vendors	5 Transactions
430	DEPT			INDIVIDUAL AND FAMILY SOCIAL SERVI		
	1886 BMO					
104	11-430-709-0000-6033		172.15	TARGET	0940	Mental Hlth Pilot Project-Discretionary
105	11-430-709-0000-6033		5.60	TARGET	0940	Mental Hlth Pilot Project-Discretionary
110	11-430-709-0000-6033		73.06	WALMART	0940	Mental Hlth Pilot Project-Discretionary
113	11-430-709-0000-6033		37.67	DOLLAR GENERAL	0940	Mental Hlth Pilot Project-Discretionary
121	11-430-709-0000-6033		16.09	JOANN FABRIC	0940	Mental Hlth Pilot Project-Discretionary
123	11-430-709-0000-6033		143.55	WALMART	0940	Mental Hlth Pilot Project-Discretionary
124	11-430-709-0000-6033		7.52	WALMART	0940	Mental Hlth Pilot Project-Discretionary
126	11-430-709-0000-6033		59.50	WALMART	0940	Mental Hlth Pilot Project-Discretionary
128	11-430-709-0000-6033		40.53	MENARDS	0940	Mental Hlth Pilot Project-Discretionary
106	11-430-709-0008-6245		424.00	MARRCH	0940	Dues and Registration Fees - MH Unit
103	11-430-741-4030-6071		68.00	DEER LAKE ORCHARD	0940	Client Outreach - CSP
107	11-430-741-4030-6071		50.37	WALMART	0940	Client Outreach - CSP
108	11-430-741-4030-6071		9.27	CASHWISE	0940	Client Outreach - CSP
111	11-430-741-4030-6071		31.61	WALMART	0940	Client Outreach - CSP
112	11-430-741-4030-6071		133.13	BUFFALO WILD WINGS	0940	Client Outreach - CSP
114	11-430-741-4030-6071		5.21	STANDARD PRINTING	0940	Client Outreach - CSP
115	11-430-741-4030-6071		26.18	DOLLAR GENERAL	0940	Client Outreach - CSP
116	11-430-741-4030-6071		8.00	FALL HARVEST ORCHARD	0940	Client Outreach - CSP

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11 HUMAN SERVICE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Vendor Name	Account/Formula	Rpt Accr	Amount	Warrant Description	Service Dates	Invoice #	Paid On Bhf #	Account/Formula Description	On Behalf of Name
117		11-430-741-4030-6071		37.86	CARLSON ORCHARD		0940		Client Outreach - CSP	
118		11-430-741-4030-6071		24.70	DAIRY QUEEN		0940		Client Outreach - CSP	
119		11-430-741-4030-6071		192.80	ART AS YOU LIKE IT		0940		Client Outreach - CSP	
120		11-430-741-4030-6071		103.21	PERKINS		0940		Client Outreach - CSP	
122		11-430-741-4030-6071		6.44	JOANN FABRIC		0940		Client Outreach - CSP	
125		11-430-741-4030-6071		124.71	WALMART		0940		Client Outreach - CSP	
127		11-430-741-4030-6071		16.52	MENARDS		0940		Client Outreach - CSP	
129		11-430-741-4030-6071		17.15	SHOPKO		0940		Client Outreach - CSP	
109		11-430-763-6410-6078		495.00	AMAZON.COM		0940		CADI Waiver - Adult Supplies and Equip	
82		11-430-709-0008-6359		245.00	U OF M CONT LEARNING		3758		CWTCM Dedicated	
89		11-430-709-0008-6359		500.00	WALMART		3758		CWTCM Dedicated	
83		11-430-710-1160-6040		200.00	SA		3758		Social Service Transportation	
84		11-430-710-1160-6040		25.00	SA		3758		Social Service Transportation	
88		11-430-710-1160-6040		50.00	SA		3758		Social Service Transportation	
85		11-430-710-1980-6062		14.38	WALMART		3758		Foster Care Licensing & Resource Develop	
86		11-430-710-1980-6062		32.71	WALMART		3758		Foster Care Licensing & Resource Develop	
87		11-430-710-1980-6062		111.46	SUBWAY		3758		Foster Care Licensing & Resource Develop	
48		11-430-700-0002-6336		158.20	GRANDVIEW LODGE		9531		Meals Lodging & Parking - Director	
1886	BMO			3,666.58						36 Transactions
11580	CENTURYLINK									
16		11-430-700-0010-6203		124.00	LONG DISTANCE	10/21/2016	320439462		Communications/Postage	
						11/20/2016				
11580	CENTURYLINK			124.00						1 Transactions
2811	CNA GROUP LONG TERM CARE									
135		11-430-000-0000-2048		103.02	LONG TERM CARE INC MAINT FUND	11/01/2016			Long Term Care Payable	
						11/30/2016				
2811	CNA GROUP LONG TERM CARE			103.02						1 Transactions
430	DEPT Total:			3,893.60	INDIVIDUAL AND FAMILY SOCIAL SER			3 Vendors		38 Transactions
11	Fund Total:			5,142.41	HUMAN SERVICE FUND					43 Transactions

***** McLeod County IFS *****



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25 SPECIAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor	Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No.	Account/Formula	Accr	Service Dates	Paid On Bhf #	On Behalf of Name
15	DEPT		LAW LIBRARY		
90	6 MATTHEW BENDER & CO INC		MN FAMILY LAW PRACTICE	86191322	Books
	25-015-000-0000-6451	149.43			
	6 MATTHEW BENDER & CO INC	149.43	1 Transactions		
15	DEPT Total:	149.43	LAW LIBRARY	1 Vendors	1 Transactions
121	DEPT		VETERAN SERVICES		
19	319 FIRST MINNESOTA BANK NA		DEPOSIT SLIPS ACCT#4117054		Printed Paper Supplies
	25-121-000-0000-6403	9.54			
	319 FIRST MINNESOTA BANK NA	9.54	1 Transactions		
121	DEPT Total:	9.54	VETERAN SERVICES	1 Vendors	1 Transactions
285	DEPT		E-911 SYSTEM MAINTENANCE - GRANT		
26	5771 NU-TELECOM		587-0405 E-911	81878133	Communications - Telephone Equipment
	25-285-000-0000-6203	588.30	11/01/2016 11/30/2016		
	5771 NU-TELECOM	588.30	1 Transactions		
285	DEPT Total:	588.30	E-911 SYSTEM MAINTENANCE - GRAN	1 Vendors	1 Transactions
618	DEPT		SSTS GRANT		
21	1220 KUBASCH EXCAVATING INC		SEPTIC SYSTEM G BESTUL		Other Services & Charges
	25-618-000-0000-6350	13,858.35			
	1220 KUBASCH EXCAVATING INC	13,858.35	1 Transactions		
618	DEPT Total:	13,858.35	SSTS GRANT	1 Vendors	1 Transactions
619	DEPT		CROW RIVER SEPTIC SYSTEM LOANS-7		
2	3856 BORKA EXCAVATING		SEPTIC SYSTEM A OTTO	09_13_16-2	Other Services & Charges
	25-619-000-0000-6350	11,700.00			
	3856 BORKA EXCAVATING	11,700.00	1 Transactions		
619	DEPT Total:	11,700.00	CROW RIVER SEPTIC SYSTEM LOANS-	1 Vendors	1 Transactions
694	DEPT		AQUATIC INVASIVE SPECIES		

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25 SPECIAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

	<u>Vendor Name</u>	<u>Rpt</u>	<u>Warrant Description</u>	<u>Invoice #</u>	<u>Account/Formula Description</u>	
	<u>No. Account/Formula</u>	<u>Accr</u>	<u>Amount</u>	<u>Service Dates</u>	<u>Paid On Bhf #</u>	<u>On Behalf of Name</u>
1	2742 ALLOVER MEDIA LLC 25-694-000-0000-6241		1,050.00	INDOOR ADVERTISING & PRODUCTION		PRINTING AND PUBLISHING
	2742 ALLOVER MEDIA LLC		1,050.00	1 Transactions		
694	DEPT Total:		1,050.00	AQUATIC INVASIVE SPECIES	1 Vendors	1 Transactions
886	DEPT			COUNTY FEEDLOT PROGRAM		
91	1457 PRO AUTO & TRANSMISSION REPAIR INC 25-886-000-0000-6338		606.66	2006 CHEV SILVERADO	3061714	Motor Pool Expenses
	1457 PRO AUTO & TRANSMISSION REPAIR INC		606.66	1 Transactions		
886	DEPT Total:		606.66	COUNTY FEEDLOT PROGRAM	1 Vendors	1 Transactions
25	Fund Total:		27,962.28	SPECIAL REVENUE FUND		7 Transactions

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82 COMMUNITY HEALTH SER

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name Account/Formula	Rpt Accr	Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
852	DEPT			PROJECT HARMONY GRANT		
	1886 BMO					
67	82-852-000-0000-6203		65.00	CONSTANT CONTACT	0955	Communications
65	82-852-000-0000-6205		6.45	USPS	0955	Postage And Postal Box Rental
	1886 BMO		71.45			2 Transactions
852	DEPT Total:		71.45	PROJECT HARMONY GRANT	1 Vendors	2 Transactions
853	DEPT			LOCAL PUBLIC HEALTH GRANT		
	1886 BMO					
66	82-853-000-0000-6241		659.95	NATIONAL CNCL	0955	Printing And Publishing
64	82-853-000-0000-6336		587.79	LITTLE AMERICA	0955	Meals, Lodging, Parking & Miscellaneous
68	82-853-000-0000-6336		12.56	LITTLE AMERICA	0955	Meals, Lodging, Parking & Miscellaneous
69	82-853-000-0000-6336		2.50	UTA	0955	Meals, Lodging, Parking & Miscellaneous
70	82-853-000-0000-6336		46.36	TEXAS STEAKHOUSE	0955	Meals, Lodging, Parking & Miscellaneous
61	82-853-000-0000-6336		12.93	SQUATTERS	0955	Meals, Lodging, Parking & Miscellaneous
62	82-853-000-0000-6336		2.50	UTA	0955	Meals, Lodging, Parking & Miscellaneous
63	82-853-000-0000-6336		87.00	MSP AIRPORT	0955	Meals, Lodging, Parking & Miscellaneous
	1886 BMO		1,411.59			8 Transactions
	2811 CNA GROUP LONG TERM CARE					
136	82-853-000-0000-2048		10.54	LONG TERM CARE CHS FUND		LONG TERM CARE PAYABLE
				11/01/2016 11/30/2016		
	2811 CNA GROUP LONG TERM CARE		10.54			1 Transactions
853	DEPT Total:		1,422.13	LOCAL PUBLIC HEALTH GRANT	2 Vendors	9 Transactions
856	DEPT			FPSP		
	41 CASH WISE PHARMACY					
3	82-856-000-0000-6439		117.95	PRESCRIPTION MMS CHS RX#		Prescriptions
	41 CASH WISE PHARMACY		117.95			1 Transactions
	4006 FAMILY REXALL DRUG					
17	82-856-000-0000-6439		22.48	PRESCRIPTION MMS CHS	RX 16130556	Prescriptions
18	82-856-000-0000-6439		18.48	PRESCRIPTION MMS CHS	RX 16130556	Prescriptions
	4006 FAMILY REXALL DRUG		40.96			2 Transactions
	2412 GLENCOE REGIONAL HEALTH SERVICES					

***** McLeod County IFS *****



POOL
11/4/16 11:24AM
82 COMMUNITY HEALTH SER

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor	Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No.	Account/Formula	Accr	Service Dates	Paid On Bhf #	On Behalf of Name
20	82-856-000-0000-6261		EXAMS MMS CHS	ACCT #42806	Physical Examinations
	2412 GLENCOE REGIONAL HEALTH SERVICES		1 Transactions		
856	DEPT Total:		FPSP	3 Vendors	4 Transactions
862	DEPT		SHIP		
	1420 ST PAULS LUTHERAN SCHOOL				
92	82-862-000-0000-6350		SHIP PARTNER EXPENSE-SCHOOLS		Other Services & Charges
	1420 ST PAULS LUTHERAN SCHOOL		1 Transactions		
862	DEPT Total:		SHIP	1 Vendors	1 Transactions
82	Fund Total:		COMMUNITY HEALTH SERVICE		16 Transactions

***** McLeod County IFS *****



POOL
11/4/16 11:24AM
86 TRUST & AGENCY FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No. Account/Formula	Accr	Amount	Service Dates	On Behalf of Name
			Paid On Bhf #	
975 DEPT				
509 MINNESOTA DNR				
23 86-975-000-0000-6850		295.50		Collections For Other Agencies
			10/25/2016 10/31/2016	
509 MINNESOTA DNR		295.50	1 Transactions	
975 DEPT Total:		295.50	1 Vendors	1 Transactions
976 DEPT				
509 MINNESOTA DNR				
22 86-976-000-0000-6850		152.50		Collections For Other Agencies
			10/25/2016 10/31/2016	
509 MINNESOTA DNR		152.50	1 Transactions	
976 DEPT Total:		152.50	1 Vendors	1 Transactions
86 Fund Total:		448.00		2 Transactions
Final Total:		59,120.94	53 Vendors	136 Transactions

***** McLeod County IFS *****

Audit List for Board AUDITOR'S VOUCHERS ENTRIES



Recap by Fund

<u>Fund</u>	<u>AMOUNT</u>	<u>Name</u>	
1	11,306.61	GENERAL REVENUE FUND	
3	5,301.07	ROAD & BRIDGE FUND	
5	6,288.71	SOLID WASTE FUND	
11	5,142.41	HUMAN SERVICE FUND	
25	27,962.28	SPECIAL REVENUE FUND	
82	2,671.86	COMMUNITY HEALTH SERVICE	
86	448.00	TRUST & AGENCY FUND	
All Funds	59,120.94	Total	Approved by,
		
		

***** McLeod County IFS *****



POOL
11/10/16 9:26AM

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Print List in Order By: 2 1 - Fund (Page Break by Fund) Page Break By: 1 1 - Page Break by Fund
2 - Department (Totals by Dept) 2 - Page Break by Dept
3 - Vendor Number
4 - Vendor Name

Explode Dist. Formulas Y

Paid on Behalf Of Name
on Audit List?: N

Type of Audit List: D D - Detailed Audit List
S - Condensed Audit List

Save Report Options?: N

***** McLeod County IFS *****



POOL
11/10/16 9:26AM
1 GENERAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name Account/Formula	Rpt Accr	Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
0	DEPT			...		
8	3028 MINNESOTA CHILD SUPPORT PAYMENT 01-000-000-0000-2056		317.48	CHILD SUPPORT 10/16/2016 10/29/2016	001124208702	Child Support Garnishment Payable
10	01-000-000-0000-2056		117.67	CHILD SUPPORT 10/16/2016 10/29/2016	001436294701	Child Support Garnishment Payable
7	01-000-000-0000-2056		257.96	CHILD SUPPORT 10/16/2016 10/29/2016	001447664801	Child Support Garnishment Payable
9	01-000-000-0000-2056		130.13	CHILD SUPPORT 10/16/2016 10/29/2016	001499730601	Child Support Garnishment Payable
11	01-000-000-0000-2056		148.59	CHILD SUPPORT 10/16/2016 10/29/2016	001527027301	Child Support Garnishment Payable
12	01-000-000-0000-2056		327.64	CHILD SUPPORT 10/16/2016 10/29/2016	001530953002	Child Support Garnishment Payable
	3028 MINNESOTA CHILD SUPPORT PAYMENT		1,299.47	6 Transactions		
0	DEPT Total:		1,299.47	...	1 Vendors	6 Transactions
75	DEPT			CENTRAL SERVICES-CHARGE BACKS		
6	1160 MCLEOD COUNTY AUDITOR TREASURER 01-075-000-0000-6338		11.00	DUP STICKERS 2008 IMPALA		Motor Pool Expenses
	1160 MCLEOD COUNTY AUDITOR TREASURER		11.00	1 Transactions		
19	1083 WEX BANK 01-075-000-0000-6338		1,405.29	FUEL OCTOBER MOTOR POOL	47424037	Motor Pool Expenses
	1083 WEX BANK		1,405.29	1 Transactions		
75	DEPT Total:		1,416.29	CENTRAL SERVICES-CHARGE BACKS	2 Vendors	2 Transactions
112	DEPT			NORTH COMPLEX BUILDING		
18	4147 WEST CENTRAL SANITATION INC 01-112-000-0000-6257		85.83	GARBAGE REMOVAL 10/01/2016 10/31/2016	10732025	Sewer, Water And Garbage
	4147 WEST CENTRAL SANITATION INC		85.83	1 Transactions		
112	DEPT Total:		85.83	NORTH COMPLEX BUILDING	1 Vendors	1 Transactions
117	DEPT			FAIRGROUNDS		

***** McLeod County IFS *****



POOL
11/10/16 9:26AM
1 GENERAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor	Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No.	Account/Formula	Accr	Service Dates	Paid On Bhf #	On Behalf of Name
5771	NU-TELECOM				
16	01-117-000-0000-6203		PHONE FOR OCT 10/01/2016 10/31/2016	81855031	Communications
17	01-117-000-0000-6203		PHONE FOR NOV 11/01/2016 11/30/2016	81878137	Communications
5771	NU-TELECOM		2 Transactions		
117	DEPT Total:		FAIRGROUNDS	1 Vendors	2 Transactions
1	Fund Total:		GENERAL REVENUE FUND		11 Transactions

***** McLeod County IFS *****



POOL
11/10/16 9:26AM
3 ROAD & BRIDGE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

	<u>Vendor Name</u>	<u>Rpt</u>	<u>Warrant Description</u>	<u>Invoice #</u>	<u>Account/Formula Description</u>	
	<u>No. Account/Formula</u>	<u>Accr</u>	<u>Amount</u>	<u>Service Dates</u>	<u>Paid On Bhf #</u>	<u>On Behalf of Name</u>
0	DEPT			...		
	3328 GURSTEL CHARGO PA					
4	03-000-000-0000-2055		277.00	GARNISHMENT	683730	Garnishments Payable
				10/16/2016 10/29/2016		
	3328 GURSTEL CHARGO PA		277.00		1 Transactions	
0	DEPT Total:		277.00	...	1 Vendors	1 Transactions
3	Fund Total:		277.00	ROAD & BRIDGE FUND		1 Transactions

***** McLeod County IFS *****



POOL
11/10/16 9:26AM
11 HUMAN SERVICE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor	Name	Rpt	Warrant Description	Invoice #	Account/Formula Description
No.	Account/Formula	Accr	Service Dates	Paid On Bhf #	On Behalf of Name
			Amount		
430	DEPT				INDIVIDUAL AND FAMILY SOCIAL SERVI
	3028 MINNESOTA CHILD SUPPORT PAYMENT				
13	11-430-000-0000-2056		276.88	001486828601	Child Support Garnishment Payable
					10/16/2016 10/29/2016
	3028 MINNESOTA CHILD SUPPORT PAYMENT		276.88		1 Transactions
430	DEPT Total:		276.88	1 Vendors	1 Transactions
11	Fund Total:		276.88		HUMAN SERVICE FUND 1 Transactions

***** McLeod County IFS *****



POOL
11/10/16 9:26AM
25 SPECIAL REVENUE FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name Account/Formula	Rpt Accr	Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
224	DEPT			NEW CANINE ACCOUNT		
1	92 ARROW BUILDING CENTER 25-224-000-0000-6612		1,149.78	TRAINING COURE MATERIAL	4069630	Capital - \$100-\$5,000 (Inventory)
	92 ARROW BUILDING CENTER		1,149.78	1 Transactions		
3	5967 GLENCOE FLEET SUPPLY INC 25-224-000-0000-6612		237.93	TRAINING EQUIP MATERIAL	641492	Capital - \$100-\$5,000 (Inventory)
	5967 GLENCOE FLEET SUPPLY INC		237.93	1 Transactions		
224	DEPT Total:		1,387.71	NEW CANINE ACCOUNT	2 Vendors	2 Transactions
613	DEPT			WATER RESOURCE MANAGEMENT-GR		
5	6009 INNOVATIVE OFFICE SOLUTIONS LLC 25-613-000-0000-6402		203.91	OFFICE SUPPLIES	IN1376478	Office Supplies
	6009 INNOVATIVE OFFICE SOLUTIONS LLC		203.91	1 Transactions		
613	DEPT Total:		203.91	WATER RESOURCE MANAGEMENT-GR	1 Vendors	1 Transactions
807	DEPT			DESIGNATED FOR CAPITAL ASSETS		
2	6906 GLENCOE CO OP ASSN 25-807-000-0000-6610		1,568.70	DIESEL FOR NEW GENERATOR	137000	Capital - Over \$5,000 (Fixed Assets)
	6906 GLENCOE CO OP ASSN		1,568.70	1 Transactions		
20	1116 WOLD ARCHITECTS & ENGINEERS INC 25-807-000-0000-6610		5,315.72	SECURITY IMPROVEMENT PLANNING	51347	Capital - Over \$5,000 (Fixed Assets)
	1116 WOLD ARCHITECTS & ENGINEERS INC		5,315.72	1 Transactions		
807	DEPT Total:		6,884.42	DESIGNATED FOR CAPITAL ASSETS	2 Vendors	2 Transactions
25	Fund Total:		8,476.04	SPECIAL REVENUE FUND		5 Transactions

***** McLeod County IFS *****



POOL
11/10/16 9:26AM
86 TRUST & AGENCY FUND

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Vendor Name Account/Formula	Rpt Accr	Amount	Warrant Description Service Dates	Invoice # Paid On Bhf #	Account/Formula Description On Behalf of Name
975	DEPT			DNR CLEARING ACCOUNT		
15	509 MINNESOTA DNR 86-975-000-0000-6850		406.50	DNR 10/31/2016 11/07/2016		Collections For Other Agencies
	509 MINNESOTA DNR		406.50		1 Transactions	
975	DEPT Total:		406.50	DNR CLEARING ACCOUNT	1 Vendors	1 Transactions
976	DEPT			GAME & FISH CLEARING ACCOUNT		
14	509 MINNESOTA DNR 86-976-000-0000-6850		220.00	G & F 10/31/2016 11/07/2016		Collections For Other Agencies
	509 MINNESOTA DNR		220.00		1 Transactions	
976	DEPT Total:		220.00	GAME & FISH CLEARING ACCOUNT	1 Vendors	1 Transactions
86	Fund Total:		626.50	TRUST & AGENCY FUND		2 Transactions
	Final Total:		12,642.81	14 Vendors	20 Transactions	

***** McLeod County IFS *****

Audit List for Board AUDITOR'S VOUCHERS ENTRIES



Recap by Fund	<u>Fund</u>	<u>AMOUNT</u>	<u>Name</u>	
	1	2,986.39	GENERAL REVENUE FUND	
	3	277.00	ROAD & BRIDGE FUND	
	11	276.88	HUMAN SERVICE FUND	
	25	8,476.04	SPECIAL REVENUE FUND	
	86	626.50	TRUST & AGENCY FUND	
	All Funds	12,642.81	Total	Approved by,
			
			



County of McLeod

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COUNTY ADMINISTRATOR

PATRICK MELVIN
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830 11th Street East, Suite 110
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Resolution 16-CB-36 FY2017 Environmental Assistance Grant Program

WHEREAS, McLeod County Solid Waste has applied for a grant from the Minnesota Pollution Control Agency (MPCA), under its FY2017 Environmental Assistance Grant Program; and

WHEREAS, if MPCA funding is received, McLeod County Solid Waste is committed to implementing the proposed project as described in the grand application; and

WHEREAS, MPCA requires that McLeod County Solid Waste provide a 25% financial, or “in-kind” match to the requested \$250,000.

BE IT RESOLVED THAT the McLeod County Board of Commissioners hereby support the application requesting financial assistance to the McLeod County Solid Waste Department for the purpose of processing and recycling agricultural wrap.

Dated this 22nd day of November, 2016.

Board Chair, Paul Wright

Pat Melvin, County Administrator



County of McLeod

830 11th Street East
Glencoe, Minnesota 55336
FAX (320) 864-1809

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Pat.Melvin@co.mcleod.mn.us

Resolution 16-CB-37 Capital Assistance Program Grant

WHEREAS, McLeod County Solid Waste plans to submit an application for a Capital Assistance Program (CAP) grant from the Minnesota Pollution Control Agency (MPCA), and

WHEREAS, if CAP funding is received, McLeod County Solid Waste is committed to implementing the proposed project as described in the grand application; and

WHEREAS, MPCA requires that McLeod County Solid Waste financially support 50% of the total project cost, therefore

BE IT RESOLVED THAT the McLeod County Board of Commissioners hereby support submission of an application requesting financial assistance to the McLeod County Solid Waste Department for the purpose of program expansion and waste diversion.

Dated this 22nd day of November, 2016.

Board Chair, Paul Wright

Pat Melvin, County Administrator

Personnel Committee

Tuesday, November 15, 2016

AGENDA

A. Discuss full-time Technical Clerk vacancy at Public Health.

Recommendation: Hire 2 full-time Technical Clerks (grade 12) in Public Health due to resignations.

B. Discuss Mental Health Professional vacancy for Tri-Star ACT Team.

Recommendation: Hire Mental Health Professional (grade 28) for Tri-Star ACT Team for up to 28 hours per week due to resignation. Position is dependent on reimbursement of all expenses from SW Mental Health Consortium of at least 105%.

C. Discuss reduction in hours for employee at Tri-Star ACT Team

Recommendation: Approve reduction in hours for Tri-Star ACT Team Community Support Technician (grade 16) from 40 hours per week to 32 hours per week. (Position is reimbursed at 105% from SW Mental Health Consortium).

D. Discuss hours for Child Support Officers.

Recommendation: Increase hours for part-time Child Support Officer (grade 17) from 20 to 28 hours per week and hire part-time Child Support Officer at 20 hours per week. These hours are to replace the hours vacated by the resignation of a 40 hour per week Child Support Officer. This will result in reduction of 12 hours per week.

E. Discuss Social Worker vacancy.

Recommendation: Hire full-time Social Worker, Chemical Dependency Rule 25 Assessor, (grade 22) to fill vacancy due to resignation.

F. Discuss HHW Tech vacancy.

Recommendation: Hire full-time Household Hazardous Waste Technician (grade 17) due to promotion of Household Hazardous Waste Technician to Household Hazardous Waste Lead (grade 20).

*Please note that the Committee Chairperson has responsibility to invite staff
not copied on this Agenda and expected to attend the meeting.*

CC: All Commissioners
All Department Heads
Mary Jo Wieseler
Pat Melvin



Pricing Proposal
 Quotation #: 12456593
 Created On: 10/31/2016
 Valid Until: 11/30/2016

MN MCLEOD COUNTY

Account Executive

Vincent Traver

830 11th Street East, Suite 111
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 UNITED STATES
 Phone: 320-864-1204
 Fax: 320-864-3410
 Email: Vincent.Traver@co.mcleod.mn.us

Greg Rohleder

MN State Contract #436392
 Phone: (888) 455-0510
 Fax: (651) 455-0977
 Email: greg_rohleder@shi.com

All Prices are in US Dollar (USD)

Product	Qty	Your Price	Total
1 CoreCAL ALNG SA MVL UsrCAL Microsoft - Part#: W06-00446 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	332	\$45.00	\$14,940.00
2 ExchgEntCAL ALNG SA MVL UsrCAL wSrvcs Microsoft - Part#: PGI-00270 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	332	\$23.00	\$7,636.00
3 ExchgSvrEnt ALNG SA MVL Microsoft - Part#: 395-02504 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	1	\$661.00	\$661.00
4 ExchgSvrStd ALNG SA MVL Microsoft - Part#: 312-02257 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	1	\$116.00	\$116.00
5 SharePointSvr ALNG SA MVL Microsoft - Part#: H04-00268 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	1	\$1,109.00	\$1,109.00
6 SQLSvrEntCore ALNG SA MVL 2Lic CoreLic Microsoft - Part#: 7JQ-00343 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	4	\$2,243.00	\$8,972.00
7 SQLSvrStdCore ALNG SA MVL 2Lic CoreLic Microsoft - Part#: 7NQ-00292 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	4	\$585.00	\$2,340.00
8 WinRmtDsktpSrvcsCAL ALNG SA MVL UsrCAL Microsoft - Part#: 6VC-01254	70	\$22.00	\$1,540.00

Coverage Term: 12/1/2016 – 11/30/2017

Note: Annual Payment

9	WinSvrDCCore ALNG SA MVL 2Lic CoreLic Microsoft - Part#: 9EA-00278 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	56	\$126.00	\$7,056.00
10	WinSvrSTDCore ALNG SA MVL 2Lic CoreLic Microsoft - Part#: 9EM-00270 Coverage Term: 12/1/2016 – 11/30/2017 Note: Annual Payment	48	\$18.00	\$864.00
			Total	\$45,234.00

Additional Comments

Please email all quote requests to QuotesMN@SHI.com

Please email all order requests to OrdersMN@SHI.com OR fax 732-564-8280

The Products offered under this proposal are subject to the SHI Return Policy posted at www.shi.com/returnpolicy, unless there is an existing agreement between SHI and the Customer.

Enterprise Enrollment

State and Local

Enterprise Enrollment number <i>(Microsoft to complete)</i>	86213446	Framework ID <i>(if applicable)</i>	
Previous Enrollment number <i>(Reseller to complete)</i>	7468728		

This Enrollment must be attached to a signature form to be valid.

This Microsoft Enterprise Enrollment is entered into between the entities as identified in the signature form as of the effective date. Enrolled Affiliate represents and warrants it is the same Customer, or an Affiliate of the Customer, that entered into the Enterprise Agreement identified on the program signature form.

This Enrollment consists of: (1) these terms and conditions, (2) the terms of the Enterprise Agreement identified on the signature form, (3) the Product Selection Form, (4) the Product Terms, (5) the Online Services Terms, (6) any Supplemental Contact Information Form, Previous Agreement/Enrollment form, and other forms that may be required, and (7) any order submitted under this Enrollment. This Enrollment may only be entered into under a 2011 or later Enterprise Agreement. By entering into this Enrollment, Enrolled Affiliate agrees to be bound by the terms and conditions of the Enterprise Agreement.

All terms used but not defined are located at <http://www.microsoft.com/licensing/contracts>. In the event of any conflict the terms of this Agreement control.

Effective date. If Enrolled Affiliate is renewing Software Assurance or Subscription Licenses from one or more previous Enrollments or agreements, then the effective date will be the day after the first prior Enrollment or agreement expires or terminates. If this Enrollment is renewed, the effective date of the renewal term will be the day after the Expiration Date of the initial term. Otherwise, the effective date will be the date this Enrollment is accepted by Microsoft. Any reference to “anniversary date” refers to the anniversary of the effective date of the applicable initial or renewal term for each year this Enrollment is in effect.

Term. The initial term of this Enrollment will expire on the last day of the month, 36 full calendar months from the effective date of the initial term. The renewal term will expire 36 full calendar months after the effective date of the renewal term.

Terms and Conditions

1. Definitions.

Terms used but not defined in this Enrollment will have the definition in the Enterprise Agreement. The following definitions are used in this Enrollment:

“Additional Product” means any Product identified as such in the Product Terms and chosen by Enrolled Affiliate under this Enrollment.

“Community” means the community consisting of one or more of the following: (1) a Government, (2) an Enrolled Affiliate using eligible Government Community Cloud Services to provide solutions to a Government or a qualified member of the Community, or (3) a Customer with Customer Data that is subject to Government regulations for which Customer determines and Microsoft agrees that the use of Government Community Cloud Services is appropriate to meet Customer’s regulatory requirements.

Membership in the Community is ultimately at Microsoft's discretion, which may vary by Government Community Cloud Service.

"Enterprise Online Service" means any Online Service designated as an Enterprise Online Service in the Product Terms and chosen by Enrolled Affiliate under this Enrollment. Enterprise Online Services are treated as Online Services, except as noted.

"Enterprise Product" means any Desktop Platform Product that Microsoft designates as an Enterprise Product in the Product Terms and chosen by Enrolled Affiliate under this Enrollment. Enterprise Products must be licensed for all Qualified Devices and Qualified Users on an Enterprise-wide basis under this program.

"Expiration Date" means the date upon which the Enrollment expires.

"Federal Agency" means a bureau, office, agency, department or other entity of the United States Government.

"Government" means a Federal Agency, State/Local Entity, or Tribal Entity acting in its governmental capacity.

"Government Community Cloud Services" means Microsoft Online Services that are provisioned in Microsoft's multi-tenant data centers for exclusive use by or for the Community and offered in accordance with the National Institute of Standards and Technology (NIST) Special Publication 800-145. Microsoft Online Services that are Government Community Cloud Services are designated as such in the Use Rights and Product Terms.

"Industry Device" (also known as line of business device) means any device that: (1) is not useable in its deployed configuration as a general purpose personal computing device (such as a personal computer), a multi-function server, or a commercially viable substitute for one of these systems; and (2) only employs an industry or task-specific software program (e.g. a computer-aided design program used by an architect or a point of sale program) ("Industry Program"). The device may include features and functions derived from Microsoft software or third-party software. If the device performs desktop functions (such as email, word processing, spreadsheets, database, network or Internet browsing, or scheduling, or personal finance), then the desktop functions: (1) may only be used for the purpose of supporting the Industry Program functionality; and (2) must be technically integrated with the Industry Program or employ technically enforced policies or architecture to operate only when used with the Industry Program functionality.

"Managed Device" means any device on which any Affiliate in the Enterprise directly or indirectly controls one or more operating system environments. Examples of Managed Devices can be found in the Product Terms.

"Qualified Device" means any device that is used by or for the benefit of Enrolled Affiliate's Enterprise and is: (1) a personal desktop computer, portable computer, workstation, or similar device capable of running Windows Pro locally (in a physical or virtual operating system environment), or (2) a device used to access a virtual desktop infrastructure ("VDI"). Qualified Devices do not include any device that is: (1) designated as a server and not used as a personal computer, (2) an Industry Device, or (3) not a Managed Device. At its option, the Enrolled Affiliate may designate any device excluded above (e.g., Industry Device) that is used by or for the benefit of the Enrolled Affiliate's Enterprise as a Qualified Device for all or a subset of Enterprise Products or Online Services the Enrolled Affiliate has selected.

"Qualified User" means a person (e.g., employee, consultant, contingent staff) who: (1) is a user of a Qualified Device, or (2) accesses any server software requiring an Enterprise Product Client Access License or any Enterprise Online Service. It does not include a person who accesses server software or an Online Service solely under a License identified in the Qualified User exemptions in the Product Terms.

"Reseller" means an entity authorized by Microsoft to resell Licenses under this program and engaged by an Enrolled Affiliate to provide pre- and post-transaction assistance related to this agreement;

“Reserved License” means for an Online Service identified as eligible for true-ups in the Product Terms, the License reserved by Enrolled Affiliate prior to use and for which Microsoft will make the Online Service available for activation.

“State/Local Entity” means (1) any agency of a state or local government in the United States, or (2) any United States county, borough, commonwealth, city, municipality, town, township, special purpose district, or other similar type of governmental instrumentality established by the laws of Customer’s state and located within Customer’s state’s jurisdiction and geographic boundaries.

“Tribal Entity” means a federally-recognized tribal entity performing tribal governmental functions and eligible for funding and services from the U.S. Department of Interior by virtue of its status as an Indian tribe.

“Use Rights” means, with respect to any licensing program, the use rights or terms of service for each Product and version published for that licensing program at the Volume Licensing Site. The Use Rights supersede the terms of any end user license agreement (on-screen or otherwise) that accompanies a Product. The Use Rights for Software are published by Microsoft in the Product Terms. The Use Rights for Online Services are published in the Online Services Terms.

“Volume Licensing Site” means <http://www.microsoft.com/licensing/contracts> or a successor site.

2. Order requirements.

- a. Minimum order requirements.** Enrolled Affiliate’s Enterprise must have a minimum of 250 Qualified Users or Qualified Devices. The initial order must include at least 250 Licenses for Enterprise Products or Enterprise Online Services.
 - (i) Enterprise commitment.** Enrolled Affiliate must order enough Licenses to cover all Qualified Users or Qualified Devices, depending on the License Type, with one or more Enterprise Products or a mix of Enterprise Products and the corresponding Enterprise Online Services (as long as all Qualified Devices not covered by a License are only used by users covered with a user License).
 - (ii) Enterprise Online Services only.** If no Enterprise Product is ordered, then Enrolled Affiliate need only maintain at least 250 Subscription Licenses for Enterprise Online Services.
- b. Additional Products.** Upon satisfying the minimum order requirements above, Enrolled Affiliate may order Additional Products.
- c. Use Rights for Enterprise Products.** For Enterprise Products, if a new Product version has more restrictive use rights than the version that is current at the start of the applicable initial or renewal term of the Enrollment, those more restrictive use rights will not apply to Enrolled Affiliate’s use of that Product during that term.
- d. Country of usage.** Enrolled Affiliate must specify the countries where Licenses will be used on its initial order and on any additional orders.
- e. Resellers.** Enrolled Affiliate must choose and maintain a Reseller authorized in the United States. Enrolled Affiliate will acquire its Licenses through its chosen Reseller. Orders must be submitted to the Reseller who will transmit the order to Microsoft. The Reseller and Enrolled Affiliate determine pricing and payment terms as between them, and Microsoft will invoice the Reseller based on those terms. Throughout this Agreement the term “price” refers to reference price. Resellers and other third parties do not have authority to bind or impose any obligation or liability on Microsoft.
- f. Adding Products.**
 - (i) Adding new Products not previously ordered.** New Enterprise Products or Enterprise Online Services may be added at any time by contacting a Microsoft Account Manager or Reseller. New Additional Products, other than Online Services, may be used if an order

is placed in the month the Product is first used. For Additional Products that are Online Services, an initial order for the Online Service is required prior to use.

- (ii) **Adding Licenses for previously ordered Products.** Additional Licenses for previously ordered Products other than Online Services may be added at any time but must be included in the next true-up order. Additional Licenses for Online Services must be ordered prior to use, unless the Online Services are (1) identified as eligible for true-up in the Product Terms or (2) included as part of other Licenses.
- g. True-up requirements.** Enrolled Affiliate must submit an annual true-up order that accounts for any changes since the initial order or last order. If there are no changes, then an update statement must be submitted instead of a true-up order.

 - (i) **Enterprise Products.** For Enterprise Products, Enrolled Affiliate must determine the number of Qualified Devices and Qualified Users (if ordering user-based Licenses) at the time the true-up order is placed and must order additional Licenses for all Qualified Devices and Qualified Users that are not already covered by existing Licenses, including any Enterprise Online Services.
 - (ii) **Additional Products.** For Additional Products that have been previously ordered under this Enrollment, Enrolled Affiliate must determine the maximum number of Additional Products used since the latter of the initial order, the last true-up order, or the prior anniversary date and submit a true-up order that accounts for any increase.
 - (iii) **Online Services.** For Online Services identified as eligible for true-up in the Product Terms, Enrolled Affiliate may place a reservation order for the additional Licenses prior to use and payment may be deferred until the next true-up order. Microsoft will provide a report of Reserved Licenses ordered but not yet invoiced to Enrolled Affiliate and its Reseller. Reserved Licenses will be invoiced retroactively to the month in which they were ordered.
 - (iv) **Subscription License reductions.** Enrolled Affiliate may reduce the quantity of Subscription Licenses at the Enrollment anniversary date on a prospective basis if permitted in the Product Terms, as follows:

 - 1) For Subscription Licenses that are part of an Enterprise-wide purchase, Licenses may be reduced if the total quantity of Licenses and Software Assurance for an applicable group meets or exceeds the quantity of Qualified Devices and Qualified Users (if ordering user-based Licenses) identified on the Product Selection Form, and includes any additional Qualified Devices and Qualified Users added in any prior true-up orders. Step-up Licenses do not count towards this total count.
 - 2) For Enterprise Online Services that are not a part of an Enterprise-wide purchase, Licenses can be reduced as long as the initial order minimum requirements are maintained.
 - 3) For Additional Products available as Subscription Licenses, Enrolled Affiliate may reduce the Licenses. If the License count is reduced to zero, then Enrolled Affiliate's use of the applicable Subscription License will be cancelled.

Invoices will be adjusted to reflect any reductions in Subscription Licenses at the true-up order Enrollment anniversary date and effective as of such date.
 - (v) **Update statement.** An update statement must be submitted instead of a true-up order if, since the initial order or last true-up order, Enrolled Affiliate's Enterprise: (1) has not changed the number of Qualified Devices and Qualified Users licensed with Enterprise Products or Enterprise Online Services; and (2) has not increased its usage of Additional Products. This update statement must be signed by Enrolled Affiliate's authorized representative.
 - (vi) **True-up order period.** The true-up order or update statement must be received by Microsoft between 60 and 30 days prior to each Enrollment anniversary date. The third-

year true-up order or update statement is due within 30 days prior to the Expiration Date, and any license reservations within this 30 day period will not be accepted. Enrolled Affiliate may submit true-up orders more often to account for increases in Product usage, but an annual true-up order or update statement must still be submitted during the annual order period.

- (vii) **Late true-up order.** If the true-up order or update statement is not received when due, Microsoft will invoice Reseller for all Reserved Licenses not previously invoiced and Subscription License reductions cannot be reported until the following Enrollment anniversary date (or at Enrollment renewal, as applicable).
- h. Step-up Licenses.** For Licenses eligible for a step-up under this Enrollment, Enrolled Affiliate may step-up to a higher edition or suite as follows:

 - (i) For step-up Licenses included on an initial order, Enrolled Affiliate may order according to the true-up process.
 - (ii) If step-up Licenses are not included on an initial order, Enrolled Affiliate may step-up initially by following the process described in the Section titled "Adding new Products not previously ordered," then for additional step-up Licenses, by following the true-up order process.
- i. Clerical errors.** Microsoft may correct clerical errors in this Enrollment, and any documents submitted with or under this Enrollment, by providing notice by email and a reasonable opportunity for Enrolled Affiliate to object to the correction. Clerical errors include minor mistakes, unintentional additions and omissions. This provision does not apply to material terms, such as the identity, quantity or price of a Product ordered.
- j. Verifying compliance.** Microsoft may, in its discretion and at its expense, verify compliance with this Enrollment as set forth in the Enterprise Agreement.

3. Pricing.

- a. Price Levels.** For both the initial and any renewal term Enrolled Affiliate's Price Level for all Products ordered under this Enrollment will be Level "D" throughout the term of the Enrollment.
- b. Setting Prices.** Enrolled Affiliate's prices for each Product or Service will be established by its Reseller. Except for Online Services designated in the Product Terms as being exempt from fixed pricing, As long as Enrolled Affiliate continues to qualify for the same price level, Microsoft's prices for Resellers for each Product or Service ordered will be fixed throughout the applicable initial or renewal Enrollment term. Microsoft's prices to Resellers are reestablished at the beginning of the renewal term.

4. Payment terms.

For the initial or renewal order, Enrolled Affiliate may pay upfront or elect to spread its payments over the applicable Enrollment term. If an upfront payment is elected, Microsoft will invoice Enrolled Affiliate's Reseller in full upon acceptance of this Enrollment. If spread payments are elected, unless indicated otherwise, Microsoft will invoice Enrolled Affiliate's Reseller in three equal annual installments. The first installment will be invoiced upon Microsoft's acceptance of this Enrollment and remaining installments will be invoiced on each subsequent Enrollment anniversary date. Subsequent orders are invoiced upon acceptance of the order and Enrolled Affiliate may elect to pay annually or upfront for Online Services and upfront for all other Licenses.

5. **End of Enrollment term and termination.**

- a. **General.** At the Expiration Date, Enrolled Affiliate must immediately order and pay for Licenses for Products it has used but has not previously submitted an order, except as otherwise provided in this Enrollment.
- b. **Renewal option.** At the Expiration Date of the initial term, Enrolled Affiliate can renew Products by renewing this Enrollment for one additional 36-month term or by signing a new Enrollment. Microsoft must receive a Renewal Form, Product Selection Form, and renewal order prior to or at the Expiration Date. Microsoft will not unreasonably reject any renewal. Microsoft may make changes to this program that will make it necessary for Customer and its Enrolled Affiliates to enter into new agreements and Enrollments at renewal.
- c. **If Enrolled Affiliate elects not to renew.**
 - (i) **Software Assurance.** If Enrolled Affiliate elects not to renew Software Assurance for any Product under its Enrollment, then Enrolled Affiliate will not be permitted to order Software Assurance later without first acquiring a new License with Software Assurance.
 - (ii) **Online Services eligible for an Extended Term.** For Online Services identified as eligible for an Extended Term in the Product Terms, the following options are available at the end of the Enrollment initial or renewal term.
 - 1) **Extended Term.** Licenses for Online Services will automatically expire in accordance with the terms of the Enrollment. An extended term feature that allows Online Services to continue month-to-month ("Extended Term") for up to one year, unless designated in the Product Terms to continue until cancelled, is available. During the Extended Term, Online Services will be invoiced monthly at the then-current published price as of the Expiration Date plus a 3% administrative fee. If Enrolled Affiliate wants an Extended Term, Enrolled Affiliate must submit a request to Microsoft at least 30 days prior to the Expiration Date.
 - 2) **Cancellation during Extended Term.** At any time during the first year of the Extended Term, Enrolled Affiliate may terminate the Extended Term by submitting a notice of cancellation to Microsoft for each Online Service. Thereafter, either party may terminate the Extended Term by providing the other with a notice of cancellation for each Online Service. Cancellation will be effective at the end of the month following 30 days after Microsoft has received or issued the notice.
 - (iii) **Subscription Licenses and Online Services not eligible for an Extended Term.** If Enrolled Affiliate elects not to renew, the Licenses will be cancelled and will terminate as of the Expiration Date. Any associated media must be uninstalled and destroyed and Enrolled Affiliate's Enterprise must discontinue use. Microsoft may request written certification to verify compliance.
- d. **Termination for cause.** Any termination for cause of this Enrollment will be subject to the "Termination for cause" section of the Agreement. In addition, it shall be a breach of this Enrollment if Enrolled Affiliate or any Affiliate in the Enterprise that uses Government Community Cloud Services fails to meet and maintain the conditions of membership in the definition of Community.
- e. **Early termination.** Any early termination of this Enrollment will be subject to the "Early Termination" Section of the Enterprise Agreement.

For Subscription Licenses, in the event of a breach by Microsoft, or if Microsoft terminates an Online Service for regulatory reasons, Microsoft will issue Reseller a credit for any amount paid in advance for the period after termination.

6. **Government Community Cloud.**

- a. **Community requirements.** If Enrolled Affiliate purchases Government Community Cloud Services, Enrolled Affiliate certifies that it is a member of the Community and agrees to use Government Community Cloud Services solely in its capacity as a member of the Community and, for eligible Government Community Cloud Services, for the benefit of end users that are members of the Community. Use of Government Community Cloud Services by an entity that is not a member of the Community or to provide services to non-Community members is strictly prohibited and could result in termination of Enrolled Affiliate's license(s) for Government Community Cloud Services without notice. Enrolled Affiliate acknowledges that only Community members may use Government Community Cloud Services.
- b. All terms and conditions applicable to non-Government Community Cloud Services also apply to their corresponding Government Community Cloud Services, except as otherwise noted in the Use Rights, Product Terms, and this Enrollment.
- c. Enrolled Affiliate may not deploy or use Government Community Cloud Services and corresponding non-Government Community Cloud Services in the same domain.
- d. **Use Rights for Government Community Cloud Services.** For Government Community Cloud Services, notwithstanding anything to the contrary in the Use Rights:
 - (i) Government Community Cloud Services will be offered only within the United States.
 - (ii) Additional European Terms, as set forth in the Use Rights, will not apply.
 - (iii) References to geographic areas in the Use Rights with respect to the location of Customer Data at rest, as set forth in the Use Rights, refer only to the United States.

Enrollment Details

1. Enrolled Affiliate's Enterprise.

- a. Identify which Agency Affiliates are included in the Enterprise. (Required) Enrolled Affiliate's Enterprise must consist of entire offices, bureaus, agencies, departments or other entities of Enrolled Affiliate, not partial offices, bureaus, agencies, or departments, or other partial entities. Check only one box in this section. If no boxes are checked, Microsoft will deem the Enterprise to include the Enrolled Affiliate only. If more than one box is checked, Microsoft will deem the Enterprise to include the largest number of Affiliates:
- Enrolled Affiliate only
 - Enrolled Affiliate and all Affiliates
 - Enrolled Affiliate and the following Affiliate(s) (Only identify specific affiliates to be included if fewer than all Affiliates are to be included in the Enterprise):

 - Enrolled Affiliate and all Affiliates, with following Affiliate(s) excluded:
- b. Please indicate whether the Enrolled Affiliate's Enterprise will include all new Affiliates acquired after the start of this Enrollment: Exclude future Affiliates

2. Contact information.

Each party will notify the other in writing if any of the information in the following contact information page(s) changes. The asterisks (*) indicate required fields. By providing contact information, Enrolled Affiliate consents to its use for purposes of administering this Enrollment by Microsoft, its Affiliates, and other parties that help administer this Enrollment. The personal information provided in connection with this Enrollment will be used and protected in accordance with the privacy statement available at <https://www.microsoft.com/licensing/servicecenter>.

- a. **Primary contact.** This contact is the primary contact for the Enrollment from within Enrolled Affiliate's Enterprise. This contact is also an Online Administrator for the Volume Licensing Service Center and may grant online access to others. The primary contact will be the default contact for all purposes unless separate contacts are identified for specific purposes

Name of entity (must be legal entity name)* McLeod County
Contact name* First Vincent **Last** Traver
Contact email address* Vincent.traver@co.mcleod.mn.us
Street address* 830 11th Street East suite 111
City* Glencoe
State/Province* MN
Postal code* 55336-2200-
(For U.S. addresses, please provide the zip + 4, e.g. xxxxx-xxxx)
Country* United States
Phone* 320-864-1204
Tax ID
** indicates required fields*

- b. **Notices contact and Online Administrator.** This contact (1) receives the contractual notices, (2) is the Online Administrator for the Volume Licensing Service Center and may grant online access to others, and (3) is authorized to order Reserved Licenses for eligible

Online Services, including adding or reassigning Licenses and stepping-up prior to a true-up order.

Same as primary contact (default if no information is provided below, even if the box is not checked).

Contact name* First Vincent Last Traver
Contact email address* Vincent.traver@co.mcleod.mn.us
Street address* 830 11th Street East suite 111
City* Glencoe
State/Province* MN
Postal code* 55336-2200-
(For U.S. addresses, please provide the zip + 4, e.g. xxxxx-xxxx)
Country* United States
Phone* 320-864-1204

Language preference. Choose the language for notices. English
 This contact is a third party (not the Enrolled Affiliate). Warning: This contact receives personally identifiable information of the Customer and its Affiliates.
** indicates required fields*

c. **Online Services Manager.** This contact is authorized to manage the Online Services ordered under the Enrollment and (for applicable Online Services) to add or reassign Licenses and step-up prior to a true-up order.

Same as notices contact and Online Administrator (default if no information is provided below, even if box is not checked)

Contact name*: First Vincent Last Traver
Contact email address* Vincent.traver@co.mcleod.mn.us
Phone* 320-864-1204

This contact is from a third party organization (not the entity). Warning: This contact receives personally identifiable information of the entity.
** indicates required fields*

d. **Reseller information.** Reseller contact for this Enrollment is:

Reseller company name* SHI International Corp.
Street address (PO boxes will not be accepted)* 290 Davidson Ave
City* Somerset
State/Province* NJ
Postal code* 08873
Country* United States
Contact name* Kristin Colin
Phone* 888-764-8888
Contact email address* Msteam@shi.com
** indicates required fields*

By signing below, the Reseller identified above confirms that all information provided in this Enrollment is correct.

Signature* _____
Printed name*
Printed title*
Date*

** indicates required fields*

Changing a Reseller. If Microsoft or the Reseller chooses to discontinue doing business with each other, Enrolled Affiliate must choose a replacement Reseller. If Enrolled Affiliate or the Reseller intends to terminate their relationship, the initiating party must notify Microsoft and the other party using a form provided by Microsoft at least 90 days prior to the date on which the change is to take effect.

- e. If Enrolled Affiliate requires a separate contact for any of the following, attach the Supplemental Contact Information form. *Otherwise, the notices contact and Online Administrator remains the default.*
- (i) Additional notices contact
 - (ii) Software Assurance manager
 - (iii) Subscriptions manager
 - (iv) Customer Support Manager (CSM) contact

3. *Financing elections.*

Is a purchase under this Enrollment being financed through MS Financing? Yes, No.

If a purchase under this Enrollment is financed through MS Financing, and Enrolled Affiliate chooses not to finance any associated taxes, it must pay these taxes directly to Microsoft.

Physically Submitted

Previous Enrollment(s)/Agreement(s) Form

Entity Name: McLeod County

Contract that this form is attached to: State Local Government

For the purposes of this form, "entity" can mean the signing entity, Customer, Enrolled Affiliate, Government Partner, Institution, or other party entering into a volume licensing program agreement.

Please provide a description of the previous Enrollment(s), Agreement(s), Purchasing Account(s), and/or Affiliate Registration(s) being renewed or consolidated into the new contract identified above.

- a. Entity may select below any previous contract(s) from which to transfer MSDN subscribers to this new contract. Entity shall ensure that each MSDN subscriber transferred is either properly licensed under the new contract or is removed.
- b. Entity may select below only one previous contract from which to transfer the Software Assurance (SA) Benefit contact details, i.e., benefits contact (*not* the SA manager) and the program codes, to this new contract.
- c. An Open License cannot be used to transfer either the SA Benefit details or MSDN subscribers.
- d. The date of the earliest expiring Enrollment/Agreement that contains SA or Online Services will be the effective date of the new contract (or SA coverage period for Select Plus).
- e. Please insert the number of the earliest expiring Enrollment/Agreement with SA or Online Services in the appropriate fields of the new contract.

Enrollment/Agreement/ Purchasing Account/Affiliate Registration Description	Enrollment/Agreement/ Purchasing Account/Affiliate Registration Public Customer Number	Transfer SA Benefit Contact	Transfer MSDN Subscribers
Standard Enrollment	7468728	X	X

Program Signature Form

MBA/MBSA number	<input type="text"/>	<input type="text"/>
Agreement number	01E73816	

Note: Enter the applicable active numbers associated with the documents below. Microsoft requires the associated active number be indicated here, or listed below as new.

For the purposes of this form, "Customer" can mean the signing entity, Enrolled Affiliate, Government Partner, Institution, or other party entering into a volume licensing program agreement.

This signature form and all contract documents identified in the table below are entered into between the Customer and the Microsoft Affiliate signing, as of the effective date identified below.

Contract Document	Number or Code
Enterprise Enrollment (Indirect)	X20-10634
Product Selection Form	0541699.005_PSF

By signing below, Customer and the Microsoft Affiliate agree that both parties (1) have received, read and understand the above contract documents, including any websites or documents incorporated by reference and any amendments and (2) agree to be bound by the terms of all such documents.

Customer
Name of Entity (must be legal entity name)* McLeod County
Signature* _____
Printed First and Last Name* _____
Printed Title _____
Signature Date* _____
Tax ID _____

** indicates required field*

Microsoft Affiliate
Microsoft Corporation
Signature _____
Printed First and Last Name _____
Printed Title _____
Signature Date (date Microsoft Affiliate countersigns)
Agreement Effective Date (may be different than Microsoft's signature date)

Optional 2nd Customer signature or Outsourcer signature (if applicable)

Customer
Name of Entity (must be legal entity name)*
Signature* _____
Printed First and Last Name*
Printed Title
Signature Date*

** indicates required field*

Outsourcer
Name of Entity (must be legal entity name)*
Signature* _____
Printed First and Last Name*
Printed Title
Signature Date*

** indicates required field*

If Customer requires physical media, additional contacts, or is reporting multiple previous Enrollments, include the appropriate form(s) with this signature form.

After this signature form is signed by the Customer, send it and the Contract Documents to Customer's channel partner or Microsoft account manager, who must submit them to the following address. When the signature form is fully executed by Microsoft, Customer will receive a confirmation copy.

Microsoft Corporation
Dept. 551, Volume Licensing
6100 Neil Road, Suite 210
Reno, Nevada 89511-1137
USA

STATE OF MINNESOTA COUNTY OF McLeod
CONTRACT
McLeod County Security and Surveillance System

This agreement, made this November 22nd, 2016, between the County of McLeod in the State of Minnesota, party of the first part, hereinafter called the County, and, UHL Company, 9065 Zachary Ln N, Maple Grove, MN 55369, party of the second part, hereinafter called the Contractor. Witnesseth, that the contractor, for and in consideration of the payment or payments herein specified and by the County to be made, hereby covenants and agrees to furnish all materials (except such as is specified to be furnished by the County), all necessary tools and equipment and to do and perform all the work and labor in the completion of the McLeod County Security and Surveillance System, as shown on approved plans and stipulated in the RFP Document provided by the County for the price and compensation set forth and specified in the proposal of \$172,369.00 for Option1, signed by the Contractor and hereto attached and hereby made a part of this agreement, said work to be done and performed in accordance with the Plans, Specifications, and Special Provision therefore on file in the office of the County Auditor of said County, which Plans, Specifications, and Special Provision are hereby made a part of this agreement.

IN WITNESS WHEREOF, This said County has caused these presents to be executed and the contractor has hereunto subscribed their name.

Dated at Glencoe, this 22nd day of November, 2016

_____ Date

County of McLeod

By _____
Chairman County Board, and

President or Vice President

County Administrator

Secretary or Treasurer

Contractor

Approved as to form and execution this _____ day of _____, _____.

County Attorney

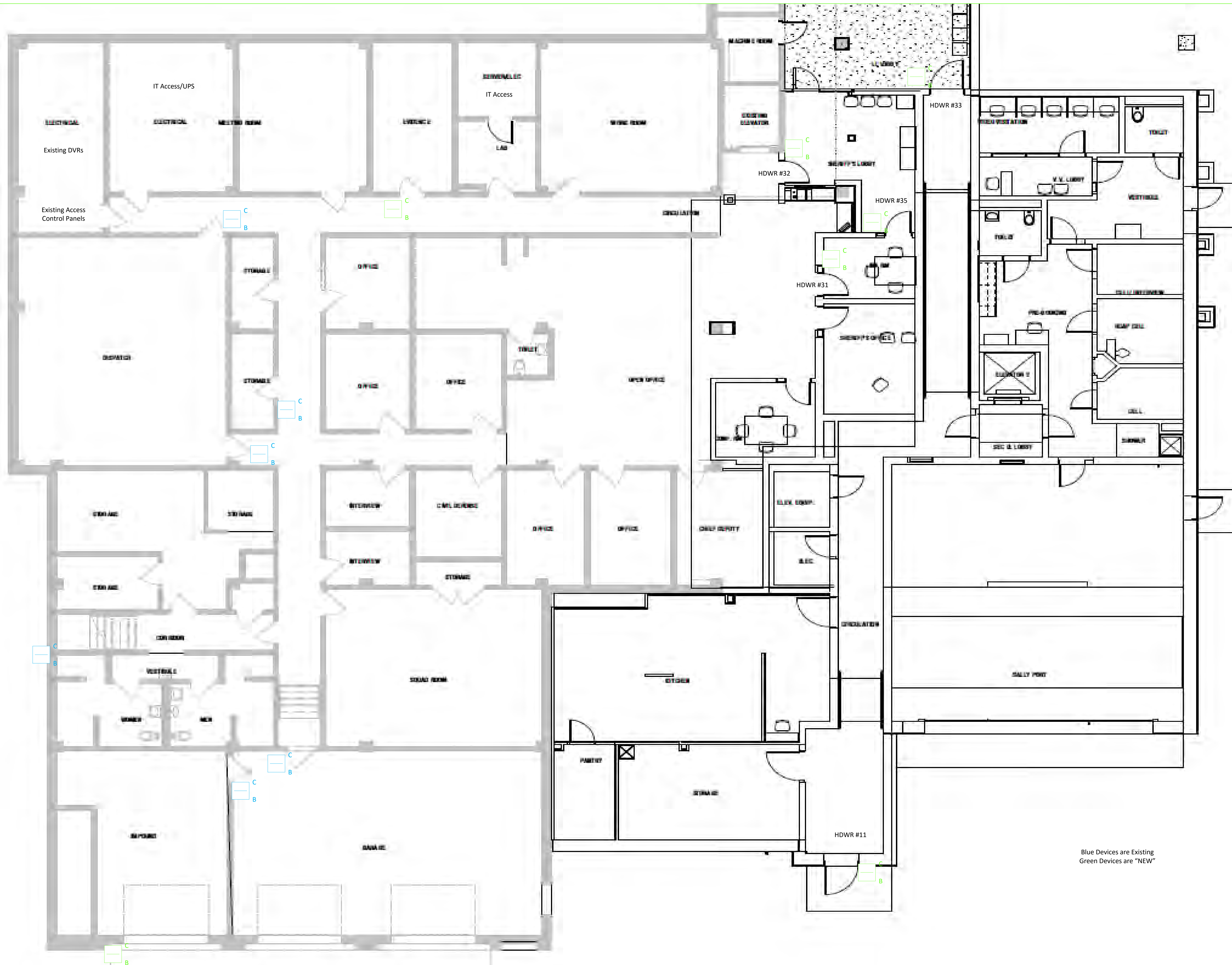


The UHL Company Presents...

McLeod County
Security/Surveillance
System

RFP Response



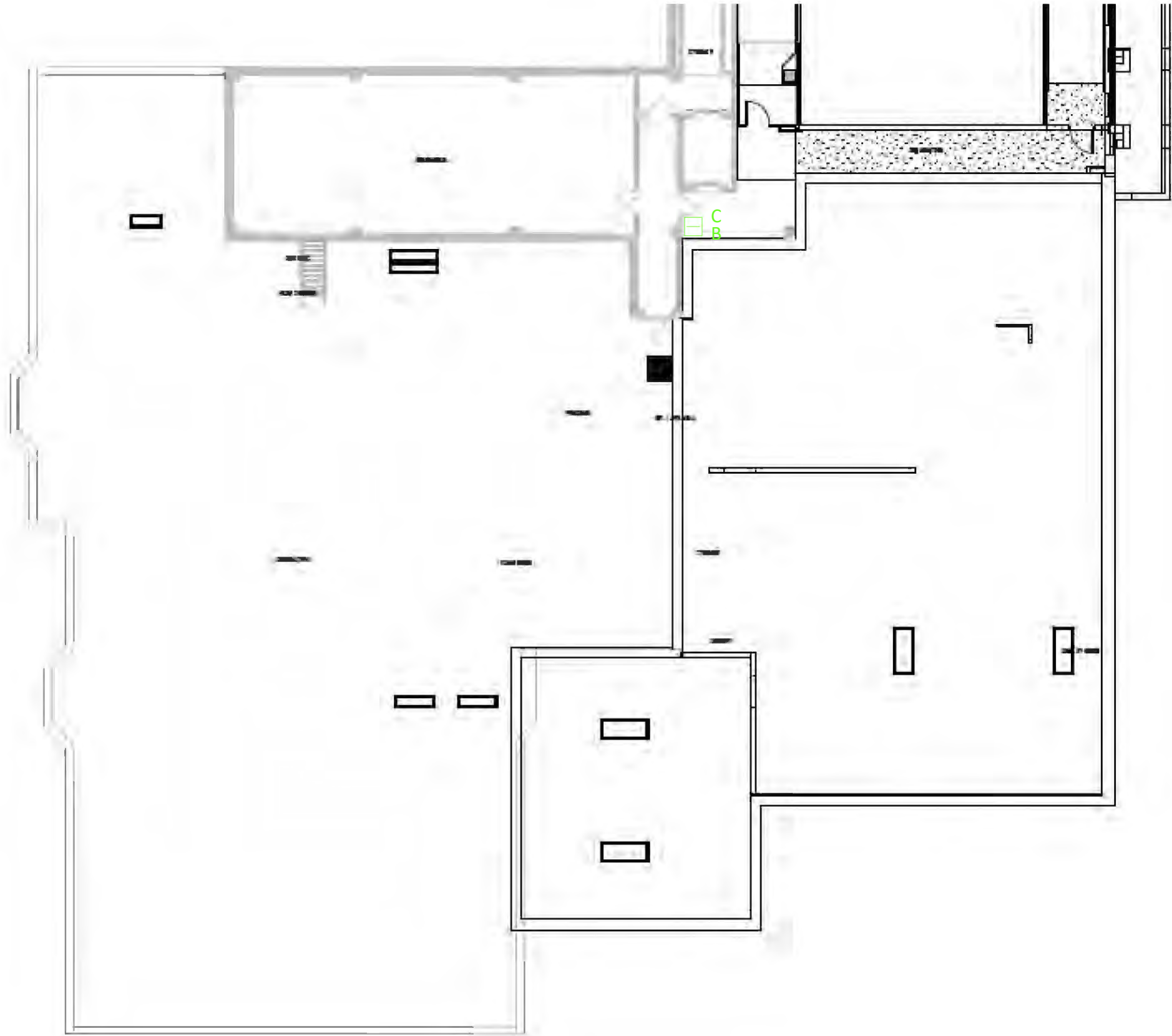


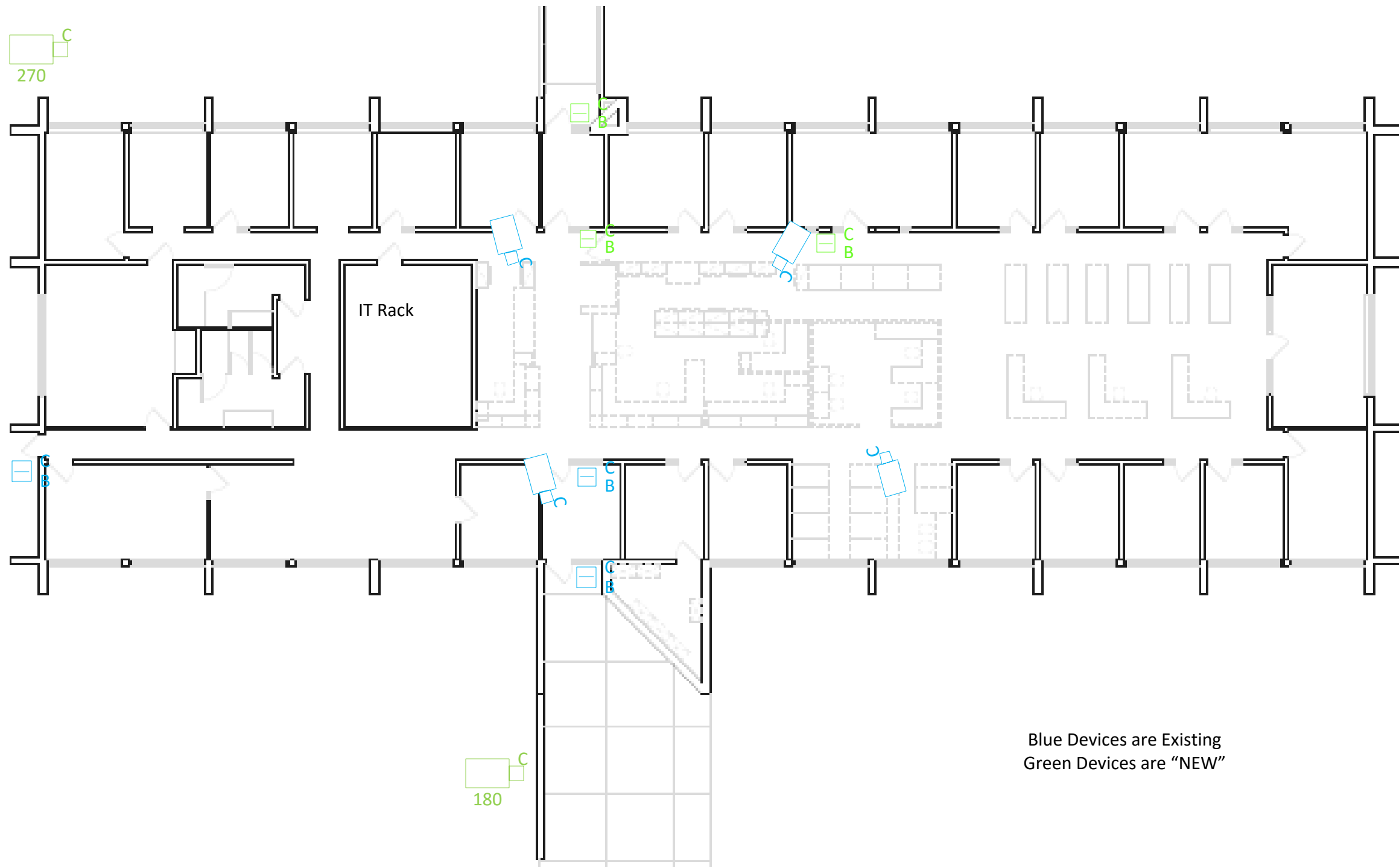
Blue Devices are Existing
Green Devices are "NEW"



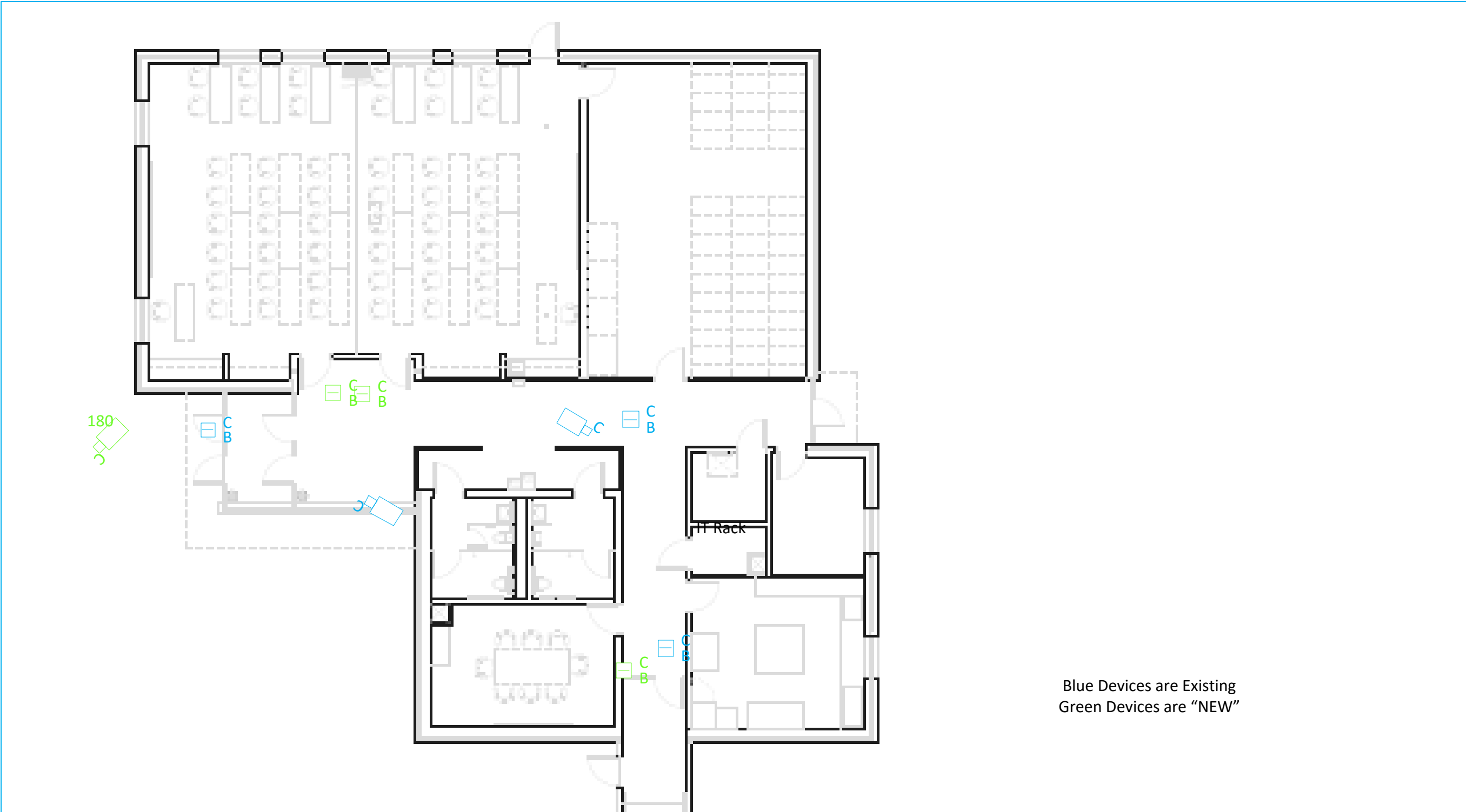




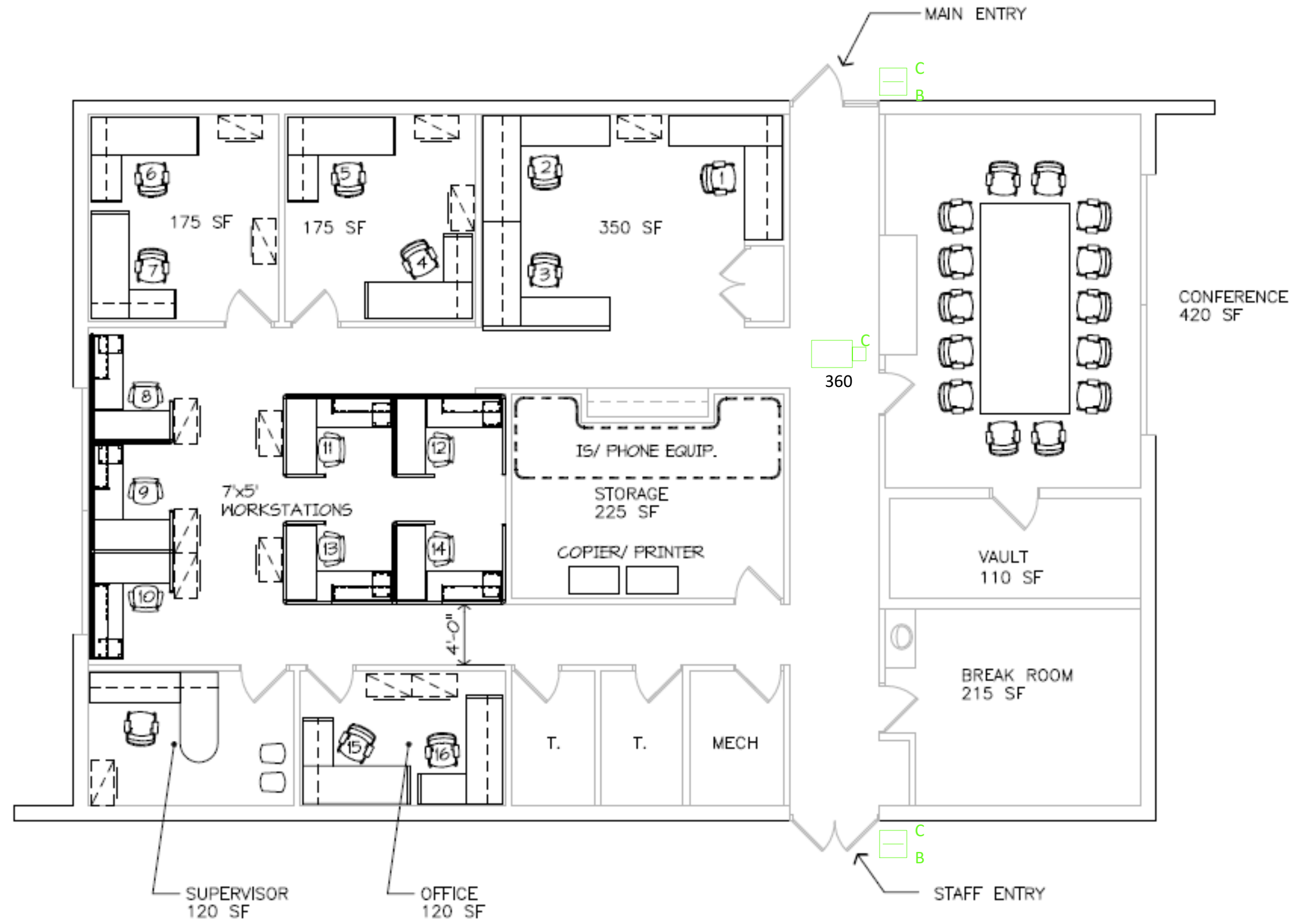


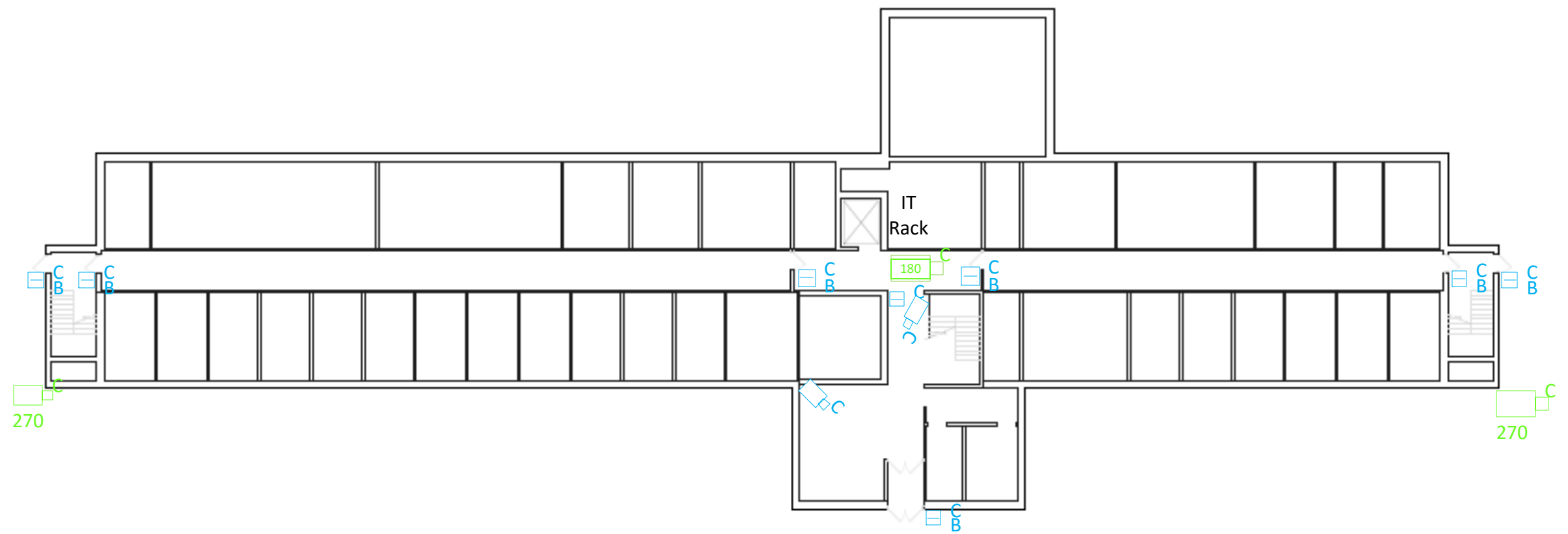


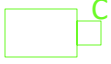
Blue Devices are Existing
Green Devices are "NEW"

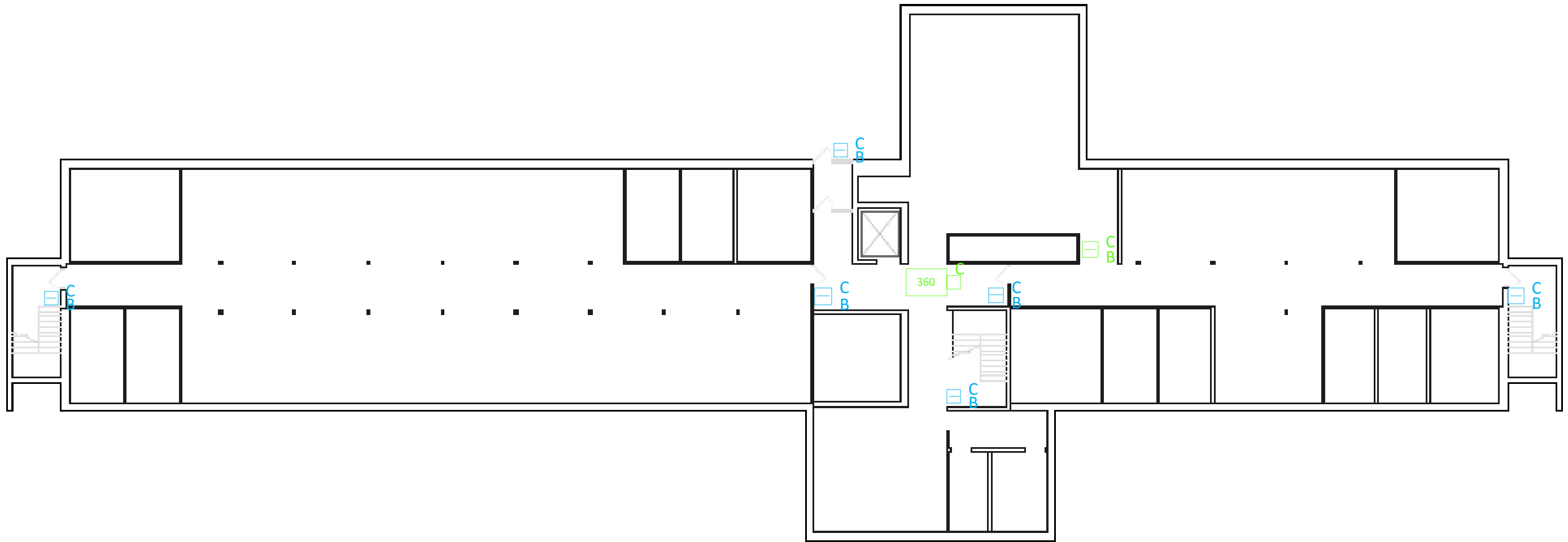


ANNEX

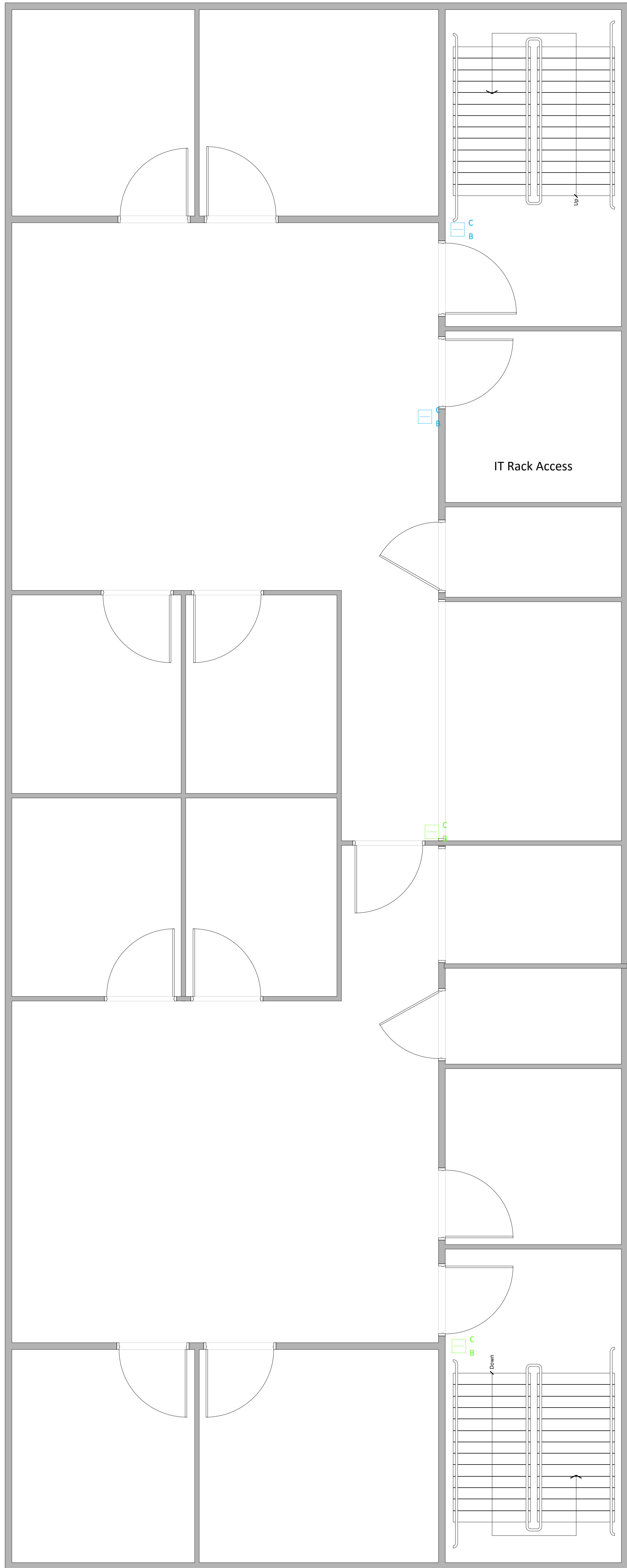




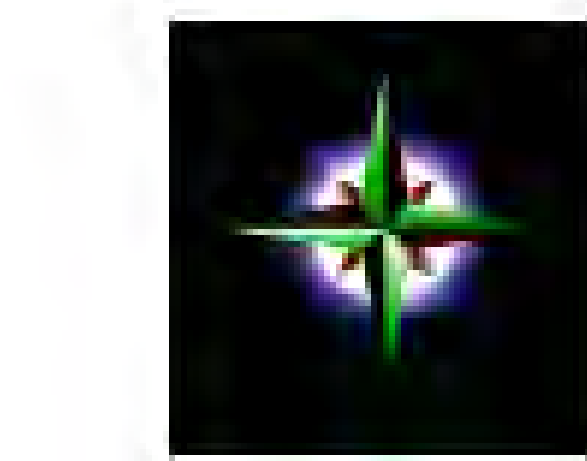
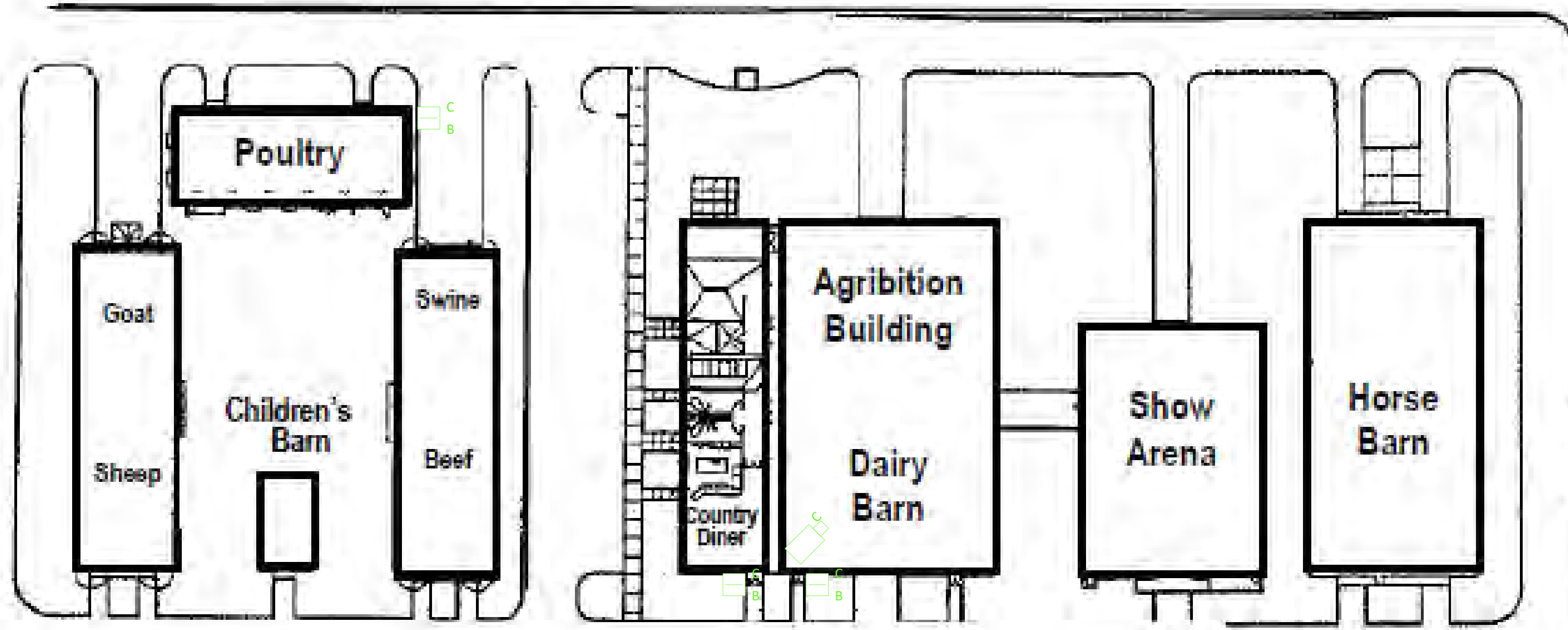

180 degree pole-mounted
camera



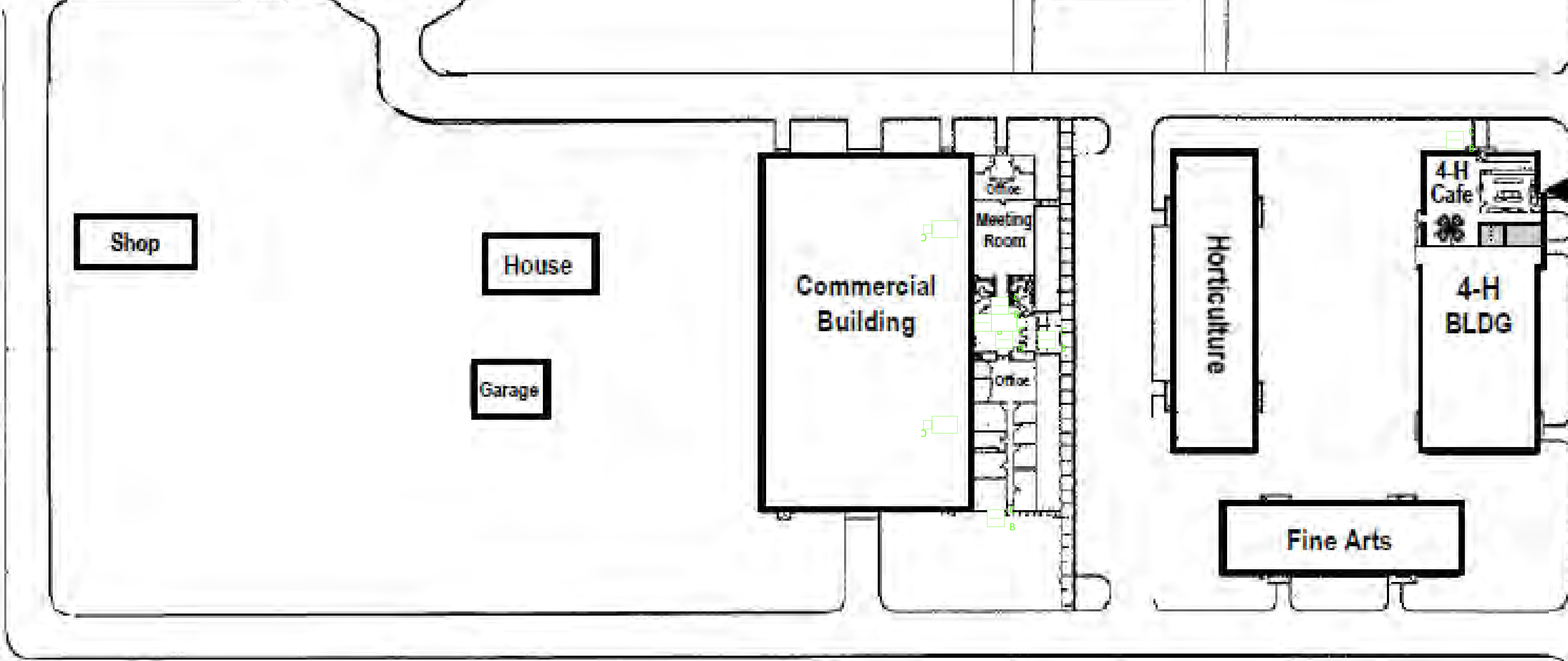
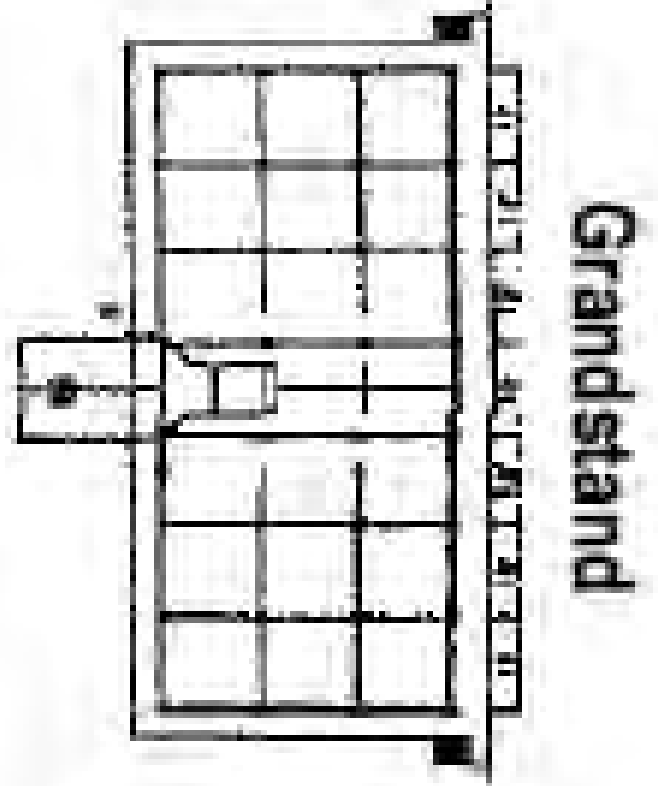




FAIRGROUNDS



← To Century Ave



West Parking Lot



Thursday, September 29, 2016

UHL is pleased to provide you a fully integrated system consisting of industry leading S2 Access Control and Panasonic VideoInsight Video Management. The proposed systems have many features that greatly lower the cost of ownership while providing the best of the best feature sets. These products have proven themselves to be the go to industry standard for municipal applications due to their unique architecture such as browser based control with zero client licenses as well as lifetime camera licenses and no cost android and iOS applications. The proposed systems have proven themselves to be the most stable products on the market with an architecture that allows for continued growth of the system for years to come. All with the lowest cost of ownership available today.

Our company has been selling and installing these systems for over 10 years and we have been in business since 1917. We specialize in multi-site municipal installations and provide value add services that our competitors simple cannot.

We also have a large number of employees that reside in or around the McLeod area that can be utilized for service and installation needs

UHL has extensive background in all aspects of the proposed installation; our technicians carry all the necessary certifications. We provide our services to many municipalities and have developed many long lasting working relationships based on our expertise and ability to meet construction schedules.

Base Bid Total
\$172,369.00

Add/Alt Option 1
\$21,316.00

Prepared and Provided By:

Jeff Eichenberger



About the UHL Company:

Our Mission Statement: To provide top quality products and services to our customers and create a workplace environment that promotes career growth and technical excellence.

Company History: Founded in 1917 By Ed and Bill Uhl representing Vulcan Radiation. Entered Temperature Control Business in 1954 with Barber-Colman Product Line. Today we are Proudly a Schneider Electric Strategic Partner with offices in Maple Grove MN, Duluth MN, Rochester MN, Bismarck ND, & Mohawk MI.

UHL Security/FIRE Division: Security Division initially formed in 2000 to bring the thought of complete building automation to reality. Over the last 15 years we have made significant growth in all areas of low voltage including the addition of Voice/Data Services for our customers. We pride ourselves on our extensive design and installation abilities on our track record of providing the most state of the art stable systems available today. We have also experienced extensive growth of our Fire Division with the addition of a NICET certified master electrician who brings 15 years of experience in fire alarm design. UHL Company is also fully UL Certified to satisfy your Fire Alarm installation, testing/service, & monitoring needs.

Security/FIRE Division References:

- Gaviidae Commons
- Southdale Shopping Center
- Rosedale Shopping Center
- City of Eagan, MN
- City of St. Louis Park, MN
- Enbridge, Duluth/Superior
- City of Hermantown
- City of Woodbury, MN
- Fairview Ridges
- Central Lakes College
- So. Washington County Schools
- St. Cloud Area Schools
- Erik's Bike Shops
- US Bank

Security Division Access Control Product Lines:



Security Division CCTV Product Lines:



Security Division Intrusion Monitoring Product Lines:



FIRE Division Product Line:



Summary/Overview:

Install and implement a complete county wide integrated IP Based Access Control and IP Based Video Surveillance System with industry leading products consisting of S2 IP Access Control and Panasonic VideoInsight Video Management (VI). Our material list is based on the RFP we received as well as our time spent walking through the facilities during the design phase of this project beginning last year. We have also had the pleasure of being your access control vendor for the Solid Waste Facility and Fairgrounds for many years where we provided very cost effective solutions. We understand the necessity of providing rock solid stable low cost of ownership solutions. We fully understand the scope and intention of this countywide project.

The proposed systems are fully Virtual Machine compatible and offer industry leading features such as web browser based control which provides zero cost for client connections. These systems have proven to be very stable and offer a very low cost of ownership while being full featured in fact both platforms software interfaces are the same enterprise level package not matter if you have a small system or a large distributed architecture system. This means they are NOT tier solutions where once you get to a certain quantity of doors or cameras you must move to a new software package. With our proposed systems you will have the ability to grow your system without concern of needing to replace the control systems. The combination of S2 and VI have become the industry standard for municipal installations and allow for unlimited remote locations and with a very easy to use interface that can be configured to allow for any level of access to an at the site user all the way to system wide access for administrators.

The proposed Panasonic VideoInsight VMS includes LIFETIME cameras license's that are FREE with purchase of all new Panasonic/i-Pro and Panasonic/Advidia brand cameras, But lifetime licenses are also available for any other brand/model of camera. This offers massive annual cost savings as most VMS manufactures require an annual per camera fee. Panasonic VideoInsight includes lifetime software upgrades at no additional charge to you.

The proposed S2 Access Control system includes the first year of Software Upgrade and Support Program (SUSP) we have included costs for 3 and 5 year extensions. This is an optional program UNLIKE many other products on the market that are MANDATORY. This gives you the option to decide if you want to upgrade or not without losing any system functionality which happens on system with mandatory upgrades. The S2 system upgrades have the added benefit of being very easy to deploy. In fact the process only takes minutes to complete and automatically updates all controllers on the system no matter where they are located though any speed of network connection. The system also fully backups up itself meaning if a catastrophic failure occurred the backup is easily loaded onto new hardware and you are and running in a very short period of time.

We are confident the systems we have proposed and the staff we employ will meet and exceed the design criteria provided in your RFP. We have many long term ongoing relationships providing systems on this scale.

We also have a large presence of employees that live in or around the county that we can utilize for your installation and service needs today and into the future. In fact one of our owners Tim Jilek is a lifetime resident of the area and his family still operates a family farm.

UHL is well rooted in the community; here is a short list of the many employees that are an active part in the McLeod County area:

Electricians:

Mike Victorian
Cory Albers
Jeff Deyonge
Rory Hench
Ryan Dalman
Mark Lubrant

Technicians:

Brian Chistianson
Bob Vasko
Randell Wilson
Darrin Nubarth

Sales:

Chris Jilek
Jake Lehman

Retired:

Randy Halvka
Dirk Lehman



AIA Document A310™ – 2010

Bond No. UB001391

Bid Bond

CONTRACTOR:

(Name, legal status and address)

Uhl Company, Inc.
9065 Zachary Lane North

Maple Grove, MN 55369

SURETY:

(Name, legal status and principal place of business)

United Fire & Casualty Company
P.O. Box 73909
118 - 2nd Ave SE (Zip 52401)
Cedar Rapids, IA 52407

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:

(Name, legal status and address)

McLeod County

BOND AMOUNT: Five Percent of the Bid Amount (5% of Bid Amount)

PROJECT: McLeod County Security/Surveillance System

(Name, location or address, and Project number, if any)

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 28th day of September, 2016

Brian W. Ulsiel
(Witness)

[Signature]
(Witness)

Uhl Company, Inc.
(Principal) [Signature] (Seal)
(Title)

United Fire & Casualty Company
(Surety) [Signature] (Seal)
(Title) Thomas B. Kemp, Attorney-in-Fact

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original assures that changes will not be obscured.

ACKNOWLEDGMENT OF PRINCIPAL (Individual)

State of _____)
County of _____)

On this _____ day of _____ in the year _____, before me personally come(s) _____, to me known and known to me to be the person(s) who (is) (are) described in and executed the foregoing instrument and acknowledge(s) to me that ___ he ___ executed the same.

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL (Partnership)

State of _____)
County of _____)

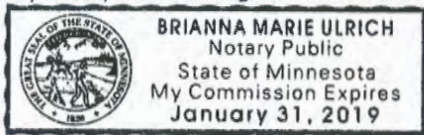
On this _____ day of _____ in the year _____, before me personally come(s) _____, a member of the co-partnership of _____, to me known and known to me to be the person who is described in and executed the foregoing instrument and acknowledges to me that he executed the same as for the act and deed of the said co-partnership.

Notary Public

ACKNOWLEDGMENT OF PRINCIPAL (Corporation)

State of Minnesota)
County of Hennepin)

On this 29th day of September in the year 2016, before me personally come(s) Paul Jackson, to me known, who, being duly sworn, deposes and says that he is the CFO of the LHI Company, Inc. the corporation described in and which executed the foregoing instrument; that he knows the seal of the said corporation; the seal affixed to the said instrument is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation, and that he signed his name thereto by like order.



Brianna Ulrich
Notary Public

ACKNOWLEDGMENT OF SURETY

State of Minnesota)
County of Dakota)

On this 28th day of September, in the year 2016, before me personally come(s) Thomas G. Kemp, Attorney(s)-in-Fact of United Fire & Casualty Company with whom I am personally acquainted, and who, being by me duly sworn, says that he is (are) the Attorney(s)-in-Fact of United Fire & Casualty Company company described in and which executed the within instrument; that he know(s) the corporate seal of such company; and that seal affixed to the within instrument is such corporate seal and that it was affixed by order of the Board of Directors of said company, and that he signed said instrument as Attorney(s)-in-Fact of the said company by like order.



[Signature]
Notary Public



UNITED FIRE & CASUALTY COMPANY, CEDAR RAPIDS, IA
 UNITED FIRE & INDEMNITY COMPANY, WEBSTER, TX
 FINANCIAL PACIFIC INSURANCE COMPANY, ROCKLIN, CA
 CERTIFIED COPY OF POWER OF ATTORNEY
 (original on file at Home Office of Company - See Certification)

Inquiries: Surety Department
 118 Second Ave SE
 Cedar Rapids, IA 52401

KNOW ALL PERSONS BY THESE PRESENTS, That UNITED FIRE & CASUALTY COMPANY, a corporation duly organized and existing under the laws of the State of Iowa; UNITED FIRE & INDEMNITY COMPANY, a corporation duly organized and existing under the laws of the State of Texas; and FINANCIAL PACIFIC INSURANCE COMPANY, a corporation duly organized and existing under the laws of the State of California (herein collectively called the Companies), and having their corporate headquarters in Cedar Rapids, State of Iowa, does make, constitute and appoint THOMAS G. KEMP, OR THOMAS M. LAHL, OR ZACHARY PATE, OR TROY STAPLES, ALL INDIVIDUALLY OF HUDSON WI

their true and lawful Attorney(s)-in-Fact with power and authority hereby conferred to sign, seal and execute in its behalf all lawful bonds, undertakings and other obligatory instruments of similar nature provided that no single obligation shall exceed \$50,000,000.00 and to bind the Companies thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Companies and all of the acts of said Attorney, pursuant to the authority hereby given and hereby ratified and confirmed.

The Authority hereby granted is continuous and shall remain in full force and effect until revoked by UNITED FIRE & CASUALTY COMPANY, UNITED FIRE & INDEMNITY COMPANY, AND FINANCIAL PACIFIC INSURANCE COMPANY.

This Power of Attorney is made and executed pursuant to and by authority of the following bylaw duly adopted on May 15, 2013, by the Boards of Directors of UNITED FIRE & CASUALTY COMPANY, UNITED FIRE & INDEMNITY COMPANY, and FINANCIAL PACIFIC INSURANCE COMPANY.

"Article VI - Surety Bonds and Undertakings"

Section 2, Appointment of Attorney-in-Fact. "The President or any Vice President, or any other officer of the Companies may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Companies in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. The signature of any officer authorized hereby, and the Corporate seal, may be affixed by facsimile to any power of attorney or special power of attorney or certification of either authorized hereby; such signature and seal, when so used, being adopted by the Companies as the original signature of such officer and the original seal of the Companies, to be valid and binding upon the Companies with the same force and effect as though manually affixed. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority shall have full power to bind the Companies by their signature and execution of any such instruments and to attach the seal of the Companies thereto. The President or any Vice President, the Board of Directors or any other officer of the Companies may at any time revoke all power and authority previously given to any attorney-in-fact.

IN WITNESS WHEREOF, the COMPANIES have each caused these presents to be signed by its vice president and its corporate seal to be hereto affixed this 24th day of October, 2014

UNITED FIRE & CASUALTY COMPANY
 UNITED FIRE & INDEMNITY COMPANY
 FINANCIAL PACIFIC INSURANCE COMPANY

By: Dennis J. Richmann Vice President



State of Iowa, County of Linn, ss:
 On 24th day of October, 2014, before me personally came Dennis J. Richmann

to me known, who being by me duly sworn, did depose and say; that he resides in Cedar Rapids, State of Iowa; that he is a Vice President of UNITED FIRE & CASUALTY COMPANY, a Vice President of UNITED FIRE & INDEMNITY COMPANY, and a Vice President of FINANCIAL PACIFIC INSURANCE COMPANY the corporations described in and which executed the above instrument; that he knows the seal of said corporations; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporations and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporations.



Judith A. Davis Notary Public
 My commission expires: 04/23/2018

I, David A. Lange, Secretary of UNITED FIRE & CASUALTY COMPANY and Assistant Secretary of UNITED FIRE & INDEMNITY COMPANY, and Assistant Secretary of FINANCIAL PACIFIC INSURANCE COMPANY, do hereby certify that I have compared the foregoing copy of the Power of Attorney and affidavit, and the copy of the Section of the bylaws and resolutions of said Corporations as set forth in said Power of Attorney, with the ORIGINALS ON FILE IN THE HOME OFFICE OF SAID CORPORATIONS, and that the same are correct transcripts thereof, and of the whole of the said originals, and that the said Power of Attorney has not been revoked and is now in full force and effect.

In testimony whereof I have hereunto subscribed my name and affixed the corporate seal of the said Corporations this 28th day of September, 20 16.



By: David A. Lange
 Secretary, UF&C
 Assistant Secretary, UF&I/FPIC



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
9/29/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).


PRODUCER Marsh & McLennan Agency LLC 7225 Northland Dr N #300 Minneapolis MN 55428	CONTACT NAME: Nick Haugan PHONE (A/C, No, Ext): 763-746-8000 FAX (A/C, No): 212-948-9954 E-MAIL ADDRESS: Nick.Haugan@marshmma.com													
	<table border="1"> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A: General Casualty Companies</td> <td>18821</td> </tr> <tr> <td>INSURER B:</td> <td></td> </tr> <tr> <td>INSURER C:</td> <td></td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: General Casualty Companies	18821	INSURER B:		INSURER C:		INSURER D:		INSURER E:		INSURER F:
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INSURER B:														
INSURER C:														
INSURER D:														
INSURER E:														
INSURER F:														
INSURED UHLINCO Uhl Company Inc 9065 Zachary Lane No. Maple Grove MN 55369														

COVERAGES **CERTIFICATE NUMBER:** 1995111167 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:			CCI0350729	5/1/2016	5/1/2017	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS			CBA0350729	5/1/2016	5/1/2017	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$10,000			CCU0350729	5/1/2016	5/1/2017	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000 \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Y/N <input type="checkbox"/> N/A			CWC0350729	5/1/2016	5/1/2017	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$100,000 E.L. DISEASE - EA EMPLOYEE \$100,000 E.L. DISEASE - POLICY LIMIT \$500,000
A	Rented Equipment Installation Floater			CCI0350729	5/1/2016	5/1/2017	Rented Equipment \$75,000 Any Location \$500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: TCP/IP-based surveillance camera system
McLeod County and the Member are included as Additional Insured as required by written contract or agreement limited to the General Liability coverage. The Member is included as Additional Insured as required by written contract or agreement limited to the Automobile Liability coverage.

CERTIFICATE HOLDER McLeod County Attn: Scott Grivna 830 11th Street East Suite 10 Glencoe MN 55336-2200	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

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Sept 28th, 2016

To whom it may concern,

This letter is to verify that Uhl Co. are a certified S2 dealer and have the ability to sell and support S2 Security systems.

Regards,

Paul Williams - S2 Security

219-688-6722

pwilliams@s2sys.com

Sept 28th, 2016

To whom it may concern,

This letter is to certify that S2 will provide software and system support for a period 5 yrs via the purchase of a valid SUSP contract along with the hardware and software submitted in the proposal from Uhl Co.

Regards,

Paul Williams - S2 Security

219-688-6722

pwilliams@s2sys.com

Jon VanDiver
Region Director, NE
VideoInsight

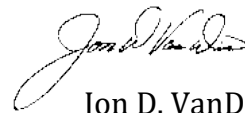
September 27, 2016

To whom it may concern,

This letter is to verify the completion and validation of certification for UHL Companies on the Panasonic/VideoInsight platform.

To include all software and hardware components and the integration of such.

This certification allows UHL companies the title of "Authorized Installer and Maintenance Provider".



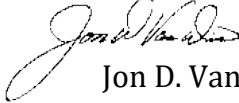
Jon D. VanDiver

Jon VanDiver
Region Director, NE
VideoInsight

September 26, 2016

To whom it may concern,

This letter is to serve as the Manufacturer's Maintenance Guarantee for 5 years warranty on Advidia brand cameras and lifetime of upgrades/support on the VideoInsight VI Monitor software platform. 5 year warranty for Dell servers provided thru VideoInsight will include onsite repair by authorized Dell service center after determination of root cause by VideoInsight technical support.



Jon D. VanDiver

McLeod County

Security/Surveillance System

Addendum A

September 23rd, 2016

Adjustments to sections in the original RFP below are in red.

3.02 Upon completion of this project, the County shall have a security/surveillance system capable of providing the following:

K. The Physical Access solution should entail gateways that can support 250,000 cached credentials and 150,000 cached events. All communication should be 128-bit Advanced Encryption Standard (AES) encrypted.

3.03 Existing Infrastructure

B. Wide Area Network

1. Glencoe

a. All buildings are fiber connected at 10Gb:

- i. Courthouse & Law Enforcement Center (main data center)
- ii. Health & Human Services
- iii. North Complex
- iv. Annex

2. Hutchinson

a. All buildings are fiber connected at 10Gb:

- i. HATS (secondary data center)
 - ◆ 10Gb Fiber connection and 100Mb failover connection to Courthouse
- ii. Extension Office
- iii. Solid Waste

5 BASE SYSTEM REQUIREMENTS (UPDATED COUNTS AND ADDRESSES FROM MEETING)

5.01 The COUNTY reserves the right to accept or reject in any combination which buildings are selected for final approval based on budgetary constraints.

5.02 McLeod County Court House (830 11th St. E. Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	32 new doors with access readers
Add Cameras	10 new IP cameras
Management Software for Access	1 Software program
Management Software for Cameras	1 Software program

5.03 McLeod County Court Administration (830 11th St. E. Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	4 current doors with access readers
---	-------------------------------------

5.04 McLeod County Law Enforcement (801 10th St. E Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	6 current doors with access readers. 7 new doors with access readers
No cameras in the Law Enforcement building are a part of this project	

5.05 McLeod County North Complex (2391 Hennepin Ave N Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	6 current doors with access readers and 6 new doors with access readers
Incorporate Current Analog Cameras and add	6 current analog cameras and 3 new IP cameras

5.06 McLeod County Annex (2397 Hennepin Ave N Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add New Camera	1 360 degree camera in main hallway

5.07 McLeod County Glencoe HWY/LEC Shed (2397 Hennepin Ave N Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add Cameras	2 camera outside covering both buildings

*We would prefer conduit for cables run in the shops to protect them, it's negotiable based on cost.

5.08 McLeod County Health and Human Services (1805 Ford Ave N Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	14 current doors with access readers and 1 new door with access reader
Incorporate Current Analog Cameras and add new	2 current analog cameras and 5 new IP cameras

5.09 McLeod County Solid Waste (1065 5th Ave SE Hutchinson, MN 55350)

Door Access Readers and Applicable Hardware	18 current doors with access readers on Keri System. 4 Current Honeywell readers. Add 2 doors with access readers.
Incorporate Current Analog and IP Cameras	29 current cameras to integrate into new system

5.10 McLeod County Fairgrounds (840 Century Ave SW Hutchinson, MN 55350)

Door Access Readers and Applicable Hardware	3 current doors with access readers on a Keri System. Add 6 doors with access readers.
Add Cameras	Add 3 cameras in Commercial Building and 1 in Dairy Building

5.11 McLeod County Brownton HWY Shop (208 1st Ave S Brownton, MN 55312)

Door Access Readers and Applicable Hardware	1 access readers for walk in door
---	-----------------------------------

*We would prefer conduit for cables run in the shops to protect them, but it's negotiable based on cost.

5.12 McLeod County Silver Lake/Lester Prairie HWY Shop (1995 Falcon Ave Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	2 access readers for walk in doors on each end of building
---	--

*We would prefer conduit for cables run in the shops to protect them, but it's negotiable based on cost.

McLeod County

Security/Surveillance System

Addendum B

September 29th, 2016

Adjustments are highlighted below in Red:

IMPORTANT DATES:

RFP Advertised	Thursday, September 1st
Mandatory Pre-Proposal Conference	Friday, September 16th
Last Day for Questions	Wednesday, September 21st
Last Addendum Issued:	Friday, September 29th
Proposal Due Date	Wednesday, October 5th
Present at Board	Tuesday, October 18th
Project Completion:	Friday, January 27 th , 2017

SEALED SUBMITTAL REQUIREMENTS: Please include one (1) original and one (1) paper copy, as well as, one (1) electronic copy in PDF format for a total of three (3) complete sets of the Proposal for a Security/Surveillance. Submittal shall be **SEALED** and submitted by **Friday, September 30th, 2016 at 2:00 pm**. Send proposals to the following address:

One original for time/date stamp, one (1) paper copy, and one electronic copy with original.	
McLeod County Attn: Scott Grivna 830 11th Street East Suite 10 Glencoe, MN 55336-2200	

Proposal is to be signed only by persons authorized to enter into a contract with McLeod County.


RESPONDENT'S SIGNATURE

UHL Company, inc
COMPANY NAME

McLeod County

Security/Surveillance System

Request for Proposal

August 30th, 2016

McLeod County
REQUEST FOR PROPOSAL

FOR: County Security/Surveillance System

Scope and Specifications of the Proposal

SCOPE: McLeod County (referenced to as the COUNTY throughout this proposal) would like to implement a County-wide, pure TCP/IP-based surveillance camera system that is fully compatible with any existing analog cameras at all county sites. All solutions must address the needs of both new IP cameras and existing analog cameras to operate within the same system and consider IP replacements as analog cameras fail. Further, the proposed system must fully comply and integrate with the existing Cisco based network infrastructure and systems throughout the COUNTY. We currently have multiple sites with individual recording devices and would like to create a more centralized solution to only two locations; The Glencoe Court House and the Highway building in Hutchinson. The solution will need to address future growth for additional cameras.

Additionally, the COUNTY would like to implement the management application software and hardware for an IP-based Access Control solution that provides integration and convergence with the above mentioned camera surveillance system. The Access Control System should have two primary component areas, door control hardware and the management application software that can run in a virtual environment. We would also like to implement a system that can scale as we combine the four separate systems we currently have into one. It would be a big advantage if the system could utilize Active Directory groups to manage access. Utilizing components of the current systems can be taken into consideration.

McLeod County reserves the right to modify the Scope and Specifications as circumstances require, including but not limited to adding, changing, or deleting proposed locations.

PROPOSAL SUBMITTED BY:

UHL Company, inc.

(Company Name)

9065 Zachary Lane North

(Address)

Maple Grove, MN 55369

(State/Zip Code)

Jeff Eichenberger

(Typed Name of Person Submitting the Proposal)

763.425.7226

(Phone #)

763.425.7336

(Fax #)

9/30/2016

(Date of Proposal Submission)

IMPORTANT DATES:

RFP Advertised	Thursday, September 1st
Mandatory Pre-Proposal Conference	Friday, September 16th
Last Day for Questions	Wednesday, September 21st
Last Addendum Issued:	Friday, September 23rd
Proposal Due Date	Friday, September 30th
Present at Board	Tuesday, October 18th
Project Completion:	Friday, January 27 th , 2017

SEALED SUBMITTAL REQUIREMENTS: Please include one (1) original and one (1) paper copy, as well as, one (1) electronic copy in PDF format for a total of three (3) complete sets of the Proposal for a Security/Surveillance. Submittal shall be **SEALED** and submitted by **Friday, September 30th, 2016 at 2:00 pm**. Send proposals to the following address:

One original for time/date stamp, one (1) paper copy, and one electronic copy with original.	
McLeod County Attn: Scott Grivna 830 11th Street East Suite 10 Glencoe, MN 55336-2200	

Proposal is to be signed only by persons authorized to enter into a contract with McLeod County.



RESPONDENT'S SIGNATURE

UHL Company, inc

COMPANY NAME

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1 SUBMITTAL REQUIREMENTS AND PROPOSAL FORMAT

- 1.01 Respondent agrees not to hold the Owner of the project responsible for simple typos, minor omissions, misspelling of words, or other specification inconsistencies, where reasonable persons, familiar with the type of work specified herein, would understand the scope as though such conditions did not exist.
- 1.02 **Proposal Clarification Questions:** After reviewing all proposals received in response to this RFP, the County may develop a list of clarification questions to be addressed by the Respondent. The County or its agent shall send these questions to the Respondent for clarification. The Respondent shall provide a response within three (3) working days following the inquiry.
- 1.03 **Submittal Requirements:** Proposals shall be submitted by tab number as instructed below. The Respondent agrees and shall comply with all provisions and specifications as stated in this RFP unless otherwise stated in the Exceptions section of this RFP. Any additional cost or factors to meet a specification or requirement must be noted in the Exceptions section. Failure to respond to these requirements may result in the proposal being considered non-responsive.

A. Tab 1 – Minimum Criteria

1. Cover letter – with overall price, any special conditions, and signature
2. A brief profile of the firm, including the following:
 - a. A brief history of the business
 - b. Organizational structure of business
3. The overall qualifications of the business to provide the services requested

B. Tab 2 – Required Documents

1. Proposal Bond (original – with seal – in original Proposal)
2. Proof of required insurance
3. Certifications and/or letter from manufacturer(s) that the firm is an authorized installer and maintenance provider
4. Five-year maintenance support guarantee from manufacturer and Respondent
5. Addenda – Any addenda issued subsequent to the release of this solicitation must be signed and returned with the firm's proposal. Failure to return signed addenda may be cause for the proposal to be considered non-responsive.

C. Tab 3 – Executive Summary/Overview

1. Written summary of the understanding of the scope of work to be performed
 2. Technical summary of the system proposed, including details about any “improvements” over and above the base request (for example, resiliency/redundancy, system management, database consolidation, or larger number of ports)
- D. Tab 4 – Main Body of Response (Sections 1-8) **(With original only)**
- E. Tab 5 – Cost
- F. Tab 6 – Bill of Material, Equipment Specifications, and Drawings
- G. Tab 7 – Respondent Assumptions
- H. Tab 8 – Installation Methodology and Drawings
- I. Tab 9 – Acceptance Testing
- J. Tab 10 – Software Upgrades and Active Directory Interface
- K. Tab 11 – Respondent and Subcontractor Qualifications, Support Capabilities, and References
- L. Tab 12 – Project Team and Maintenance Team Resumes/Certifications
- M. Tab 13 – Exceptions and Clarifications
- N. Tab 14 – Exhibits
- O. Tab 15 – Sales Documents and Brochures
- 1.04 **Exceptions to the RFP:** Respondents may find instances where they must take exception with certain requirements or specifications of the RFP. All exceptions shall be clearly identified in the Exceptions section, and written explanations shall include the scope of the exceptions, the ramifications of the exceptions for the COUNTY, and a description of the advantage to be gained or disadvantages to be incurred by the COUNTY as a result of these exceptions.
- 1.05 **Alternate Proposals:** Respondents who wish to submit an alternate premise-based proposal may do so. If more than one proposal is submitted, all must be complete and comply with the instructions set forth in this RFP.
- 1.06 Respondent Contact/Questions about the RFP:

- A. Respondent communications shall be limited to contacts defined herein. Failure to comply with this provision may result in disqualification or evaluation penalty.
 - B. It shall be the Respondent's responsibility to learn all aspects of the RFP requirements. Should any details necessary for a clear and comprehensive understanding be omitted or any error appear in the RFP documents, or should the Respondent note facts or conditions that in any way conflict with the letter or spirit of the RFP documents, it shall be the responsibility of the Respondent to obtain clarifications before submitting a proposal.
 - C. Questions may be submitted up to **Wednesday, September 21st**. After that time, no further questions shall be accepted. Submit questions to: Scott Grivna at Scott.Grivna@co.mcleod.mn.us
- 1.07 **Addenda:** It is incumbent upon each Respondent to carefully examine all specifications, terms, and conditions contained herein. Any inquiries, suggestions, or requests concerning interpretation, clarification, or additional information shall be made in writing, through the recipient named above. The County shall not be responsible for any oral representation(s) given by any employee, representative, or others. The issuance of a written addendum is the only official method by which interpretation, clarification, or additional information can be given. No addenda shall be issued later than five (5) business days prior to the date for receipt of proposals, except an addendum postponing or withdrawing the request for proposals. Respondents must acknowledge receipt of addenda in their proposals.
- 1.08 **Request for Proposal:** It is the sole responsibility of the Respondent to ensure that they have received the entire Request for Proposal.
- 1.09 **Proposal Bond:** A Proposal Bond in the amount of 5% of the proposal price, payable to McLeod County, is required for this RFP. The Proposal Bond can be in the form of a bond or cashier's check. The bond shall be issued by an agency authorized to do business in the State of Minnesota and with a rating of "A" or higher as listed in the A.M. Best & Company latest published rating guide. The bond or cashier's check shall not expire until the Contract is awarded and shall guarantee that (1) a Respondent shall not withdraw its proposal after the closing time and date of this RFP, or (2) the awarded Respondent shall promptly execute a Contract and deliver any specifications required by the County prior to start-up of the Contract. The bond or cashier's check shall be invoked by the County to ensure payment of the Respondent of damages incurred by withdrawal of a proposal, or failure to enter into a Contract after award. Proposal bonds, without interest, shall be returned upon

receipt of appropriate insurance documents and/or a Performance Bond, where/if applicable. No proposal shall be considered without a proper form of security.

- 1.10 **Performance Bond:** The successful Respondent shall furnish within ten (10) days of notification of award a Performance Bond in the amount of 100% of the proposed price, payable to McLeod County as security for the faithful performance of the Contract. The bond shall be issued by an agency authorized to do business in the State of Minnesota with a rating of "A" or higher, as listed in the A.M. Best & Company latest published rating. An attorney in fact who signs a Performance Bond must file with the bond a certified copy of his/her power of attorney to assign said bond. The awarded Respondent, upon failure or refusal to furnish within ten (10) days of notification the required Performance Bond, shall pay to the County, as liquidated damages for such failure or refusal, an amount in cash equal to the Proposal Bond.
- 1.11 **Payment Bond:** The successful Respondent shall furnish within ten (10) days of notification of award a Payment Bond in the amount of 100% of the proposed price, payable to McLeod County as security for payment as required by statute of all persons supplying labor and material. The bond shall be issued by an agency authorized to do business in the State of Minnesota with a rating of "A" or higher, as listed in the A.M. Best & Company latest published rating. An attorney in fact who signs a Payment Bond must file with the bond a certified copy of his/her power of attorney to assign said bond. The awarded Respondent, upon failure or refusal to furnish within ten (10) days of notification the required Payment Bond, shall pay to the County, as liquidated damages for such failure or refusal, an amount in cash equal to the Proposal Bond.
- 1.12 **Descriptive Material:** The County is not responsible for locating or securing any information that is not identified in the Respondent's proposal and reasonably available to the County. To ensure that sufficient information is available, Respondent must furnish as a part of the proposal all descriptive material necessary for the County to (1) determine whether the product offered meets the requirements of the RFP and (2) establish exactly what the Respondent proposes to furnish in terms of supplies, materials, and services.
- 1.13 **Diagrams:** Diagrams shall be submitted with the RFP. The diagrams shall include the proposed system, any construction work needed, connections to the network, location of equipment, etc.
- 1.14 **Subcontractors:** If Respondent's organization will use subcontractors, they must be identified under the References tab of your response.

- 1.15 **Request for Additional Information:** Prior to the final selection, Respondents may be required to submit additional information regarding the Respondent's qualifications and experience that the County may deem necessary to further evaluate the proposal's qualifications.
- 1.16 **Proposal Award:** The RFP consists of a base proposal configuration that shall be accepted or rejected in its entirety and proposal options that the County may accept or reject individually without regard to the listing order of the option, but only as the County determines is in its best interest.
- 1.17 **Right to Accept/Reject:** The County reserves the right to reject any or all proposals and waive any irregularities. The County also reserves the right to choose the proposal that is deemed in the best interest of the County based on any or all criteria, etc. In addition, the County reserves the right to negotiate any or all items and terms of proposal.
- 1.18 **After Hours Cost:** Some work may have to be done after hours depending on the intrusion of that work to McLeod County Employees or Constituents. These costs shall be included in the total price presented in the RFP response.
- 1.19 **Denial of Reimbursement:** The County shall not reimburse Respondents for any costs associated with the preparation and submittal of any proposal, or for any travel and/or per diem costs that are incurred.
- 1.20 **Gratuity Prohibition:** Respondents shall not offer any gratuities, favors, or anything of monetary value to any official, employee, or agent of McLeod County for the purpose of influencing consideration of this proposal.
- 1.21 **Right of Withdrawal:** A proposal may not be withdrawn before the expiration ninety (90) days from the proposal due date.
- 1.22 **Rights to Submitted Material:**
 - A. All proposals, responses, inquiries, or correspondence relating to or in reference to this RFP, and all reports, charts, and other documentation submitted by Respondents shall become the property of McLeod County when received.
 - B. The County reserves the right to retain all proposals submitted and to use any ideas in a proposal regardless of whether that proposal is selected. Submission of a proposal indicates acceptance by the Respondent of the conditions contained in this Request for Proposal.
- 1.23 **Selection Criteria:** Proposals shall be evaluated based on, but not limited to, the following criteria:

- A. Cost – The price included in the RFP response shall be the price evaluated. There SHALL NOT be an opportunity for a BEST AND FINAL OFFER. Respondent is encouraged to include their best prices in their initial response. Evaluation shall include up-front costs as well as long-term maintenance protection.
 - B. Technology – Ability to meet the County’s security configuration goals, hardware/door/network configuration, feature functionality, and system management.
 - C. Respondent/Manufacturer – Financial stability, references, installation methodology, project and maintenance teams experience and certifications, and long-term product support.
 - D. Support – Number of trained technicians, remote and on-site response time guarantee, dispatch distance, remote monitoring maintenance capabilities, and adherence to maintenance requirements.
- 1.24 **Selection Committee:** Proposals may be evaluated by a Selection Committee. The Selection Committee may, at its option, request any or all Respondents to provide on-site demonstrations of the proposed system.
- 1.25 **Submittal of Qualifications:** Respondents should submit experience and qualifications as described in the RFP. Additional information may be submitted as appropriate to further describe vendor and provide product capabilities.

2 TERMS AND CONDITIONS

- 2.01 **Contract:** Any award of a contract resulting from this RFP will be made only by written authorization from McLeod County upon approval by the McLeod County Board of Commissioners. The Sample Contract is included in the Exhibits section as 18.01. The contract between McLeod County and the Contractor shall consist of (1) the Request for Proposal (RFP) and any amendments thereto and (2) the proposal submitted by the Contractor in response to the RFP. In the event of a conflict in language between these two documents, the provisions and requirements set forth and/or referenced in the RFP shall govern. The County also reserves the right to clarify any contractual relationship in writing with the concurrence of the Contractor, and such written clarification shall govern in case of conflict with the applicable requirements stated in the RFP or the Contractor's proposal. In all other matters not affected by the written clarifications, if any, the RFP shall govern...
- 2.02 **Termination/Cancellation of Contract:** McLeod County may cancel the contract at any time for breach of contractual obligation, convenience, or non-appropriation of funds by providing the Contractor with a written notice of such cancellation. Should the County exercise its right to cancel the contract for such reasons, the cancellation shall become effective on the date as specified in the notice of cancellation sent to the Contractor.
- 2.03 **Compliance with Laws:** In connection with the furnishing of supplies or performance of work under the contract, the Contractor agrees to comply with the Fair Labor Standard Act, Equal Opportunity Employment Act, and all other applicable Federal and State laws, regulations, and executive orders to the extent that the same may be applicable, and further agrees to insert the foregoing provision in all subcontracts awarded hereunder.
- 2.04 **Incurred Expenses:** This RFP does not commit the County to award a contract, nor shall the County be responsible for any cost or expense that may be incurred by the Respondent in preparing and submitting the proposal called for in this RFP, or any cost or expense incurred by the Respondent prior to the execution of a contract agreement.
- 2.05 **Indemnification:** The Contractor agrees it shall defend, indemnify, and hold harmless the County, its officers, and its employees against any and all liability, loss, costs, damages, and expenses, including attorneys fees that the County, its officers, or its employees may hereafter sustain, incur, or be required to pay arising out of the negligent or intentional acts or omissions of the Contractor's officers or employees

2.06 Insurance

- A. The Contractor agrees, in order to protect itself and the County under the indemnity provision set forth above, to at all times during the term of this contract have and keep in force insurance policies that meet the following minimum requirements:

\$1,500,000 Each Occurrence

\$3,000,000 General Aggregate

\$3,000,000 Products and Completed Operations Aggregate

The policy should be written on an occurrence basis, not a claims-made basis

The Member will be included as Additional Insured

An Excess or Umbrella Liability policy may be used in conjunction with primary coverage limits to meet the minimum limit requirements

The Contractor agrees to name the County as an additional insured on said policy.

- B. An automobile liability insurance policy that meets the following minimum requirements:

\$1,500,000 on a Combined Single Limit Basis

Auto coverage should include: Any Auto, including Hired and Non-owned

The member will be included as Additional Insured

Note: Auto coverage should be waived only when the contractor's work under the contract clearly does not involve the use of a vehicle on the Member's behalf.

- C. Workers Compensation insurance in the statutory amounts.

1. Bodily injury by Accident: \$500,000 each accident
2. Bodily injury by Disease: \$500,000 each employee
3. Bodily injury by Disease: \$500,000 policy limit

- D. Professional liability should be required for individuals who perform professional or semi-professional services. Some examples of professionals who should obtain this type of coverage include, but are not limited to individuals who are medical service providers, architects, engineers, attorneys, and consultants. Minimum limits of liability should be:

1. \$2,000,000 per Wrongful Act or Occurrence
2. \$4,000,000 Annual Aggregate Level 1

E. Certificates of insurance showing the coverage listed above shall be provided to the County prior to the effective date of this contract, and the County shall be named as an additional insured under the liability policy required above.

- 2.07 **Safety:** Respondent shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work. The Respondent shall at all times comply with the regulations set forth by federal, state, and local laws, rules, and regulations concerning OSHA and all applicable state labor laws, regulations, and standards. The Respondent shall indemnify and hold harmless the County from and against all liabilities, suits, damages, costs, and expenses (including attorney's fees and court costs) that may be imposed on the County because of the Respondent's, Subcontractor's, or supplier's failure to comply with the regulations.
- 2.08 **Ownership of Work Product(s):** Any work product, including but not limited to software programs, documentation, memoranda, correspondence, and/or files generated by the Contractor in the course of this work for the County is the sole property of the County. All work products must be surrendered to the County at the completion of the Contract. The Contractor shall prepare and maintain all records required by the County to substantiate the amount and types of services rendered and for other purposes. The County shall inform the Contractor of the need for and nature of all such records.
- 2.09 **Warranty of Integrated Security System:** In a contract resulting from this RFP, Contractor shall warrant that during the warranty period, all hardware, equipment, and licensed software (including third-party software installed or recommended by Contractor or its subcontractors) of the integrated security system solution shall perform at a minimum in all material aspects within the specifications and functional requirements defined by the Scope of Service/Work of the RFP. The foregoing representations and warranties shall be in force as to each version or release of software, system, components, networks, and equipment.
- 2.10 **Independent Contractor:** Nothing contained in this agreement is intended or should be construed as creating the relationship of co-partners or joint ventures within the County. The Contractor shall remain an independent contractor, and all employees of the Contractor or its subcontractors shall remain the employees of the Contractor or subcontractor and shall not become the employees of the County. No tenure or any rights or benefits, including worker's compensation, unemployment insurance, medical care, sick leave,

vacation leave, severance pay, or other benefits available to County employees shall accrue to the Contractor or employees of the Contractor performing services under this agreement.

- 2.11 **Nondiscrimination:** All Contractors agree that during the life of the contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, marital status, disability, sexual orientation, age, religion, or status with regard to public assistance, and shall intend a similar provision in all subcontracts entered into for the performance thereof. All proposals shall be accompanied by a signed statement of this fact, with failure to sign reason for proposal rejection.
- 2.12 **Default and Cancellation:**
- A. If the Contractor fails to perform any of the provisions of this Request for Proposal or so fails to administer the work as to endanger the performance of the contract, this shall constitute default. Unless the Contractor's default is excused, the County may, upon written notice, immediately cancel this agreement in its entirety.
 - B. Back orders, failure to meet delivery requirements, or failures to meet specifications in the contract authorizes the ordering entity to cancel the contract, or any portion of it, purchase elsewhere, and charge the full increase in cost and administrative handling to the defaulting Contractor. In the event of default, the County reserves the right to pursue any other remedy available by law. A Contractor may be removed from the Contractors list, suspended, or debarred from receiving a contract for failure to comply with terms and conditions of the contract or for failure to pay the County for the cost incurred on the defaulted contract.
- 2.13 **Severability:** Every section, provision, or part of this agreement is declared severable from every other section, provision, or part thereof, to the extent that if any section, provision, or part of this agreement shall be held invalid by a court of competent jurisdiction, it shall not invalidate any other section, provision, or part thereof.
- 2.14 **Third-Party Products:** Contractor agrees to assign or pass through to the County or otherwise make available for the benefit of County, any manufacturer's or supplier's warranties applicable to any third-party software, hardware, or equipment provided by Contractor or its subcontractors under a contract resulting from this RFP.
- 2.15 **Title to Software:** By submitting a proposal, the Respondent represents and warrants that it is the sole owner of the software or, if not the owner, that it has received all legally required authorizations from the owner to license the software, has the full

power to grant the rights required by this solicitation, and that neither the software nor its use in accordance with the contract shall violate or infringe upon any patent, copyright, trade secret, or any other property rights of another person or organization.

- 2.16 **New Material:** Unless otherwise provided for in this specification, the Respondent represents and warrants that the goods, materials, supplies, or components offered to the County under this RFP solicitation are new, not used or reconditioned. It represents that they are not of such age or so deteriorated as to impair their usefulness or safety and that the goods, materials, supplies, or components offered are current production models of the respective manufacturer.
- 2.17 **Ownership of Intellectual Property:** All copyright and patent rights to all papers, reports, forms, materials, creations, or inventions created or developed in the performance of this contract shall become the sole property of the County. Upon request, the Contractor shall promptly provide an acknowledgment or assignment in a tangible form satisfactory to the County to evidence the County's sole ownership of specifically identified intellectual property created or developed in the performance of the contract. This excludes ownership of proprietary software belonging to the vendor, except software developed specifically for the County for which the County pays.
- 2.18 **Term of Software License:** Unless otherwise stated in the solicitation, the software license(s) identified in the pricing schedule shall be purchased on a perpetual basis and shall continue in perpetuity. The County reserves the right to terminate the license at any time, although the mere expiration or termination of this contract shall not be construed as intent to terminate the license. All acquired license(s) shall be for use at any computing facilities, on any equipment, by any number of users, and for any purposes for which it is procured. The County further reserves the right to transfer all rights under the license to another state agency to which some or all of its functions are transferred.
- 2.19 **Return of Assets:** Except as otherwise provided in the Contract, or upon termination of the Contract, the Contractor shall return all County-owned assets, including but not limited to stored data and information.
- 2.20 **Excessive Downtime:** Equipment or software furnished under the contract shall be capable of continuous operation. Should any part of the equipment or software become inoperable for a period of more than four (4) hours, the Contractor agrees to pro-rate maintenance charges to account for each full hour of inoperability beyond four (4) hours. The period of inoperability shall commence upon initial notification. In the event the equipment or software remains inoperable for more than three (3) consecutive calendar

days, the Contractor shall promptly replace the equipment or software at no charge upon request of the County. Such replacement shall be with new, or refurbished product(s) of comparable quality, and must be installed and operational within three (3) consecutive calendar days following the request for replacement.

2.21 **Proposal Acceptance/Rejection:** The County reserves the right to accept or reject any or all proposals received as a result of this RFP, or to negotiate separately with competing respondents, and to waive any informalities, defects, or irregularities in any proposal, or to accept the proposal or proposals that, in the judgment of the proper officials, are in the best interest of the County.

2.22 **Firearms:** No provider of services pursuant to this Contract, including but not limited to employees, agents, or subcontractors of the Contractor, shall carry or possess a firearm on County premises or while acting on behalf of McLeod County pursuant to the terms of this agreement. Violation of this provision shall be considered a substantial breach of the Agreement and is grounds for immediate suspension or termination of this contract.

2.23 Other Contract Terms:

1. Compliance with Laws/Standards

2. General: The Contractor shall abide by all Federal, State, and local laws, statutes, ordinances, rules, and regulations now in effect or hereinafter adopted pertaining to this Contract or to the facilities, programs, and staff for which the Contractor is responsible.

3. Licenses and Permits: The Contractor shall procure all licenses, permits, or other rights necessary for the fulfillment of its obligation under this Contract. The Contractor indemnifies, saves, and holds harmless the County and any agents, commissioners, officers, employees, or volunteer workers thereof from any and all claims, demands, actions, or causes of action of whatsoever nature or character arising out of, allegedly arising from, or related to the execution or performance of the services of the successful Respondent provided for herein.

4. Force Majeure: Neither party shall be held responsible for delay or failure to perform when such delay or failure is due to any of the following, unless the act or occurrence could have been foreseen and reasonable action could have been taken to prevent the delay or failure: fire, flood, epidemic, strikes, wars, acts of God, unusually severe weather, acts of public authorities, or delays or defaults caused by public carriers, provided the defaulting party gives notice as soon as possible to the other party of the inability to perform.

5. **Inability to Perform:** Contractor shall make every reasonable effort to maintain staff, facilities, and equipment to deliver the services to be purchased by the County. The Contractor shall immediately notify the County in writing whenever it is unable to provide the agreed upon quality and quantity of services or reasonably believes it is going to be unable to provide this level of service. Upon such notification, the County shall determine whether such inability requires a modification or cancellation of this Contract.
- B. In the event the County terminates the Contract for cause in whole or in part as provided above, the County may procure, upon such terms and in such manner as the County may deem appropriate, services similar to those so terminated, and the Contractor shall be liable to the County for any excess costs for such similar goods or services. The Contractor shall continue the performance of the Contract to the extent not terminated under the provisions for this section.
- C. The rights and remedies of the County provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.
- D. **Payment Terms:** Payment terms shall be event based and negotiated with the successful vendor prior to contract signing. The County shall issue no payment until they have verified the invoice. The County shall retain at least 10% of all authorized payments until acceptance of the work is authorized.
- E. **Software Licensing Agreements:** Within the RFP response, Contractor agrees to provide copies of software licensing agreements for all proposed software applications and operating systems.

3 SCOPE OF SERVICES

- 3.01 The COUNTY plans to procure a premise-based County-wide security system to replace the current four separate door access systems, as well as a surveillance system to replace a number of separate systems and anticipates that the entire system shall be completed by to January, 2017.
- 3.02 Upon completion of this project, the County shall have a security/surveillance system capable of providing the following:
- A. All cameras and door hardware must be fully compatible with the COUNTY's existing Cisco based network infrastructure. Purposed equipment must be new from the manufacturer and qualify for warranty and maintenance services.
 - B. All new cameras shall be TCP/IP cameras that utilize PoE. (No Analog Cameras or converting to I/P) Cameras and overall system must integrate fully with COUNTY's existing Cisco VLAN technology and Quality of Service requirements. Further, video streams between camera and the agreed upon network video storage solution must be able to be configured for both uni-cast and multi-cast transmission modes.
 - C. All cameras shall be full-featured, vandal resistant, fixed dome, and wall mount TCP/IP cameras designed for indoor and outdoor applications. Outdoor cameras shall be sealed for outdoor use and provide IP66 protection against water, wind or dust.
 - D. All new cameras shall be high resolution, high sensitivity integral color cameras and should accommodate monitoring visibility day and night under parking light illumination conditions. IP cameras must offer Wide Dynamic Range and provide a mechanical cut filter for IR Sensitivity. Administrative user(s) must have the ability to adjust the color and brightness of each camera. Cameras must support 4CIF D1 resolution at 30fps.
 - E. All new cameras shall be immune to shock and vibration and be vandal-resistant by being able to withstand the equivalent of 120lbs of force.
 - F. Proposed video surveillance system shall be network video storage agnostic, and scalable to accommodate our requirements for retention and performance.
 - G. Proposed video surveillance system must allow recorded video to be played back in the forward or reverse direction, frame by frame, and from beginning or end of the clip using standard VCR-like buttons. Solution must be able to record from 1–30

FPS on a per camera basis. System must have the capability to record when motion occurs and suppress video recording at other times at the camera end, not the video storage. Must also have the ability to define zones where a recording trigger would not be enabled. System must also have the ability to define recording schedules through Internet browser only.

- H. Proposed video surveillance system must provide video authentication, checksums, and reporting to ensure videos are not altered in any way to ensure the chain of evidence.
- I. Proposed video surveillance system must provide simultaneous viewing of both live and recorded video through a web browser interface exclusively. Complete system must be able to be administered through a web browser including full control of any PTZ cameras.
- J. Proposed video surveillance system must be able to view up to 16 images on a single display with at least a resolution of 1024x768. Internet browser display must allow for viewing of different cameras from the network video storage simultaneously.
- K. Proposed video surveillance system must provide a comprehensive authentication system that allows user authentication against Microsoft Active Directory for simultaneous access to all the network video storage for County-wide cameras. Further, the system must also provide comprehensive role-based authorization for each user. Administrative user(s) must have the capability to create new users and define granular control over all system and camera functions.
- L. Proposed system must be expandable for future camera installations without forklift upgrades or visible topology changes to the end-user through the web interface. The system shall not require individual client licenses and the system shall not require any reoccurring license fees.
- M. Contractor shall provide property notices at each county site of installed video surveillance systems.
- N. The successful Contractor shall warrant all materials and equipment furnished under the contract are in good working order, free from defects and in conformance with system specifications. All installed equipment must conform to the manufacturer's official published specifications.
- O. Contractor must provide pricing for three years warranty and support on the proposed project. Vendor technical support shall

be available for business hours support and Next Business Day Replacement.

- P. Contractor must detail what is included and define if provided by manufacturer or by Contractor in the standard warranty for each item proposed.
- Q. Contractor must provide warranty service availability beyond the initial three years for each item proposed. Specify annual cost and period of extension.
- R. Solution must support Motion based recording that can be configured to save disk space, change operators views and send alerts.
- S. Central Operations Manager must be able to access video from the network video storage, instantly.
- T. The video management solution must have the ability for the operator to trigger any camera that is not actively archiving video. This trigger shall be initiated from an http call to the system.
- U. Solution must provide the ability for multiple cameras to be updated at once using the Batch administration feature from the Operations Manager leveraging an Excel template.
- V. Video surveillance solution must entail internal Digital zoom capabilities that can focus in on any object instantly using the inbuilt zoom feature on non PTZ cameras. This feature must be able to be turned off if deemed necessary.
- W. Video Surveillance Operations Manager must provide full converged integration with Physical Access Control Manager
- X. Vendor must provide an IP-based Access Control Management solution that can provide door access and monitoring of any dry contact point.
- Y. The IP-based Physical Access Control System should have two primary components, door control hardware (gateways and modules) and an appliance based web management application.
- Z. The access control solution should support a thin client model. Clients from computers running a Windows operating system can contact the Physical Access Manager and download and install an application that allows interaction with the Physical Access Manager for administrative purposes.
- A. All users on the Physical Access Manager can be configured to use Microsoft Active Directory groups for authentication and door access.

- B. The physical access manager should enable the creation of badge templates, badge printing, taking user photographs, and enrolling users into Physical Access Manager User database.
- C. No additional licensing or fees should be charged for the integration with the Video Surveillance Management Solution and the Physical Access Control System.
- D. HTTP/S URLs can be invoked as a result of any event or alarm by way of the Physical Access Manager. Event data can be inserted in the URL to integrate with any external application that accepts URL invocations, such as Cisco Digital Media Signage solution.
- E. Access Manager Appliance and Video Management Solution should be qualified to run in a virtual environment.
- F. The Physical Access Control System must allow Physical Access Gateway images to be upgraded using the Physical Access Manager.
- G. The Physical Access Manager client should support a 1click client application which gives the administrator access to live and archive video from the Video Surveillance System.
- H. Motion Detection events in Video Surveillance System can also be recorded in the Physical Access Manager Events window. System also should allow the Physical Access Manager to trigger local door alarms or other annunciation devices attached to the Physical Access Control System when motion detection events occur in Video Surveillance System.
- I. The Physical Access Manager must have the ability to plot cameras and any controlled access point on a graphical map or floor plan. Physical Access Manager should integrate with Video Surveillance System and enable video to be pushed to the administrators and users of the Physical Access Control Solution based on Events.
- J. Administrators of the Physical Access Solution should have the ability to access live camera views from the system.
- K. The Physical Access solution should entail gateways that can support 250,000 cached credentials and 150,000 cached events. All communication should be 256-bit Advanced Encryption Standard (AES) FIPS 140-2 certified encrypted.

3.03 Existing Infrastructure

- A. The County's primary network infrastructure consists of a mix of cisco network switches.

1. We have 6 buildings in Glencoe
2. We have 3 buildings in Hutchinson

B. Wide Area Network

1. Glencoe
 - a. Single mode fiber between the Courthouse and the following three locations:
 - i. Health & Human Services
 - ii. North Complex
 - iii. Annex
 - b. State of Minnesota MN.IT Connection: The County shares a 1 gigabit fiber connection to MN.IT with Courts and the City of Glencoe PD, and State Department of Corrections.
2. Hutchinson
 - a. The County has a 10 gigabit point to point connection between their HATS facility in Hutchinson:
 - i. Extension Office
 - ii. Solid Waste
 - b. State of Minnesota MN.IT Connection: The County HATS facility has a backup 100 megabit connection to MN.IT in case of a fiber down issue between Glencoe and Hutchinson

C. Cable

1. CAT 6 cable will be required for any new cable runs.

D. UPS

1. Courthouse and LEC
 - a. The County Courthouse and LEC MER locations are equipped with UPS system and backup generator power.
 - b. All TER locations have existing APC UPS systems and utilize APC Network Manager Management system.
2. All other County facilities MER and TER are equipped with APC UPS systems and utilize APC Network Manager Management system.

4 GENERAL ROLES AND RESPONSIBILITIES

4.01 Permission to Proceed

- A. The Contractor's first task shall be to submit a Statement of Work with an estimate of schedules and benchmarks. The document should identify in detail the exact tasks that the

County and Contractor must perform and/or be responsible for in order to accomplish the delivery and installation of the system. The Contractor shall project delivery date and installation period by function (cable, under-carpet wiring, switch, stations, etc.), which shall allow the Contractor to meet the required completion date.

- B. The Contractor shall provide the County with shop drawings of the proposed equipment placement for each location prior to the procurement of equipment or commencement of work. The Contractor shall make corrections and additions as necessary to the design documents. Equipment lists, data sheets, etc., shall be provided in MS Word, MS Excel, and MS Visio.
- C. The submittals must be received and approved by the County prior to the procurement of material or the commencement of work. Any procurement or work performed prior to this approval is at the Contractor's own risk.
- D. The project timeline shall not be altered due to lateness of submittals. The Contractor shall remain bound to deliver a timely, complete, and finished project as stipulated in their contract.
- E. The failure of the Contractor to provide submittals as required herein may result in the cancellation of the contract.
- F. Contractor must obtain the County's permission before proceeding with any work necessitating cutting into or through any part of a building structure.

4.02 Damage and Cleanup

- A. Existing floors, walls, ceilings, or any structural piece shall not be drilled or cut without prior approval of the County. The Contractor shall be held responsible for and make payment on any damage caused from the delivery and/or installation of its work.
- B. The Contractor shall keep the premises clean from debris and rubbish. After each workday, the Contractor shall remove any rubbish or waste from the working area. If the County is required to clean up, the cost shall be charged back to the Contractor.

4.03 Project Manager

- A. The Contractor shall appoint a Project Manager who shall be the main point of contact regarding the project for the County. The Project Manager is responsible for the following:
 - 1. Ensuring the contract is completed successfully in a timely manner.

2. Guaranteeing the work and performance of all employees and subcontractors that have been hired by the Contractor.
 3. Completing and submitting all required submittals and documentation.
 4. Attending all project coordination and/or construction meetings as required by the County, plus chairing a weekly project status meeting throughout the duration of the project.
 5. Maintaining the project status meeting minutes and distributing them to all participants within two days following the meeting.
 6. Providing written status reports to the County Project Manager on a regular interval.
 7. Informing the County of all unexpected conditions and problems that may result in delay or expense. The Contractor must report issues immediately upon discovery and must provide the County with the option(s) for resolving them.
- B. If the Contractor seeks to change the Project Manager during the course of the project, such change is subject to prior written approval from the County.
- C. The County reserves the right to request a new Project Manager during the course of the project if the Project Manager does not perform to the County's satisfaction.
- D. The Contractor shall re-verify closet locations with the County's Project Manager prior to installation.
- E. Prior to ordering, furnishing, or installing any equipment, the Contractor shall obtain the County's written approval of equipment, locations, layout, and installation.
- F. If other Contractors' work delays the Contractor, that information must immediately be communicated to the County's Project Manager and appropriate extra time may be allowed. Shipping delays are the sole responsibility of the Contractor.
- 4.04 Cable Management System
- A. The Contractor shall use the County's cable management system where equipped to provide a neat and efficient means for routing and protecting fiber and copper cables and patch cords on telecommunication racks and enclosures.
- 4.05 Installation Requirements

- A. The Contractor shall perform the upgrades, installation, configuration, training for the County's personnel, and support of the proposed systems.
- B. Contractor and/or its subcontractors are fully authorized/certified to supply, upgrade, install, configure, provide warranty service, and troubleshoot/support the proposed equipment.
- C. All installing personnel have completed certified manufacturer training, or the Contractor shall contract with manufacturer for installation of all proposed components.
- D. For any equipment items/systems accepted by the County and made part of the contract, the delivery, installation, configuration, testing, user training, and documentation must be included in the project schedule.
- E. The Contractor shall take responsibility for proper ordering, shipping charges and delivery of all component parts. This includes any components to be ordered from any third-party companies. The Contractor shall be responsible for proper storage of delivered equipment.
- F. The personnel listed in the Respondent's proposal shall be the personnel assigned to this project. If changes are required, the Contractor shall gain written approval from the County's Project Manager prior to assignment of substitutes.
- G. Manufacturer(s) or a certified training agency thereof must be offered to the County employees on products supplied.
- H. The Contractor has, with staff employees, previously configured and operated a system with components as quoted.
- I. Any technician(s) dispatched to install or fix a failed component shall have been factory trained and certified by the manufacturer of the proposed equipment. The Contractor is responsible for following industry standards and all manufacturer installation and maintenance practices.
- J. The Contractor is responsible for working with the County to understand its IP addressing scheme and for implementing this scheme in the furnished devices. Currently, the County uses a mixture of static addressing and DHCP. The County shall work with the vendor to enable DHCP addressing for all new devices.
- K. The Contractor must install hardware in a secure manner. Screws shall be tightened to a torque just sufficient to secure equipment without deforming washers beyond their original diameter.

- L. All rack-mount equipment shall be secured as recommended by the manufacturer with consideration to airflow, power, and patch cable connections.
- M. The Contractor shall be responsible for labeling all cables and equipment components installed as part of this project. In doing so, make the labeling of each component...
 - 1. Unique, to prevent it from being confused with other similar components.
 - 2. Legible and permanent enough to last the life of the component. Handwritten labels shall not be permitted.
- N. Velcro straps shall be installed snugly without deforming cable insulation. Straps shall be spaced at uneven intervals not to exceed 4-foot. No sharp burrs should remain where excess length of the cable tie has been cut.
- O. The Contractor shall make the system properly operational and physically secure by mounting equipment and related accessories into walls, consoles, and racks as required. Manufacturer's guidelines for installation shall be followed. Discrepancies in installation procedure or inability to complete a given task due to a shortage of materials or malfunctioning equipment shall be reported to the County immediately upon discovery.
- P. Systems described in this document, once configured by the Contractor, shall be delivered to the customer installation location and installed by the Contractor without any additional cost or expense to the County, and the County shall not be deemed to have accepted any equipment until the date of acceptance.
- Q. The Contractor shall unpack equipment from shipping material and organize equipment into the kits from which it shall be used. This includes checking to ensure that all equipment is complete and fully functional. Empty boxes and packaging shall be neatly organized per the County's instructions and removed if requested.
- R. The Contractor shall be responsible for the removal of existing equipment not incorporated. That equipment shall be inventoried, boxed, and removed by Contractor and placed in a specified location as designated by the County. The boxes shall clearly show the inventoried contents. The County shall be responsible for disposal of equipment.
- S. The Contractor shall provide a weekly update to the County Project Manager on the project status.

- T. Client quantities included in this RFP are estimates. The Contractor shall be required to perform station surveys to verify quantities. Any increases in components prior to acceptance shall be at pre-cutover costs, and deletions shall not be charged restocking fees.
- U. The Contractor shall supply one complete set of hardware and software documentation/manuals for all provided items at no additional cost.

4.06 Security

- A. When deploying any product, software, or application associated with this RFP, the Contractor shall harden the resulting system(s). Hardening includes the following actions:
 1. Determining the purpose of the system and minimum software and hardware requirements
 2. Documenting the minimum hardware, software, and services to be included on the system
 3. Installing the minimum hardware, software, and services necessary to meet the requirements using a documented installation procedure
 4. Installing necessary patches
 5. Installing the most secure and up-to-date versions of applications
 6. Configuring privilege and access controls by first denying all, then granting back the minimum necessary to each user
 7. Configuring security settings as appropriate, enabling allowed activity and disallowing other activity
 8. Enabling logging sufficient for the County staff to determine equipment faults or configuration problems in the equipment
 9. Archiving the configuration and checksums in secure storage prior to system deployment
 10. Testing the system to ensure a secure configuration
 11. Using secure replication procedures for additional, identically configured systems, making configuration changes on a case-by-case basis
 12. Changing all default passwords
 13. Testing the resulting systems

4.07 Project Closeout and Acceptance

- A. Punch List – Work or materials found to be incomplete, of unsatisfactory quality, failing to meet the specifications in the RFP package and resulting contract, and/or unacceptable to the

County shall be documented in a punch list by the County and provided to the Contractor to rectify.

- B. Punch List Approval – The punch list shall be considered complete only after having been signed by the County.
- C. Acceptance – Acceptance shall occur after all of the following conditions have been met:
 - 1. All items/systems have been delivered, installed, configured, tested, and transitioned into service.
 - 2. The system, including all ancillary devices, applications, and options made part of the contract, has had 30 consecutive days with 100 percent availability.
 - 3. All of the work has been completed in accordance with the contract and RFP specifications (including testing procedures as outlined in the accepted response).
 - 4. Training as specified is complete.
 - 5. The system operates in conformance with manufacturer's published specifications.
 - 6. The system is transitioned to service.
 - 7. All of the documentation requirements have been met.
 - 8. All outstanding punch list items have been completed.
 - 9. The system post-cutover requirements have been completed.
 - 10. The Contractor has supplied test results needed to verify compliance with the specifications found in this RFP package.
 - 11. The Contractor has certified in writing to the County that the system is installed and operational in accordance with these specifications and is ready for use.
 - 12. The County or the County's designated representative has inspected the installation and provided written approval.
 - 13. Software refresh has been completed (to ensure all systems operate on the latest software).
- D. At this time, upon the County's written acceptance, operational control becomes the responsibility of the County. This constitutes Date of Acceptance. The warranty for the entire system and all components begins as of this date.

4.08 Service and Support

- A. Server and Software Maintenance – The Contractor shall provide all necessary server and software maintenance on a turnkey

basis during the first year warranty period and any subsequent maintenance term. The Respondent shall be responsible for operating system and database tuning, patches, hardware, and software diagnosis, recovery, and version upgrades as needed. Contractor shall work directly with the County on application modifications, diagnosis, recovery, customization, configuration, and how-to questions. Contractor shall manage backups of data, application, operating system, and database management system as required to provide for full recovery in the event of a disaster or hardware failure. The Contractor shall coordinate and work with the server hardware maintenance provider in the diagnosis and repair of the server hardware. Contractor shall perform restores and recovery without the County's assistance.

- B. Warranty Period and Maintenance – The Contractor, by entering into a contract with the County, warrants and represents that all materials, equipment, and services delivered to the County pursuant to the contract conforms to all of the specifications contained or referred herein. The Contractor further guarantees to replace all materials, equipment, software, or services that may be rejected by the County due to defective materials or workmanship for a minimum of one year following final acceptance of all systems. Failure or neglect of the County to require compliance with any term or condition of the contract specifications shall not be deemed a waiver of such term or condition.
- C. The following must be included in the warranty period and under maintenance contract:
1. Monday-Friday, 8:00 a.m. - 5:00 p.m. call-out on minor alarms
 2. Seven day per week 24-hour call-out coverage shall be provided for the items listed below.
 - a. Critical alarms
 - b. System outages
 3. Three-hour on-site response time for critical alarms and system outages
 4. Software upgrades
 5. Patches
 6. Corrective maintenance
 7. All labor except for upgrades to major software releases
 8. Materials
 9. Next business day for non-critical components
 10. Remote support

11. Telephone support to assist County Building personnel with technical and system management issues and questions
 12. Database backups for business continuity
 13. Off-site software storage
 14. Work to completion
 15. 24 hour x 7 days a week service center
 16. 24 hour x 7 days a week alarm monitoring and remote trouble resolution (Respondent must include all hardware and software required to support this application in base surveillance system cost.)
- D. Maintenance Guarantee – A signed letter from both the Respondent and manufacturer is required guaranteeing maintenance of the proposed system over its five (5) year life. Should the manufacturer discontinue this product or cease to do business, the Respondent guarantees to stock an adequate supply of components to maintain the system over its five (5) year life. Further, should the Respondent cease to do business, the manufacturer guarantees to provide components and services for this installation over its five (5) year life.

5 BASE SYSTEM REQUIREMENTS

5.01 The COUNTY reserves the right to accept or reject in any combination which buildings are selected for final approval based on budgetary constraints.

5.02 McLeod County Court House

Add Door Access Readers and Applicable Hardware	18 access readers.
Add Cameras	8 new cameras
Management Software for Access	1 Software program
Management Software for Cameras	1 Software program

5.03 McLeod County Court Administration

Door Access Readers and Applicable Hardware	Replace 6 current access readers from Old Keri System
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5.03 McLeod County Law Enforcement

Door Access Readers and Applicable Hardware	6 current doors with access readers. 8 new doors with access readers
Incorporate Current Analog Cameras not part of the Jail Video System	6 current analog cameras

5.04 McLeod County North Complex

Door Access Readers and Applicable Hardware	6 current access readers and need 1 new
Incorporate Current Analog Cameras and add	5 current analog cameras and 3 new cameras

5.05 McLeod County Annex

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add New Camera	1 360 degree camera in main hallway

5.06 McLeod County Glencoe HWY/LEC Shed

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add Cameras	2 camera outside covering both buildings

5.07 McLeod County Health and Human Services

Door Access Readers and Applicable Hardware	14 current badge readers and 2 new doors
Incorporate Current Analog Cameras and add new	4 current cameras and 1 new outside and 360 camera upstairs

5.08 McLeod County Solid Waste

Door Access Readers and Applicable Hardware	20 current access readers on Keri System. Add 2 readers. 4 Current Honeywell readers
Incorporate Current Analog and IP Cameras	29 current cameras to integrate into new system

5.09 McLeod County Fairgrounds

Door Access Readers and Applicable Hardware	Add 8 access readers
Add Cameras	Add 3 cameras in Commercial Building and 1 in Dairy Building

5.10 McLeod County Brownton HWY Shop

Door Access Readers and Applicable Hardware	1 access readers for walk in door
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5.11 McLeod County Silver Lake/Lester Prairie HWY Shop

Door Access Readers and Applicable Hardware	2 access readers for walk in doors on each end of building
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6 OPTIONAL SECURITY SYSTEM REQUIREMENTS

6.01 McLeod County Court House

Scalable Video Storage Solution	Current requirements to hold video for 30 days and over right
	Scalable to incorporate the contents of the LEC DVR, HHS DVR, and NC DVR

6.02 McLeod County HATS

Secondary Scalable Video Storage Solution	Current requirements to hold video for 30 days and over right
	Scalable to incorporate SW DVRs and New Fairground's cameras.

7 DATA NETWORK REQUIREMENTS

- 7.01 The Contractor shall have as a part of its implementation team someone completely capable of analyzing and implementing proper Quality of Service configurations necessary to support this surveillance system utilizing current and new customer provided Cisco network devices. This person shall be available throughout the implementation phase of the project to assist the project team with each building assessment, engineering and configuration recommendations for implementing the surveillance system across the County's existing LAN.
- 7.02 The Contractor must provide a complete network assessment and make recommendations on any configuration changes needed to support the proposed system.
- 7.03 The Contractor shall provide a report that identifies any errors, including any latency and jitter issues, and shall provide recommended resolutions.
- 7.04 The Contractor shall provide detailed LAN configuration specification and best practices required to support all installed surveillance components.
- 7.05 Implementation
 - A. The Contractor is responsible for working with the County to understand its IP addressing scheme and for implementing this scheme to support all applications provided under the RFP.
 - B. The Contractor is responsible for working with the County to ensure the proper VLAN and QoS configurations are implemented to support all applications provided under this RFP.
 - C. The Contractor shall be responsible for understanding the County's network device naming convention and shall implement device names on all new devices and all relocated devices.
- 7.06 When installation is complete, the Contractor shall furnish the County with two complete sets (in three-ring binders) and on soft copy in MS Office format of data network project documentation. Contractor shall provide documentation as follows:
 - A. Logical diagrams showing all installed equipment.
 - B. IP addresses assigned to all equipment shall be noted both on diagrams and on a separate table/spreadsheet.

8 COUNTY RESPONSIBILITIES

- 8.01 Patch Cord Connections – The County shall provide and complete all patch cord connections required in all (MER) and (TER) locations.
- 8.02 VMware environment to create servers on which to load the required management applications.

9 SUMMARY RFP COSTS

9.01 Base

5.02	McLeod County Court House	\$62,753.20
5.03	McLeod County Court Administration	\$4,536.13
5.04	McLeod County Law Enforcement	\$12,898.44
5.05	McLeod County North Complex	\$16,013.60
5.06	McLeod County Annex	\$4,029.68
5.07	McLeod County HWY/LEC Shed	\$4,918.11
5.08	McLeod County Health and Human Services	\$18,512.66
5.09	McLeod County Solid Waste	\$25,501.22
5.10	McLeod County Fairgrounds	\$17,465.75
5.11 & 5.12	McLeod County HATS	\$2,599.36 / \$3,141.25
	Base Total	\$172,369.00

9.02 Option 1

	McLeod County Court House Option 1	\$10,658.00
	McLeod County HATS Option 1	\$10,658.00
	Option Total	\$21,316.00

10 BILL OF MATERIAL AND EQUIPMENT SPECIFICATIONS

- 10.01 Provide an itemized bill of material (BOM) including all hardware, software, and the labor for all software, cabling, card readers, door hardware, control panel hardware, and optional hardware proposed in response to this RFP.
- 10.02 Provide the quantity of network connections by location that shall be required to connect the cameras, access card readers, control panels, and all peripheral equipment to the data network.

11 RESPONDENT ASSUMPTIONS

- 11.01 Provide a complete list of any equipment that the County will need to provide, such as hardware, software, and servers required to support the proposed security system, and all optional equipment/applications. The list shall include detailed specifications and be organized to allow the County to determine which alternate or option the equipment shall support.
- 11.02 The Contractor must provide all equipment, including but not limited to hardware, software, and labor required for supporting and installing the proposed surveillance system, and all optional equipment/applications proposed, unless it has been identified in this section.
- 11.03 Provide details of any other assumptions taken in preparing your response to the RFP.

12 INSTALLATION METHODOLOGY AND DRAWINGS

12.01 Installation Methodology

A. Provide a detailed description with diagrams of how the proposed system shall be phased in over a period of weeks or months. Include the following:

1. Time line for each phase beginning with contract signing
2. Logical description of how the equipment/systems shall be rolled out to all locations
3. Database collection
4. Network assessment
5. Application deployment
6. Training
7. Acceptance and warranty

12.02 Provide diagram for all locations, including any new equipment currently not there.

12.03 Provide a complete network diagram depicting all physical and logical inter- and intra-building network facilities to be utilized in the installation, including the required number of network ports.

13 ACCEPTANCE TESTING

13.01 Provide the manufacturer's recommended installation and acceptance test plan for all proposed products and applications.

14 SOFTWARE UPGRADES AND LDAP INTERFACE

- 14.01 Provide a detailed description of what is included in the proposed software upgrade maintenance, including the following:
- A. What type of upgrades are included (e.g., major or release, minor or versions, updates and patches)?
 - B. What is the frequency of each upgrade?
 - C. How many of each type of upgrade were required over the past year on the proposed products?
 - D. How is each of the upgrades accomplished/implemented, and what impact do they have on the system availability?
 - E. What tools are used to manage the upgrades?
 - F. Who installs the upgrades?
- 14.02 LDAP Integration with MS Active Directory (AD) – Provide a detailed description of the system management functions that can be accessed from AD utilizing LDAP for the proposed Access/Surveillance system, and optional applications. At a minimum, you should address the following activities:
- A. Importing users and groups to manage access
 - B. How changes to AD sync with the surveillance system
 - C. Dealing with a lost badge and disabling the AD account

15 RESPONDENT AND SUBCONTRACTOR QUALIFICATIONS, SUPPORT CAPABILITIES, AND REFERENCES

15.01 Information about the Respondent

- A. Company name
- B. Legal name (if different)
- C. Years in business
- D. Number of years selling systems similar to this Proposal
- E. Contact person
- F. Full mailing address
- G. Telephone number
- H. Fax number
- I. E-mail address
- J. Name and phone number of bonding company
- K. Number of full-time employees
- L. Number of technical/installation personnel (minimum of four dedicated to this project)
- M. Names and titles of personnel who would be providing the training for the equipment in this project (attach listing of experience with similar projects)
- N. Name of person who would be project manager for this project (attach listing of experience with similar projects)
- O. Dunn and Bradstreet Number
 - 1. Respondent - 00-621-5156
 - 2. Equipment Manufacturer - S2 17-056-0143
Video Insight 15-679-0953

15.02 Qualification and Requirements

- A. If more than one (1) company is involved in the installation, training, and/or support after installation, there must be a Prime Contractor. This Prime Contractor assumes responsibility for all other entities involved.

1. List Prime Contractor here:

UHL Company, inc.

- B. The response shall include a statement from all involved Respondents agreeing that the configuration shall work as specified and that all Respondents shall work under the Prime Contractor to resolve any configuration or interoperability problems during the installation process at no additional cost to the County. Write statement below.

UHL Company, inc. will perform the complete installation

15.03 Experience and Existing Customers – How many similar systems has the Respondent sold/installed?

A. In the area: X

B. Statewide: X

C. Nationwide:

15.04 Surveillance System – All prospective Respondents must provide a minimum of three installation and three maintenance references using the reference format provided below. The references must be in the State of Minnesota, similar in scope and size to the County's project and must demonstrate the following:

A. At minimum, two of the three references must have the exact system you are proposing.

B. References must demonstrate that the Respondent has extensive knowledge of all equipment proposed and has at least one (1) year of experience with the same system(s) in the same environment.

C. References will be contacted – please verify information before submitting. Use the format below for all references. All references will be called. Please inform your contacts that a 10 to 15 minute call may be anticipated.

Reference Format:

Organization Name City of St. Louis Park

Address 5005 Minnetonka Blvd

St Louis Park, MN 55416

Type of Business Municipal

Contact Person Nikki Farrow

Telephone Number 952.924.2167

Contact Email Address nfarrow@stlouispark.org

Dates of Installation Ongoing with annual additions

Description of System City Wide Access Control & Video

Number of Networked Locations 14

D. Subcontractors/Partners

1. The applicable terms and provisions of the contract documents shall bind every subcontractor. Further information about subcontractors may be requested prior to award.
2. Identify all subcontractors or partners used for any purposes. Failure to disclose subcontractors/partners may lead to disqualification. Include separate sheet(s) labeled "Subcontractors/Partners," if necessary.

Business Name Years Experience Type of Work Percent of Project

- E. References for Subcontractors/Partners – Include below three (3) references for EACH subcontractor. (Duplicate this page if needed for multiple subcontractors.) Again, preference shall be given to Respondents with references for implementations at organizations most similar to the client.

Subcontractor References will be contacted – please verify information before submitting. Utilize the format below for all subcontractor references. All references will be called. Please inform your contacts that a 10 to 15 minute call may be anticipated.

Subcontractor Reference Format

Organization Name _____

Address _____

Type of Business _____

Contact Person _____

Telephone Number _____

Contact Email Address _____

Dates of Installation _____

Description of System _____

Number of Networked Locations _____

15.05 Surveillance System Service after Installation

- A. How many service personnel trained in maintaining the proposed systems does Respondent employ in the County's area? Please indicate location closest to the County.

1. Trained Service Personnel: 2

2. Location: Hutchinson, Silver Lake

- B. Provide the address of Respondent's service center(s) closest to the County:

1. Company UHL Company

2. Address 9065 Zachary Lane North, Maple Grove MN 55369

3. Telephone Number 763.425.7226

- C. Who shall maintain parts inventory? At what location?

1. Company UHL Company

2. Address 9065 Zachary Lane North, Maple Grove MN 55369

3. Telephone Number 763.425.7226

4. What critical component parts are kept in stock at this location? Network Nodes, Cameras

15.06 Financial statements – Upon request, financial statements from the Respondent, Manufacturer, and subcontractor(s) inclusive of cash flow sheet, income sheet, balance sheet, and asset liability statement for the last three (3) years shall be provided.

16 PROJECT AND MAINTENANCE TEAM

- 16.01 Provide names, titles, resumes, and training certificates of installation project team members.
- 16.02 Provide names, job titles, and training certificates of service personnel who will be assigned to the County after installation.

17 EXCEPTIONS AND CLARIFICATIONS



9065 Zachary Lane N
Maple Grove, MN 55369

McLeod County Security/Surveillance System

RFP Costs – Base Bid - \$172,369.00

Section	Location	Cost
5.02	McLeod County Court House	\$ 62,753.20
5.03	McLeod County Court Administration	\$ 4,536.13
5.04	McLeod County Law Enforcement	\$ 12,898.44
5.05	McLeod County North Complex	\$ 16,013.60
5.06	McLeod County Annex	\$ 4,029.68
5.07	McLeod County HWY/LEC Shed	\$ 4,918.11
5.08	McLeod County Health and Human Services	\$ 18,512.66
5.09	McLeod County Solid Waste	\$ 25,501.22
5.10	McLeod County Fairgrounds	\$ 17,465.75
5.11	McLeod County Brownton HWY Shop	\$ 2,599.36
5.12	McLeod County Silver Lake/Lester Prairie HWY Shop	\$ 3,141.25

RFP Costs – Option 1 - \$21,316.00

Section	Location	Cost
9.02	McLeod County Court House Option 1	\$ 10,658.00
9.02	McLeod County HATS Option 1	\$ 10,658.00

RFP Costs – Extended Manufacturer Warranty Options

Section	Location	Cost
3.02- O	3 Year Extended Warranty	\$ 8,632.00
3.02- O	5 Year Extended Warranty	\$ 16,966.00

RFP Costs – Annual Maintenance Agreement Option

Section	Location	Cost
	Annual Maintenance Agreement	\$ 8,130.00

Maintenance Agreement Breakdown

We will perform annually 40 hours of IP Video/Access Control Preventative Maintenance (includes device cleaning, device testing, hardware testing, & any applicable software upgrades). In addition we will perform up to 2 Service Calls per Month, During Normal Business Hours (7am to 3:30pm Monday through Friday) @ 2 hr. maximum per call. A \$650 Replacement Parts Fund has also been included in this agreement which would be usable for any equipment not covered by a factory warranty. Unused service calls and unused replacement parts fund totals may be carried over month to month, but not annually.

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-NBVM-64	S2 Netbox VM Software Package 64 Portal
1	S2	S2-NR64	S2 Netbox VM 64 Portal Add-On
10	S2	S2-NN-E-WM	S2 Netbox Network Nodes
55	S2	S2-ACM	S2 Netbox 2 Portal Access Control Blade
5	S2	S2-MNP	S2 Netbox MicroNode Plus
1	S2	S2-VMS-B-VI	VI VMS initial integration (4 cam incl)
57	S2	S2-VMS-C-VI	VI VMS Integration license per camera
116	HID	920NTNNEK0000C	R40 iClass SE Reader
23	HES	1006CDB-12/24D-t	Complete PAK Strike
32	HES	5000C-12/24D-630	Complete PAK Strike
6	SDC	LR100VDK	VonDuprin Lock Power Conversion Kit
8	Preferred Power	P3DCAXS-10OL	12/24DC 10 Amp Power Supply
7	Preferred Power	P3DCAXS-5OL	12/24DC 5 Amp Power Supply
15	Preferred Power	P3DB-8	Individual Output Board
30	PowerSonic	BAT125	12v 5AH Batteries
1	Videolnsight	v.6 VMS	Enterprise Software Package
17	Videolnsight	B-5360	360 5MP IP Cameras
8	Videolnsight	A-54-V2	3MP Vandal Dome
2	Videolnsight	VP-1	Single Channel Video Encoder
2	Videolnsight	VP-8-V2	8 Channel Video Encoder
1	Videolnsight	VP-16-V2	16 Channel Video Encoder
3	Videolnsight	B-31-CMB	Corner Mount Bracket
1	Videolnsight	B-MD-WM	Wall Mount Bracket
7	Videolnsight	IPsv-UL	Lifetime Camera License (for exist IP cams)

Rough In

Quantity	Manufacturer	Part Number	Description
5000	Windy City	22/6 Shielded	Plenum Reader Wire - Yellow Stripe
5000	Windy City	18/4	Plenum Lock Wire - Purple Stripe
5000	Windy City	CAT6	Plenum Network Cable - Yellow
200	Border States	Conduit	EMT
200	Border States	Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-NBVM-64	S2 Netbox VM Software Package 64 Portal
1	S2	S2-NR64	S2 Netbox VM 64 Portal Add-On
3	S2	S2-NN-E-WM	S2 Netbox Network Nodes
16	S2	S2-ACM	S2 Netbox 2 Portal Access Control Blade
1	S2	S2-VMS-B-VI	VI VMS initial integration (4 cam incl)
6	S2	S2-VMS-C-VI	VI VMS Integration license per camera
32	HID	920NTNNEK0000C	R40 iClass SE Reader
14	HES	1006CDB-12/24D-1	Complete PAK Strike
14	HES	5000C-12/24D-630	Complete PAK Strike
4	SDC	LR100VDK	VonDuprin Lock Power Conversion Kit
3	Preferred Power	P3DCAXS-100L	12/24DC 10 Amp Power Supply
3	Preferred Power	P3DB-8	Individual Output Board
6	PowerSonic	BAT125	12v 5AH Batteries
1	Videolnsight	v.6 VMS	Enterprise Software Package
5	Videolnsight	B-5360	360 5MP IP Cameras
5	Videolnsight	A-54-V2	3MP Vandal Dome

Rough In

Quantity	Manufacturer	Part Number	Description
2025		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
2025		18/4	Plenum Lock Wire - Purple Stripe
2400		CAT6	Plenum Network Cable - Yellow
100		Conduit	EMT
100		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-NN-E-WM	S2 Netbox Network Nodes
2	S2	S2-ACM	S2 Netbox 2 Portal Access Control Blade
4	HID	920NTNNEK0000C	R40 iClass SE Reader
1	Preferred Power	P3DCAXS-5OL	12/24DC 5 Amp Power Supply
1	Preferred Power	P3DB-8	Individual Output Board
2	PowerSonic	BAT125	12v 5AH Batteries

Rough In

Quantity	Manufacturer	Part Number	Description
100		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
100		18/4	Plenum Lock Wire - Purple Stripe
50		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-NN-E-WM	S2 Netbox Network Nodes
7	S2	S2-ACM	S2 Netbox 2 Portal Access Control Blade
13	HID	920NTNNEK0000C	R40 iClass SE Reader
4	HES	1006CDB-12/24D-i	Complete PAK Strike
3	HES	5000C-12/24D-630	Complete PAK Strike
1	Preferred Power	P3DCAXS-10OL	12/24DC 10 Amp Power Supply
1	Preferred Power	P3DB-8	Individual Output Board
2	PowerSonic	BAT125	12v 5AH Batteries

Rough In

Quantity	Manufacturer	Part Number	Description
500		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
500		18/4	Plenum Lock Wire - Purple Stripe
50		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-NN-E-WM	S2 Netbox Network Nodes
6	S2	S2-ACM	S2 Netbox 2 Portal Access Control Blade
9	S2	S2-VMS-C-VI	VI VMS Integration license per camera
12	HID	920NTNNEK0000C	R40 iClass SE Reader
3	HES	1006CDB-12/24D-I	Complete PAK Strike
3	HES	5000C-12/24D-630	Complete PAK Strike
1	Preferred Power	P3DCAXS-10OL	12/24DC 10 Amp Power Supply
1	Preferred Power	P3DB-8	Individual Output Board
2	PowerSonic	BAT125	12v 5AH Batteries
3	Videolnsight	B-5360	360 5MP IP Cameras
1	Videolnsight	VP-8-V2	8 Channel Video Encoder
1	Videolnsight	B-31-CMB	Corner Mount Bracket

Rough In

Quantity	Manufacturer	Part Number	Description
450		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
450		18/4	Plenum Lock Wire - Purple Stripe
450		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-MNP	S2 Netbox MicroNode Plus
1	S2	S2-VMS-C-VI	VI VMS Integration license per camera
2	HID	920NTNNEK0000C	R40 iClass SE Reader
2	HES	5000C-12/24D-630	Complete PAK Strike
1	Preferred Power	P3DCAXS-5OL	12/24DC 5 Amp Power Supply
1	Preferred Power	P3DB-8	Individual Output Board
2	PowerSonic	BAT125	12v 5AH Batteries
1	Videolnsight	B-5360	360 5MP IP Cameras

Rough In

Quantity	Manufacturer	Part Number	Description
100		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
100		18/4	Plenum Lock Wire - Purple Stripe
175		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-MNP	S2 Netbox MicroNode Plus
2	S2	S2-VMS-C-VI	VI VMS Integration license per camera
2	HID	920NTNNEK0000C	R40 iClass SE Reader
2	HES	5000C-12/24D-630	Complete PAK Strike
1	Preferred Power	P3DCAXS-5OL	12/24DC 5 Amp Power Supply
1	Preferred Power	P3DB-8	Individual Output Board
2	PowerSonic	BAT125	12v 5AH Batteries
2	Videolnsight	B-5360	360 5MP IP Cameras

Rough In

Quantity	Manufacturer	Part Number	Description
100		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
100		18/4	Plenum Lock Wire - Purple Stripe
300		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-NN-E-WM	S2 Netbox Network Nodes
7	S2	S2-ACM	S2 Netbox 2 Portal Access Control Blade
1	S2	S2-MNP	S2 Netbox MicroNode Plus
7	S2	S2-VMS-C-VI	VI VMS Integration license per camera
15	HID	920NTNNEK0000C	R40 iClass SE Reader
1	HES	1006CDB-12/24D-t	Complete PAK Strike
1	Preferred Power	P3DCAXS-10OL	12/24DC 10 Amp Power Supply
1	Preferred Power	P3DCAXS-5OL	12/24DC 5 Amp Power Supply
2	Preferred Power	P3DB-8	Individual Output Board
4	PowerSonic	BAT125	12v 5AH Batteries
5	Videolnsight	B-5360	360 5MP IP Cameras
2	Videolnsight	VP-1	Single Channel Video Encoder
2	Videolnsight	B-31-CMB	Corner Mount Bracket
1	Videolnsight	B-MD-WM	Wall Mount Bracket

Rough In

Quantity	Manufacturer	Part Number	Description
400		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
400		18/4	Plenum Lock Wire - Purple Stripe
775		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
2	S2	S2-NN-E-WM	S2 Netbox Network Nodes
12	S2	S2-ACM	S2 Netbox 2 Portal Access Control Blade
29	S2	S2-VMS-C-VI	VI VMS Integration license per camera
24	HID	920NTNNEK0000C	R40 iClass SE Reader
2	HES	5000C-12/24D-630	Complete PAK Strike
2	Preferred Power	P3DCAXS-10OL	12/24DC 10 Amp Power Supply
2	Preferred Power	P3DB-8	Individual Output Board
4	PowerSonic	BAT125	12v 5AH Batteries
1	Videolnsight	VP-8-V2	8 Channel Video Encoder
1	Videolnsight	VP-16-V2	16 Channel Video Encoder
7	Videolnsight	IPsv-UL	Lifetime Camera License (for exist IP cams)

Rough In

Quantity	Manufacturer	Part Number	Description
650		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
650		18/4	Plenum Lock Wire - Purple Stripe
150		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-NN-E-WM	S2 Netbox Network Nodes
3	S2	S2-ACM	S2 Netbox 2 Portal Access Control Blade
3	S2	S2-MNP	S2 Netbox MicroNode Plus
4	S2	S2-VMS-C-VI	VI VMS Integration license per camera
9	HID	920NTNNEK0000C	R40 iClass SE Reader
1	HES	1006CDB-12/24D-630	Complete PAK Strike
3	HES	5000C-12/24D-630	Complete PAK Strike
2	SDC	LR100VDK	VonDuprin Lock Power Conversion Kit
4	Preferred Power	P3DCAXS-5OL	12/24DC 5 Amp Power Supply
4	Preferred Power	P3DB-8	Individual Output Board
8	PowerSonic	BAT125	12v 5AH Batteries
1	Videolnsight	B-5360	360 5MP IP Cameras
3	Videolnsight	A-54-V2	3MP Vandal Dome

Rough In

Quantity	Manufacturer	Part Number	Description
525		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
525		18/4	Plenum Lock Wire - Purple Stripe
700		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-MNP	S2 Netbox MicroNode Plus
1	HID	920NTNNEK0000C	R40 iClass SE Reader
1	HES	5000C-12/24D-630	Complete PAK Strike
1	Preferred Power	P3DCAXS-5OL	12/24DC 5 Amp Power Supply
1	Preferred Power	P3DB-8	Individual Output Board
2	PowerSonic	BAT125	12v 5AH Batteries

Rough In

Quantity	Manufacturer	Part Number	Description
50		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
50		18/4	Plenum Lock Wire - Purple Stripe
50		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Bill Of Materials

Components

Quantity	Manufacturer	Part Number	Description
1	S2	S2-MNP	S2 Netbox MicroNode Plus
2	HID	920NTNNEK0000C	R40 iClass SE Reader
2	HES	5000C-12/24D-630	Complete PAK Strike
1	Preferred Power	P3DCAXS-5OL	12/24DC 5 Amp Power Supply
1	Preferred Power	P3DB-8	Individual Output Board
2	PowerSonic	BAT125	12v 5AH Batteries

Rough In

Quantity	Manufacturer	Part Number	Description
100		22/6 Shielded	Plenum Reader Wire - Yellow Stripe
100		18/4	Plenum Lock Wire - Purple Stripe
50		CAT6	Plenum Network Cable - Yellow
10		Conduit	EMT
10		Wiremold	Metal Raceway

Assumptions:

Our response assumes customer to supply conduit path between buildings where necessary, we have not included ANY trenching or horizontal boring in our RFP response.

ANNEX to Glencoe HWY/LEC Shed – Assumed Existing Conduit Adequate or New Provided

Health and Human Services – Assumed Conduit Provided for New Camera on Light Pole

Fairgrounds – Assumed NO conduit thus we included individual access panels for each building

Our response assumes customer to supply and manage a Virtual Machine Server for the Access Control System, this servers should be equal to or greater than:

Minimum Storage - 128GB Pro Series SSD

Memory (RAM) - 8GB

Processor - Intel Xeon Quad Core

Server Host - VMWare ESXi 5.1 or later

Our response assumes customer to supply and manage 2 Virtual Machine Recording Servers for Video Surveillance System, these servers should be equal to or greater than:

O/S - MS Server 2008/2012/2016

Total Storage - 6 X 6TB or 36TB

Usable Storage - 27TB

Ram - 8GB

Processor - Dual

Power Supply – Dual

Our response assumes all existing cameras to be in full functioning order, we also assume all existing camera wiring to be in full functioning order

Our response assumes all existing electronic door locking hardware to be in full functioning order, we also assume all existing card access wiring to be in full functioning order.

Our response assumes all existing locksets to remain in-place and to be in full functioning order, we also assume any lockset hardware changes or re-keying to be beyond the scope of this RFP and thus are not included in our response.

Installation Methodology:

Our intent is to complete the entire project within an 8 week time span, after receiving a signed contract we will provide engineered drawings and a complete Microsoft Project Gantt Chart. All equipment would also be ordered and we would have a project kickoff meeting to determine the schedule and flow of each site in order to minimize impact on the day to day functions. Our first priority would be to begin and complete the exterior work before the season changes to winter. At the same time we will work with you to determine what if any data from the existing system you would like to import, the specified access control system includes full database import utilities at no additional charge to you. We will also begin working with you IT personnel to set parameters for bandwidth use at each site as part of this we will do some real world testing to ensure the bandwidth that is needed is in place. As part of this we will also deploy the software systems and begin training the necessary personnel. Upon substantial completion we will do a complete top to bottom system provisioning and test. System turnover occur only after all items are fully tested and acceptance documentation is completed.

Assigned Technicians are fully certified in the products we have proposed; normally we would assign 2 technicians and 2 installers plus a project manager for projects such as this. Due to the sort timeline we may assign more staff to this project.

We have a large number of UHL Employees living in or near McLeod County we will use this personnel when at all possible.

Acceptance Testing:

The following forms will be utilized during and at completion of project to ensure all systems are working as designed and that all necessary personnel are properly trained on the systems



Inspection Check List Access Control (ICL AC)

Project Name _____ Project Number _____ Date _____

IP Address _____ User Name _____ Password _____

INSTRUCTIONS: Inspect the project and carefully check whether all items meet the project specifications. Initial in the space marked "Satisfactory" if the item meets with your approval. If an item is not satisfactory, describe the problem in the "Unsatisfactory" field. Once unsatisfactory item has been remedied to your satisfaction, initial in the space provided.

ITEM	SATISFACTORY	UNSATISFACTORY	REMEDIED
Software Solution Server Configuration			
Software Solution Server Operator Configuration			
Software Solution Client Configuration			
Software Solution Client Operator Configuration			
Software Solution Client Selection and/or Locations			
Software Solution Time Zone Configuration			
Software Solution Access Group Configuration			
Software Solution Holiday Configuration			
Software Solution Credential Configuration			
Software Solution Inputs/Output Configuration			
Door Function* Door Contacts			
Door Function* Door Forced Alarms			
Door Function* Door Held Alarms			
Door Function* Readers			
Door Function* Locking Hardware			
Door Function* Request To Exit Devices			
Door Function* Remote Release			
Control Panels Wires Labeled			
Control Panels Doors Labeled (for each controller)			
Control Panels Cleanliness			
Training* Systems Use Training			

- * {UHL Representative} You must provide/submit separate form [ICL ACb] listing each individual door with this form.
- * {UHL Representative} You must provide/submit separate Training Sign In form with this form
- * {UHL Representative} You must provide/submit screen shots showing all of the Server/Client settings with this form.

FINAL INSPECTION: Having inspected the project listed herein, the Customer hereby accepts the project as is, further it is understood and agreed that your warranty begins on the date listed above and will be in effect for a period of 90 days unless otherwise stated on your proposal. You will receive a warranty statement listing your specific warranty terms.

Customers Signature _____ Customers Name (please print) _____



Inspection Check List Access Control (ICL ACb)

Project Name _____ Project Number _____ Date _____

Door Name and/or Number _____

	SATISFACTORY	UNSATISFACTORY	REMEDIED
Door Contact			
Door Forced			
Door Held			
Reader			
Locking Hardware			
Request to Exit			
Remote Release			

Door Name and/or Number _____

	SATISFACTORY	UNSATISFACTORY	REMEDIED
Door Contact			
Door Forced			
Door Held			
Reader			
Locking Hardware			
Request to Exit			
Remote Release			

Door Name and/or Number _____

	SATISFACTORY	UNSATISFACTORY	REMEDIED
Door Contact			
Door Forced			
Door Held			
Reader			
Locking Hardware			
Request to Exit			
Remote Release			

Door Name and/or Number _____

	SATISFACTORY	UNSATISFACTORY	REMEDIED
Door Contact			
Door Forced			
Door Held			
Reader			
Locking Hardware			
Request to Exit			
Remote Release			

Door Name and/or Number _____

	SATISFACTORY	UNSATISFACTORY	REMEDIED
Door Contact			
Door Forced			
Door Held			
Reader			
Locking Hardware			
Request to Exit			
Remote Release			

Door Name and/or Number _____

	SATISFACTORY	UNSATISFACTORY	REMEDIED
Door Contact			
Door Forced			
Door Held			
Reader			
Locking Hardware			
Request to Exit			
Remote Release			

* {UHL Representative} You must mark all non-applicable items with an N/A in the Satisfactory column.



Inspection Check List Camera System (ICL CS)

Project Name _____ Project Number _____ Date _____

IP Address _____ User Name _____ Password _____

INSTRUCTIONS: Inspect the project and carefully check whether all items meet the project specifications. Initial in the space marked "Satisfactory" if the item meets with your approval. If an item is not satisfactory, describe the problem in the "Unsatisfactory" field. Once unsatisfactory item has been remedied to your satisfaction, initial in the space provided.

ITEM	SATISFACTORY	UNSATISFACTORY	REMEDIED
Recording Solution Server Configuration*			
Recording Solution Server Operator Configuration*			
Recording Solution Live Storage Configuration*			
Recording Solution Archive Storage Configuration*			
Recording Solution Client Configuration*			
Recording Solution Client Operator Configuration*			
Recording Solution Client Selection and/or Locations			
Recording Solution Live Video and/or Audio Quality			
Recording Solution Recorded Video and/or Audio Quality			
Recording Solution Video and/or Audio Export & DVD Create			
Camera Function* Placement			
Camera Function* Focal Length			
Camera Function* Focus			
Camera Programming* Compression Format			
Camera Programming* Resolution			
Camera Programming* Frames Per Second			
Camera Programming* Frame Size			
Camera Programming* Motion Recording			
Camera Function* Audio/Video Sync Quality			
Headend Wires Labeled			
Headend Cleanliness			
Training* Systems Use Training			

- * {UHL Representative} You must provide/submit separate form [ICL CSb] listing each individual camera with this form.
- * {UHL Representative} You must provide/submit separate Training Sign In form with this form.
- * {UHL Representative} You must provide/submit screen shots showing all of the Server/Client settings with this form.

FINAL INSPECTION: Having inspected the project listed herein, the Customer hereby accepts the project as is, further it is understood and agreed that your warranty begins on the date listed above and will be in effect for a period of 90 days unless otherwise stated on your proposal. You will receive a warranty statement listing your specific warranty terms.

Customers Signature _____ Customers Name (please print) _____



Inspection Check List Camera System (ICL CSb)

Project Name _____ Project Number _____ Date _____

Camera Name and/or Number	SATISFACTORY	UNSATISFACTORY	REMEDIED
Placement			
Focal Length			
Focus			
Compression Format			
Resolution			
Frames Per Second			
Frame Size			
Motion Recording			
Audio/Video Sync			

Camera Name and/or Number	SATISFACTORY	UNSATISFACTORY	REMEDIED
Placement			
Focal Length			
Focus			
Compression Format			
Resolution			
Frames Per Second			
Frame Size			
Motion Recording			
Audio/Video Sync			

Camera Name and/or Number	SATISFACTORY	UNSATISFACTORY	REMEDIED
Placement			
Focal Length			
Focus			
Compression Format			
Resolution			
Frames Per Second			
Frame Size			
Motion Recording			
Audio/Video Sync			

Camera Name and/or Number	SATISFACTORY	UNSATISFACTORY	REMEDIED
Placement			
Focal Length			
Focus			
Compression Format			
Resolution			
Frames Per Second			
Frame Size			
Motion Recording			
Audio/Video Sync			

Camera Name and/or Number	SATISFACTORY	UNSATISFACTORY	REMEDIED
Placement			
Focal Length			
Focus			
Compression Format			
Resolution			
Frames Per Second			
Frame Size			
Motion Recording			
Audio/Video Sync			

* {UHL Representative} You must mark all non-applicable items with an N/A in the Satisfactory column.



Security/Fire Division Training Sign-in Form

Internal Routing Instructions: 1) Copy to Security Division Operations Department

Project Name	Project Number	Date
<input type="text"/>	<input type="text"/>	<input type="text"/>

Type of Training Given

Name (Printed)	Name (Signature)
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Comments

Trainer(s)	Trainer(s)
<input type="text"/>	<input type="text"/>

Total Hours On-Site	Total Training Hours Provided To Date
<input type="text"/>	<input type="text"/>

Software Upgrades/LDAP:

Our systems include the first year of software upgrades at no additional charge; the upgrades are optional and normally follow a quarterly release schedule. The system offers single point upgrade meaning from a client PC a single upgrade file will take care of any server upgrades as well as any field controller upgrades, normal downtime for an upgrade is less than 15 minutes.

The proposed system offers complete AD integration at both user and group level. The system relies on your current AD database and as such any changes to an AD entry results in an immediate update with the system.

References:

City of St. Louis Park
5005 Minnetonka Blvd
St Louis Park, MN 55416

Municipal

Nikki Farrow
952.924.2167
nfarrow@stlouispark.org

On-going installation with annual additions (began in 2010), networked sites include City Hall, Public Safety, Fire Stations, Rec Center, Nature Center, Maintenance Facility, Multiple Park Buildings, and Police Sub Stations.

They have the exact systems we have proposed to use for McLeod County.

City of Woodbury
2100 Radio Drive
Woodbury, MN 55125

Municipal

JB Guiton
651.714.3600
jguiton@ci.woodbury.mn.us

On-going installation with annual additions (began in 2015), networked sites include City Hall, Public Safety, and Fire Stations.

They have the Video Insight video surveillance solution and are in the process of upgraded to S2 access control

City of White Bear Lake
4701 Highway 61
White Bear Lake, MN 55110

Municipal

Julie Swanson
651.429.8551
jswanson@whitebearlake.org

On-going installation with annual additions (began in 2016), networked sites include City Hall, Public Safety, Rec Center, Nature Center, Maintenance Facility, Multiple Park Buildings, and Police Sub Stations.

They have the exact systems we have proposed to use for McLeod County.

Information about the Respondent:

Company name – UHL Company, inc

Legal name (if different) – Same

Years in business – 99 Years (since 1917)

Number of years selling systems similar to this Proposal – 15 Years

Contact person – Jeff Eichenberger

Full mailing address – 9065 Zachary Lane North Maple Grove, MN 55369

Telephone number – 763.425.7226

Fax number – 763.425.7336

E-mail address – jeffe@uhlco.com

Name and phone number of bonding company – Pate Bonding

Number of full-time employees – 115

Number of technical/installation personnel (minimum of four dedicated to this project) - 60

Names and titles of personnel who would be providing the training for the equipment in this project (attach listing of experience with similar projects)

Nick Lind/Nick Eaton
Gaviidae Common
City of St Louis Park
City of White Bear Lake
City of Eagan
City of Woodbury

Name of person who would be project manager for this project (attach listing of experience with similar projects)

Nick Lind/Nathan Parr
Gaviidae Common
City of St Louis Park
City of White Bear Lake
City of Eagan
City of Woodbury

Dunn and Bradstreet Number

1. Respondent – 00-621-5156

2. Equipment Manufacturer – S2 17-056-0143 VideoInsight 15-679-0953

Exclusions:

Door Contacts/Status Switches are not called for in the Specification or the Addendum so they have NOT been included in our RFP response.

Request to Exit Devices (only needed with Door Contacts/Status Switches) are not called for in the Specification or the Addendum so they have NOT been included in our RFP response.

Lockset upgrade or replacement is not called for in the Specification or the Addendum so they have NOT been included in our RFP response.

The drawings requested in the RFP to be created from within our dedicated engineering department immediately after we are awarded the project.

POE Network Switches are not called for in the Specification or the Addendum so they have NOT been included in our RFP response.

Clarifications:

S2 Provides secure communication to/from all network nodes through SSL Digital Certificates and the SHA-1 Algorithm as opposed to the lesser secure AES128, if AES 128 or 256 is a necessity we can provide this by utilizing Mercury hardware with the S2 System.

S2 Requires zero client software and has zero client license costs

VideoInsight includes at no charge the client software, web client, and android/iOS apps.

Network Connections by Location:

5.02 Court House

Access Control = 3

Video = 10

5.03 Court Administration

Access Control = 1

Video = 0

5.04 Law Enforcement

Access Control = 1

Video = 0

5.05 North Complex

Access Control = 1

Video = 4

5.06 Annex

Access Control = 1

Video = 2

5.07 Glencoe HWY/LEC Shed

Access Control = 1

Video = 2

5.08 Health and Human Services

Access Control = 2

Video = 7

5.09 Solid Waste

Access Control = 2

Video = 9 (7 should be existing)

5.10 Fairgrounds

Access Control = 4

Video = 4

5.11 Brownton HWY Shop

Access Control = 1

Video = 0

5.12 Silver Lake/Lester Prairie HWY Shop

Access Control = 1

Video = 0



Network Ports Used by S2 Security Products

The following table summarizes the ports that must be opened on your network to allow communication between an S2 NetBox[®] system and:

- An S2 Global[®] system or an S2 NetVR[®] series video management system
- S2 nodes or third-party products
- S2 Magic Monitor[®]
- S2 Mobile Security Officer[®]

Port or Port Range	Products	Description
20, 21 (TCP)	S2 NetBox	When using active FTP, these ports must be open to the FTP server for FTP backups from the S2 controller. When using passive FTP, port 20 will not be required. Ports must also be left open to the S2 controller for FTP server responses. The network administrator must set up these ports.
22 (TCP)	<ul style="list-style-type: none">• S2 NetBox• S2 NetVR• S2 Global Server• S2 Network Node with M1-3200 blade	Used by S2 Technical Support for troubleshooting When secure FTP is enabled, must be open to the SFTP server for SFTP backups from the S2 controller
25, 587 (TCP)	S2 NetBox	SMTP access email relay (for the event action "Send Email")
80 (TCP)	<ul style="list-style-type: none">• S2 NetBox• S2 NetVR• S2 Global Server• S2 Network Node with M1-3200 blade	Must be open to the S2 controller for browser access to the security management system. This can be configured on a different port.
123 (UDP & TCP)	All S2 controllers	NTP (Network Time Protocol) - used for time synchronization

Port or Port Range	Products	Description
139 (TCP)	S2 NetBox	smbd server daemon, which provides file sharing and printing services to Windows clients
443 (TCP)	<ul style="list-style-type: none"> S2 NetBox S2 NetVR 	Secure Web access (SSL)
445 (TCP)	<ul style="list-style-type: none"> S2 NetBox S2 NetVR 	smbd server daemon, which provides file sharing and printing services to Windows clients
554	All S2 NetVR products	Real Time Streaming Protocol (RTSP) Must be open for streaming H.264 video streams
694, 33752 (TCP)	S2 NetBox	Linux-HA high availability Heartbeat
1080	S2 NetBox	Must be open to the S2 controller to allow communications with S2 Magic Monitor
1818, 3011, 22609 (TCP)	S2 NetVR	S2 NetVR video support
3000, 3010 (TCP)	S2 NetBox	Required for integration with third-party video management systems (VMS)
3306	All S2 controllers	For PostgreSQL report usage
4503	<ul style="list-style-type: none"> S2 NetBox S2 NetBox VR 	Must be open for communications between S2 Mobile Security Officer and an S2 NetBox or S2 NetBox VR controller
4743	<ul style="list-style-type: none"> S2 NetBox S2 NetVR 	OpenHPI – HPI instance to which multiple clients can connect
5432 (TCP)	<ul style="list-style-type: none"> S2 NetBox S2 Global 	For PostgreSQL database system
7262 (TCP)	<ul style="list-style-type: none"> S2 NetBox S2 Network Node with M1-3200 blade S2 Network Node with CBM blade S2 MicroNode™ Plus S2 MicroNode™ (inbound to the S2 nodes only)	Must be open to the S2 controller for communications with S2 nodes Be sure that this port is open through routers and firewalls for any S2 nodes on different subnets than the S2 controller.

Port or Range	Products	Description
ASSA ABLOY Integration		
2571 (TCP)	S2 NetBox	Used to connect to ASSA ABLOY wireless and POE locksets
9020, 9090 (TCP)	S2 NetBox	S2 Global Server support Port 9020 is used for S2 Global to S2 NetBox communications. Port 9090 is used for S2 NetBox to S2 Global communications.
Blackboard Nodes		
9005 (TCP)	<ul style="list-style-type: none"> • S2 NetBox • Blackboard nodes (inbound to the Blackboard nodes only) 	Must be open to the S2 controller for communications with Blackboard nodes. Be sure that this port is open through routers and firewalls for any Blackboard nodes on different subnets than the S2 controller.
Digital Monitoring Products (DMP) Integration		
2001 (S2 product outbound TCP)	S2 NetBox	Used for outbound communications between the S2 system and supported DMP intrusion panels
2011 (S2 product outbound TCP)	S2 NetBox	Used for inbound communications between the S2 system and supported DMP intrusion panels
6000-6063 (Inbound to S2 TCP)	S2 NetBox	Must be open to the S2 controller for assignment to each DMP panel created in the S2 system This port is needed as the PC Logging port for status communications to the S2 system. It cannot be changed and it is the same for all DMP panels.
Mercury Security Integration		
3001	S2 NetBox	Required for integration with all Mercury series based controllers, including Allegion Schlage and M5 Bridge
Otis Elevator Compass Integration		
45303, 45307, 45308	S2 NetBox	Required for Otis Elevator Compass integrations
ODBC		
5432	S2 NetBox	For ODBC connection to PostgreSQL



Integrated security for an IP-connected world®

S2 Node Operational Requirements

The operational requirements for S2 nodes are as follows:

- IP Network configured for IPV4 or IPV4/IPV6.
- Networks with switches running the Spanning-Tree Protocol (STP) must have the STP PortFast feature enabled on every port where an S2 node is connected.
- S2 nodes support connections fixed full duplex at 10 or 100 megabit Ethernet (10 base T / 100 base T) or auto-negotiate connections where the negotiation time resolves in under 2 seconds.

Note: With release 4.4.02 (bmod 107), the auto-negotiate time is relaxed to 8 seconds. This change does not take effect until after the S2 node(s) are upgraded to V4.4.02 (bmod107).

- S2 nodes initiate connections to the S2 controller, maintaining a continuous (TCP) connection. The TCP port 7262 must be open in the path leading from the S2 node to the S2 controller at all times. This is the primary communications path between the S2 controller and the S2 node.

Note: The connection is maintained constantly and should not be disrupted in order to maintain online application integrity. For this reason, we recommend using static IP address assignments for all S2 devices.

- All network links (in the path from S2 controller to S2 node and back) must support an MTU (Maximum Transaction Unit) of at least 1500 bytes. If any link limits the MTU to below 1500 bytes, then the network *must* be configured to fragment TCP/IP packets.

Note: If this is not possible, please call S2 Technical Support at 508 663-2505.

- High bandwidth broadcast traffic should be avoided on the subnet where the S2 node is attached. Specifically, all multicast and broadcast UDP traffic on the link to an S2 node should be limited to the following two S2-specific multicast group addresses: 224.0.72.62 and 224.0.72.63; port 7262 is used as the destination for both. Forwarding multicast traffic on 224.0.72.62 upstream to the S2 controller (on the same subnet) will enable

node-autodiscovery; without this, the S2 node addresses may be entered manually, through a separate configuration utility (NNCONFIG).

- Except during configuration and credential download, the traffic between the S2 node and S2 controller is very low, less than 10K bytes per minute, but it is latency sensitive. If large transfers are occurring on the network, S2 recommends increasing the Quality of Service (QOS) allocation between the S2 node and S2 controller to keep the round trip latency to less than 2 seconds.
- Troubleshooting: At the request of S2 Support, TCP port 7262 may need to be opened in the path leading from the S2 controller to the S2 node, for troubleshooting purposes. This path does not need to be open at all times and is used only by S2 Support.
- Environmental: 0°C - 50°C.

VIDEOINSIGHT



IP Server Administrator Guide 6.3

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HOUSTON 6467133v.3

Introduction

Video Insight is a leading developer of enterprise-class video management software. Our vision is to provide powerful, user-friendly software that will run on "off-the-shelf" hardware based on IP technology. We have developed our solution from the ground-up, making us one of the few pure-play IP video management software providers.

Video Insight's suite of products was created to protect clients by providing intelligent, easy to use IP security solutions. Our extensive effort has resulted in products that are flexible and powerful enough for any situation, yet still very cost effective. Our software boasts the largest number of camera integrations available on the market. Users can access their Video Insight surveillance systems on mobile devices, through the web and on Microsoft Windows clients over internal networks or the Internet.

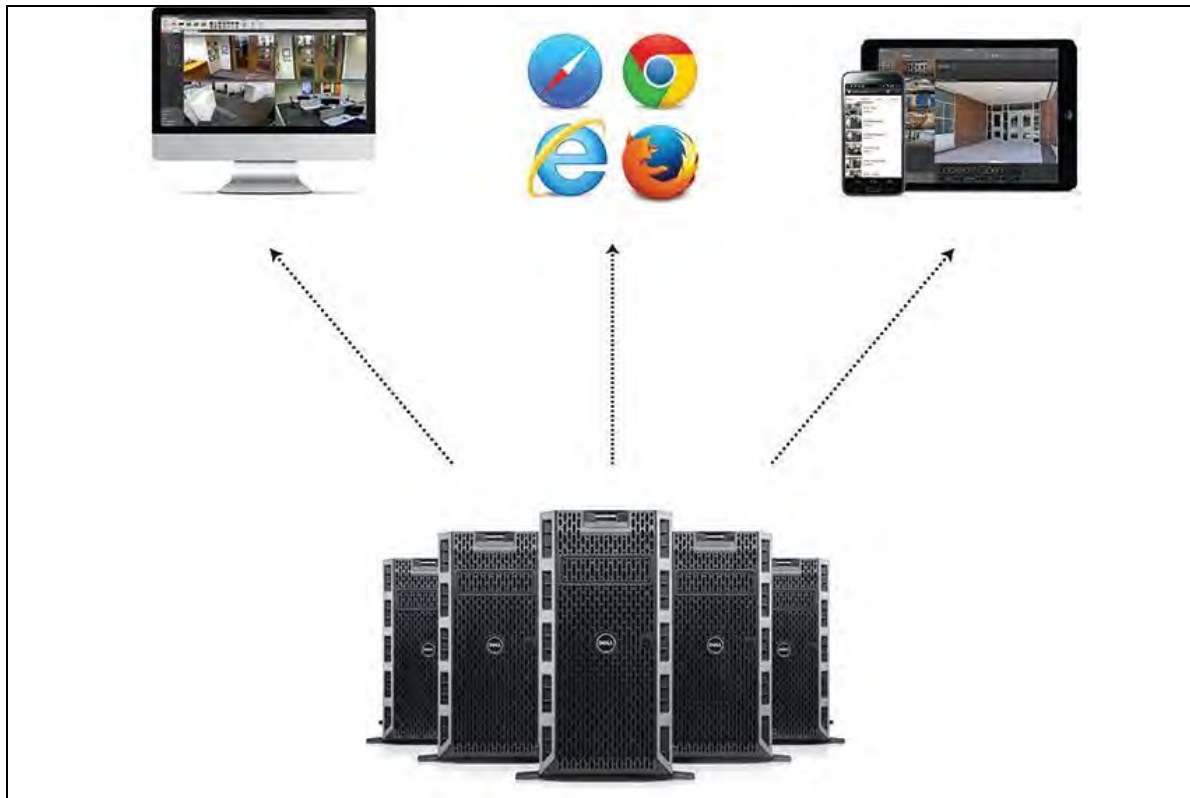
Video Insight v6.3 can intelligently and efficiently monitor security throughout your organization. Key advantages of this version are:

- Easy to Use Updated User Interface
- Support for over 3,000 cameras
- Alarm Monitoring
- Facility Maps
- Synchronized Playback

The Video Insight IP Server Administrator Guide includes everything you need to install and configure IP Server with best practices and a troubleshooting guide. This document is intended for use by advanced users and system administrators.

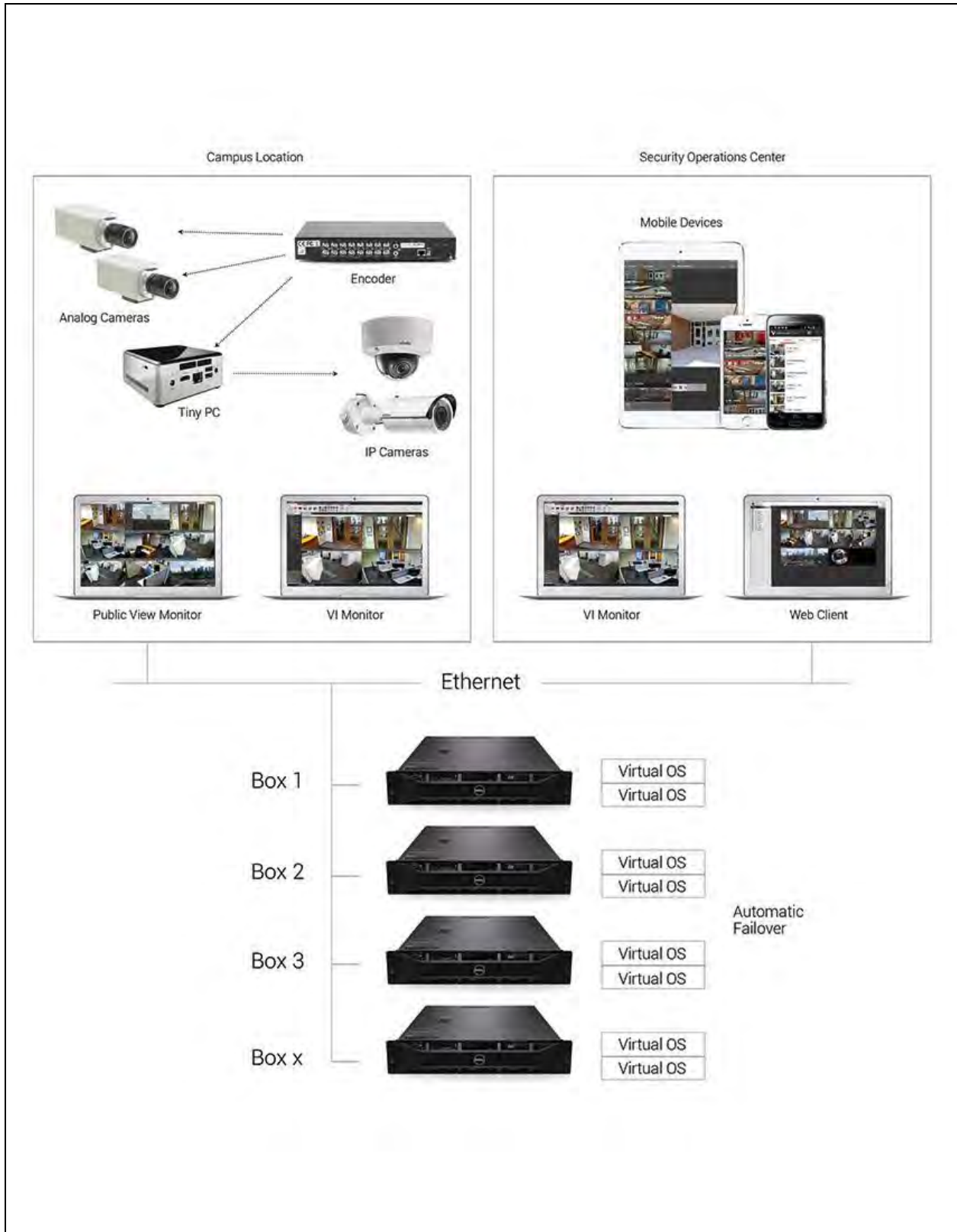
System Overview

The Video Insight application suite provides a solution for many different scenarios. You can use it for basic unattended monitoring or mobile remote viewing by patrolling security personnel. At its core is Video Insight IP Server, which powers the software platform. The figure below shows video monitoring options for users.



The Video Insight application suite runs over an Ethernet network, meaning cameras, security personnel, and servers do not have to be co-located.

The figure below shows the distributed flexibility of the system extending to IP Server's automatic failover capability.



The system is a robust software platform that has three main components that capture and view live or recorded video from anywhere: IP Server, VI Monitor Client and Web Client. The table below summarizes the role of hardware in the Video Insight application suite.

Table 1: Role of Client Applications, Hardware, and Software in the Video Insight application suite.

Product Suite: IP Server		
Client Applications	VI Monitor	<ul style="list-style-type: none"> Client application Live and recorded video Centralized administration Alarm notification
	Web Client	<ul style="list-style-type: none"> Live and recorded video Internet Explorer, Safari, Chrome and Opera (with optional support for Internet Explorer)
	Smart Phone/Tablet Client	<ul style="list-style-type: none"> Live and recorded video iPhone, iPad, BlackBerry and Android support PTZ control
Hardware	IP Server	<ul style="list-style-type: none"> Records and manages video VM support Alarm processing 3rd-party access control and analytics integration Microsoft IIS for Internet clients Active Directory, LDAP, and Novell eDirectory support
	Storage	<ul style="list-style-type: none"> Direct Attached, SAN/NAS, and iSCSI storage support
Software	IP Server Manager	<ul style="list-style-type: none"> Monitors the IP Server(s) and presents a visual status for each state Network connection administration Diagnostics for troubleshooting and system optimization
	Health Monitor	<ul style="list-style-type: none"> Accessory application that monitors the health of all your servers and cameras from a single location Email notification on error

Planning

Getting the most out of your hardware and our software requires planning. Understanding your needs will help you size your solution. Evaluate and plan the integrations you will need to make.

Server

IP Server is at the heart of the Video Insight platform. It runs on industry-standard hardware and works with 32- and 64-bit versions of these Microsoft operating systems.

- Windows Server 2008 R2
- Windows Server 2008 Enterprise, Standard and Web editions
- Windows 7 Pro and Enterprise editions
- Windows Server 2012 (All Versions)
- Windows 8 Pro and Enterprise editions
- Windows 10 Pro, Enterprise and Education editions

IP Server also requires Microsoft .NET Framework 4.5+ and Microsoft Internet Information Services (IIS) with “static content” enabled. The operating system *must be current with updates* because Video Insight hardware and software integrates with the latest updates.

The hardware required for installation of IP Server is determined by a variety of factors including the number of cameras, the resolution of those cameras, the number of frames per second, as well as the number of days of required video storage.

IP Server Sample Configurations

20 H.264 cameras streaming 1.5Mbps

- Dell Optiplex 7010 with Intel Core i5 3.30 GHz, with 4GB, 3TB of Storage, Intel HD 2500 Graphics, and Windows 7 Professional
- CPU Performance
- Using Camera-Side Motion Detection
- Server Only CPU utilization at 10%
- VI Monitor Client displaying 4 Live Windows CPU utilization at 25%
- VI Monitor Client displaying 9 Live Windows CPU utilization at 35%
- VI Monitor Client displaying 16 Live Windows CPU utilization at 45%
- VI Monitor Client displaying 20 Live Windows CPU utilization at 60%

40 H.264 cameras streaming 1.5Mbps

- Dell Optiplex 7010 with Intel Core i5 3.30 GHz, with 4GB, 3TB of Storage, Intel HD 2500 Graphics, and Windows 7 Professional
- CPU Performance
- Using Camera-Side Motion Detection
- Server Only CPU utilization at 10%
- VI Monitor Client displaying 4 Live Windows CPU utilization at 25%
- VI Monitor Client displaying 9 Live Windows CPU utilization at 35%
- VI Monitor Client displaying 16 Live Windows CPU utilization at 45%
- VI Monitor Client displaying 20 Live Windows CPU utilization at 60%

120 H.264 cameras streaming 1.5Mbps

- Dell PowerEdge R520 2U Rackmount with Dual Intel Xeon E5-2403 1.80GHz, with 8GB, 21TB of RAID5 Storage, Intel HD 2500 Graphics, and Windows Server 2008
- CPU Performance
- Using Camera Side Motion Detection:
- Server Only CPU utilization at 10%
- VI Monitor Client displaying 4 Live Windows CPU utilization at 25%

- VI Monitor Client displaying 9 Live Windows CPU utilization at 35%
- VI Monitor Client displaying 16 Live Windows CPU utilization at 45%
- VI Monitor Client displaying 20 Live Windows CPU utilization at 60%

240 H.264 cameras streaming 1.5Mbps

- Dell PowerEdge R720xd 2U Rackmount with Dual Intel Xeon E5-2403 1.80GHz, with 8GB, 42TB of RAID5 Storage, Intel HD 2500 Graphics, and Windows Server 2008
- CPU Performance
- Using Camera-Side Motion Detection
- Server Only CPU utilization at 10%
- VI Monitor Client displaying 4 Live Windows CPU utilization at 25%
- VI Monitor Client displaying 9 Live Windows CPU utilization at 35%
- VI Monitor Client displaying 16 Live Windows CPU utilization at 45%
- VI Monitor Client displaying 20 Live Windows CPU utilization at 60%

Failover Server

In the event a network outage or hardware failure prevents a server from recording camera video, the IP Server Failover Server feature will enable another server to take over the recording capabilities of the offline server. When configured with a shared SQL Database as part of a cluster, the Failover Server feature eliminates video loss and enables continuous live streaming video.

To use the Failover Server feature you must:

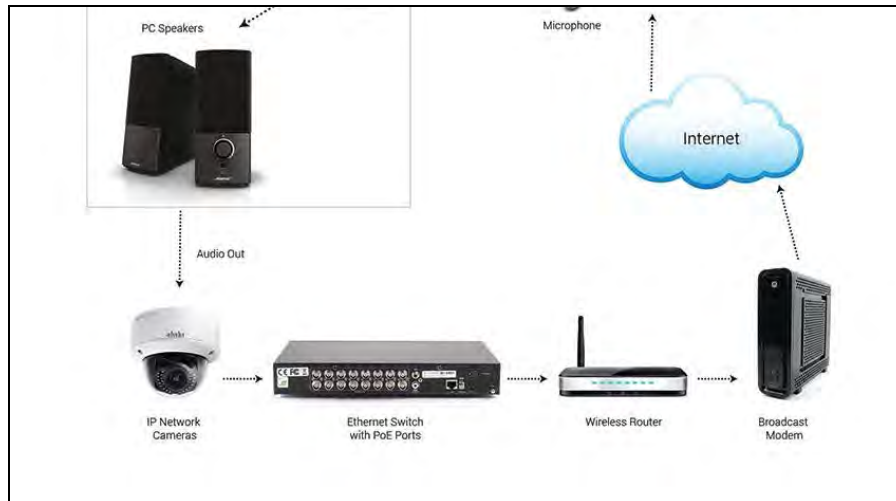
- Have at least two servers with the same hardware configuration.
- Have a Shared Database installation; *see IP Server installation with an existing SQL installation.*
- Have at least one license and a serial number or activation key for each server.

Network

Network configuration is extremely important when implementing an IP video solution. IP cameras use considerable bandwidth to deliver information between the camera and the server. Different cameras will require different amounts of bandwidth based on resolution and frame rate. Accessing video from VI Monitor, Web Client, mobile device client and Video Wall increases the needed bandwidth.

Figure 3 illustrates a very basic, isolated network comprising of one switch, one camera, and one router.

Figure 3: Basic IP video monitoring solution with remote viewing.



Factors affecting performance

Any system is the sum of its parts. A mismatched sub-system or component can have a negative effect on the whole system. Video streaming can only be as good as the cameras and underlying network. Best practices for IP video solutions indicate cameras connected to and powered over Ethernet or separate VLANs for cameras.

Local and Wide Area Network

Video travels over a network, meaning infrastructure plays a big part in the overall performance of the Video Insight solution. A slow network can create bottlenecks that result in a slow frame rate, jittery video, and packet loss. Avoid devices on your local network with a port speed of 100 Mb/s or less.

The following network issues can cause cameras to drop a connection or otherwise go offline:

- Camera is using a dynamic instead of static IP address
- Another service or device is running at the same time with the same IP address, causing a conflict
- Multiple applications pulling a stream from one camera (some cameras limit the number of streams)
- Power output of a switch is less than required by the cameras. The power output of a switch has to be greater than the sum of the power requirements of the attached cameras. Refer to the camera's manual for power requirements

Some may be tempted to implement wireless local networking to connect cameras. Due to potential dead zones, transmission speed, outside interference and weather conditions you can expect subpar performance and dropped connections. Video Insight *does not* recommend using wireless networking to connect video cameras.

If organization using IP Server has more than one site, then it will likely rely on an Internet provider for connectivity. The performance gotten from the provider will depend on their network infrastructure, customer utilization of that network and what can be afforded. Streaming video remotely to a desktop client requires basic broadband. Streaming to a mobile device requires 4G service.

Cameras

The following factors can affect camera imaging:

- Bit Rate – a higher bit rate usually gives better picture quality
- Resolution – a higher resolution usually gives better picture quality
- Format – some picture formats incorporate better algorithms that more accurately represent the subject
- Firmware – outdated firmware can impair camera functionality
- Location – unless intended for such use, placement in dark or obstructed locations, or in places affected by adverse weather, will not result in useful pictures
- Number of cameras connected to server – the higher the number of connected cameras, the greater the load on server resources

VI Monitor

VI Monitor, the Video Insight thick client, allows users full access to all cameras and provides centralized administration for the system. It is used to watch live and recorded video.

VI Monitor runs on industry-standard hardware and works with 32- and 64-bit versions of Microsoft Windows XP or later. Microsoft DirectShow 9 or higher is required. The operating system must be current with updates because Video Insight hardware and software integrates with the latest updates.

VI Monitor requests video from the server in the camera's native format. Transferring video in the camera's native format is a file server operation that does not burden the IP Server CPU as a video decompression operation would. Because video decompression is performed on the client and not the server, the hardware requirements for VI Monitor are different from those of IP Server. Table 4 shows the hardware requirements for VI Monitor Client.

Table 4: VI Monitor Client hardware requirements

Component	Minimum	Recommended
Processor	1 2.0 GHz dual-core	1 2.4 GHz quad-core+
Memory	8 GB	16 GB+
Video	512 MB	1 GB+
Network	100 Mb/s	1 Gb/s+
Display Resolu on	1600 X 900	1920 X 1080 or higher

Note

The video subsystem must support Microsoft DirectShow.

VI Monitor will require additional system memory, video memory and processor if more cameras are viewed and processor-intensive compression protocols are used. The greater the number of compressed images viewed at once, the greater the load on the processor. Dual streaming (model specific) on the client is also available for the ability to monitor more cameras at once.

Web Client

Web Client, the Video Insight thin client, allows users remote access to cameras. Web Client is distinct from the Video Insight mobile device application. Web Client utilizes Microsoft IIS services hosted on the same server as IP Server. To support cross-platform compatibility, IP Server sends MJPEG images to clients that are unable to decompress MPEG4 or H.264 streams. These images are normally provided as a dual stream from the camera. IP Server can create an MJPEG but this increases the load on the CPU. Web Client connects directly to the cameras to view live video, unlike VI Monitor Client. Web Client currently supports Internet Explorer 11+ or Chrome (for low speed only).

Microsoft IIS 5.1 or higher must be installed and configured prior to the installation of IP Server.

Cameras

Video Insight supports a vast array of cameras from a large number of manufacturers. Additional camera support is included with every software release. Refer to our website for the latest list of supported cameras.

Video Insight supports the Open Network Video Interface Forum (ONVIF) standard. We support version 1.03.

Camera Audio

IP Server is capable of recording audio along with the capturing of video recording when used with the appropriate and desired peripherals. While configuring audio recording is a possibility, it is often overlooked that necessary and desired changes be made on the camera itself in order for audio recording to function within IP Server's video recording process.

The following codecs are found to work well with IP Server and are most commonly used by known camera manufacturers:

- L8 @ 8K (Uncompressed 8-bit audio)
- L16 @ 16K (Uncompressed 16-bit audio)
- G711 ULAW and ALAW @ 8K and 16K
- G726 40/32/24/16
- AAC Low Complexity (*) Bitrate is 128kbps or less
- AMR Audio

Licensing

Video Insight's licensing structure is simple: one camera requires one license. Our floating licenses means there is no need to tie a licensing seat, IP address or MAC address to a particular camera. Cameras offering multiple camera views only require one license. Separate video streams from the same camera do not require a separate license. Video Insight offers encoders, such as the VP16, that allow up to 16 analog cameras with only one license. Please contact us for more information on specific licensing requirements.

Note

Some cameras include a license for use with our software.

Router configuration

Video Insight recommends using some type of router if the IP Server is connected to the internet. Small Office/Home Office (SOHO) routers provide a simple hardware firewall that protect the computer. SOHO routers connect to a DSL or cable modem and then connect to the server with them. The SOHO router prevents all inbound traffic from accessing the network and computers except for the traffic that are specifically allowed through the firewall.

How to configure your Video Insight server and router for remote access:

1. Assign a static IP address to the IP Server. SOHO routers typically use DHCP to assign an IP address from a range of addresses to devices connected to the router. Choose an address outside of this range but within the subnet to assign to the server. For help on assigning a static IP address, review your SOHO router user guide or consult with a network administrator.
2. Configure your SOHO router to forward ports 80 and 4011 to IP Server.
 - a. For help on forwarding ports, review manual that came with the router consult with a network administrator.
 - b. www.portforward.com provides information on how to configure most SOHO routers. Video Insight does not endorse this information.
3. Test the IP Servers configuration by trying to access the Web Client externally.
 - a. Start an Internet browser.
 - b. Enter: `http://<external IP>/videoinsight` into the address bar of the Internet browser.
 - c. Note, many SOHO routers will not allow a connection to the external IP address when the IP Server is behind the firewall. Testing will need to be conducted outside of the local area network (LAN).
 - d. A third-party website such as canyouseeme.org to provide the external IP address of the LAN and to verify if the correct ports are being forwarded.

Storage considerations

The amount of storage required for recordings depends on the number of cameras, the CODEC, Frames per Second (FPS), resolution of the images and the percentage of pixel change. The Video Insight solution gives you flexibility of per camera storage options:	
Record Always	This requires significantly more storage space because video is constantly recorded.
Record On Motion Only	This requires less storage space than Record Always because video is recorded only when motion occurs in the camera’s field of view.

IP Server supports the following types of storage:

NAS, SAN & RAID 5, RAID 6, RAID 10 and JBOD* (*with custom camera configuration, per camera)

Long Term Storage Application (LTS)

You can specify which cameras to copy, how many days to keep before copying and what time of the day to execute the copy. The copied files can be viewed using Video Insight software or Microsoft Windows Media Player.

File Manipulation Rule

A feature that allows users to backup their files to other locations such as standard file servers, NAS or SAN using the Rules manager. This feature takes the task of remembering to backup important video recordings on the local server and automates it. File Manipulation can also move or delete videos.

Database considerations

IP Server saves configuration settings, user names, camera information and event logs in a Microsoft SQL database. When IP Server starts, it reads its settings directly from the assigned database. When VI Monitor Client connects to IP Server it saves all recordings to its local hard drive so recordings are still accessible in the case of database failure.

Use Table 5 to help you determine whether you need a local or a shared database.

Table 5: Choosing a local or shared database.

Local	Shared
Small centralized organization with 1-3 servers	Large regional organization with many servers
Use VI Monitor Client and built-in User Manager	Use Active Directory/LDAP
Number of users is small	Number of users is large
Disaster recovery and backup for each server's database	Disaster recovery and backup for one database
Failover server functionality <i>is not</i> desired	Failover server functionality <i>is</i> desired
Servers are not on the same LAN or the communication link between the server the database is a low-speed connection	Servers are on the same LAN and connection speeds are not an issue

Cameras will not move from one server to another	Cameras will move from one server to another at final configuration
Avoids unnecessary exposure SQL to the network	Exposure of SQL to the network in a secured network environment

Software installation

Video Insight software supports both 32- and 64-bit operating systems. Download and install the correct installation for your version. Review the following list prior to beginning the installation process:

1. [Storage Considerations](#)
2. [SQL Considerations](#)
3. [Network Considerations](#)
4. Online Calculator: www.video-insight.com/calc.php
5. Administrator-level access on server is **required**

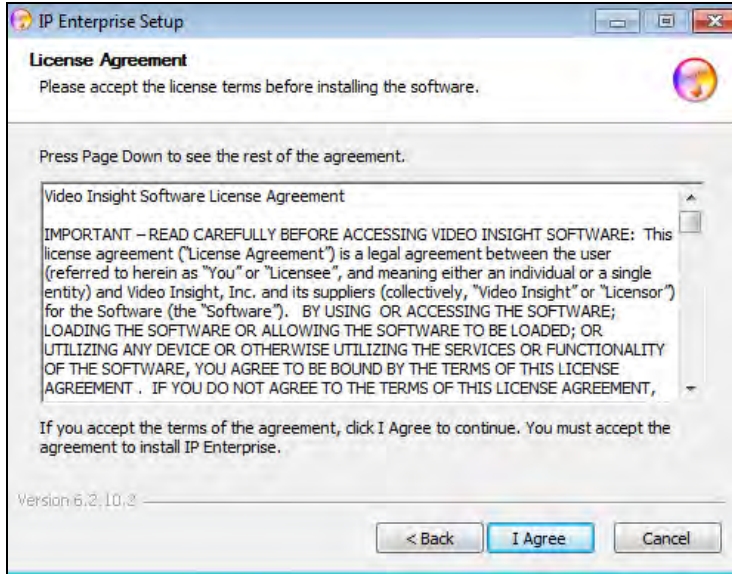
IP Server

If Microsoft SQL Server is not already present in your environment you can choose to install the package. It includes Microsoft SQL Server 2008 R2 for both 32-bit and 64-bit operating systems.

If your environment already has Microsoft SQL Server 2008 installed and you only need the Video Insight database and are not required to install SQL Server installation package.

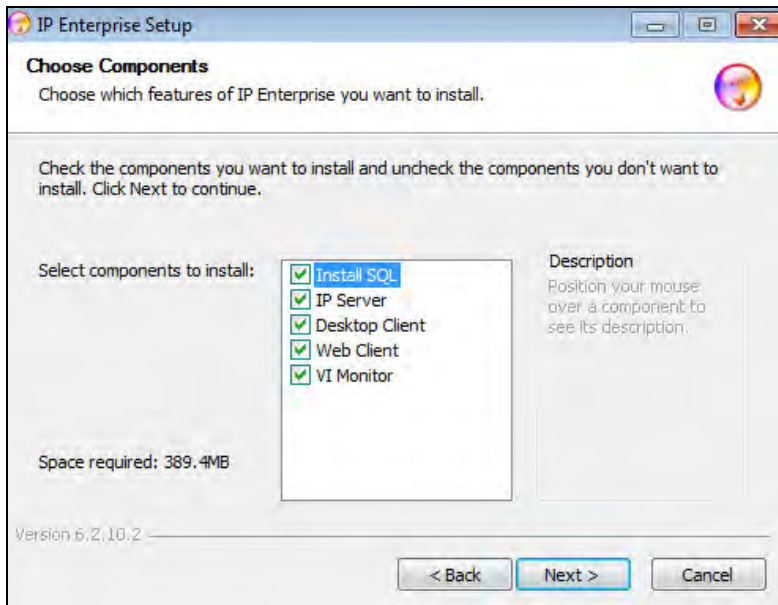
Installation without an existing SQL installation

Use the following steps to install IP Server with Microsoft SQL Server for the first time. This option will also install VI Monitor and Web Client:

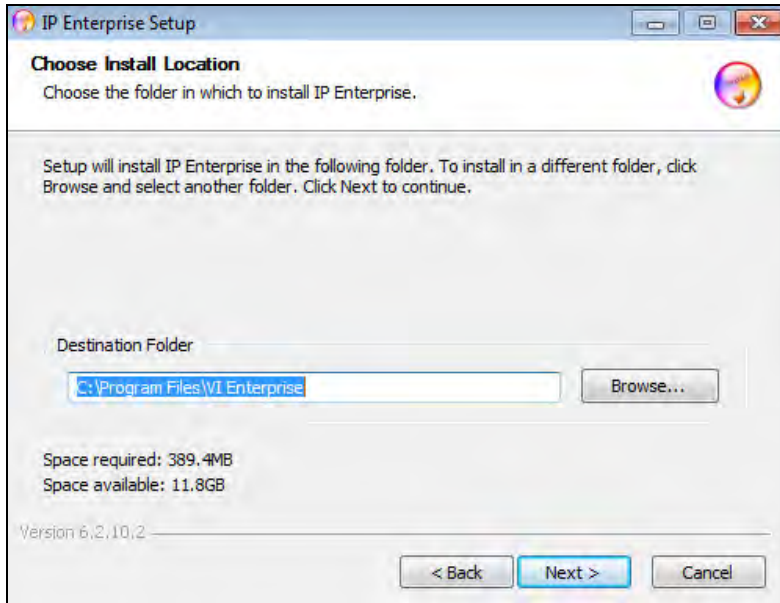


Launch the executable located on DownloadVI.com.

Click **I Agree** to agree to the terms and continue the installation. If you do not agree or do not want to continue the installation, click **Cancel**.



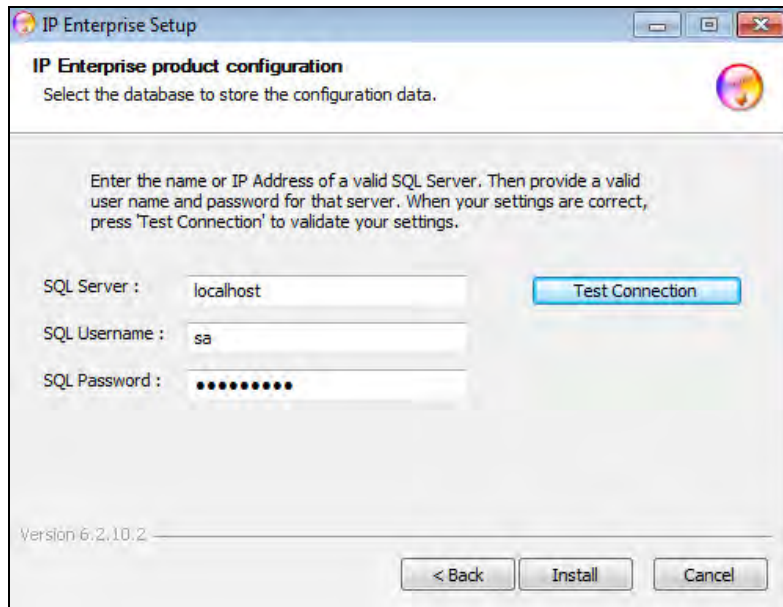
Select all the components that you would like to install, click **Next**.



To accept the default destination folder, click **Install**. To choose another destination, enter the destination path or click **Browse** to search.



Select the start menu folder that you would like the installation to be created, click **Next**.

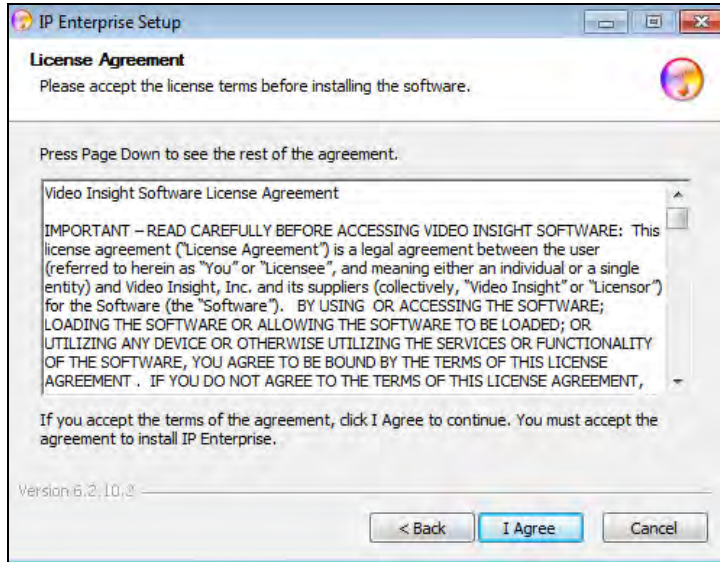


The default credentials are entered for the SQL installation. If you would like to change the credentials please enter them now and click **Install**.

IP Server is installed. To initialize and configure it, see [Initialization](#).

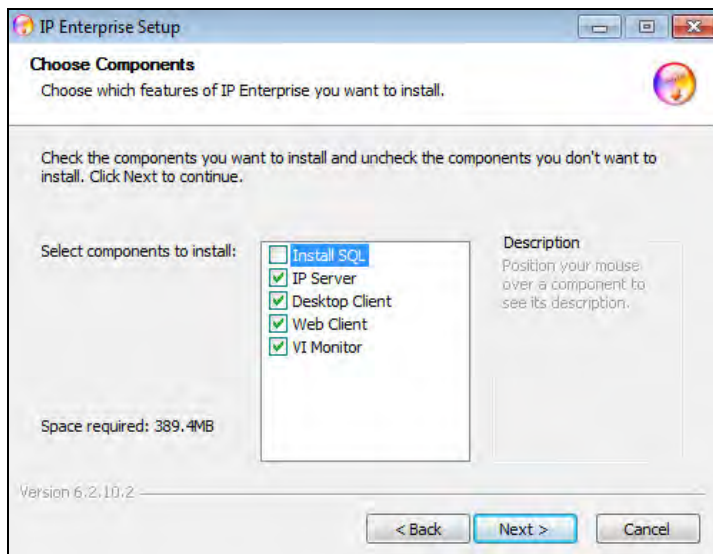
Installation with an existing SQL installation

Use the following steps to install IP Server for the first time in an environment with Microsoft SQL Server. This option will also install VI Monitor Client and Web Client.

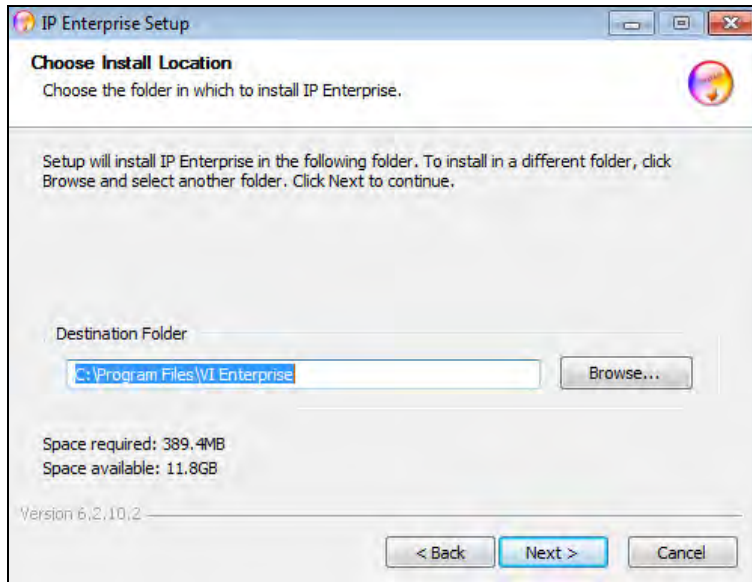


Launch the executable from DownloadVI.com.

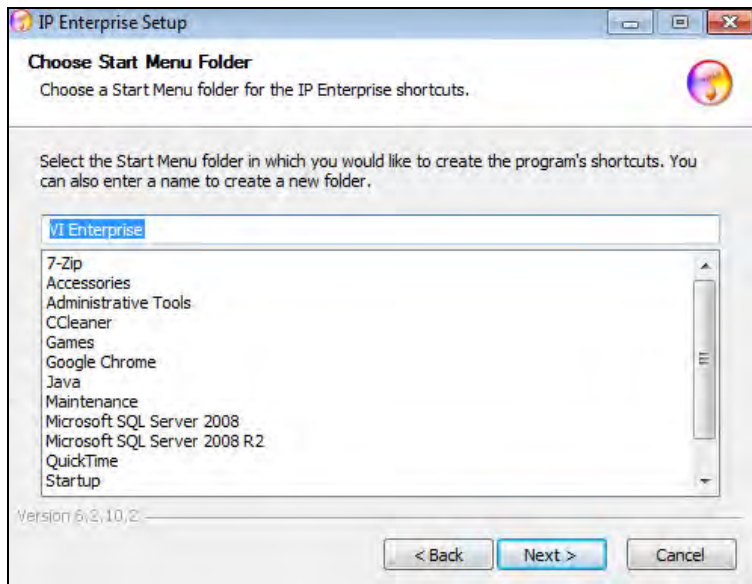
Click **I Agree** to agree to the terms and continue the installation. If you do not agree or do not want to continue the installation, click **Cancel**.



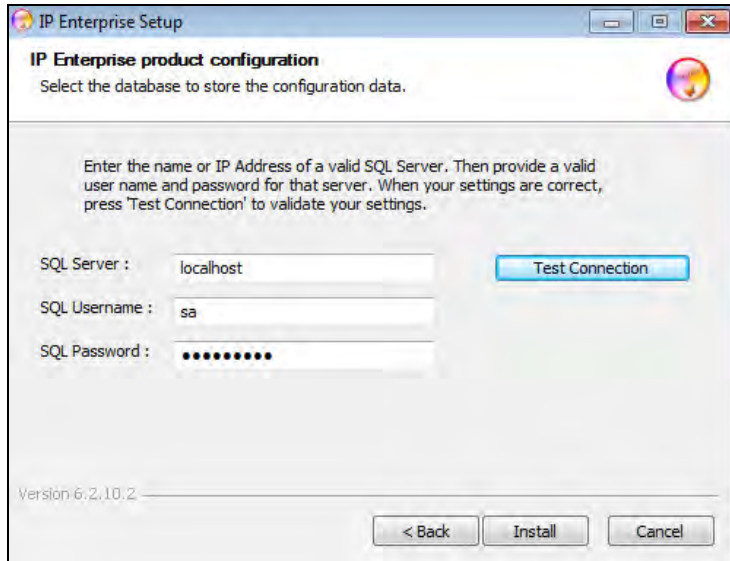
Select all the components that you would like to install, click **Next**. The install SQL selection should not be checked.



To accept the default destination folder, click **Install**. To choose another destination folder, enter the destination path or click **Browse**. Click **Next** to begin the installation process.



Select the start menu folder that you would like the installation to be created, click Next.



The default credentials are entered for the SQL installation.

If there is a need to change the credentials, please enter them now and click **Install**.

IP Server is now installed.

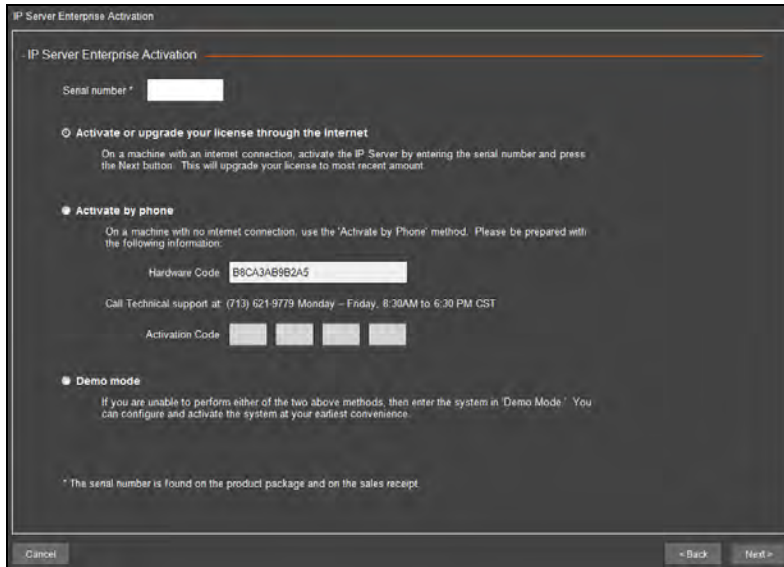
Initialization

You must activate and initialize IP Server before you can use it. Click Next to Continue as seen on the screen below.

To activate IP Server with a serial number:



If **IP Server** is being activated with a serial number, click **Next**. If IP Server is being activated by phone or by activating a demo, select the correct option on the screen and select click **Next**.

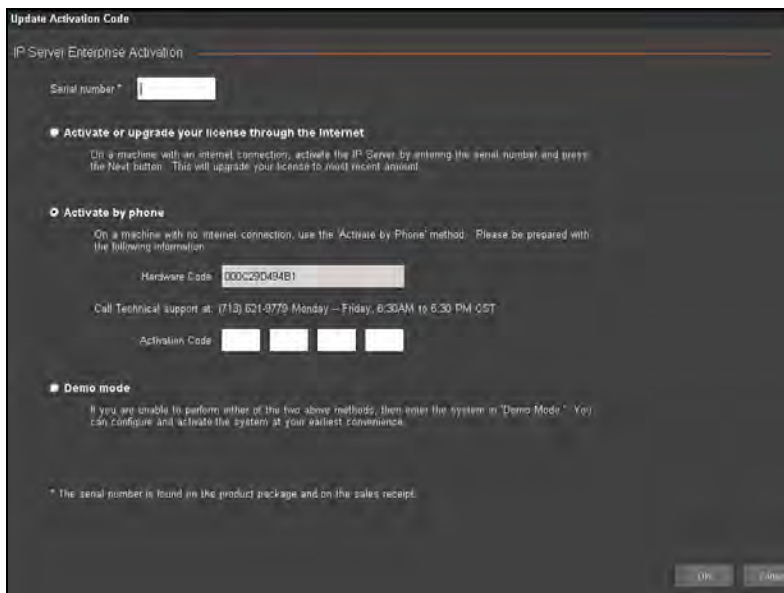


Enter the five character, alpha-numeric, serial number provided at the time of purchase

Now, click **Next**.

Note: Clicking **Cancel** will abort the installation and the server will not start automatically.

Select *Activate by Phone* and call 713-621-9779 if you are having a problem activating the software with your serial number, or select *Demo mode*, to start recording immediately. **(Toll charges may apply.)**



Next, enter the user information in the event there is a desire to be notified of updates and beta releases.

Now, click **Next**.

Alternatively, if this information is to be entered later, select *Register Later* and then click **Next**.

IP Server automatically detects most camera settings at setup. Verify the information or make changes, then click **Next**.

Note:

Recording to a shared location requires a user with write permission to that share or recordings will not be saved.

Server Name: The default is “IP Server –” and the detected IP address of this server. You can change this to a more friendly or meaningful name. Do not use special characters.

IP Address: This is the selected server’s IP address and should not be changed.

Version: The current version of the software.

For additional settings click **Advanced**.

The Default Port is 4010 and the Command Port is 4011.

Do not change these values unless the ports are already in use by another program.

SQL Server Location: This is the location or IP address of the database server. ‘localhost’ indicates that the database and Microsoft SQL server are local to the host computer. An IP address in this field indicates the Microsoft SQL Server is located on another computer.

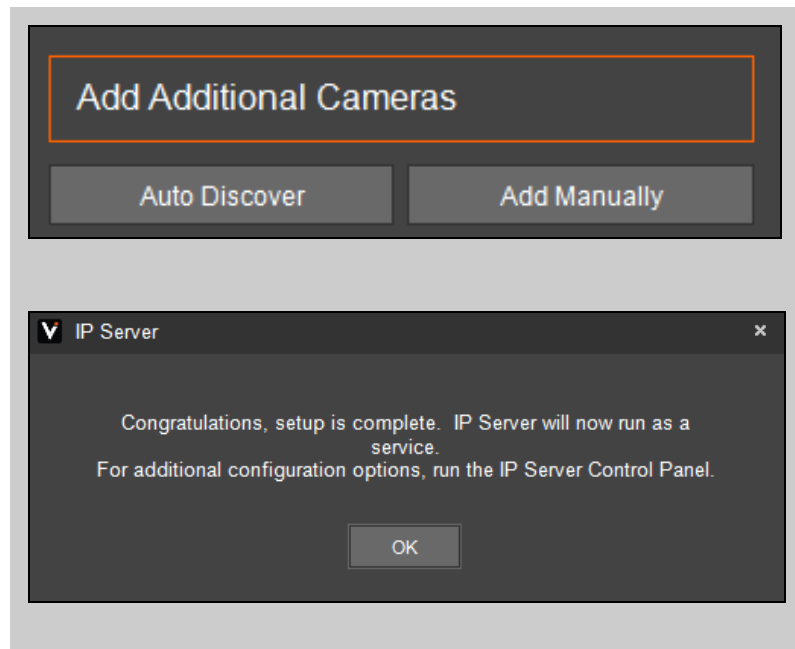
To test the connection click **Test DB**. Click **Advanced** to modify the database connection string values: Database Name, IP Address, SQL Server User ID and Password

Video Data Storage Path: This is the location where all the recorded video will be saved. The default is the local OS drive (i.e., C). The video folder is created automatically once server configuration is completed. You can choose to save video to several different locations:

Local server drive: For example, C:\video

Alternate local drive: For example, D:\video

Shared drive: For example, \\vShareHost\share\HHSvideo



Add cameras using Auto Discovery, Manual or Add/Remove as needed. See Adding Cameras for more information on adding cameras. Click **Finish**.

Click **OK**.

Then, click **Yes** to restart the computer.

Use one of the following steps to activate IP Server.

Select Activate by phone.

Call the phone number displayed. Give the representative your serial number. If you do not have one, the representative will ask you for a hardware code. If the account is in good standing you will be given a 16 digit activation code. Enter the activation code and then click **Next**.

Activate Using Demo Mode

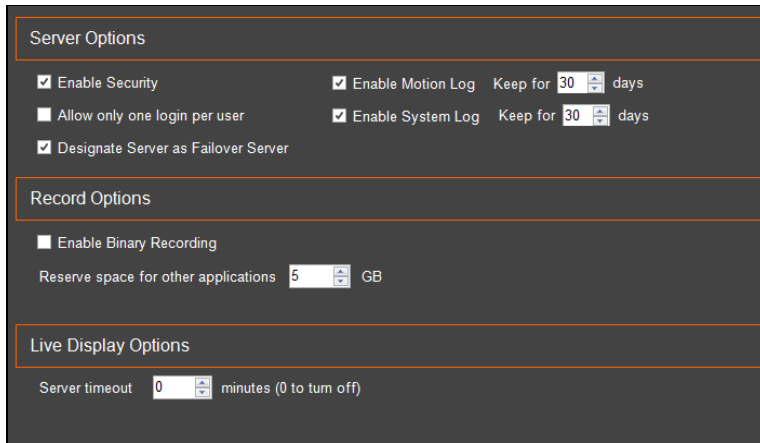
Selecting Demo mode will allow IP Server to operate normally for up to 30 days using up to 99 cameras. Once the 30-day period has expired the software will no longer record or display live images. IP Server will fail to start until initialization is completed with a valid serial number or activation code. Reinstallation is not required.

Failover Server

A fault-tolerant feature of IP Server is the ability to designate a failover server.

Once designated and configured, the failover server can take over from another server that has gone offline.

To designate an IP Server as a Failover Server:



Click **Administration** -> **Servers** on from the main menu.

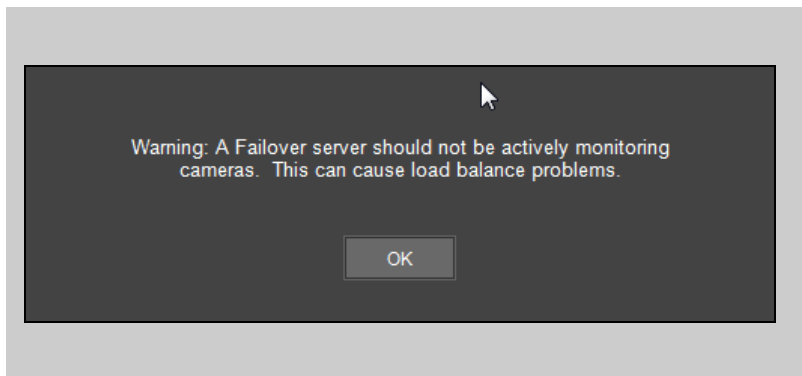
Select the desired failover server from the left navigation pane.

Select the **Advanced** tab.

Check the **Designate Server as Failover Server** box.

Avoid selecting a server that is actively monitoring cameras.

The Image below shows the warning that appears if a server with existing cameras is selected as a Failover Server.



Warning generated when designating a server that is actively monitoring cameras.

If a failure occurs the transfer of the camera(s) to the Failover Server will take approximately 5-10 minutes to recover.

During the time that the main IP Server is down, the Failover Server can be accessed via VI Monitor Client. Once the Failover Server is accessed by VI Monitor, the Failover server will show all cameras and images from the offline server. Recording will continue onto the Failover Server or a previously configured Network Share location, if available.

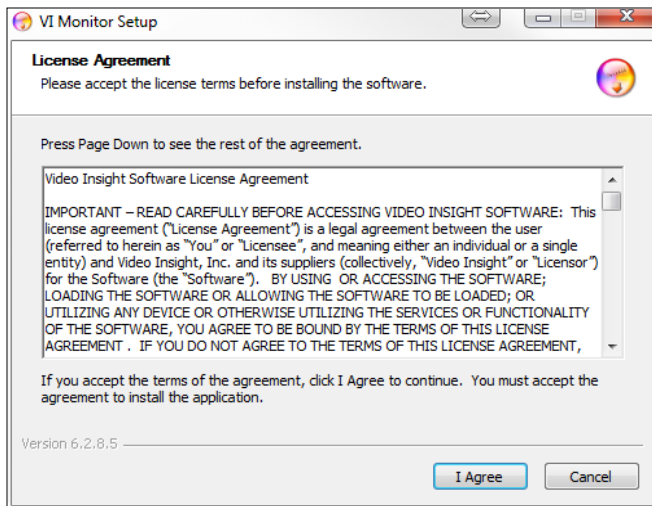
Note

It is possible to access Server Properties by right-clicking the server name in the left navigation and selecting Properties, selecting the Advanced tab and then selecting Configuring a Failover Server.

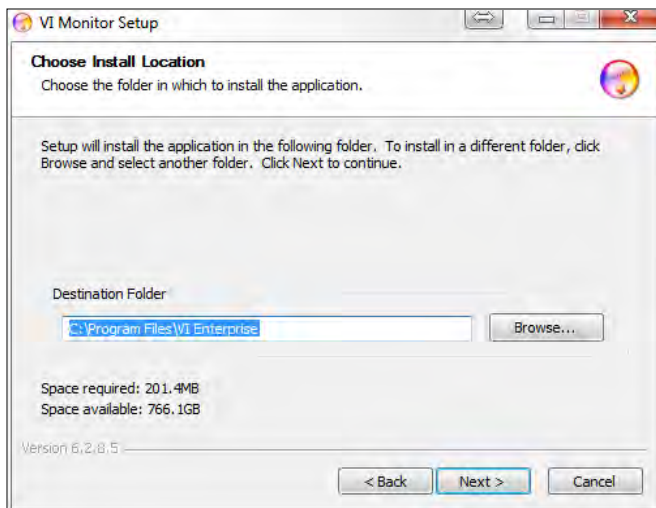
VI Monitor Client

The VI Monitor client is installed automatically with either IP Server install or IP Server installation with an existing SQL installation so a client is easily accessible from the server. In some cases, a client-only install is needed for active visitor monitoring personnel.

To perform a client-only installation:

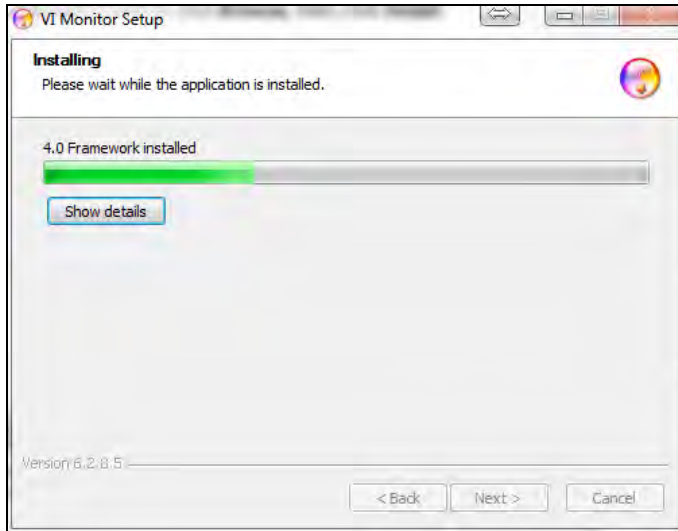


Double-click the Setup executable applicable for the system's operating system: either a 32-bit or 64-bit OS.



Click **I Agree** to accept the terms and continue the installation. If no agreement can be had, or there is no desire to continue with the installation, click **Cancel**.

Otherwise, select **VI Monitor Client install** and then click **Next**.



To accept the default destination folder, click **Install**.

To choose another destination, enter the destination path or click **Browse**, then click **Install**.

When the installation is complete, click **Next**, and then click **Finish**.

When prompted to reboot, it is advised that you click **Yes**.

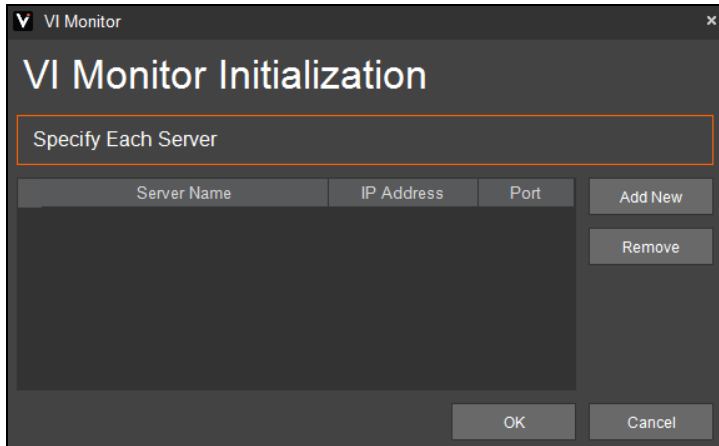
VI Monitor Client is now installed and ready to be initialized, then configured.

Open VI Monitor Client by double-clicking the icon on the desktop.



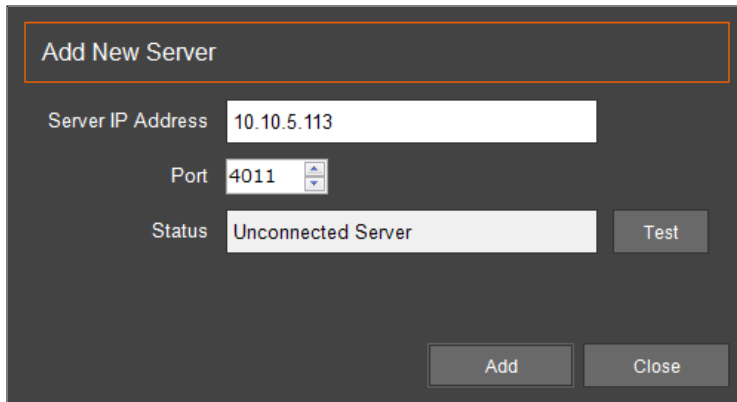
Enter login credentials or accept the default login, and click **OK** to continue.

At least one server must be entered into the Server Setup prior to using VI Monitor client.



Enter server information on one server at a time, or [add multiple servers automatically](#).

Manually Adding Servers



To add a server manually, in the Server-Setup dialog-box click **Add New**.

Enter the IP address or name of the server to connect to, and the port if different from the default.

Click **Test** to initiate a connection.

There are three possible outcomes testing a connection to an IP Server..

1) **Login Error:** The server is found *but security is on*.

The server attempted to authenticate the login with the initial credentials used to login to VI Monitor. The server default login is Administrator/blank *for the password*. You can still add the server. Then logout of VI Monitor login again with the correct credentials.

- 2) **No Server Found:** Either the IP address, server name, server port or both are incorrect. Enter the correct values and then click **Test** again.
- 3) **Server Found:** The server is found and a successful connection was made using the current credentials (Administrator/blank). The server's name is displayed in the Status field.

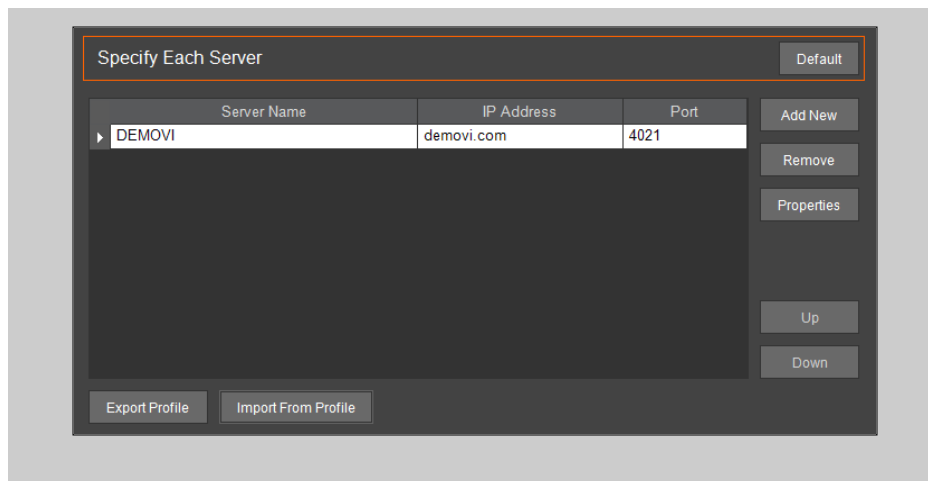
Assuming that the IP Server was found, follow these remaining few steps:

1. Click **Add**.
2. Repeat steps 1-5 for additional servers if needed.
3. Click **Apply** and then **OK**.

Add Server Automatically

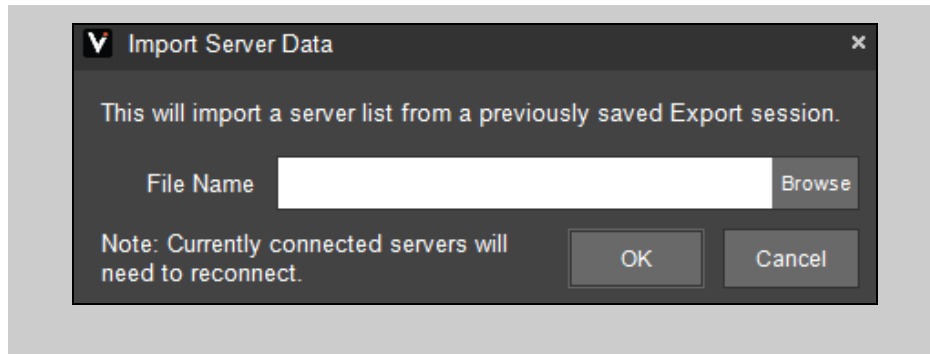
In a large organization, it is possible to have upwards of 20 video surveillance servers across multiple locations. You can easily add a long list of servers at one time using the import feature.

You need an exported list of servers before you can import them using this feature. The file format is .LSL. See the **Login** section for instructions on how to create this file.



In the Administration > Options and click Connections.

Select **Import From Profile**.



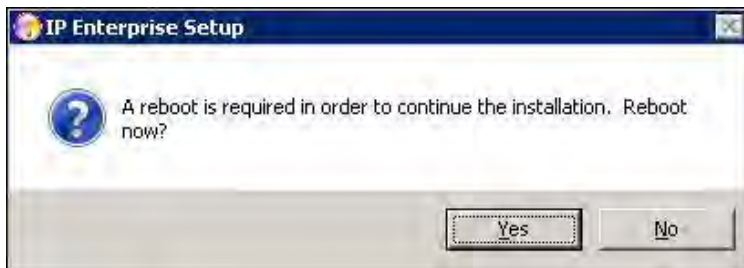
Enter the filename or click **Browse** to go to the location of the saved .LSL file.

Next, click **OK**.

Note:

If the file is unreadable or not found *an error will display*.

If the import is successful the full list of servers will display in the Known Video Servers grid.

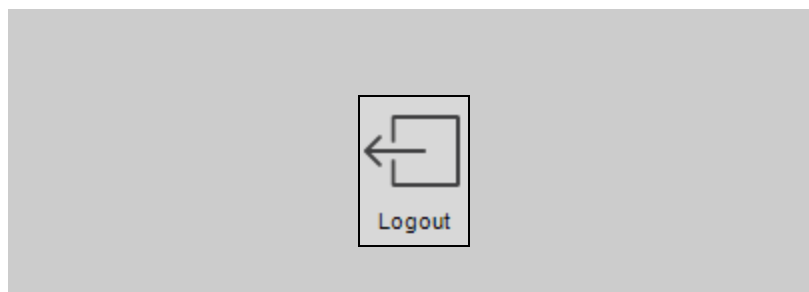


A prompt to restart VI Monitor appears..

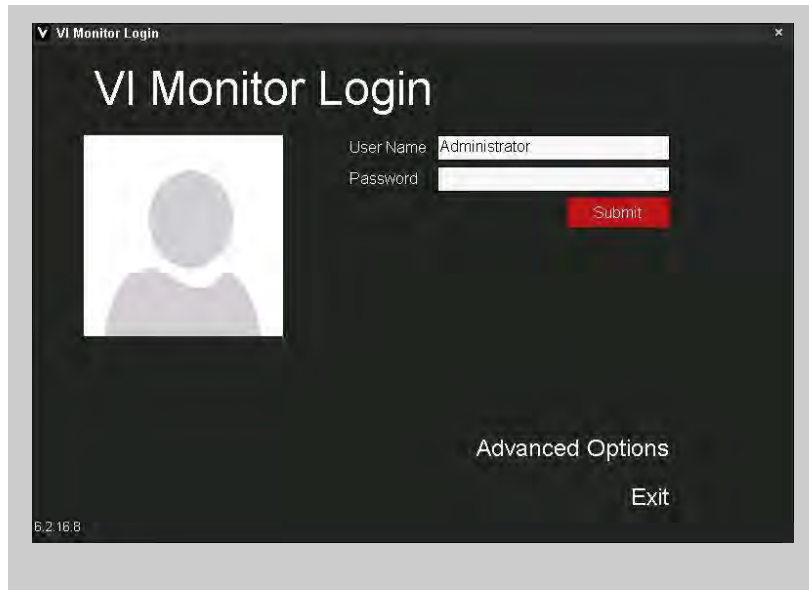
Click **Yes**.

Note:

If rebooting the operating system doesn't happen automatically within a minute, it is recommended that it be rebooted manually prior to use for a fresh run of various system components.



Once the computer finishes with its reboot process, the VI Monitor Client can be restarted by clicking the Logout icon on the upper left of the main live dashboard.



Enter the credentials to login to the desired server(s) or click **OK** to bypass the Login dialog box without any credentials.

IP Server Manager

The IP Server Manager (IPSM) application is used to manage and troubleshoot advanced server settings. It is installed at the same time as IP Server.

The IPSM:

- Monitors the IP Server and presents visual status cues for each server

- Provides a Diagnostics version of the IP Server Manager for troubleshooting and system optimization

- Manages IP Server network connections

- Manages licensing and registration

- Manages Lightweight Directory Access Protocol (LDAP) and Active Directory configuration

Options available in IPSM vary slightly depending on the installation type. See [Installation](#) for more information on installation types.

Accessing IPSM

The IPSM icon resides in the Windows System Tray. It has two possible states:



Server is functioning properly; streaming video to clients, recording video and reporting to Health Monitor, if applicable.



Server is stopped and is NOT streaming or recording video.



You can configure IP Server, manage the IP Server service, exit the application and see information about Video Insight by right-clicking on the IPSM icon.

Select Server Configuration to manage the IP Server service, configure IP Server and terminate the IPSM application.

Select Start IP Server, Stop IP Server or Restart IP Server to start, stop or restart the IP Server service.

Select Exit IP Server Manager to terminate the IPSM application and remove the icon from the Windows System Tray. Terminating the application prevents clients from remotely restarting the IP Server service. Select About Video Insight to display version information, technical support information, and legal terms.

Configuring IP Server

You can manage service controls and configure IP Server by right-clicking the IPSM icon in the Windows System Tray and selecting Server Configuration.



The Service Controls Status field displays IP Server service status.

Click **Start**, **Stop** or **Restart** to start, stop or restart the IP Server service.

Clicking **Close** closes the IP Server Manager dialog box but does not exit IPSM. To exit the IPSM application, click **Exit IP Server Manager** to terminate the IPSM application and remove the icon from the Windows System Tray. Terminating the application prevents clients from remotely restarting the IP Server service.

Click a configuration button to perform other functions:

Options – configure options to automatically restart the server on a schedule

System Log – view the current system log

Network Options – configure connection options

Diagnostics – stop the IP Server service and run the diagnostic version

No Cameras – run Diagnostics with cameras not started

Update Activation – update the activation code

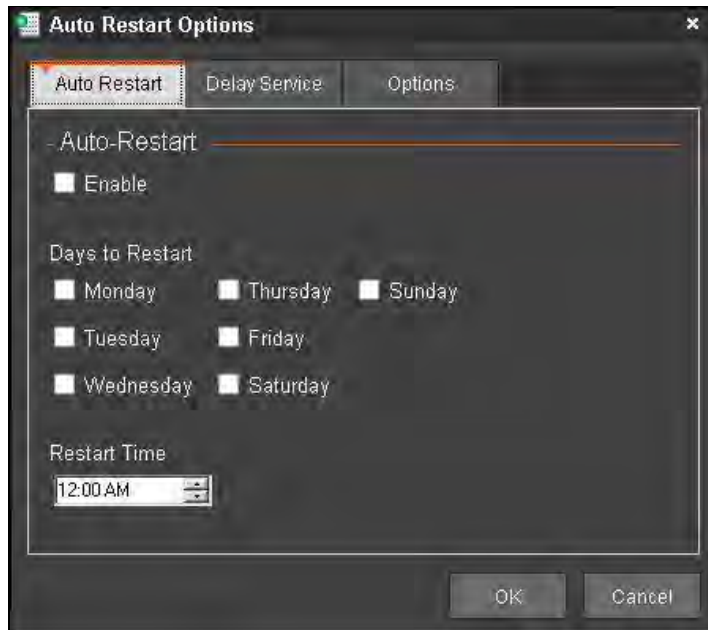
Each function is detailed on the next page.

IPSM: Options

Clicking **Options** brings up the Auto Restart Options dialog box. This dialog box offers several settings aimed at mitigating some organizational and server environment settings that could interfere with the IP Server service.

Auto Restart

Restarting the service can refresh streaming, bandwidth and CPU performance by releasing used resources. You can choose to automatically restart the service on a specific day and time. This flexibility to restart means that you can schedule it so as to not interfere with business hours.



To set an auto-restart schedule:

Check the **Enable** box.

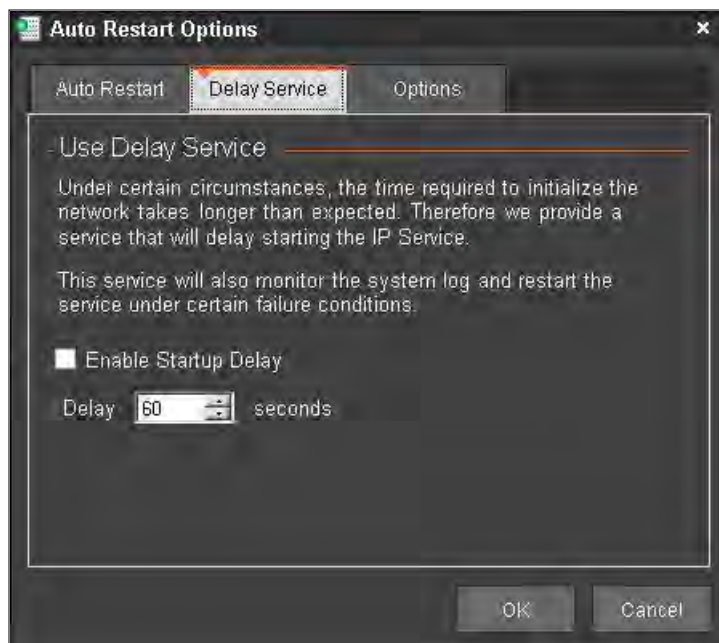
Select the restart day or days.

Select a restart time.

Click **OK**.

Delay Service

Delaying the IP Server service start is an option to consider if the server has many services that have to start in addition to the IP Service. The IP Server service may have trouble initializing without services such as the Microsoft SQL database service already running.



To set a startup delay:

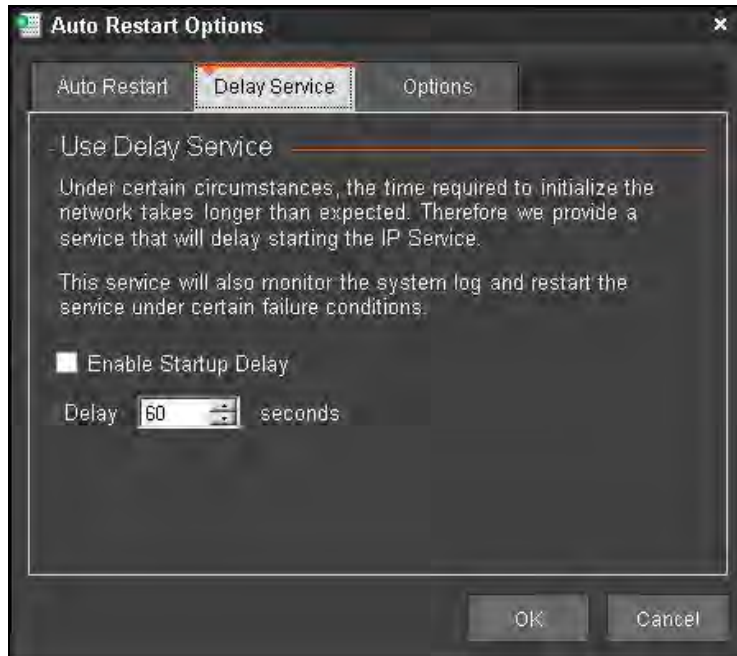
Check the **Enable Startup Delay** box.

Select the startup delay time (in seconds).

Click **OK**.

Options

In environments where both an Analog and an IP server are installed on the same server, and where bandwidth resources will likely be very highly utilized as a result, there is an option to restrict the Analog server's bandwidth consumption.



Enabling this option will terminate communication between the Analog and the IP server.

As a result, no live streaming or recording will be done by the IP server when the timeout threshold has been reached.

For example, in a scenario with the timeout enabled and set to 30 seconds, there is a VI Monitor Client layout comprised of both analog and IP camera images. For 30 seconds, both streaming and recording is managed by the IP Server. When 30 seconds have passed the analog cameras will stop streaming and recording due to this feature. Changing the layout will restart streaming and recording for all cameras until the timeout is reached again.

To set an analog video timeout:

- 1) Check the Enable Analog Video Bandwidth Timeout box.
- 2) Select the timeout in seconds.
- 3) Click **OK**.

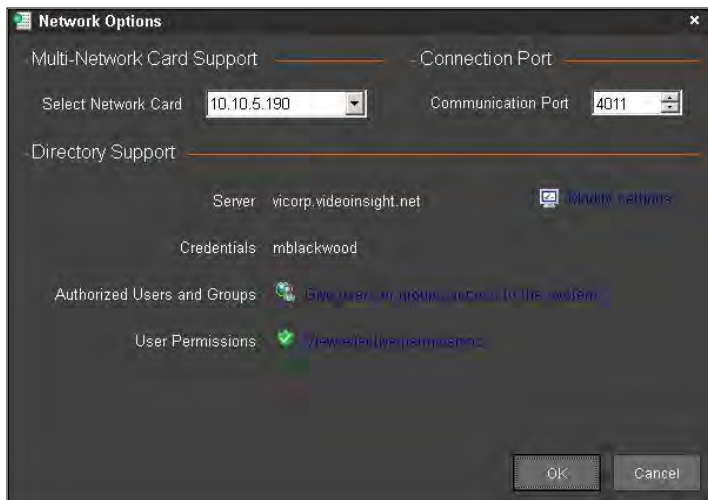
IPSM: System Log

Clicking **System Log** will bring up the System Log dialog box. The System Log documents warnings, errors, security and informational messages related to various system functions. Each

message may or may not appear depending on the configuration and whether Security is enabled on the server.

Time	Message	Source
09/28/2015 10:48:16 AM	Video Server started at 10:48 AM - 9/28/2015	Initialization
09/28/2015 10:48:14 AM	Warning: Server has started in Demo mode.	Initialization
09/28/2015 9:39:46 AM	Video Server was shut down at 9:39 AM - 9/28/2015	Board Close
09/28/2015 9:20:56 AM	Video Server started at 9:20 AM - 9/28/2015	Initialization
09/28/2015 9:20:52 AM	Warning: Server has started in Demo mode.	Initialization
09/18/2015 11:25:36 AM	integranetwork.com\Administrator has logged in at 11:25 AM - 9/18/2015 - Monitor	CommandChannel.GetServerClass
09/18/2015 11:08:50 AM	integranetwork.com\Administrator has logged in at 11:08 AM - 9/18/2015 - Monitor	CommandChannel.GetServerClass
09/16/2015 12:10:17 PM	integranetwork.com\Administrator has logged in at 12:10 PM - 9/16/2015 - Monitor	CommandChannel.GetServerClass
09/16/2015 9:58:29 AM	Could not find a part of the path 'c:\video\10.10.4.187-368213251'.	System.IO__Error.WinIOError(20:2519:1)
09/15/2015 4:37:22 PM	Video Server started at 4:37 PM - 9/15/2015	Initialization
09/15/2015 4:37:21 PM	Warning: Server has started in Demo mode.	Initialization
09/15/2015 4:37:06 PM	Video Server was shut down at 4:37 PM - 9/15/2015	Board.Close
09/15/2015 4:37:06 PM	Restart Request	CommandChannel.RemoveCamera
09/15/2015 4:36:04 PM	Video Server started at 4:36 PM - 9/15/2015	Initialization
09/15/2015 4:36:03 PM	Warning: Server has started in Demo mode.	Initialization
09/15/2015 4:35:38 PM	Video Server was shut down at 4:35 PM - 9/15/2015	Board.Close
09/15/2015 4:35:38 PM	Restart Request	CommandChannel.RemoveCamera
09/15/2015 4:35:26 PM	integranetwork.com\Administrator The servers properties were updated 4:35 PM - 9/15/2015	CommandChannel.UpdateServer
09/15/2015 3:40:15 PM	Could not find a part of the path 'c:\video\10.10.4.123-1681860417'.	System.IO__Error.WinIOError(20:2519:295055)
09/15/2015 3:25:15 PM	exported video from CameraID: 5:05 AM 8/18/2015 : 5:38 AM - 1779160282.	CommandChannel.FileExport

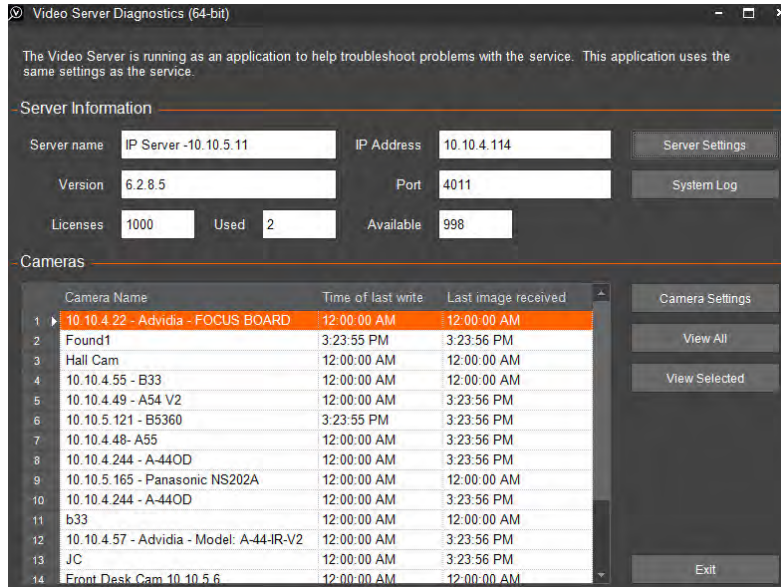
IPSM: Network Options



Clicking **Network Options** brings up the Network Options dialog box. This dialog box is used for selecting the network scheme when a server has dual NIC cards or changing the communication port of the server. You can also modify Active Directory and LDAP settings.

Note: If you change the Communication Port here, you must also change the command port in Server Properties.

IPSM: Diagnostics



Clicking **Diagnostics** brings up the Video Server Diagnostics interface.

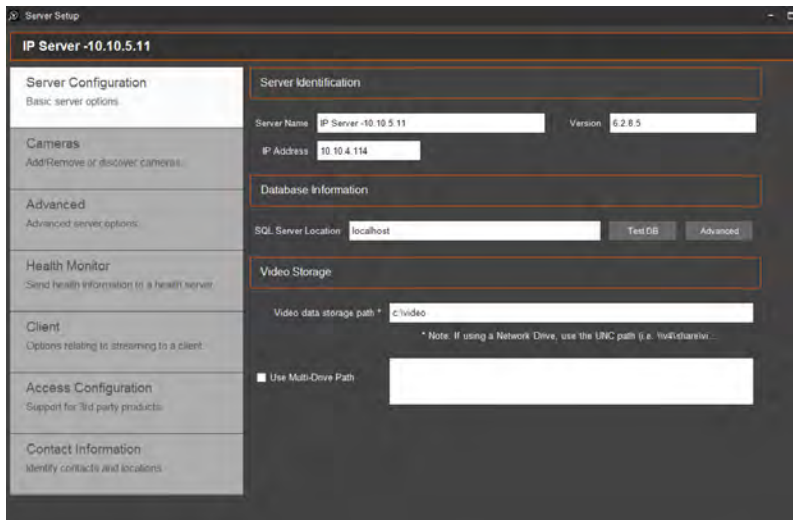
This interface is used for troubleshooting any service related issues.

The IP Server service is stopped when Diagnostics is launched;

<p>Server name</p>	<p>This field displays the server name previously entered. It is not editable. To change the name of the server, click Setup and configuration in the left pane or from Server Properties.</p>
<p>IP Address</p>	<p>This field displays the server's IP address and should not be changed.</p>
<p>Port</p>	<p>This field displays the port used by the VI Monitor to get and set system information. This port is also referred to as the Command Channel Port. See list of ports for more information on ports used by the software.</p>
<p>Max cameras</p>	<p>This field displays the maximum number of cameras allocated to the serial number assigned to the server. Using a Video Insight encoder such as the VP16 will show a value of zero in this field, but all 16 channels of the encoder can be added.</p>
<p>Version</p>	<p>This field displays the software version.</p>

<p>Available</p>	<p>This field displays the number of licenses available to add to the server.</p> <p>The grid area of the Diagnostics interface is read-only and displays all cameras, the last video write- me, if it is recording and the me the last image was received, or the last me a live image was received from the camera.</p>
<p>Time of last write</p>	<p>This column displays the last me the camera’s images were recorded to a file. A me of 12:00:00 AM is indicative of a camera that is set to Recording Off or not recording due to a Motion-Only recording type.</p>
<p>Last image received</p>	<p>This column displays the last me the camera’s live images were streamed. A me of 12:00:00 AM is indicative of a camera that is offline. The camera could be offline for several reasons: incorrect credentials, network, bandwidth or the IP Server service not running. See the FAQ section for more information on why a camera could be offline.</p>

Note: Remember to start the service when exiting the Diagnostics application.



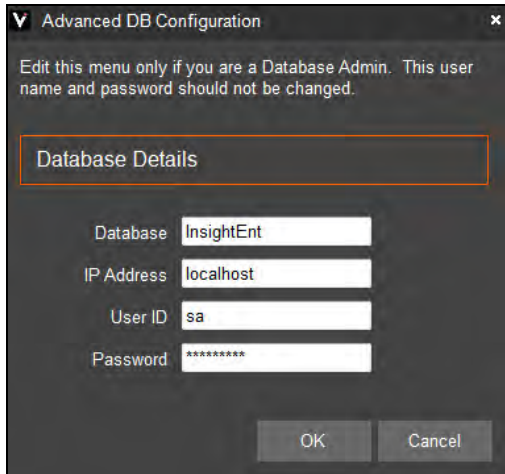
Two additional features for troubleshooting are available that are not available in VI Monitor Client, by highlighting the server node in the left pane:

Test DB and Advanced.

Click **Test DB** to test connectivity to the database. The database test will pass when the server makes a successful connection to the database.

If it does not, the test will display: “Error: Database version is not correct. Either the database

did not respond, nor has an outdated version.” There are several reasons why the database test failed. See [FAQs](#) for possible reasons for and potential solutions to the failure.



Advanced DB Configuration

Edit this menu only if you are a Database Admin. This user name and password should not be changed.

Database Details

Database: InsightEnt

IP Address: localhost

User ID: sa

Password: *****

OK Cancel

Incorrect database information may be one cause of test failure. To update or confirm the information click **Advanced**.

Database: Enter the database name. The default database name is InsightEnt.

IP Address: Enter either the IP address or the hostname of the database server.

User ID: The default user ID for the InsightEnt database is sa.

Password: The default password for the InsightEnt database is V4in\$ight. You can change this at any time after the installation to match the security needs of your environment.

You can view the System Log by clicking the node in the left pane. See [System Log](#) for more information on the system log.

Time	Message	Source
06/01/2015 3:33:44 PM	Administrator The servers properties were updated 3:33 PM - 6/1/2015	CommandChannel.UpdateServer
06/01/2015 3:28:10 PM	Video Server was shut down at 3:28 PM - 6/1/2015	Board.Close
06/01/2015 3:28:09 PM	Video Server started at 3:28 PM - 6/1/2015	Initialization
06/01/2015 3:27:07 PM	Video Server started at 3:27 PM - 6/1/2015	Initialization
06/01/2015 3:26:52 PM	Video Server was shut down at 3:26 PM - 6/1/2015	Board.Close
06/01/2015 3:23:52 PM	Administrator The servers properties were updated 3:23 PM - 6/1/2015	CommandChannel.UpdateServer
06/01/2015 3:23:26 PM	Video Server was shut down at 3:23 PM - 6/1/2015	Board.Close
06/01/2015 3:23:25 PM	Video Server started at 3:23 PM - 6/1/2015	Initialization
06/01/2015 2:40:13 PM	Video Server started at 2:40 PM - 6/1/2015	Initialization
05/25/2015 4:39:39 PM	10.10.4.244 - A-440D (10.10.4.244) is restored	GeneralTimerClass.CheckStreamsStatus
05/25/2015 4:39:39 PM	10.10.4.244 - A-440D (10.10.4.244) is restored	GeneralTimerClass.CheckStreamsStatus
05/25/2015 3:22:06 PM	10.10.4.244 - A-440D (10.10.4.244) is down	GeneralTimerClass.CheckStreamsStatus
05/25/2015 3:22:06 PM	10.10.4.244 - A-440D (10.10.4.244) is down	GeneralTimerClass.CheckStreamsStatus
05/25/2015 3:12:42 PM	Cannot delete folder(c:\video\10.10.5.121-924986490\05.22.2015)	GeneralTimer.CleanDrive()
05/25/2015 3:12:40 PM	CleanDrive:(Free Space<10GB>, Total Space<120GB>, Reserved Space<5GB>, ToDate<5/24/2015>)	GeneralTimer.CleanDrive()
05/25/2015 2:53:39 PM	10.10.4.244 - A-440D (10.10.4.244) is restored	GeneralTimerClass.CheckStreamsStatus
05/25/2015 2:53:39 PM	10.10.4.244 - A-440D (10.10.4.244) is restored	GeneralTimerClass.CheckStreamsStatus
05/25/2015 2:33:28 PM	10.10.4.244 - A-440D (10.10.4.244) is down	GeneralTimerClass.CheckStreamsStatus
05/25/2015 2:33:28 PM	10.10.4.244 - A-440D (10.10.4.244) is down	GeneralTimerClass.CheckStreamsStatus
05/25/2015 2:33:28 PM	10.10.4.244 - A-440D (10.10.4.244) is down	GeneralTimerClass.CheckStreamsStatus
05/25/2015 11:29:03 AM	10.10.4.244 - A-440D (10.10.4.244) is restored	GeneralTimerClass.CheckStreamsStatus

IPSM: No Cameras

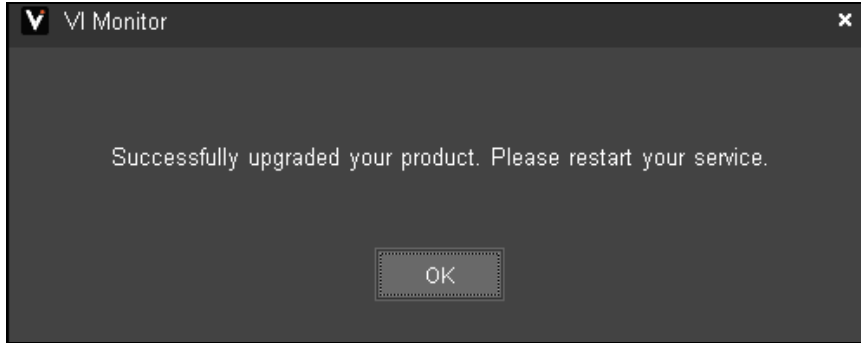
Another troubleshooting option is a diagnostics version that can run the application without starting any cameras. This version does not consume any bandwidth.

This version functions the same as the other version, with the exception that camera-related features and information such as Live View and Time of last write are not available after this diagnostics version is started. See IPSM Diagnostics for more information on running diagnostics.

IPSM: Update Activation

The Update Activation option is used to update the Activation type (e.g., transitioning from Demo to purchased licensing scheme) or when the serial number used is upgraded with additional licenses.

See Installation for more information on changing the activation type. Click **OK** to confirm the number of licenses currently available.



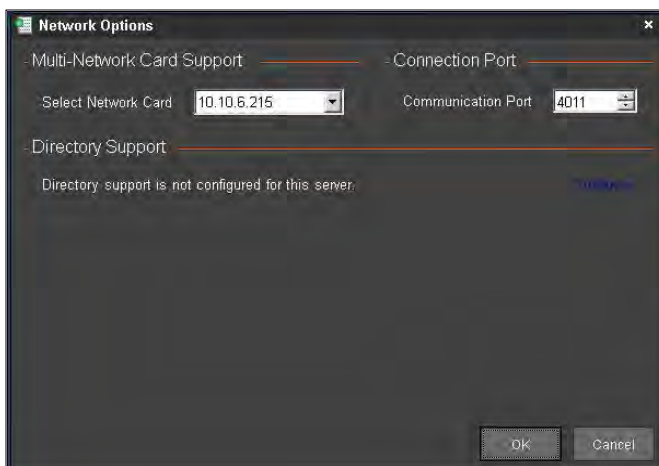
Camera Status tab

The Camera Status tab displays the camera name, the last received communication from the server, the resolution being used, the number of frames per second, the bandwidth, frame size and the format.

Security

Video surveillance is a pillar of overall security. To secure our products we have implemented secure access to the software, watermarking of recorded video and the ability to quickly know when someone has modified something by using the logs.

Configuring Active Directory



Access the IP Server computer.

Right-click the IP Server Manager icon, found in the System Tray.

Select **Server Configuration**.

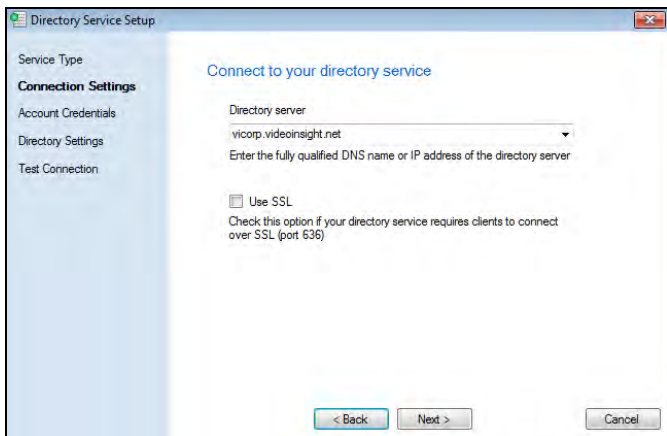
Click **Network Options**.

Click **Configure**.



Click **Use Active Directory**.

Click **Next**.



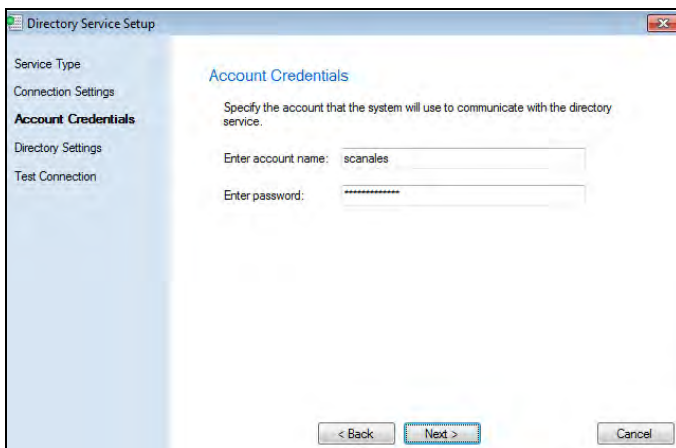
The domain name automatically populates the Directory server field.

If it is blank, check if the prerequisites have been met.

Confirm the domain name.

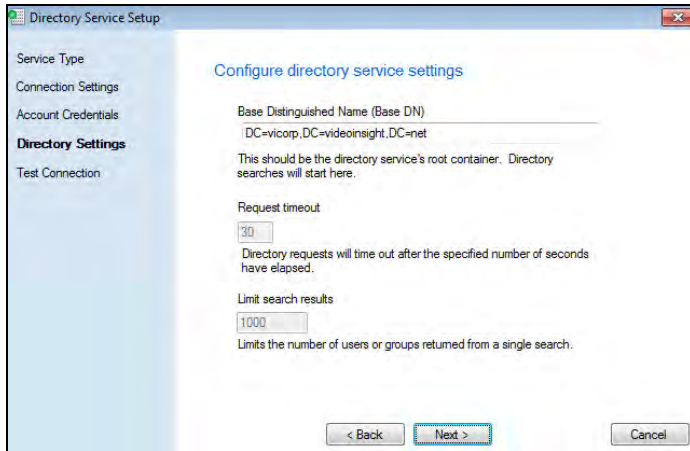
Check the box for Use SSL if using SSL for Active Directory configuration.

Click **Next**.



Enter the administrative account name and password.

Click **Next**.



The Base Distinguished Name (DN) automatically populates the Base (DN) field.

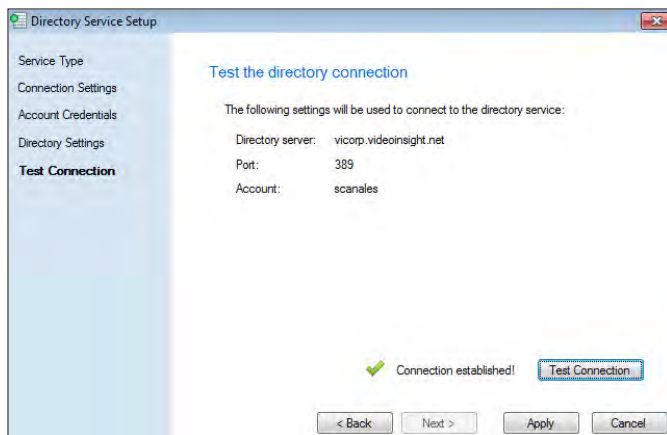
If it is blank, verify that the Active Directory prerequisites have been met.

If they have, the Base DN should be the top (root) folder to allow for adding of any user from any group.

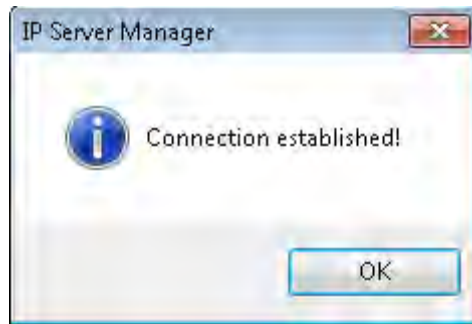
If the **Base DN** is extremely long it could mean the user has access restrictions. This could limit the number of users they will be able to add.

Request timeout: This value reflects the setting on the Active Directory server, and cannot be changed here. Any requests made to the Active Directory server that exceed that time will time out.

Limit search results: This value reflects the setting on the Active Directory server. This is the maximum number of results returned from the Active Directory server.



Click **Next**.

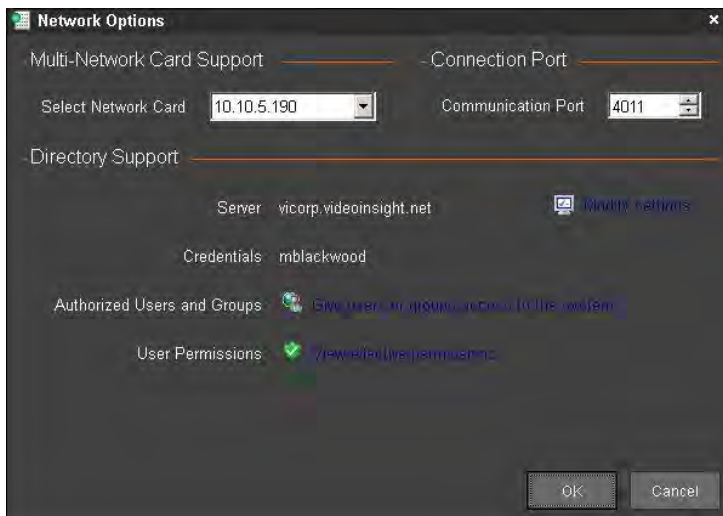


Click **Test Connection**.

Click **OK** to dismiss the "Connection established!" message.

If the test connection fails, review the steps above for Active Directory Configuration.

Otherwise, click **Ok**.



IP Server and Active Directory are now integrated.

The next step is to both add users and add groups before they are able to log in to VI Monitor Client.

Active Directory Prerequisites

Active Directory server with users and groups configured.

Active Directory can be configured using a local database for each server or using a shared database environment.

Administrator user account with administrator-level credentials in both the domain and on the Active Directory server (do not use an individual account).

The IP Server host is part of the domain.

IP Server must be able to communicate with all domain controllers via port 389 or 636. Port 389 cannot be changed. Port 636 is used for SSL encryption.

IP Server configuration must be done while logged into the domain with a valid domain account. This is required by Windows for security reasons.

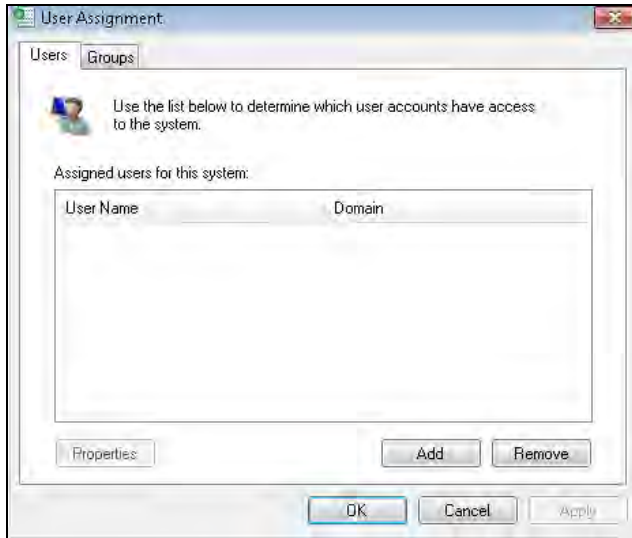
Video Insight recommends importing users as a group instead of individually. The group must be created in Active Directory before it can be imported. You can create groups to suit your needs and policies.

To configure the IP Video Enterprise service to run as an Active Directory account:

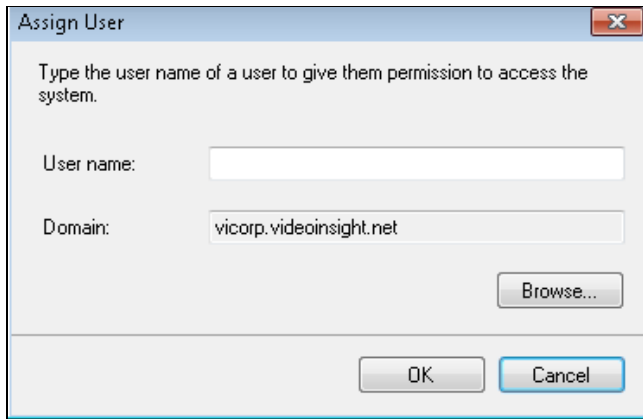
1. Click the Start button.
2. Enter *services.msc* and then press Enter.
3. Locate the IP Video Enterprise service.
4. Right-click and select Stop.
5. Right-click and select Properties.
6. Select the Logon tab.
7. Select the second option for the account.
8. Provide an Active Directory account with minimal rights. A basic domain user account should be sufficient.
9. Click the General tab and then select Start.
10. Click OK.
11. Restart the IIS Admin service if using Web Client.

Adding users or groups

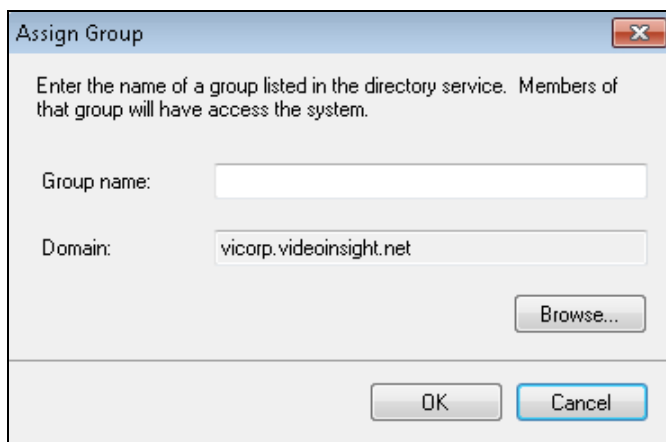
To add Active Directory users and groups:



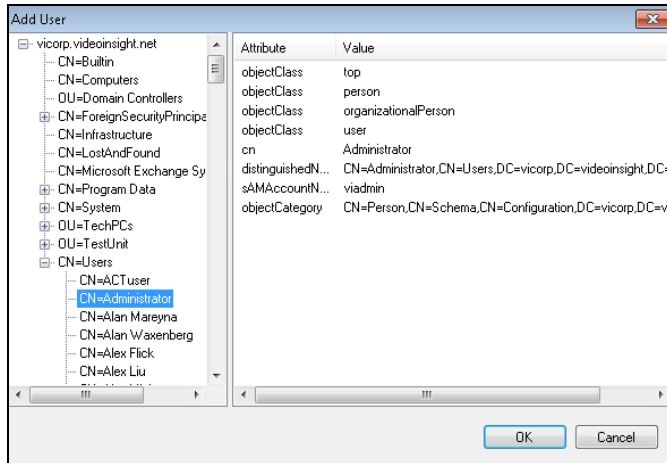
On the Network Operations screen click Give users or groups access to the system.



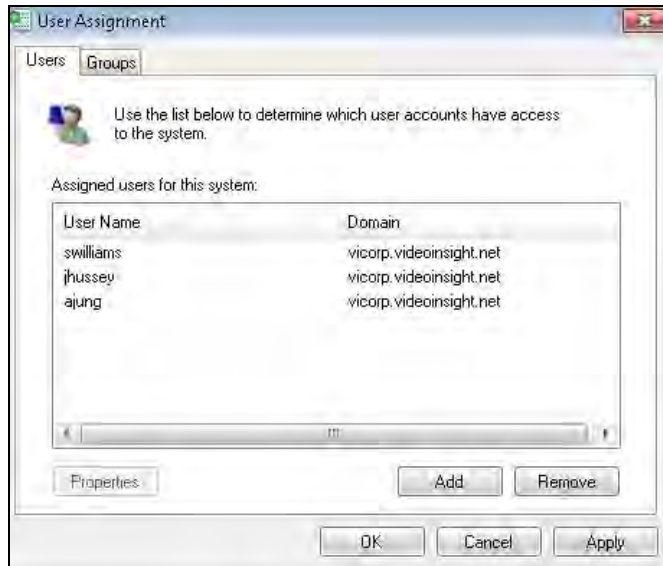
Click **Add**.



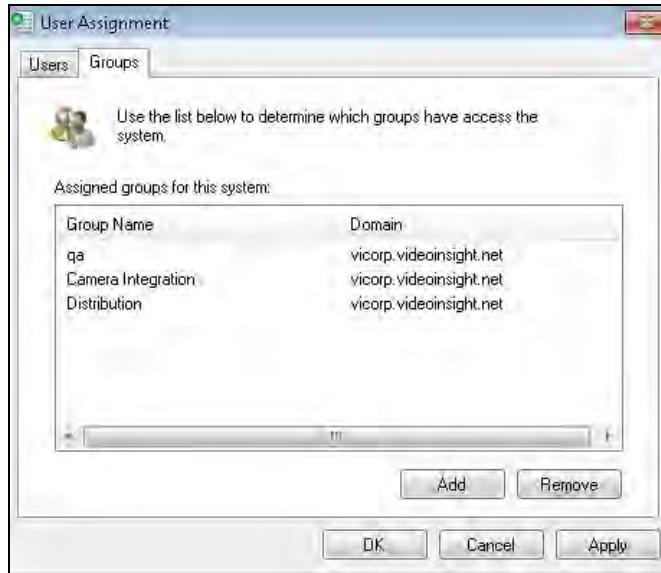
Enter the user or group name exactly as it appears in Active Directory and then click **OK**.



Click Browse to select a **user or group** from the list.

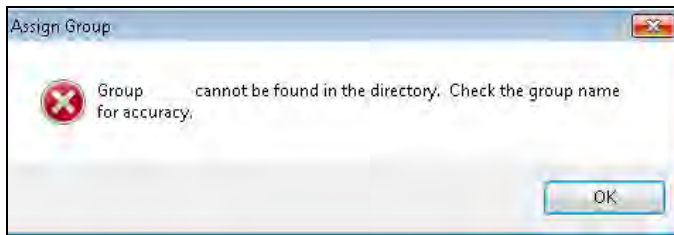


Select the specific **user or group** and then click **OK**.



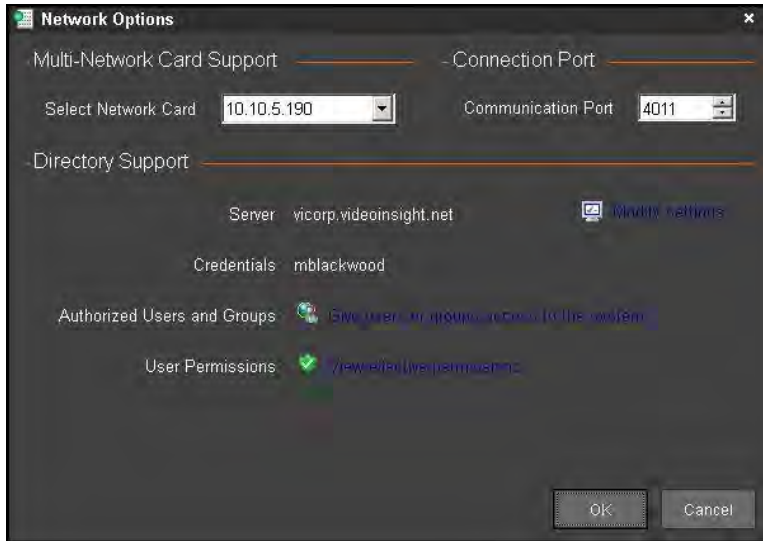
Click **Apply** and then click **OK**.

See [VI Monitor Client-User Manager](#) for more information on how to import these users and groups. See [Login](#) for more information on how to login.



Entering an invalid user or group name displays an error message as shown on the left.

Removing users or groups



To remove Active Directory users and groups:



On the Network Options screen click Give users or groups access to the system.

Select the user or users to remove and then click **Remove**.

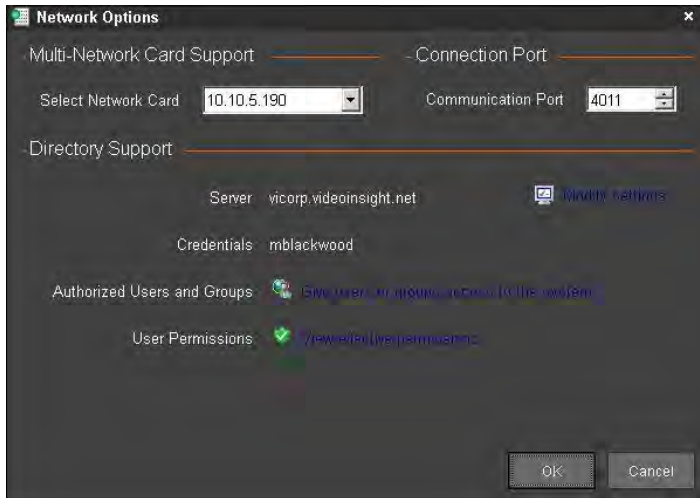
Click **Apply**.

Click **OK**.

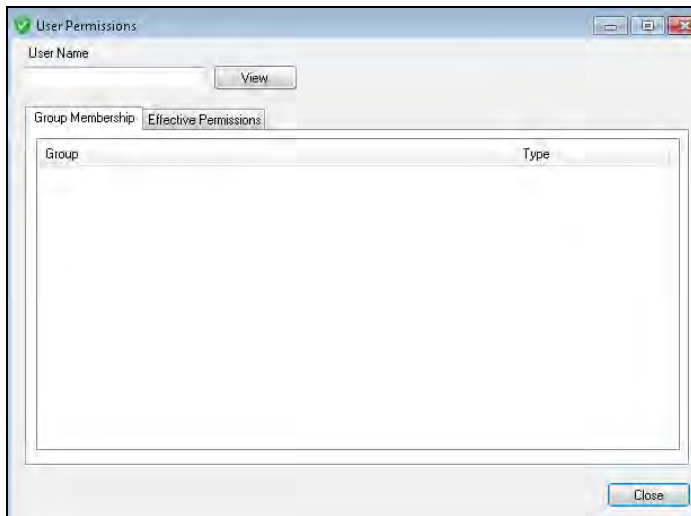
Viewing user permissions

IP Server and Active Directory are highly integrated. You can view the same user permissions using both.

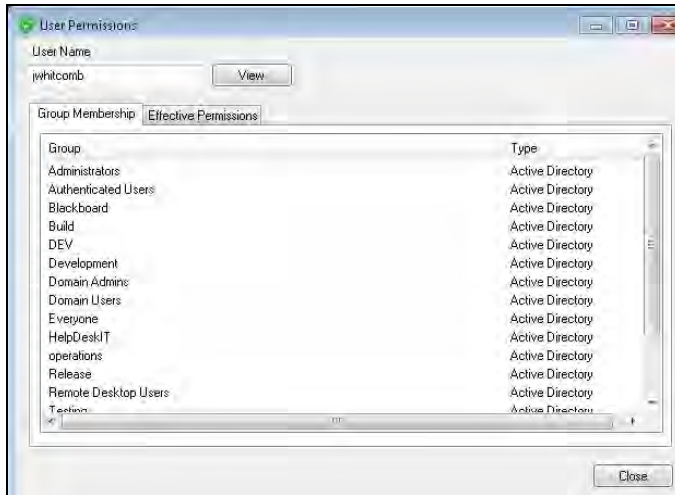
You can view user permissions in several places: Network Options, Add User and VI Monitor Client User Manager.



On the Network Options screen, and click the View effective permissions.

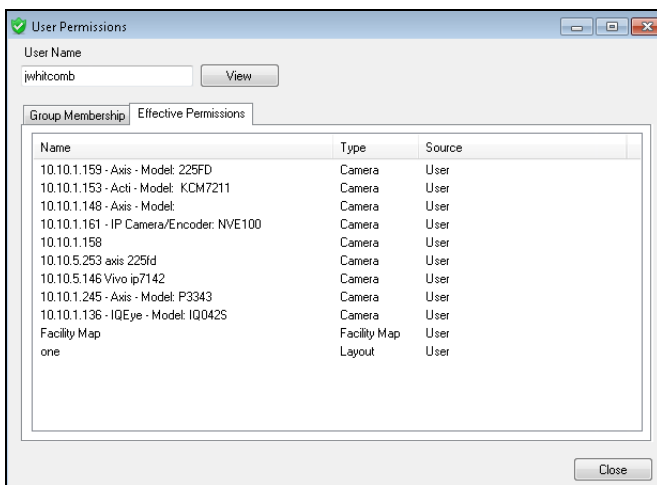


Enter the username and then click **View**.



The Group Membership tab displays all Active Directory groups the user belongs to. You cannot make any changes on this tab.

The Effective Permissions tab displays all IP Server items the user has access to. You cannot make any changes on this tab. See [User Manager](#) for more information on modifying user permissions in VI Monitor Client.

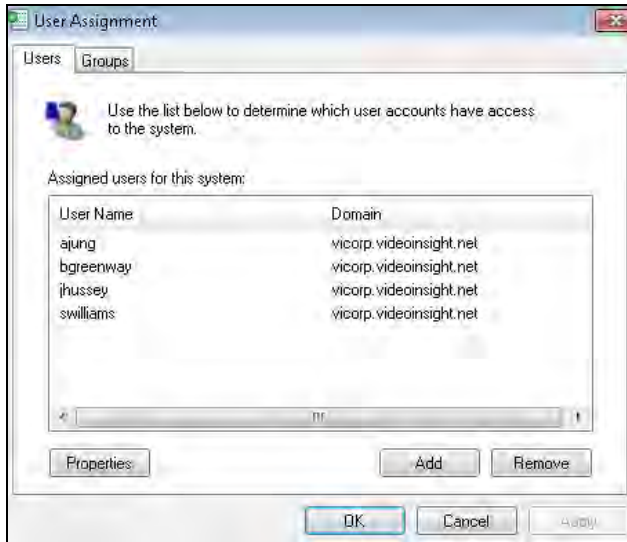


Name: Lists the object names the user has access to.

Type: Lists the object type the user has access to.

Source: Lists the source of the permission; in this example, the user was created individually and granted permissions exclusively, not as part of a group.

To view permissions from the User Assignment screen:



On the Network Op ons screen click Give users or groups access to the system.



Select a username and then click **Properties**.

The Group Membership screen displays a list of Active Directory groups the user belongs to.

Click **Close**.

LDAP (Lightweight Directory Access Protocol)

LDAP is the information technology standard way of accessing a directory service over a TCP/IP network. Active Directory is Microsoft’s directory service. Some other directory services are Novell eDirectory and OpenLDAP. Directory services store, organize and provide access to information in a directory containing information about users, computers, and permissions.

LDAP uses Distinguished Name (DN) as the syntax to identify objects in the directory. The DN is composed of four discrete name parts:

- CN – Common Name – For example, Jane Doe
- OU – Organizational Unit – For example, Sales
- DC – Domain component – For example, my.domain.net
- Domain component – For example, net

The DN reads from left to right, from the most specific part of the node to the least specific node on the right. The root of the DN is actually the last two parts (for example, my.domain.net).

See [Active Directory](#) for more information on managing users using LDAP. The process to manage users in both systems is the same.

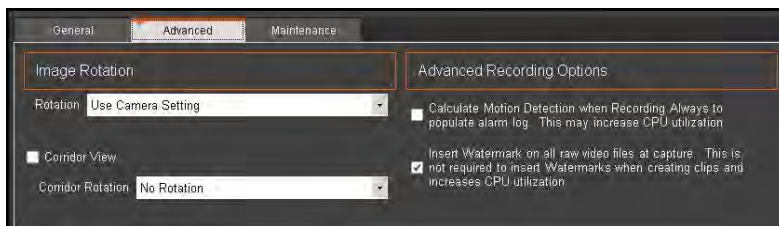
Checksum

The checksum logic incorporated into Video Insight software prevents modification to recordings that can be made using other software. This feature guarantees the authenticity of the recording and ensures the delivered recording has not been tampered with. This is important when using recordings as evidence in legal proceedings. Video Insight uses MD5 checksum logic.

Enabling this feature is processor intensive because the server decompresses and re-compresses each image to interlace the watermark. You can interlace the watermark into clips or full recordings. The watermark is invisible to the naked eye and can only be verified using our Standalone Player utility.

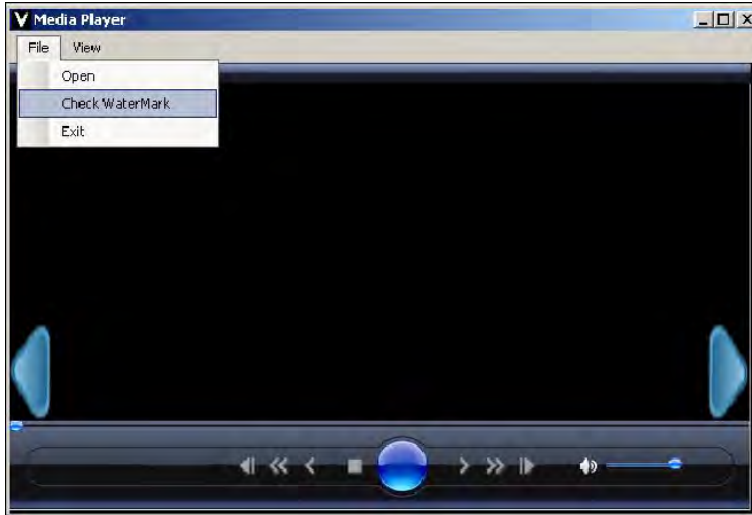
Enabling CheckSum Watermark

- 1) Start VI Monitor Client.
- 2) Select a camera from the left navigation tree.
- 3) Right-click the camera node and select Properties.
- 4) Click the Record tab.
- 5) Click the Advanced tab.
- 6) Check the box to Insert Watermark on all raw video files at capture.
- 7) Click **Save**.



Verifying a CheckSum Watermark

A video can be verified for tampering by using the Standalone Player utility provided in the full DVD download for your operating system type.



Start the Standalone Player utility (also called Video Insight Standalone Media Player).

Click the **File** menu and then select **Open** to navigate to the file that needs verification.

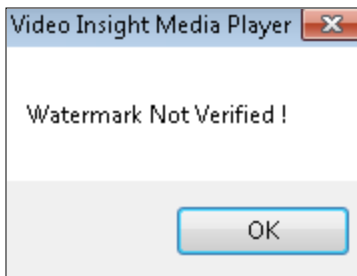
Select the file and then click **Open**.

Click the File menu and then select **Check Water Mark**.



The player will check the file and if the video is watermarked and has not been tampered with, it will display a verification message as in the following.

Click **OK**.



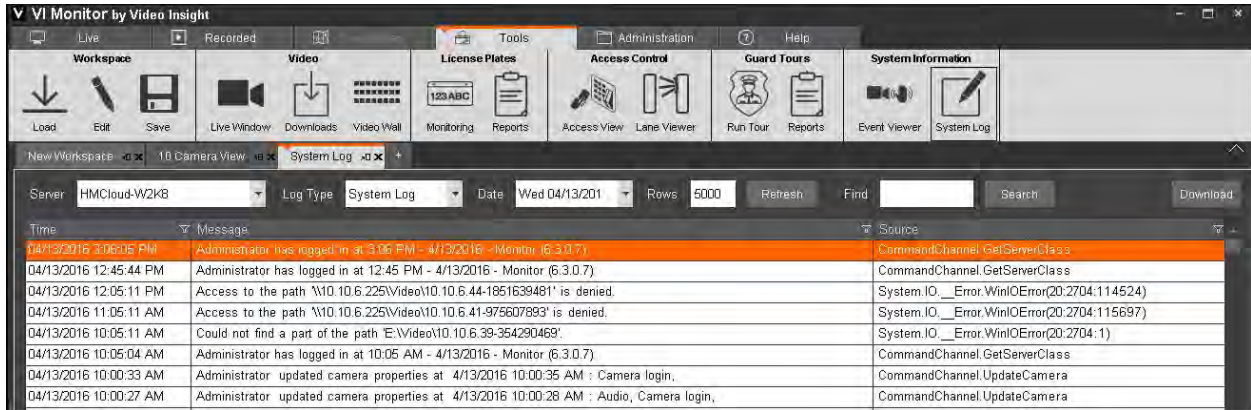
The player displays a different message if the file does not have a watermark or has been tampered with.

System Log

Reviewing the System Log is a good way to identify user actions, server, and camera messages as well as obtain any error logs which can aid in troubleshooting.

You can access the System Log from several areas of the application, but the functionality and available actions are the same.

1. Start the System Log by selecting Tools → System Log at the top of VI Monitor

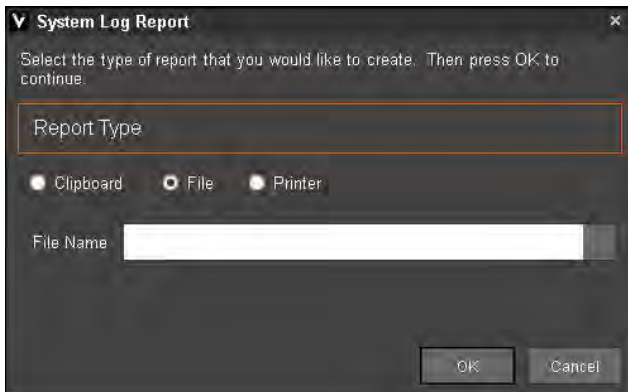


Note: The number of pages available and saved in the database depends on the System Log setting. You can change this setting on the Advanced Tab of Server Properties. The default is 30 days and the maximum is 1000 days.



Download

Exports the System Log.



Clicking **Download** displays three options as seen on the left.

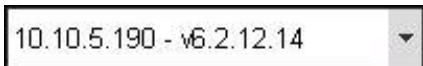
Here, the ability to copy the system log to the clipboard exists.

Optionally, print to a file and Print to a printer are also available.



Refresh

The Refresh icon refreshes the System Log.

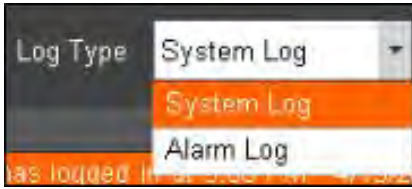


Server

This drop down menu selects the server.

All servers added to VI Monitor Client with a status of Connected display here.

Note: if using the IPSM Diagnostics System Log- all servers in a shared database will appear, regardless of their connection status.



Log Type

This drop-down menu selects the type of log to view.

System Log is the default.



Find Option

The field next to this icon allows you to search for a specific string.



Date

The calendar control selects the “through” date of the logs. For example, when 12/31/2011 is selected all logs available up to and including 12/31/2011 display.

Troubleshooting

Your registered Video Insight product includes one year of software maintenance and a technical support plan that begins on your purchase date. This is verified by the serial number used to activate the software. The one year of software maintenance entitles users to one full year of free software upgrades and unlimited technical support. Video Insight recommends renewing your maintenance before it expires to avoid a lapse in upgrades and support.

Our technical support team is highly skilled in our software and in the world of IP cameras, as well as networking and access control systems. Video Insight technical support works to make sure your issue is resolved as quickly and completely as possible.

Frequently Asked Questions

Answers to the most commonly asked questions and troubleshooting hints can be found on our website, under the FAQ section.

You can also access this section by clicking the following link:

<http://www.video-insight.com/support/FAQ/>

Online Resources

Youtube Tutorials: http://www.youtube.com/user/videoinsight_v

Downloads and Updates: <http://downloadvi.com>

Remote Support

If you require personal assistance from one of our Technical Support representatives, please contact us using one of our contact methods. Install the Teamviewer client application prior to requesting remote support.

To install Team Viewer:



1. Browse to <http://www.downloadvi.com>
2. Click the VI Remote Support QS button.
3. Click **Run** at the prompt.
4. Click **Run** again.
5. Call us at Technical Support at 713-621-9779.
6. Give the representative your ID. Your ID is randomly generated every time you request remote support. The representative will log on to your computer and show you how to correct the issue or fix it for you.

Contact Us

In person:

3 Riverway, Suite 700
Houston, Texas 77056

Hours of Operation:

9:00 AM - 6:00 PM CST, Monday – Friday

By Phone: 713-621-9779

800-513-5417

By Fax: 713-621-7281

Sales Department:

713-621-9779

Technical Support Hours: 8:00 AM - 6:00 PM CST, Monday – Friday

For Saturdays and Holidays: 10:00 AM - 2:00 PM

Please call our Answering Service at **877-743-2403** and the support engineer on-call will be paged to assist you.

By Email: support@video-insight.com

Feature Request <http://www.questionspro.com/akira/TakeSurvey?id=1028953>

Appendices

Appendix A: IP Server port list

Appendix B: Current Customers Examples

Appendix C: Commonly Used Camera Credentials

Appendix D: Configuring a CNB camera

Appendix E: Configuring Sentry FS1000 and FS2000 cameras

Appendix F: Configuring an IQEye Camera using Optional Controls

Appendix G: The Independent JPEG Group's JPEG Software Notice

Appendix A: IP Server port list

Port Number	Name	Purpose
4010	Data Port	Sends live video streams from IP Server to VI Monitor Client
4011	Command Port	To get and set system information by VI Monitor Client
3010	Ovid Server	Communication between S2, IP Server and the Ovid Server for Video Insight and S2 Access Control Configuration
80	HTTP	IIS for serving the Web Client Note: Some ISPs block port 80 access. You may need to configure IIS to use a different port
2051	MonitorCast	Access control communication between Video Insight and MonitorCast
554	RTSP	Specific camera properties
21	FTP	Specific camera properties
11000	N/A	Communication between IP Server and Health Monitor
636	Active Directory SSL	Active Directory configured with Secure Socket Layer (SSL)
389	Active Directory non-SSL	Active Directory configured without Secure Socket Layer (SSL)

Appendix B: Current Customers Examples

Klein ISD – is using HP servers with Dual Xeon E554 2.53GHz processors with 8GB memory and Windows 2003 Server.

1. Server CS21 has (90) 1.3MP H.264 cameras
2. Server 41 has (100) 1.3MP H.264 cameras and (30) D1 cameras running MJPEG

The screenshot shows a 'Server Statistics' window with tabs for Overview, Server Status, Camera Status, Storage, Licensing, and Online Users. The 'Licensing' tab is active, displaying a table with the following data:

Server Name	Max Cameras	Used	Available	Serial Number	Processor %	Memory Available
CS 21	150	120	30	69247	13 %	6732 MB
CS 23	150	140	10	317DA	15 %	6808 MB
CS 25	200	72	128	12345	10 %	7016 MB
CS 27	150	116	34	C116A	10 %	6898 MB
CS 29	150	89	61	F64A2	11 %	6891 MB
CS 33	150	64	86	552F0	3 %	7011 MB
CS 35	150	105	45	06678	13 %	6822 MB
CS 37	150	86	64	4A4D6	5 %	6960 MB
CS 39	150	63	87	3CDA1	5 %	7096 MB
CS 41	300	130	170	0429B	7 %	6291 MB
CS PD	150	24	126	8451A	34 %	2468 MB
CS-KMS	40	11	29	12345	28 %	1976 MB

Pflugerville ISD – is using Dell R510's with Dual Xeon E5620 2.4GHz processors, 12GB memory, and Windows Server 2008 R2. The servers are running 1,200 2MP H.264 cameras and 400 D1 cameras spread across the servers.

The screenshot shows a 'Server Statistics' window with tabs for Overview, Server Status, Camera Status, Storage, Licensing, and Online Users. The 'Licensing' tab is active, displaying a table with the following data:

Server Name	Max Cameras	Used	Available	Serial Number	Processor %	Memory Available
VS01 .31	300	141	225	F789F	5 %	4312 MB
VS02 .32	300	147	225	AA475	3 %	3877 MB
VS03 .33	300	148	230	9C205	2 %	2843 MB
VS04 .34	300	246	177	B7347	9 %	3074 MB
VS05 .35	300	169	197	B0554	7 %	3236 MB
VS06 .36	300	218	194	E2528	14 %	2580 MB
VS07 .37	300	191	191	5C790	11 %	3370 MB
VS07 .38	300	208	194	47B84	19 %	2689 MB
VS09 .39	300	156	215	1099A	7 %	3282 MB
VS10 .40	300	117	241	816CA	5 %	3683 MB
IP Server -10.225.187.41	300	0	300	D5292	0 %	10772 MB
VS12 .42	300	0	300	BD600	0 %	10856 MB
VS13 .43	300	15	294	AD283	1 %	7601 MB

Recommendations - the following are general guidelines based on the previous discussion assuming Xeon processors and camera side motion detection:

- a. D1 or 4CIF cameras – 150-200 cameras per OS
- b. 1.3 MP cameras – 90 cameras per OS
- c. 3 MP cameras – 50 cameras per OS

Appendix C: Commonly Used Camera Credentials

Here is a list of the default usernames/passwords for a few of the supported IP camera manufacturers. Should your camera model not appear here please refer to the manual included with your camera.

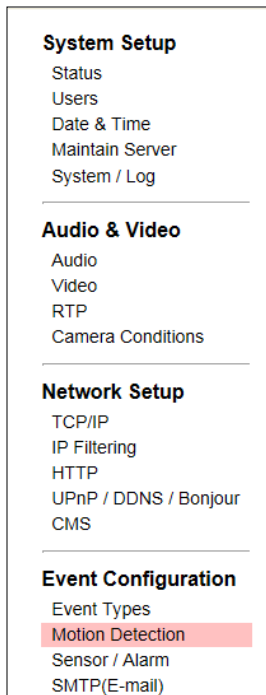
Brand	UserName	Password	Notes
3S	root	root	
Acti	Admin	123456	or 'admin' with a lowercase "a"
Arecont Vision			No credentials needed
Avigilon	admin	admin	
Axis	root	blank or pass	You will be asked to create a root password the first time you go into the cameras interface.
Basler	admin	admin	
Bosch Dinion			No credentials needed
Brickcom	admin	admin	
Cisco			You will be asked to create a root password the first time you go into the cameras interface.
Dlink	root	blank	
Grandstream	admin	admin	
Hikvision	admin	12345	
Honeywell	Administrator	1234	
Huvion	Admin	admin	To change settings
Huvion	root	root	To view images

Infinova	infinova	INFINOVA	
IPX-DDK	root	admin	Also try 'Admin'
IQeye	root	system	
IQinVision	root	system	
Mobotix	admin	meinsm	
Panasonic	admin	12345	
Pelco Sarix	admin	admin	
Pixord	admin	admin	
Samsung Electronics	root	root	or admin/4321
Samsung Techwin (new)	admin	4321	
Samsung Techwin (old)	admin	1111111	
Sanyo	admin	admin	
Scallop	admin	password	
Sony	admin	admin	
Stardot	admin	admin	
Starvedia	admin	leave blank	
Toshiba	root	ikwb	
Toshiba	root	ikwd	
Trendnet	admin	admin	
Ubiquiti	ubnt	ubnt	
VideoIQ	supervisor	supervisor	
Vivotek	root	leave blank	

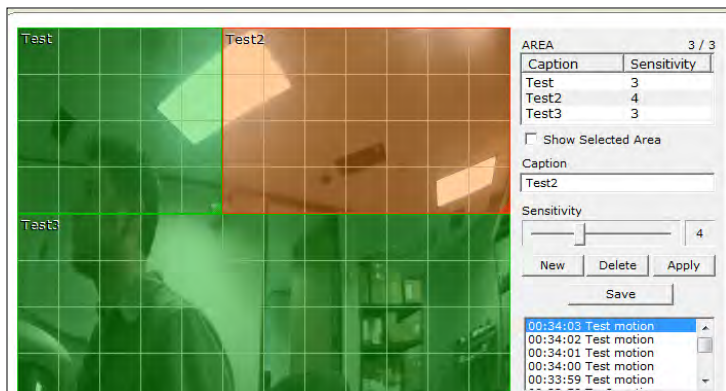
VP16	admin	12345	
VP16-A	Admin	12345	

Appendix D: Configuring a CNB camera

Due to the nature of the CNB camera integration and the capabilities of the camera will turn on Motion detection inside the camera, but we cannot draw zones inside the Motion Detection page, all zones must be created inside the CNB web page under Motion Detection as shown below.



Access the camera's Web page



Click the **Motion Detection** option

With the CNB cameras the best way for Motion Detection to work is to draw at least two zones; the camera will not detect motion anywhere there is not a zone and allows you to draw up to three zones.

The Sensitivity adjusts the threshold for the amount of motion that needs to occur. The lower the number, the less amount of motion that needs to occur to trigger a motion event, setting the Sensitivity to 10 turns off Motion Detection in that area.

Motion Zones can overlap and it appears the zone with the lower sensitivity takes precedence over the other zone.

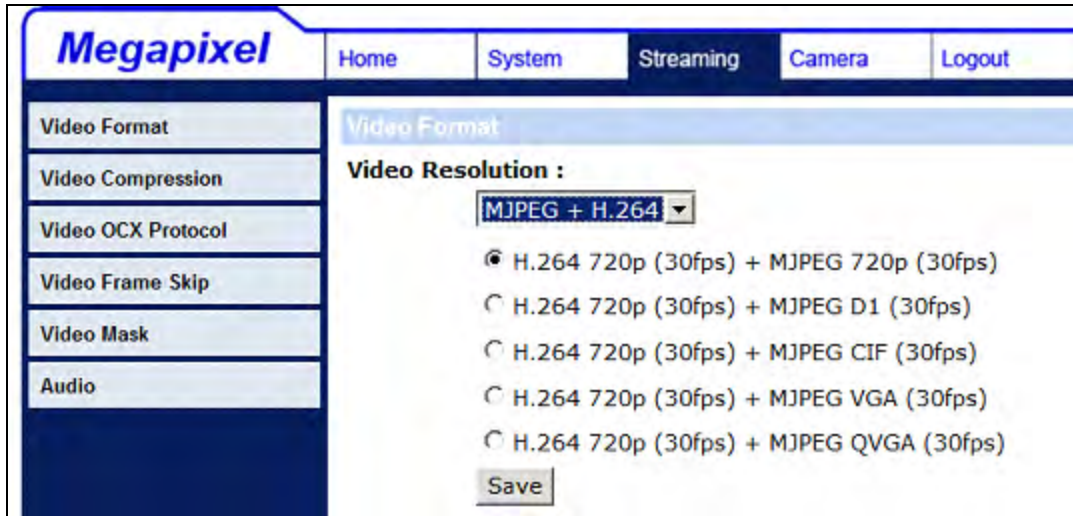
The window is dynamic once you save the changes you have made, but as you can see from the picture, it does not tell you the amount of motion, just that motion has occurred and in which zone.

While testing, we discovered that a zone with sensitivity between 3 and 5 work the best, but it will depend on the size of the zone drawn as well. The bigger the zone, the lower the number will need to be.

Appendix E: Configuring Sentry FS1000 and FS2000 cameras

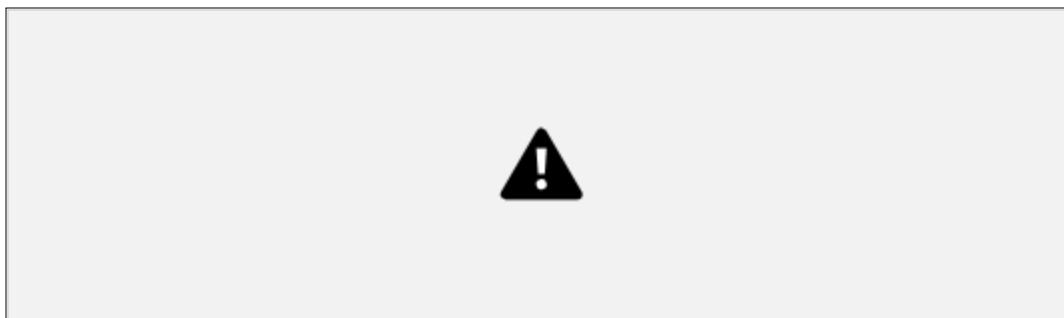
Web client requirement of cameras streaming JPEGs may require specific configuration to ensure these two models are streaming both H.264 and JPEG to properly display in VI Monitor Client and the Web Client.

If the Sentry cameras you are de-warping have menus that look like this:



Then the correct setting should be H.264 + MJPEG for the web client and the de-warp to work properly.

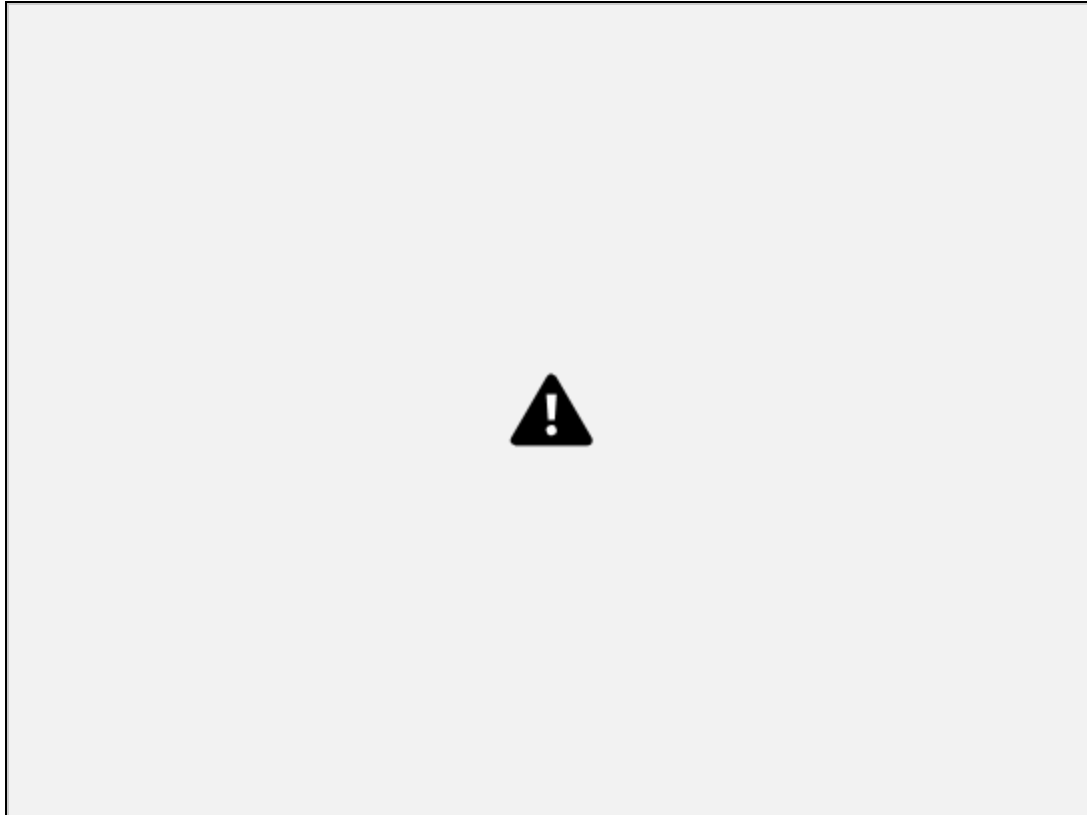
Conversely, if the camera's web interface looks like this:



No changes are needed; the camera streams both h.264 and JPEG as requested, regardless of what the image settings are set to.

Appendix F: Configuring an IQEye Camera using Optional Controls

Once the camera is added to the software, access the Optional Controls tab in the Camera's Properties.



These controls change the way that the IQ Eye cameras handle different light settings and adjust the iris accordingly.

Gain Style- The autogain algorithm of your camera will set brightness to best display. The gain style setting chooses which pixels within the exposure window will be used by the autogain algorithm for setting brightness levels.

Peak Detect: uses only the brightest pixels in the exposure window, making sure they're appropriately-adjusted for bright pixels. This is a good setting for watching bright areas.

Backlight: uses only the darkest pixels in the exposure window, making sure they're appropriately-adjusted for dark pixels. This is a good setting for outdoor scenes where you want to watch a shaded region.

Average: uses **all** of the pixels in the exposure window. This is a good setting for indoor scenes where there are no very bright or very dark areas to skew the gain calculations.

Clip Average: uses all pixels **except** for the very darkest and brightest pixels. This is a good setting for outdoor scenes where you want to ignore both sky and shadows and to watch a region of intermediate brightness levels. This is also a good setting for interior scenes.

Undefined- This setting turns off Gain Style

Light Grabber- Enables or disables special processing for low-light images. These values can be seen at the camera's web page under Image tab.

Most Frames- Sets the Light Grabber value to 4x, which specifies "integration" of four frames, twice the low-light correction as the 2x setting which specifies the integration of two frames.

Medium- Sets the Light Grabber value to 2x.

Undefined- Sets the Light Grabber value to 4x

Disabled- Turns Light Grabber off at the camera.

Light Behavior- This setting adjusts the electronic shutter values for the IQeye camera

Optimize speed: Use this setting for fast moving subjects. This setting may cause images to appear grainy in low light conditions.

Optimize quality: Use this setting for high-quality images. This setting may cause images to blur in low light conditions.

Auto: This setting is ideal when there is adequate light and objects are not moving too fast.

The other values set a fixed exposure. This is useful for tuning a camera to minimally changing conditions or to capture objects moving at predictable speeds. The list of available exposures may change based on other settings like frame rate, Light Grabber and resolution.

Appendix G: The Independent JPEG Group's JPEG Software Notice

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README for release 6b of 27-Mar-1998

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This distribution contains the sixth public release of the Independent JPEG Group's free JPEG software. You are welcome to redistribute this software and to use it for any purpose, subject to the conditions under LEGAL ISSUES, below.

Serious users of this software (particularly those incorporating it into larger programs) should contact IJG at jpeg-info@uunet.uu.net to be added to our electronic mailing list. Mailing list members are notified of updates and have a chance to participate in technical discussions, etc.

This software is the work of Tom Lane, Philip Gladstone, Jim Boucher, Lee Crocker, Julian Minguillon, Luis Ortiz, George Phillips, Davide Rossi, Guido Vollbeding, Ge' Weijers, and other members of the Independent JPEG Group.

IJG is not affiliated with the official ISO JPEG standards committee.

DOCUMENTATION ROADMAP

=====

This file contains the following sections:

OVERVIEW General description of JPEG and the IJG software.
 LEGAL ISSUES Copyright, lack of warranty, terms of distribution.
 REFERENCES Where to learn more about JPEG.
 ARCHIVE LOCATIONS Where to find newer versions of this software.
 RELATED SOFTWARE Other stuff you should get.
 FILE FORMAT WARS Software **not** to get.
 TO DO Plans for future IJG releases.

Other documentation files in the distribution are:

User documentation:

install.doc How to configure and install the IJG software.
 usage.doc Usage instructions for cjpeg, djpeg, jpegtran, rdjpgcom, and wrjpgcom.
 *.1 Unix-style man pages for programs (same info as usage.doc).
 wizard.doc Advanced usage instructions for JPEG wizards only.
 change.log Version-to-version change highlights.

Programmer and internal documentation:

libjpeg.doc How to use the JPEG library in your own programs.
 example.c Sample code for calling the JPEG library.

structure.doc Overview of the JPEG library's internal structure.
 filelist.doc Road map of IJG files.
 coderules.doc Coding style rules --- please read if you contribute code.

Please read at least the files install.doc and usage.doc. Useful information can also be found in the JPEG FAQ (Frequently Asked Questions) archive. See ARCHIVE LOCATIONS below to find out where to obtain the FAQ archive.

If you want to understand how the JPEG code works, we suggest reading one or more of the REFERENCES, then looking at the documentation files (in roughly the order listed) before diving into the code.

OVERVIEW

=====

This package contains C software to implement JPEG image compression and decompression. JPEG (pronounced "jay-peg") is a standardized compression method for full-color and gray-scale images. JPEG is intended for compressing "real-world" scenes; line drawings, cartoons and other non-realistic images are not its strong suit. JPEG is lossy, meaning that the output image is not exactly identical to the input image. Hence you must not use JPEG if you have to have identical output bits. However, on typical photographic images, very good compression levels can be obtained with no visible change, and remarkably high compression levels are possible if you can tolerate a low-quality image. For more details, see the references, or just experiment with various compression settings.

This software implements JPEG baseline, extended-sequential, and progressive compression processes. Provision is made for supporting all variants of these processes, although some uncommon parameter settings aren't implemented yet. For legal reasons, we are not distributing code for the arithmetic-coding variants of JPEG; see LEGAL ISSUES. We have made no provision for supporting the hierarchical or lossless processes defined in the standard.

We provide a set of library routines for reading and writing JPEG image files, plus two sample applications "cjpeg" and "djpeg", which use the library to perform conversion between JPEG and some other popular image file formats. The library is intended to be reused in other applications.

In order to support file conversion and viewing software, we have included considerable functionality beyond the bare JPEG coding/decoding capability; for example, the color quantization modules are not strictly part of JPEG decoding, but they are essential for output to colormapped file formats or colormapped displays. These extra functions can be compiled out of the library if not required for a particular application. We have also included "jpegtran", a utility for lossless transcoding between different JPEG processes, and "rdjpgcom" and "wrjpgcom", two simple applications for inserting and extracting textual comments in JFIF files.

The emphasis in designing this software has been on achieving portability and flexibility, while also making it fast enough to be useful. In particular, the software is not intended to be read as

a tutorial on JPEG. (See the REFERENCES section for introductory material.) Rather, it is intended to be reliable, portable, industrial-strength code. We do not claim to have achieved that goal in every aspect of the software, but we strive for it.

We welcome the use of this software as a component of commercial products. No royalty is required, but we do ask for an acknowledgement in product documentation, as described under LEGAL ISSUES.

LEGAL ISSUES
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In plain English:

1. We don't promise that this software works. (But if you find any bugs, please let us know!)
2. You can use this software for whatever you want. You don't have to pay us.
3. You may not pretend that you wrote this software. If you use it in a program, you must acknowledge somewhere in your documentation that you've used the IJG code.

In legalese:

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All Rights Reserved except as specified below.

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- (2) If only executable code is distributed, then the accompanying documentation must state that "this software is based in part on the work of the Independent JPEG Group".
- (3) Permission for use of this software is granted only if the user accepts full responsibility for any undesirable consequences; the authors accept NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code, not just to the unmodified library. If you use our work, you ought to acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name in advertising or publicity relating to this software or products derived from it. This software may be referred to only as "the Independent JPEG Group's software".

We specifically permit and encourage the use of this software as the basis of commercial products, provided that all warranty or liability claims are assumed by the product vendor.

ansi2knr.c is included in this distribution by permission of L. Peter Deutsch, sole proprietor of its copyright holder, Aladdin Enterprises of Menlo Park, CA. ansi2knr.c is NOT covered by the above copyright and conditions, but instead by the usual distribution terms of the Free Software Foundation; principally, that you must include source code if you redistribute it. (See the file ansi2knr.c for full details.) However, since ansi2knr.c is not needed as part of any program generated from the IJG code, this does not limit you more than the foregoing paragraphs do.

The Unix configuration script "configure" was produced with GNU Autoconf. It is copyright by the Free Software Foundation but is freely distributable. The same holds for its supporting scripts (config.guess, config.sub, ltconfig, ltmain.sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.)

So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

We are required to state that "The Graphics Interchange Format(c) is the Copyright property of CompuServe Incorporated. GIF(sm) is a Service Mark property of CompuServe Incorporated."

REFERENCES

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We highly recommend reading one or more of these references before trying to understand the innards of the JPEG software.

The best short technical introduction to the JPEG compression algorithm is Wallace, Gregory K. "The JPEG Still Picture Compression Standard", Communications of the ACM, April 1991 (vol. 34 no. 4), pp. 30-44.

(Adjacent articles in that issue discuss MPEG motion picture compression, applications of JPEG, and related topics.) If you don't have the CACM issue handy, a PostScript file containing a revised version of Wallace's article is available at [p:// p.uu.net/graphics/jpeg/wallace.ps.gz](http://p.uu.net/graphics/jpeg/wallace.ps.gz). The file (actually a preprint for an article that appeared in IEEE Trans. Consumer Electronics) omits the sample images that appeared in CACM, but it includes corrections and some added

material. Note: the Wallace article is copyright ACM and IEEE, and it may not be used for commercial purposes.

A somewhat less technical, more leisurely introduction to JPEG can be found in "The Data Compression Book" by Mark Nelson and Jean-loup Gailly, published by M&T Books (New York), 2nd ed. 1996, ISBN 1-55851-434-1. This book provides good explanations and example C code for a multitude of compression methods including JPEG. It is an excellent source if you are comfortable reading C code but don't know much about data compression in general. The book's JPEG sample code is far from industrial-strength, but when you are ready to look at a full implementation, you've got one here...

The best full description of JPEG is the textbook "JPEG Still Image Data Compression Standard" by William B. Pennebaker and Joan L. Mitchell, published by Van Nostrand Reinhold, 1993, ISBN 0-442-01272-1. Price US\$59.95, 638 pp. The book includes the complete text of the ISO JPEG standards (DIS 10918-1 and draft DIS 10918-2.. This is by far the most complete exposition of JPEG in existence, and we highly recommend it.

The JPEG standard itself is not available electronically; you must order a paper copy through ISO or ITU. (Unless you feel a need to own a certified official copy, we recommend buying the Pennebaker and Mitchell book instead; it's much cheaper and includes a great deal of useful explanatory material.) In the USA, copies of the standard may be ordered from ANSI Sales at (212. 642-4900, or from Global Engineering Documents at (800) 854-7179. (ANSI doesn't take credit card orders, but Global does.) It's not cheap: as of 1992, ANSI was charging \$95 for Part 1 and \$47 for Part 2, plus 7% shipping/handling. The standard is divided into two parts, Part 1 being the actual specification, while Part 2 covers compliance testing methods. Part 1 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 1: Requirements and guidelines" and has document numbers ISO/IEC IS 10918-1, ITU-T T.81. Part 2 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 2: Compliance testing" and has document numbers ISO/IEC IS 10918-2, ITU-T T.83.

Some extensions to the original JPEG standard are defined in JPEG Part 3, a newer ISO standard numbered ISO/IEC IS 10918-3 and ITU-T T.84. IJG currently does not support any Part 3 extensions.

The JPEG standard does not specify all details of an interchangeable file format. For the omitted details we follow the "JFIF" conventions, revision 1.02. A copy of the JFIF spec is available from:

Literature Department
C-Cube Microsystems, Inc.
1778 McCarthy Blvd.
Milpitas, CA 95035
phone (408) 944-6300, fax (408) 944-6314

A PostScript version of this document is available by FTP at
 p:// p.uu.net/graphics/jpeg/jfif.ps.gz. There is also a plain text version at
 p:// p.uu.net/graphics/jpeg/jfif.txt.gz, but it is missing the figures.

The TIFF 6.0 file format specification can be obtained by FTP from
 p:// p.sgi.com/graphics/ff/TIFF6.ps.gz. The JPEG incorporation scheme found in the TIFF 6.0
 spec of 3-June-92 has a number of serious problems.

IJG does not recommend use of the TIFF 6.0 design (TIFF Compression tag 6). Instead, we
 recommend the JPEG design proposed by TIFF Technical Note #2 (Compression tag 7). Copies of
 this Note can be obtained from p.sgi.com or from p:// p.uu.net/graphics/jpeg/. It is
 expected that the next revision of the TIFF spec will replace the 6.0 JPEG design with the Note's
 design.

Although IJG's own code does not support TIFF/JPEG, the free libff library uses our library to
 implement TIFF/JPEG per the Note. libff is available from p:// p.sgi.com/graphics/ff/.

ARCHIVE LOCATIONS

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The "official" archive site for this software is p.uu.net (Internet address 192.48.96.9). The
 most recent released version can always be found there in directory graphics/jpeg. This
 particular version will be archived as p:// p.uu.net/graphics/jpeg/jpegsrc.v6b.tar.gz. If you
 don't have direct Internet access, UUNET's archives are also available via UUCP; contact
 help@uunet.uu.net for information on retrieving files that way.

Numerous Internet sites maintain copies of the UUNET files. However, only p.uu.net is
 guaranteed to have the latest official version.

You can also obtain this software in DOS-compatible "zip" archive format from the SimTel
 archives (p:// p.simtel.net/pub/simtelnet/msdos/graphics/), or on CompuServe in the
 Graphics Support forum (GO CIS:GRAPHSUP), library 12 "JPEG Tools". Again, these versions may
 sometimes lag behind the p.uu.net release.

The JPEG FAQ (Frequently Asked Questions) article is a useful source of general information
 about JPEG. It is updated constantly and therefore is not included in this distribution. The FAQ
 is posted every two weeks to Usenet newsgroups comp.graphics.misc, news.answers, and other
 groups. It is available on the World Wide Web at <http://www.faqs.org/faqs/jpeg-faq/> and other
 news.answers archive sites, including the official news.answers archive at r m.mit.edu:
 p://r m.mit.edu/pub/usenet/news.answers/jpeg-faq/.

If you don't have Web or FTP access, send e-mail to mail-server@r m.mit.edu with body send
 usenet/news.answers/jpeg-faq/part1 send usenet/news.answers/jpeg-faq/part2

RELATED SOFTWARE

=====

Numerous viewing and image manipulation programs now support JPEG. (Quite a few of them use this library to do so.) The JPEG FAQ described above lists some of the more popular free and shareware viewers, and tells where to obtain them on Internet.

If you are on a Unix machine, we highly recommend Jef Poskanzer's free PBMPLUS software, which provides many useful operations on PPM-format image files. In particular, it can convert PPM images to and from a wide range of other formats, thus making cjpeg/djpeg considerably more useful. The latest version is distributed by the NetPBM group, and is available from numerous sites, notably [p://wuarchive.wustl.edu/graphics/graphics/packages/NetPBM/](http://wuarchive.wustl.edu/graphics/graphics/packages/NetPBM/).

Unfortunately PBMPLUS/NETPBM is not nearly as portable as the IJG software is; you are likely to have difficulty making it work on any non-Unix machine.

A different free JPEG implementation, written by the PVRG group at Stanford, is available from [p://havefun.stanford.edu/pub/jpeg/](http://havefun.stanford.edu/pub/jpeg/). This program is designed for research and experimentation rather than production use; it is slower, harder to use, and less portable than the IJG code, but it is easier to read and modify. Also, the PVRG code supports lossless JPEG, which we do not. (On the other hand, it doesn't do progressive JPEG.)

FILE FORMAT WARS

=====

Some JPEG programs produce files that are not compatible with our library. The root of the problem is that the ISO JPEG committee failed to specify a concrete file format. Some vendors "filled in the blanks" on their own, creating proprietary formats that no one else could read. (For example, none of the early commercial JPEG implementations for the Macintosh were able to exchange compressed files.)

The file format we have adopted is called JFIF (see REFERENCES). This format has been agreed to by a number of major commercial JPEG vendors, and it has become the de facto standard. JFIF is a minimal or "low end" representation. We recommend the use of TIFF/JPEG (TIFF revision 6.0 as modified by TIFF Technical Note #2. for "high end" applications that need to record a lot of additional data about an image. TIFF/JPEG is fairly new and not yet widely supported, unfortunately.

The upcoming JPEG Part 3 standard defines a file format called SPIFF. SPIFF is interoperable with JFIF, in the sense that most JFIF decoders should be able to read the most common variant of SPIFF. SPIFF has some technical advantages over JFIF, but its major claim to fame is simply that it is an official standard rather than an informal one. At this point it is unclear whether SPIFF will supersede JFIF or whether JFIF will remain the de-facto standard. IJG intends to support SPIFF once the standard is frozen, but we have not decided whether it should become our default output format or not. (In any case, our decoder will remain capable of reading JFIF indefinitely.) Various proprietary file formats incorporating JPEG compression also exist.

We have little or no sympathy for the existence of these formats. Indeed, one of the original reasons for developing this free software was to help force convergence on common, open format standards for JPEG files. Don't use a proprietary file format!

TO DO

=====

The major thrust for v7 will probably be improvement of visual quality.

The current method for scaling the quantization tables is known not to be very good at low Q values. We also intend to investigate block boundary smoothing, "poor man's variable quantization", and other means of improving quality-vs-file-size performance without sacrificing compatibility.

In future versions, we are considering supporting some of the upcoming JPEG Part 3 extensions --- principally, variable quantization and the SPIFF file format. As always, speeding things up is of great interest.

Please send bug reports, offers of help, etc. to jpeg-info@uunet.uu.net.



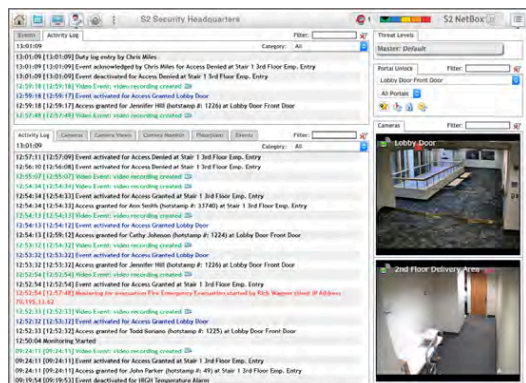
S2 NetBox® Virtual Machine

Overview

S2 NetBox Virtual Machine is a powerful, web-based access control and event monitoring system that can be installed on user-preferred hardware. The highly scalable system supports a wide range of deployments and enables users to build a system supporting over 7,000 portals and more than 500 S2 Nodes. Optional system partitioning allows the entire database to be separated into multiple smaller systems for entities such as field officers or tenants.

Features such as person record and cardholder management, event and alarm monitoring, threat level escalation and reporting are accessible from any web browser. S2 NetBox Virtual Machine works with existing infrastructure and peripheral devices, making it easy to deploy. In addition, S2 NetBox Virtual Machine tightly integrates with S2 NetVR® series video management systems, providing unified system management and administration. Integration with third-party video management systems is also supported.

S2 NetBox Virtual Machine is ideal for organizations that choose to implement an access control solution on their preferred hardware platform. Distributed enterprises can manage multiple S2 NetBox Virtual Machine servers with S2 Global®, allowing for nearly unlimited scalability.



S2 NetBox Virtual Machine is web-based, with one-click access to major system functionality.

Key Features

Access Control

- **Portals:** Supports up to 7,168 doors or other access points
- **Event and Alarm Monitoring:** Includes comprehensive event logging, notification and escalation
- **Threat Level Management:** Provides configurable system status and response actions such as system lock downs
- **Person Record Management:** Maintains detailed, credential-driven user records and access history
- **Reporting:** Offers predefined and custom reports

System

- **Custom Access Control Solution:** Operates on a user-preferred hardware platform¹
- **Web Interface:** Delivers browser-based, unified system management and administration
- **Video Integration:** Works with S2 NetVR series video management systems and other third-party video systems
- **API Support:** Integrates with third-party products such as human resource databases via an open source API
- **Automated System Management:** Automatically discovers S2 Nodes and handles system backups
- **Mobile App:** Allows for mobile security management using S2 Mobile Security Officer®
- **System Partitioning Option:** Allows the entire database to be separated into multiple smaller systems

S2 NetBox Virtual Machine - Specifications

Portal Capacity: 16 to 64

Access Control	
Cardholders	40,000
Access Levels	Unlimited
Unique User Roles	16
Simultaneous Users	10
Time Specifications	512
Portal Capacity	64
S2 Node Capacity ²	64
Maximum Inputs / Outputs	2,000 / 2,000
Online Transactions	Up to 40 million records

Client Requirements	
Operating System	Any
Browser ³	Chrome, Internet Explorer, Firefox and Safari
Processor	Intel Core i3 or higher
Memory (RAM)	8GB minimum
Hard Drive	100GB minimum

Minimum Provisioning Requirements	
Storage Capacity	128GB Pro Series SSD
Processor	Intel Xeon Quad Core
Memory (RAM)	8GB
Ethernet Ports	1
Server Host	VMWare ESXi 5.1 or later
S2 Hardware	Minimum of 1 S2 MicroNode Plus, S2 Network Node or S2 Network Node VR
Warranty	1 year, software

Integrations ⁴	
Video Management	S2 NetVR series VMS and other major VMS manufacturers
S2 NetVR Capacity	16
S2 NetVR Camera Capacity	1,024
Concurrent S2 Client Connections (S2 NetBox, S2 Magic Monitor®, S2 Mobile Security Officer)	10
Third-Party VMS Camera Capacity	256
Access Control	Allegion, ASSA ABLOY, DMP and Mercury

Part Numbers	
S2-NBVM-16	Includes 16 portal license
S2-NBVM-32	Includes 32 portal license
S2-NBVM-64	Includes 64 portal license

Portal licenses expandable in 64 portal increments to 7,168 portals. Refer to price book for additional part numbers.

Portal Capacity: 128 to 7,168

Access Control	
Cardholders	150,000
Access Levels	Unlimited
Unique User Roles	16
Simultaneous Users	35
Time Specifications	512
Portal Capacity	7,168
S2 Node Capacity ²	512
Maximum Inputs / Outputs	2,000 / 2,000
Online Transactions	Up to 400 million records

Client Requirements	
Operating System	Any
Browser ³	Chrome, Internet Explorer, Firefox and Safari
Processor	Intel Core i3 or higher
Memory (RAM)	8GB minimum
Hard Drive	100GB minimum

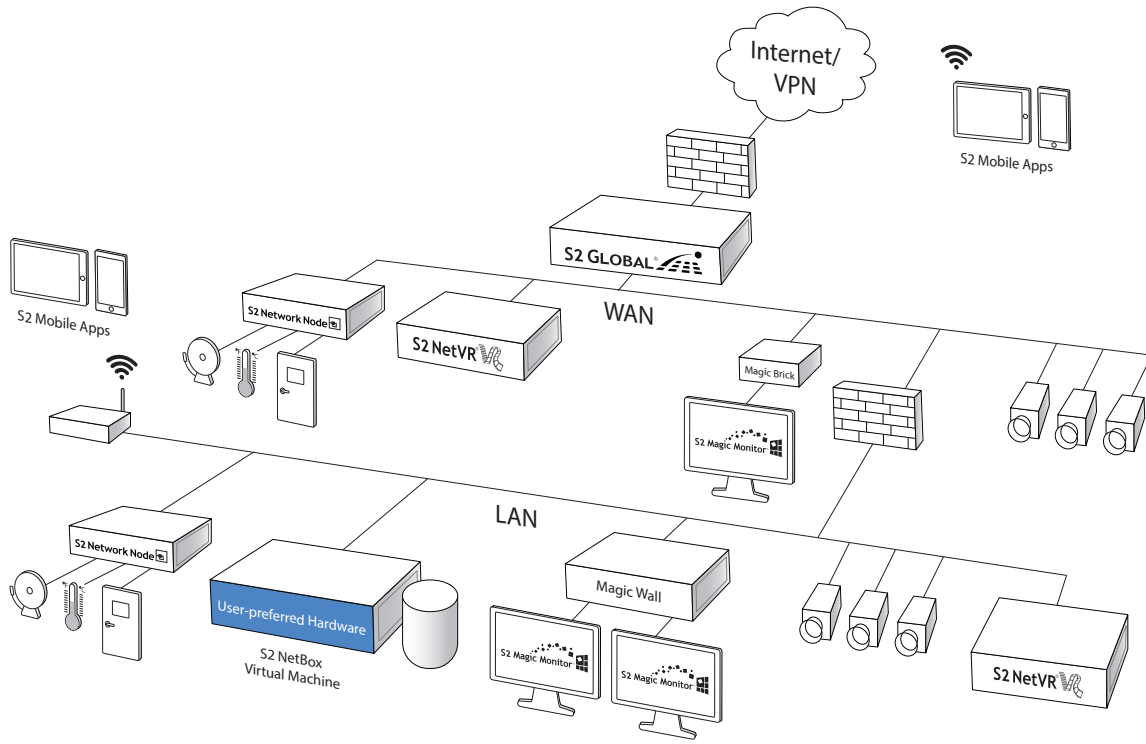
Minimum Provisioning Requirements	
Storage Capacity	128GB Pro Series SSD
Processor	Intel Xeon Quad Core
Memory (RAM)	8GB
Ethernet Ports	1
Server Host	VMWare ESXi 5.1 or later
S2 Hardware	Minimum of 1 S2 MicroNode Plus, S2 Network Node or S2 Network Node VR
Warranty	1 year, software

Integrations ⁴	
Video Management	S2 NetVR Series VMS and other major VMS manufacturers
S2 NetVR Capacity	128
S2 NetVR Camera Capacity	4,096
Concurrent S2 Client Connections (S2 NetBox, S2 Magic Monitor, S2 Mobile Security Officer)	35
Third-Party VMS Camera Capacity	1,024
Access Control	Allegion, ASSA ABLOY, DMP and Mercury

Part Numbers	
S2-NBVM-128	Includes 128 portal license

Portal licenses expandable in 64 portal increments to 7,168 portals. Refer to price book for additional part numbers.

Schematic Diagram - S2 Security System



Schematic only. Not a network diagram.

¹ User-preferred hardware must meet minimum provisioning requirements.

² S2 Network Node capacity may vary depending on system design.

³ Refer to the latest Release Notes for browser version compatibility.

⁴ For additional integration information, contact sales@s2sys.com.

For more information, please visit www.s2sys.com.



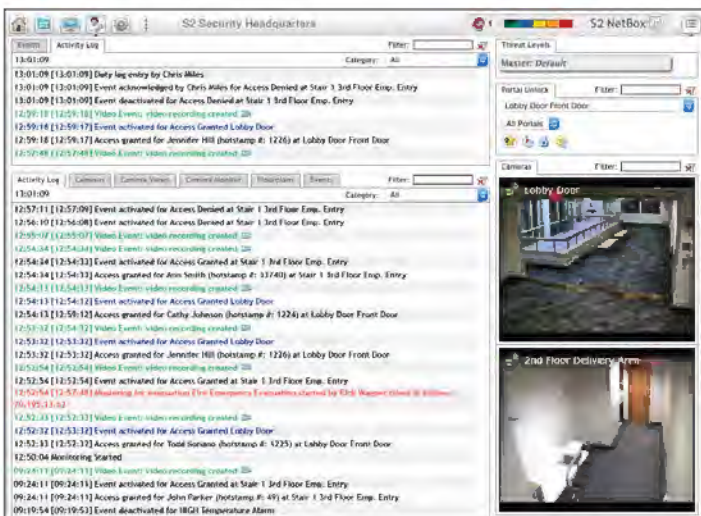
S2 Network Node

Overview

S2 Network Node is an intelligent field panel that handles distributed processing for S2 NetBox® access control and event monitoring systems. Access control and events from connected devices are aggregated to the S2 NetBox web interface for centralized system management.

S2 Network Node supports up to seven modular S2 application blades for access control, inputs, outputs and temperature probes. Any S2 application blades can be combined to fit deployment requirements. Blades are automatically recognized and addressed without jumpers or switches. External devices such as 12VDC card readers can be powered from the S2 access control application blade.

A highly flexible component of any S2 NetBox system, S2 Network Node enables customization and expansion of the system's capabilities.



Access control and event monitoring for connected devices are aggregated to the S2 NetBox web interface.

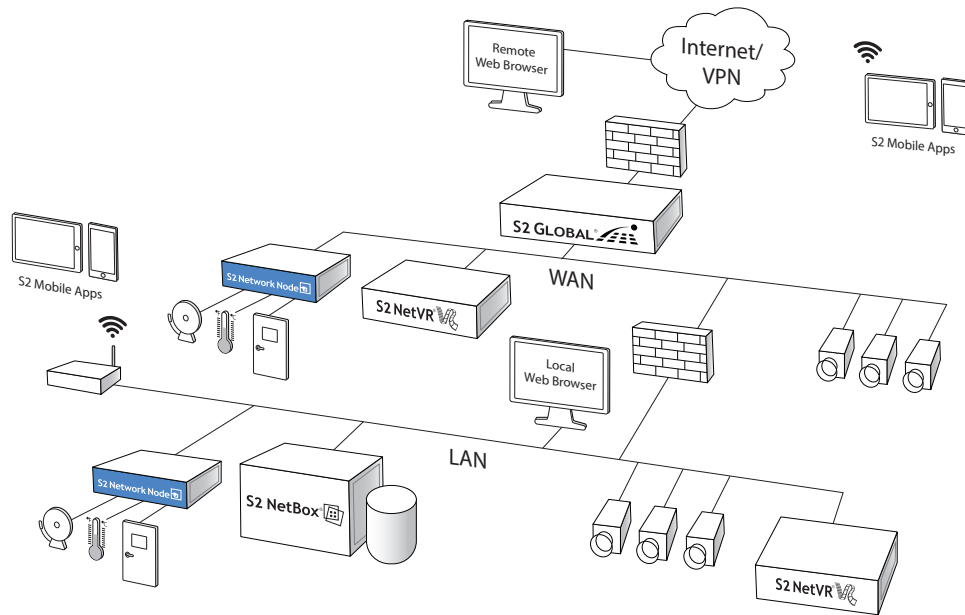
Key Features

Access Control

- **Blade Support:** Houses up to seven S2 application blades for access control, inputs, outputs and temperature probes
- **Portals:** Supports up to fourteen doors or other access points
- **Reader Support:** Interfaces with Wiegand, magnetic stripe and keypad reader technologies
- **Input Assignment:** Enables assignment of up to 56 supervised inputs
- **Output Assignment:** Enables assignment of up to 56 form C output relays
- **Temperature Inputs:** Monitors up to 56 analog temperature points

System

- **S2 System Node:** Handles distributed access control and event monitoring
- **Solid State Design:** Extends product lifecycle, lowering total cost of ownership
- **Offline Availability:** Maintains access control capabilities even when connectivity to the S2 controller is lost
- **Intuitive Configuration:** Utilizes embedded web interface for initial setup
- **Automatic Discovery:** Automatically connects to and authenticates with the S2 controller upon configuration



Schematic only. Not a network diagram.

Specifications – S2 Network Node

Access Control

S2 NetBox Software	Version 4.1.02 and later
S2 Network Node Blade	M1-3200
Application Blades / SIOs	7
Portals	14
Access Levels	512
Supervised Inputs	56
Relay Outputs	56
Temperature Inputs	56
Credential Storage	150,000
Buffered Transactions	800,000

Client Requirements

Operating System	Windows 7, 32-bit or 64-bit
Browser	Chrome, Internet Explorer, Firefox and Safari*
Processor	Intel Core i3 or higher
Memory (RAM)	4GB
Hard Drive	100GB minimum

Appliance

Storage	2GB Flash
Processor	TI AM3352 ARM
Memory (RAM)	512MB SDRAM
Operating System	Linux
Ethernet Ports	1
MTBF	297,000 hrs
Chassis	Wall mount or standard 4U rack mount

Appliance (continued)

Dimensions (H, W, D)	<i>Wall Mount:</i> 17.0in x 15.0in x 6.75in (43.18cm x 38.1cm x 17.15cm) <i>Rack Mount:</i> 7.0in x 19.0in x 15.0in (17.78cm x 48.26cm x 38.1cm)
Weight	18 lbs (8.6 kg) maximum
Operating Temperature	32° – 95°F (0° – 35°C)
Storage Temperature	-4° – 158°F (-20° – 70°C)
Input Power	100 - 240 VAC, 50/60 Hz, 2.3A
Reader Output Power	12VDC, 250 mA/reader
BTU Maximum	184 per hour
Commissioning	Web configuration utility
Regulatory Approvals	UL, CE, FCC, RoHS
Warranty	2 years, hardware; 1 year, software

Part Numbers

S2-NN-E-WM	Supports up to 7 S2 application blades, wall mount
S2-NN-E-RM	Supports up to 7 S2 application blades, rack mount
S2-NN-E2R-WM	Includes 1 S2 access control application blade with 6 available expansion slots, wall mount
S2-NN-E2R-RM	Includes 1 S2 access control application blade with 6 available expansion slots, rack mount

* Refer to the latest Release Notes for browser version compatibility.

For more information, please visit www.s2sys.com.

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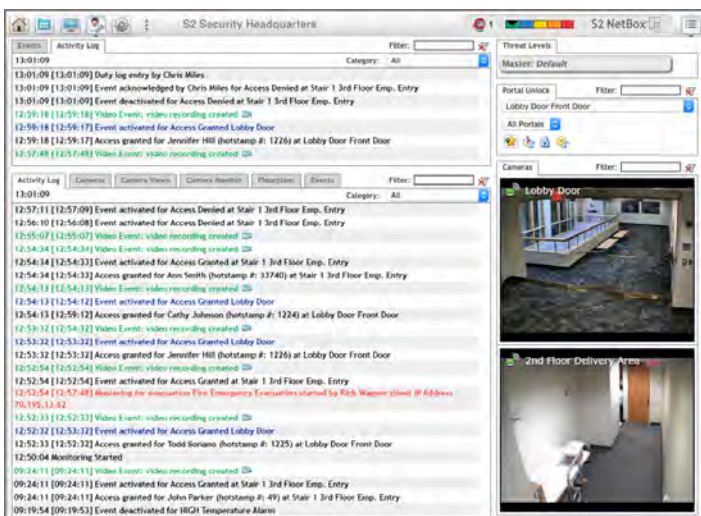
S2 MicroNode™ Plus

Overview

S2 MicroNode Plus is a compact, intelligent field panel that handles distributed processing for S2 NetBox® access control and event monitoring systems. Access control and events from connected devices are aggregated to the S2 NetBox web interface for centralized system management.

S2 MicroNode Plus supports up to two portals, four relay outputs with wet/dry selection, four inputs with programmable levels of supervision, and one temperature input. The 12VDC auxiliary output can power devices such as a PIR Request to Exit input or an alarm sounder.

Designed for localized access control and event monitoring, S2 MicroNode Plus is also an ideal retrofit solution. The seamless upgrade from legacy two-reader panels to S2 MicroNode Plus can be made without replacing readers, inputs or lock outputs.



Access control and event monitoring for connected devices are aggregated to the S2 NetBox web interface.

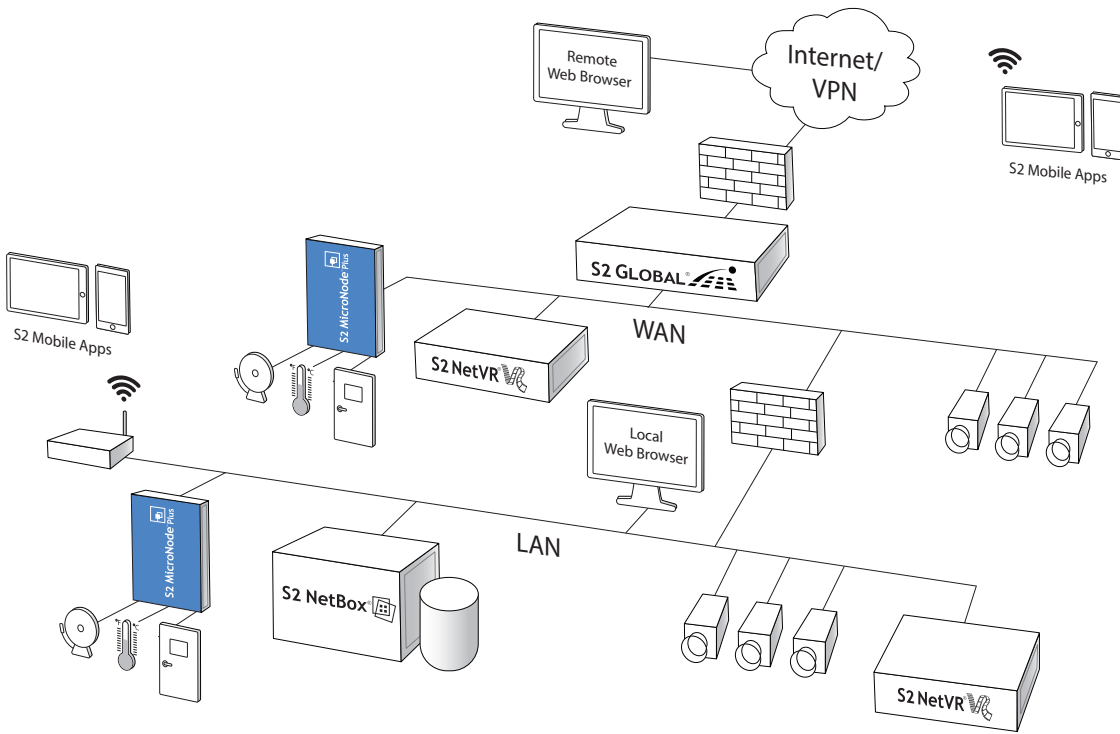
Key Features

Access Control

- **Reader Support:** Interfaces with Wiegand, magnetic stripe and keypad reader technologies
- **Input/Output Assignment:** Enables assignment of four input and four output relays to control doors and other end point devices
- **Temperature Input:** Includes one analog temperature input
- **Retrofit Solution:** Replaces legacy two-reader panels without requiring new readers, inputs or lock outputs

System

- **S2 System Node:** Handles distributed access control and event monitoring
- **Offline Availability:** Maintains access control capabilities even when connectivity to the S2 controller is lost
- **Intuitive Configuration:** Utilizes embedded web interface for initial setup
- **Automatic Discovery:** Automatically connects to and authenticates with the S2 controller upon configuration
- **Power Options:** Offers Power over Ethernet Plus, Power over Ethernet, or standard 12VDC power



Schematic only. Not a network diagram.

Specifications – S2 MicroNode Plus

Access Control	
Portals	2
Access Levels	512
Supervised Inputs	4
Relay Outputs	4; 2 wet / dry selectable
Temperature Inputs	1
Credential Storage	150,000
Buffered Transactions	800,000
Client Requirements	
Operating System	Windows 7, 32-bit or 64-bit
Browser	Chrome, Internet Explorer, Firefox and Safari*
Processor	Intel Core i3 or higher
Memory (RAM)	4GB
Hard Drive	100GB minimum
General	
Processor	TI AM3352 ARM
Memory (RAM)	512MB SDRAM
Operating System	Linux
Ethernet Ports	1
MTBF	297,000 hrs

General (continued)	
Chassis	Wall or ceiling mount
Dimensions (H, W, D)	11.34in x 8.0in x 2.57in (28.77cm x 20.32cm x 6.53cm)
Weight	3.2 lbs (1.45 kg)
Operating Temperature	32° – 95° F (0° – 35° C)
Storage Temperature	-4° – 158° F (-20° – 70° C)
Input Power	12VDC 5A, PoE (802.3af) and PoE Plus (802.3at)
Output Power	12VDC 5A: 2000mA (24 watts) @ 12VDC PoE: 500mA (6 watts) @ 12VDC PoE Plus: 1000mA (12 watts) @ 12VDC
BTU Maximum	204 per hour
Commissioning	Web configuration utility
Regulatory Approvals	UL, CE, FCC, RoHS
Warranty	2 years, hardware; 1 year, software

Part Numbers

S2-MNP

* Refer to the latest Release Notes for browser version compatibility.

For more information, please visit www.s2sys.com.

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S2021716





iCLASS SE® Readers



HIGHLY ADAPTABLE AND SECURE HIGH FREQUENCY ACCESS CONTROL SOLUTION

- **Powerfully Secure** - Provides layered security beyond the card media for added protection to identity data using SIOs.
- **Adaptable** - Interoperable with a growing range of technologies and form factors including mobile devices utilizing Seos®.
- **Interoperable** - Open Supervised Device Protocol (OSDP) for secure, bidirectional communication.
- **Versatile** - Extended read range is available for applications such as parking and gate control solutions.

HID Global's iCLASS SE® platform goes beyond the traditional smart card model to offer a secure, standards-based and flexible platform that has become the new benchmark for highly adaptable, interoperable and secure access control solutions.

Supervised Device Protocol (OSDP) standard which also ensures secure transmission of data from the reader to the controller.

Additionally, iCLASS SE readers support mobile devices utilizing Seos, enabling a new class of portable identity credentials that can be securely provisioned and safely embedded into both fixed and mobile devices.

As part of HID Global's iCLASS SE platform for advanced security, the readers utilize state-of-the-art authentication through the platform's Secure Identity Object (SIO) data model for trusted and secure communication between the card and reader to prevent unauthorized access. The iCLASS SE reader line is built on the Security Industry Association (SIA) Open

iCLASS SE readers include Open Supervised Device Protocol (OSDP), a new Security Industry Association (SIA) standard that together with Secure Channel Protocol (SCP) provides secure communications and central management.

POWERFULLY SECURE:

- Multi-Layered Security - Ensures data authenticity and privacy through the multi-layered security of HID's SIO.
- EAL5+ Certified Secure Element Hardware - Provides tamper-proof protection of keys/cryptographic operations.
- Secured communications using OSDP with Secure Channel Protocol.
- Expanded iCLASS Elite™ Program - Extends private security by protecting uniquely keyed credentials, SIOs and programming keys.

HIGHLY ADAPTABLE:

- Mobile device support using iCLASS Seos - enabling HID access control.
- Flexible to support future technologies.
- Field Programmable Readers - Provides secure upgrades for migration and extended lifecycle.

SUSTAINABILITY AND MANAGEMENT:

- Intelligent Power Management (IPM) - Reduces reader power consumption by as much as 75% compared to standard operating mode.
- Recycled Content - Contributes toward building LEED credits.

INTEROPERABLE:

- SIO Media Mapping - Simplifies deployment of third-party objects to multiple types of credentials.
- Industry standard communications using OSDP.
- Custom programming support to read models on MIFARE and MIFARE DESFire EV1 credentials



SPECIFICATIONS

Model Name	R10	R15	R40	RK40	R90
Base Part Number	900N	910N	920N	921N	940N
Typical Read Range ¹	13.56 MHz Single Technology ID-1 Cards - SIO Data Model				
	iCLASS Seos: 2.4" (6 cm) iCLASS: 3.6" (9 cm) MIFARE Classic: 2.4" (6 cm) MIFARE DESFire EV1: 2.4" (6 cm)	iCLASS Seos: 2.4" (6 cm) iCLASS: 3.6" (9 cm) MIFARE Classic: 2.4" (6 cm) MIFARE DESFire EV1: 2.4" (6 cm)	iCLASS Seos: 3.2" (8 cm) iCLASS: 5.2" (13 cm) MIFARE Classic: 3.9" (10 cm) MIFARE DESFire EV1: 3.2" (8 cm)	iCLASS Seos: 2.0" (5 cm) iCLASS: 5.5" (14 cm) MIFARE Classic: 5.1" (13 cm) MIFARE DESFire EV1: 2.0" (5 cm)	iCLASS Seos: 5.9" (15 cm) iCLASS: 14.2" (36 cm) MIFARE Classic: 9.4" (24 cm) MIFARE DESFire EV1: 5.9" (15 cm)
	13.56 MHz Single Technology Tags/Fobs - SIO data Model				
Mounting	iCLASS: 1.6" (4 cm) MIFARE Classic: 1.2" (3 cm)	iCLASS: 1.6" (4 cm) MIFARE Classic: 1.2" (3 cm)	iCLASS: 2.8" (7 cm) MIFARE Classic: 2.0" (5 cm)	iCLASS: 3.1" (8 cm) MIFARE Classic: 2.0" (5 cm)	iCLASS: 7.5" (19 cm) MIFARE Classic: 3.1" (8 cm)
	Mini-Mullion Size; physically HID's smallest iCLASS® readers and are ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Mullion Size; physically HID's second smallest iCLASS readers and are ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Wall Switch Size; designed to mount and cover single gang switch boxes primarily used in the Americas and includes a slotted mounting plate for European and Asian back box spacing	Wall Switch Size; designed to mount and cover single gang switch boxes primarily used in the Americas and includes a slotted mounting plate for European and Asian back box spacing	Mounts on any standard back boxes or any flat surface
Color	Black				
Keypad	No		Yes (4x3)		No
Dimensions	1.9" x 4.1" x 0.9" 4.8 cm x 10.3 cm x 2.3 cm	1.9" x 6.0" x 0.9" 4.8 cm x 15.3 cm x 2.3 cm	3.3" x 4.8" x 1.0" 8.4 cm x 12.2 cm x 2.4 cm	3.3" x 4.8" x 1.1" 8.5 cm x 12.2 cm x 2.8 cm	13.1" x 13.1" x 1.55" 33.3cm x 33.3cm x 3.9cm
Product Weight (Pigtail)	3.9 oz (113g)	5.3 oz (151g)	7.7 oz (220g)	9.0 oz (256g)	N/A
Product Weight (Terminal Strip)	2.9 oz (84g)	4.2 oz (120g)	7.5 oz (215g)	8.0oz (226g)	4lb 1oz (1844g)
Operating Voltage Range	5-16 VDC			5-16 VDC	12 VDC or 24 VDC
Current Draw - Standard Power Mode ² (mA)	60 @ 16V	60 @ 16V	65 @ 16V	85 @ 16V	110 @ 12V
Current Draw - Intelligent Power Management (IPM) Mode ² (mA)	35 @ 16V	35 @ 16V	40 @ 16V	60 @ 16V	30 @ 12V
Peak Current Draw - Standard Power or IPM Mode ² (mA)	200 @ 16V	200 @ 16V	200 @ 16V	220 @ 16V	300 @ 12V
NSC ³ Power Consumption - Standard Power Mode	1.0 @ 16V	1.0 @ 16V	1.0 @ 16V	1.4 @ 16V	1.3 @ 12V
NSC ³ Power Consumption - w/ IPM	0.6 @ 16V	0.6 @ 16V	0.6 @ 16V	1 @ 16V	.4 @ 12V
Operating Temperature	-31° to 150° F (-35° to 65° C)				
Storage Temperature	-67° to 185° F (-55° to 85° C)				
Operating Humidity	5% to 95% relative humidity non-condensing				
Environmental Rating	Indoor/Outdoor IP55; IP65 if installed with optional gasket				IP65
Transmit Frequency	13.56 MHz				
13.56 MHz Card Compatibility	Secure Identity Object™ (SIO) on iCLASS Seos, iCLASS SE/SR, MIFARE DESFire EV1 and MIFARE Classic (On by Default) - MIFARE Classic and MIFARE DESFire EV1 custom data models - standard iCLASS Access Control Application (order with Standard interpreter) - ISO14443A (MIFARE) CSN, ISO14443B CSN, ISO15693 CSN - FeliCa™ CSN, CEPAS ⁴ CSN or CAN				
Communications	Wiegand, Clock-and-Data, Open Supervised Device Protocol (OSPD) via RS485				
Panel Connection	Pigtail or Terminal Strip				Terminal Strip
Certifications	UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), RCM (Australia, New Zealand), SRRR (China), KCC (Korea), NCC (Taiwan), iDA (Singapore), RoHS, FIPS201 Transparent FASC-N Reader ⁴ , MIC (Japan) ⁴				
Crypto Processor Hardware Common Criteria Rating	EAL5+				
Patents	www.hidglobal.com/patents				
Housing Material	UL94 Polycarbonate				
Manufactured with % of recycled content (Pigtail)	10.5%	11.0%	10.5%	10.9%	N/A
Manufactured with % of recycled content (Terminal Strip)	11.0%	11.5%	11.0%	12.4%	11.00%
UL Ref Number	R10E	R15E	R40E	RK40E	R90E
Warranty	Limited Lifetime				

- ¹ Read range listed is statistical mean rounded to nearest whole centimeter. HID Global testing occurs in open air. Some environmental conditions, including metallic mounting surface, can significantly degrade read range and performance; plastic or ferrite spacers are recommended to improve performance on metallic mounting surfaces.
- ² Measured in accordance with UL294 standards; See Installation Guide for Details
- ³ NSC = Normal Standby Current; See Installation Guide for Details
- ⁴ Not available on R90 Model



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2016-05-19-hid-i-class-se-readers-ds-en PLT-00230

An ASSA ABLOY Group brand

ASSA ABLOY

P3DCAXS-100L

12 OR 24VDC, 10 AMP ACCESS CONTROL POWER SUPPLY



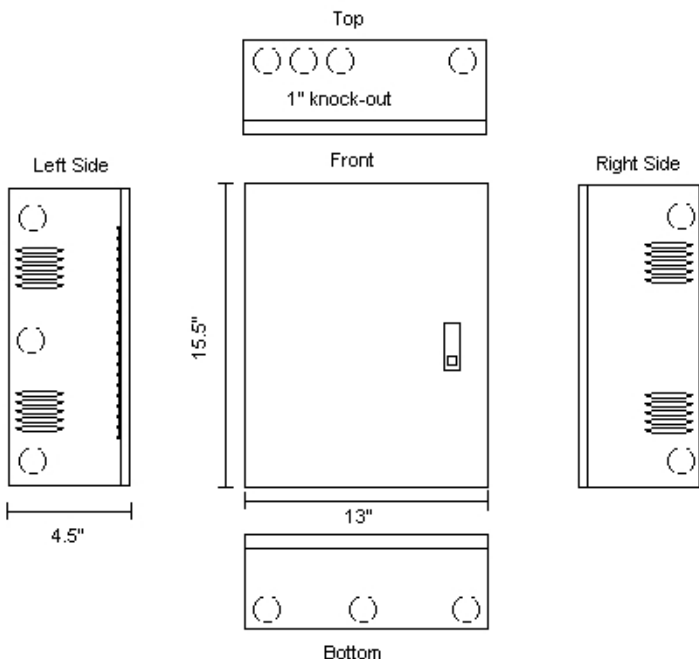
The P3DCAXS-100L is a power supply and charger. It is engineered to convert 115VAC/60Hz input into 12VDC or 24VDC @ 10 AMPS of continuous supply current. The P3DCAXS-100L is designed for use in an access control system.

FEATURES

- Front spring loaded, locking, side vented, heavy gauge metal enclosure
- Double coated polyurethane finish
- Multiple 1" knock-outs to accommodate various wiring configurations
- Filtered and electronically regulated outputs
- Built-in charger for sealed lead acid or gel type batteries
- AC Fail and low battery supervision (form "C" contacts)
- AC input and DC output LED indicate power is present
- Tim pot adjustable voltage
- Short circuit and thermal overload protection
- Includes battery leads

SPECIFICATIONS

- Input 115VAC 50/60Hz, 2.7A
- 12 or 24VDC selectable output
- Power supply/charger - P3PS-10-SU
- Maximum temperature range: 32° to 120°F (0° to 49° C)
- Ideal operating temperature: 70° (21°C)
- For indoor use only
- Enclosure dimensions: 15.5" (H) x 13" (W) x 4.5" (D)
- Shipping weight: 19 lbs



RELATED PART NUMBERS



P3DCAXS-100L-DB4

12 OR 24VDC, 4 OUTPUT, 10 AMP ACCESS CONTROL POWER SUPPLY

- Four (4) fuse protected outputs (P3DB-4)
- Individual output fuses rated at 3A
- Main fuse rated at 10A
- Shipping weight: 19 lbs



P3DCAXS-100L-DB8

12 OR 24VDC, 8 OUTPUT, 10 AMP ACCESS CONTROL POWER SUPPLY

- Eight (8) fuse protected outputs (P3DB-8)
- Individual output fuses rated at 3A
- Main fuse rated at 10A
- Shipping weight: 20 lbs



P3DCAXS-100L-DB16

12 OR 24VDC, 16 OUTPUT, 10 AMP ACCESS CONTROL POWER SUP-

- Sixteen (16) fuse protected outputs [(2) P3DB-8]
- Individual output fuses rated at 3A
- Main fuse rated at 10A
- Shipping weight: 21 lbs



P3DCAXS-100L-PC5

12 OR 24VDC, 5 POWER CONTROL OUTPUTS, 10 AMP ACCESS CONTROL POWER SUPPLY

- Five (5) individual PTC protected, power limited class 2 outputs (P3PC-5)
- Fire Alarm or Access Control trigger inputs
- Individual output PTC limited to 2.5A per output @ 12 VDC or 24VDC
- Shipping weight: 21 lbs



P3DCAXS-100L-PC8

12 OR 24VDC, 8 POWER CONTROL OUTPUTS, 10 AMP ACCESS CONTROL POWER SUPPLY

- Eight (8) individually selectable (FAIL/SAFE or FAIL/SECURE), fused protected outputs (P3PC-8)
- Eight (8) trigger input options
- FACP disconnect
- Individual fuses rated at 3A
- Main fuse rated at 10A
- Shipping weight: 22 lbs

P3DCAXS-5OL

12 OR 24VDC, 5 AMP ACCESS CONTROL POWER SUPPLY



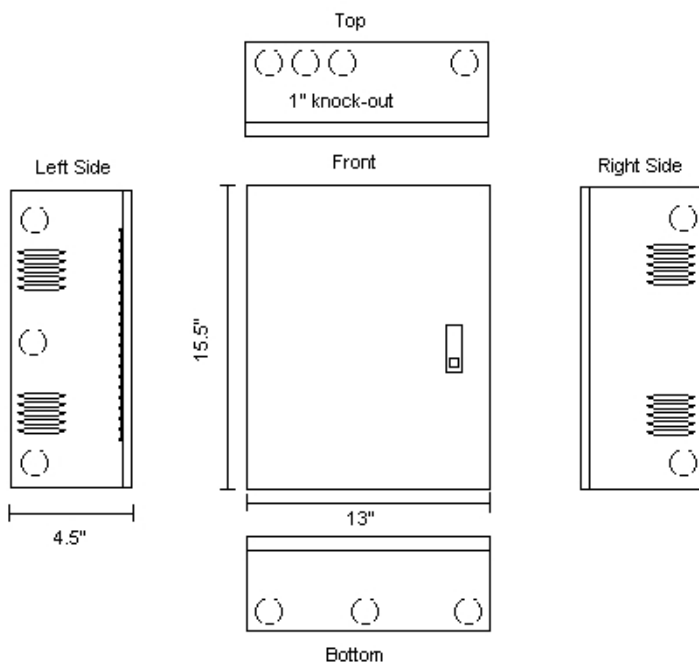
The P3DCAXS-5OL is a power supply and charger. It is engineered to convert 115VAC/60Hz input into 12VDC or 24VDC @ 5 AMPS of continuous supply current. The P3DCAXS-5OL is designed for use in an access control system.

FEATURES

- Front spring loaded, locking, side vented, heavy gauge metal enclosure
- Double coated polyurethane finish
- Multiple 1" knock-outs to accommodate various wiring configurations
- Filtered and electronically regulated outputs
- Built-in charger for sealed lead acid or gel type batteries
- AC Fail and low battery supervision (form "C" contacts)
- AC input and DC output LED indicate power is present
- Tim pot adjustable voltage
- Short circuit and thermal overload protection
- Includes battery leads

SPECIFICATIONS

- Input 115VAC 50/60Hz, 1.0A
- 12 or 24VDC selectable output
- Power supply/charger - P3PS-5-SU
- Transformer (P3XR28175) includes built-in thermal protection
- Maximum temperature range: 32° to 120 °F (0° to 49° C)
- Ideal Operating temperature: 70° (21 °C)
- For indoor use only
- Enclosure dimensions: 15.5" (H) x 13" (W) x 4.5" (D)
- Shipping weight: 19 lbs



1-877-478-4733

WWW.PTHREE.COM

*Specifications subject to change without notice

RELATED PART NUMBERS



P3DCAXS-5OL-DB4

12 OR 24VDC, 4 OUTPUT, 5 AMP ACCESS CONTROL POWER SUPPLY

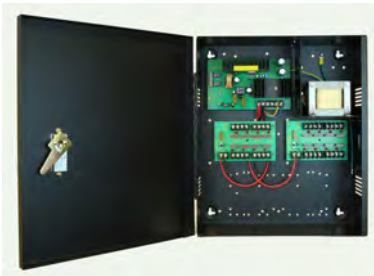
- Four (4) fuse protected outputs (P3DB-4)
- Individual output fuses rated at 3A
- Main fuse rated at 5A
- Shipping weight: 19 lbs



P3DCAXS-5OL-DB8

12 OR 24VDC, 8 OUTPUT, 5 AMP ACCESS CONTROL POWER SUPPLY

- Eight (8) fuse protected outputs (P3DB-8)
- Individual output fuses rated at 3A
- Main fuse rated at 5A
- Shipping weight: 20 lbs



P3DCAXS-5OL-DB16

12 OR 24VDC, 16 OUTPUT, 5 AMP ACCESS CONTROL POWER SUPPLY

- Sixteen (16) fuse protected outputs [(2) P3DB-8]
- Individual output fuses rated at 3A
- Main fuse rated at 5A
- Shipping weight: 21 lbs



P3DCAXS-5OL-PC5

12 OR 24VDC, 5 POWER CONTROL OUTPUTS, 5 AMP ACCESS CONTROL POWER SUPPLY

- Five (5) individual PTC protected, power limited class 2 outputs (P3PC-5)
- Fire Alarm or Access Control trigger inputs
- Individual output PTC limited to 2.5A per output @ 12 VDC or 24VDC
- Shipping weight: 21 lbs



P3DCAXS-5OL-PC8

12 OR 24VDC, 8 POWER CONTROL OUTPUTS, 5 AMP ACCESS CONTROL POWER SUPPLY

- Eight (8) individually selectable (FAIL/SAFE or FAIL/SECURE), fused protected outputs (P3PC-8)
- Eight (8) trigger input options
- FACP disconnect
- Individual fuses rated at 3A
- Main fuse rated at 5A
- Shipping weight: 22 lbs

1006

Series

The strongest, most versatile electric strike available

hes
ASSA ABLOY

Specifications

- UL 10C fire-rated, 3 hour single door (fail secure only)
- UL 10C fire-rated, 1-1/2 hour double door (fail secure only)
- CAN4-S104 (ULC-S104) fire door conformant
- ANSI A250.13-2003 windstorm listed
- UL 1034, burglary-resistant listed
- ANSI/BHMA A156.31, Grade 1
- NFPA-252 fire door conformant
- ASTM-E152 fire door conformant
- MEA New York City accepted
- Florida Building Code approved
- Patents #6,021,038 & #6,595,564

Standard Features

- Stainless steel construction
- Tamper resistant
- Static strength 3,070 lbs. (fail secure)
- Dynamic strength 350 ft-lbs. (fail secure)
- Endurance 1,000,000 cycles
- Fail secure (standard)
- Dual voltage 12VDC or 24VDC continuous duty
- Non-handed
- Internally mounted solenoid
- Accommodates up to 1" deadbolt
- Plug-in connector
- Full keeper shims for horizontal adjustment
- Trim enhancer
- Five year limited warranty

Optional Features

- Fail Safe
- LBM - Latchbolt monitor
- LBSM - Latchbolt strike monitor
- 27 interchangeable faceplate options

Electrical

- .45 Amps @ 12VDC continuous duty
- .25 Amps @ 24VDC continuous duty

Finishes

- 630 - Satin stainless steel
- 605 - Bright brass
- 606 - Satin brass
- 612 - Satin bronze
- 613 - Bronze toned
- 629 - Bright stainless steel
- BLK - Black

Frame Application

- Metal
- Wood



5000

Series

The grade 1, low profile solution
for cylindrical locksets

hes
ASSA ABLOY



Specifications

- UL 1034, burglary-resistant listed
- ANSI/BHMA A156.31, Grade 1
- MEA New York City accepted
- Patent #5,934,720

Standard Features

- Tamper resistant
- Static strength 1,500 lbs.
- Dynamic strength 70 ft-lbs.
- Endurance 500,000 cycles
- Field selectable fail secure/fail safe
- Dual voltage 12 or 24 VDC/VAC
- Non-handed
- Internally mounted solenoid
- Accommodates 1/2" - 5/8" latchbolt (5/8" with 1/8" door gap)
- Strike body depth 1-1/16"
- Plug-in connector
- Trim enhancer included
- Five year limited warranty

Optional Features

- LBM - Latchbolt monitor

Electrical

- .24 Amps @ 12VDC/VAC
- .12 Amps @ 24VDC/VAC
- DC continuous duty/AC intermittent duty only

Finishes

- 630 - Satin stainless steel
- 605 - Bright brass
- 606 - Satin brass
- 612 - Satin bronze
- 613 - Bronze toned
- 629 - Bright stainless steel
- BLK - Black

Frame Application

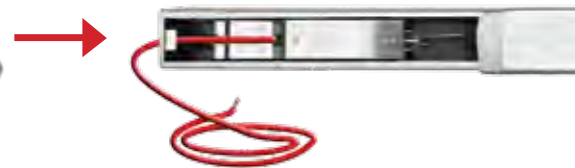
- Metal
- Wood

Quiet Duo™ Series

LR100 24V Latch Retraction / Dogging Kit

SDC DESIGNED AND MANUFACTURED

Patents # US 8,851,530



The SDC LR100 Series Electric Latch Retraction Kit enables electric access control and dogging of mechanical exit devices. When energized the motor retracts the exit device latch and pulls the pushpad into the dogged (depressed) position enabling momentary or sustained push and pull operation of the door.

The latch retraction mechanism may be activated by an access control, remote control device or building automation system. The exit device always provides uninhibited egress.

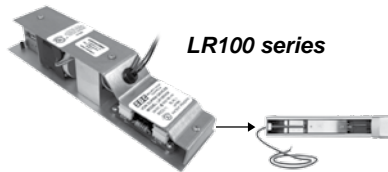
QUIET DUO™ LR100 Series available for these brands:

- Von Duprin
- Yale
- Corbin Russwin
- Dor-O-Matic
- Hager
- Adams Rite
- Dorma
- Stanley K2
- IDC
- TownSteel
- Arrow
- PHI
- Falcon
- Detex
- Cal-Royal
- PDQ
- Falcon IR
- Marshall Best
- Sargent
- SDC
- Tell

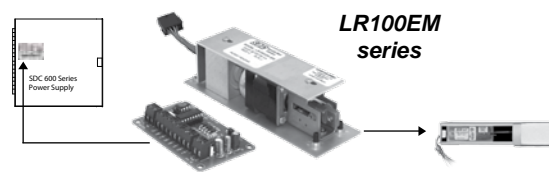
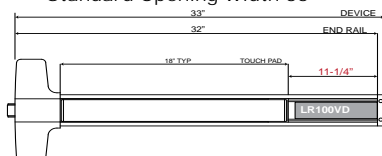
Refer to page 2 to confirm compatibility of Rim, Mortise, Surface Vertical Rod for each brand.

FEATURES

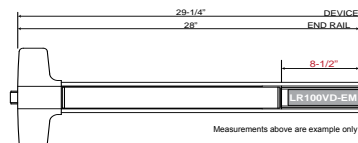
- 700 mA Inrush, 200 mA Continuous @ 24VDC
- For access control and sustained dogging applications
- Simultaneous latch retraction and dogging (pushpad depressed) for most exit devices*
- Pushpad is depressed* electrically for quieter push / pull operation
- Automatic re-trigger if device does not pull on first try
- Eliminates need for costly replacement of existing exit device
- Significantly less labor and costs compared to competitive retrofit kits
- Low current enables longer wire runs with smaller gauge wire
- No door sequencers required for pairs of manual doors
- Installs in Von Duprin non-fire rated panic device without removing from the door



Standard Opening Width 36"



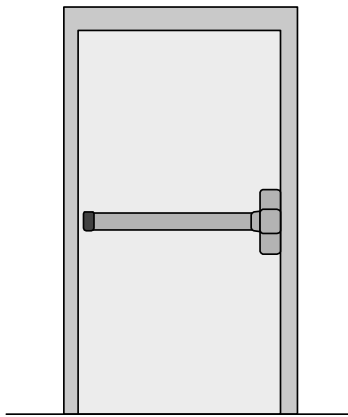
32" Opening (36" Device Modified for 32" Opening)



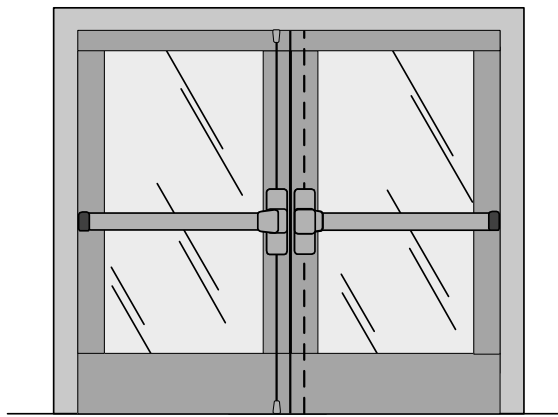
Measurements above are example only - all devices vary

* on designated models



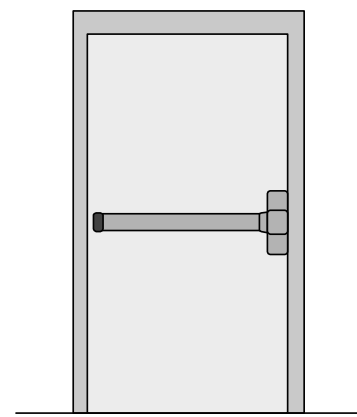


Rim Device



Surface Vertical Device

Concealed Vertical Device



Mortise Device

MODELS

(Brands in alphabetical order)

Adams Rite Exit Device		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100ARK	LR100AR
30"	LR100ARK-EM	LR100AR-EM
Models		
Rim Mount	8700** / 8800 / 3700	
Surface Vertical Rod	8100 / 8200 / 3100	
Concealed Vertical Rod	8500 / 8600 / 3600	
Options		
LRAR1R	REX Status Status Kit	

* Note: Retracts only the latch ** Works With EM version ONLY

Arrow 1000 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100AWK	LR100AW
Models		
Rim Mount	S1250	
Surface Vertical Rod	S1150	
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100AWK-ED910	LR100AW-ED910
Models		
Rim Mount	ED910	

Corbin Russwin ED Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100CRK	LR100CR
30"	LR100CRK-EM	LR100CR-EM
42" - 48"	LR100CRK-42/48	LR100CR-42/48
Models		
Rim Mount	ED5200 / ED4200	
Surface Vertical Rod	ED5400	
Concealed Vertical Rod	ED4800 / ED5800	
Options		
LRCR1L	Latch Status Kit	
LRCR1R	REX Status Kit	

* Note: Retracts only the latch

Cal-Royal Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100CAK	LR100CA
Models		
Rim Mount	7700 / F7700	
Surface Vertical Rod	7760 / F7760	
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100CAK-9800	LR100CA-9800
Models		
Rim Mount	GLS9800	
Surface Vertical Rod	GLSCVR9800	
Opening for	Field Retrofit Kit	Factory Installed
30"	LR100CAK-EM	LR100CA-EM
Models		
Rim Mount	2200 / F2200 / 9800 / F9800	
Surface Vertical Rod	2260 / F2260 / 9860 / F9860	

Design Hardware Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100DHK	LR100DH
Models		
Rim Mount	1000R	
Surface Vertical Rod	1000V	

Detex Exit Device		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100DXK	LR100DX
Models		
Rim Mount	10 / 40 Series	
Surface Vertical Rod	20 / 50 Series	
Concealed Vertical Rod	80 / 81 / 62 / 63 Series	
Options		
LRDX1R	REX Status Status Kit	



Dorma Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100DAK	LR100DA

Models		
Rim Mount	9300 / F9300	
Surface Vertical Rod	9400 / F9400	

Falcon 24/25 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100FRK	LR100FR

Models		
Rim Mount	25-R / F-25-R / 24-R / F-24-R	
Surface Vertical Rod	25-V / F-25-V / 24-V / F-24-V	
Concealed Vertical Rod	25-C / F-25-C / 24-C / F-24-C	

Falcon Dor-O-Matic Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100FAK	LR100FA
30"	LR100FAK-EM	LR100FA-EM

Models		
Rim Mount	1790	
Concealed Vertical Rod	1690	

Opening for	Field Retrofit Kit	Factory Installed
36"	LR100DMK	LR100DM

Models		
Rim Mount	1590	
Concealed Vertical Rod	1490	

Hager 4500 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100HK	LR100H
30"	LR100HK-EM	LR100H-EM

Models		
Rim Mount	4501 - Rim	
Surface Vertical Rod	4501 - SVR	

Options		
LRH1L	Latch Status Kit	
LRH1R	Pushpad/Dogging Status or REX Status Kit	

IDC (International Door Closers) 8000 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100IDCK	LR100IDC
30"	LR100IDCK-EM	LR100IDC-EM

Models		
Rim Mount	8610 / 8810 / 8510 / 8710	
Surface Vertical Rod	8630 / 8830 / 8530 / 8730	
Mortise	8620 / 8820	
Concealed Vertical Rod	8650 / 8850 / 8550 / 8750	

Options		
LRIDC1L	Latch Status Kit	
LRIDC1R	Pushpad/Dogging Status or REX Status Kit	

Marshall Best Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100MBSK	LR100MBS

Models		
Rim Mount	Q1100 / QF1100	
Surface Vertical Rod	Q1200 / QF1200	

Pamex Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100PAK	LR100PA
30"	LR100PAK-EM	LR100PA-EM

Models		
Rim Mount	EF9000	
Surface Vertical Rod	EF9000V	
Concealed Vertical Rod	EF9020V	

PDQ Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100PDQK	LR100PDQ

Models		
Rim Mount	6200R	
Surface Vertical Rod	6200V	

PHI (Precision Hardware) Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100PDK	LR100PD

Models		
Rim Mount	2100 / 2400	
Surface Vertical Rod	2200 LBR	
Concealed Vertical Rod	2800 LBR / 2600	
Rim Mount	5100	
Surface Vertical Rod	5200 LBR	

Options		
LRP1L	Latch Status Kit for PHI Rim 2000 Series	
LRP2L	Latch Status Kit for PHI Vertical Rod 2000 Series	
LRP1R	REX Status or Pushpad/Dogging Status for PHI 2000 Series	

Sargent Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100SGK	LR100SG
30"	LR100SGK-EM	LR100SG-EM

Models		
Rim Mount	8500 / 8800	
Surface Vertical Rod	8700	
Concealed Vertical Rod	8400 / 8600	
Mortise	8300 / 8900	

Options		
LRSG2R	Latch Status and REX Status or Pushpad/Dogging Status Kit	



SDC 6000 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"-48"	LR100SDCK	LR100SDC
30"	LR100SDCK-EM	LR100SDC-EM
Models		
Rim Mount	S6100	
Surface Vertical Rod	S6200	
Mortise	S6300	
Concealed Vertical Rod	S6800	
Options		
LRSDC1L	Latch Status Kit	
LRSDC1R	Pushpad/Dogging Status or REX Status Kit	

Stanley K2 QED Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100K2K	LR100K2
30"	LR100K2K-EM	LR100K2-EM
Models		
Rim Mount	QED111	
Surface Vertical Rod	QED114	
Concealed Vertical Rod	QED124	
Options		
LRK2R	Latch Status and REX Status or Pushpad/Dogging Status Kit	

TownSteel ED1100 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100TSK	LR100TS
30"	LR100TSKEM	LR100TSEM
Models		
Rim Mount	ED1100	
Surface Vertical Rod	ED1200	
Concealed Vertical Rod	ED1300	
Options		
LRTS1R	REX Status or Pushpad/Dogging Status Kit	
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100TSK-55/56	LR100TS-55/56
Models		
Rim Mount	ED5500	
Surface Vertical Rod	ED5600	
Options		
LRTS2R	REX Status or Pushpad/Dogging Status Kit FOR ED5500	
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100TSK-65/67	LR100TS-65/67
Models		
Rim Mount	ED6500	
Surface Vertical Rod	ED6700	

Tell Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100TEK	LR100TE
Models		
Rim Mount	9500	
Surface Vertical Rod	9400	

Von Duprin 22 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100VDK-22	LR100VD-22
30"	LR100VDK-22-EM	LR100VD-22-EM
Models		
Rim Mount	22	
Surface Vertical Rod	2227	
Options		
LRVD1L	Latch Status Kit for 22 Series	
LRVD2R	REX Status or Pushpad/Dogging Status for 22 Series	

Von Duprin 98/99 and 33/35 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36" - 48"	LR100VDK	LR100VD
30"	LR100VDK-EM	LR100VD-EM
Models		
Rim Mount	98/99	33A / 35A
Surface Vertical Rod	9827/9927	3327A / 3527A
Concealed Vertical Rod	9847/9947	3347A / 3547A
Mortise	9875/9975	
Three Point latching	9857/9957	
Options		
LRVD1L	Latch Status Kit for Von Duprin 98/99	
LRVD2L	Latch Status Kit for Von Duprin 33/35 Series	
LRVD1R	REX Status or Pushpad/Dogging Status for Von Duprin 98/99 Series	
LRVD2R	REX Status or Pushpad/Dogging Status for Von Duprin 33/35 Series	

Yale 7000 Series Exit Devices		
Opening for	Field Retrofit Kit	Factory Installed
36"	LR100YDK	LR100YD
30"	LR100YDK-EM	LR100YD-EM
42" - 48"	LR100YDK-42/48	LR100YD-42/48
Models		
Rim Mount	7100, 7100-2, 7200	
Surface Vertical Rod	7110, 7210	
Concealed Vertical Rod	7120, 7220	
Options		
LRY1L	Latch Status Kit	
LRY1R	REX Status Kit	

* Note: Retracts only the latch



Enterprise VMS for End Users



VIDEOINSIGHT
Campus Security Simplified

Trusted by
over 25,000
customers
worldwide

Today, many IP Video Management Software products have been designed with unnecessary complexity and a bloated infrastructure – and cost way too much to own! Video Insight brings an affordable, easy-to-use Video Management System that delivers full situational awareness and indisputable detail, reducing investigation time and allowing you to provide superior overall protection.

This powerful VMS solution captures, manages, and stores video surveillance across a network – on a single or multiple locations – and supports the broadest range of IP and analog camera models. Video Insight is the perfect solution for multi-facility configurations including K-12 schools, universities, hospitals, healthcare providers, law enforcement, and SMBs in need of a powerful yet easy-to-use software.

Grow and scale your system without limitations

Video Insight is an intuitive and robust video management software like no other. Our powerful VMS supports an unlimited number of client workstations, users, simple integration with legacy systems, detailed management system, and more. Add one – or hundreds – of cameras anywhere on the network or across the entire organization, regardless of geographic boundaries.

Become an Integrator and Increase Opportunities and Revenue

Dealers and Integrators play a vital role to the overall success of Video Insight's rapid-growth and increased market share. This is why we go to great lengths to select the right group of highly-qualified Systems Integrators to represent, sell, install, educate and support end user customers with Video Insight solutions.

Integrators and Dealers receive aggressive volume discounts, special offers and promotions, training, marketing assistance, shared leads, and world-class support. Your success is our success.

Lower entry to video surveillance market

Affordability, flexibility and a simple licensing model are what sets Video Insight apart from the rest – we provide the most cost-effective VMS solution on the market and are the easiest to work with.

Video Insight v6 allows end users to receive a perpetual license that includes a wide range of enterprise features – all included without any hidden fees.

Ensure your customer is always UP and Protected

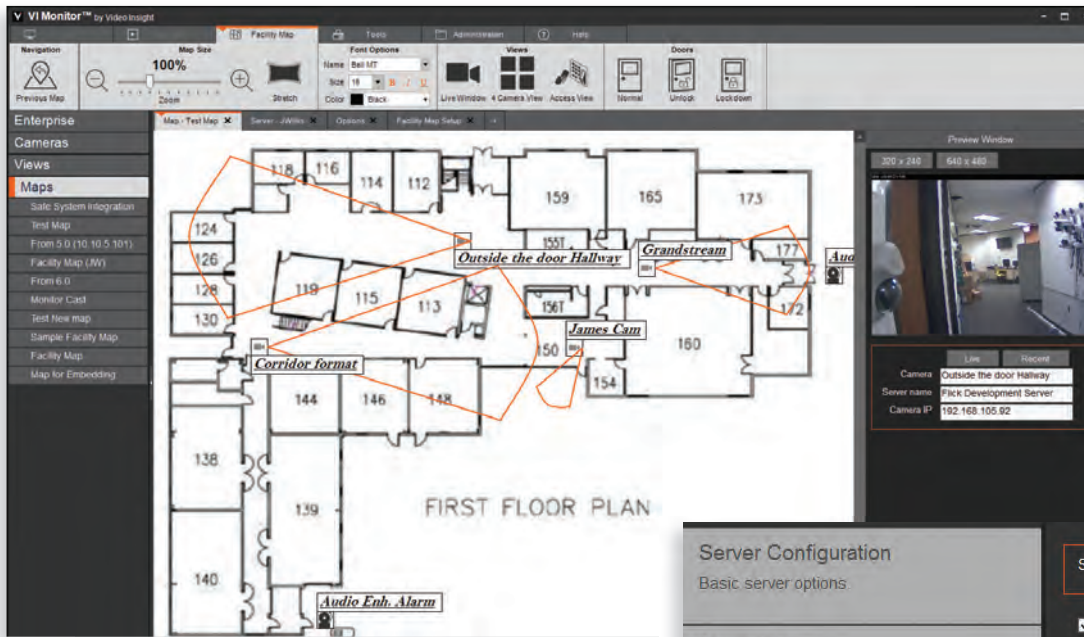
Maximize protection with redundant recording to multiple Network Video Recorders (NVRs). Health Monitor, Automated failover and easy to use load balancing allows migration of cameras between servers. All of these features can provide high system availability for both live and recorded video at all times. User-access privileges and security features ensure that your video, data, and audio aren't tampered with and are always protected.

Peace of mind with our Customer Assurance Program (CAP)

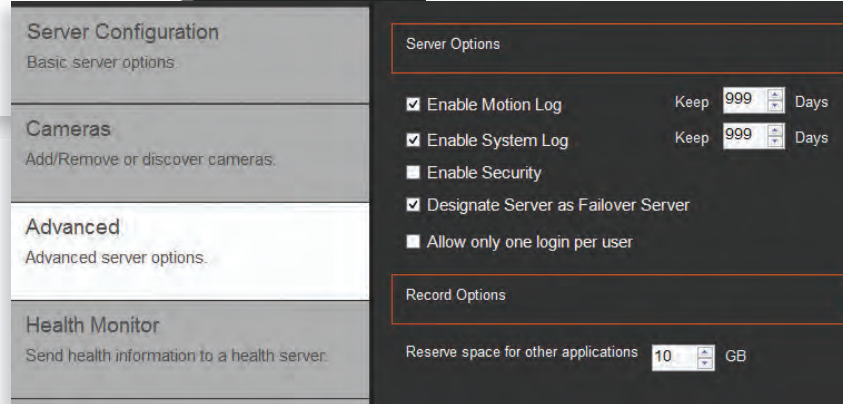
What good is your customer's current surveillance system if cameras are down and they don't know it? Our Customer Assurance Program (CAP) provides proactive monitoring and diagnostics to ensure you – and your customers – are never in the dark. Get notified upon failure and receive the assistance needed to solve the problem – this even includes replacement of cameras that were purchased from Video Insight.

Fanatical support

VI Fanatical Support starts with products and services. At Video Insight, we pride ourselves on being able to assist you in your time of need in a timely manner. We guarantee a callback within an hour or we'll give you \$100 credit towards your next order. The Video Insight U.S.-based technical support team will be there when you need them. Guaranteed.



Facility Maps



Simple Camera and Server Configuration

Key Product Features

Simple Camera and Server Installation

Video Insight simplifies complex network configurations and setup by automatically identifying cameras on the network – eliminating the need for manual configuration or searching.

Motion Detection

Detects and determines the presence of motion in a video tile. Configure and specify the level of motion required to trigger an event or archiving.

Remote Viewing

Powerful video surveillance features – even when you're on the go. View full resolution live and recorded images from any server on Apple and Android devices with VI Mobile. Email full resolution snapshots, view predefined camera layouts and import all servers and cameras.

Facility Maps

Allows you to upload any type of image of your buildings and then place camera icons on the map representing camera placement. Hover over the icon to see a live image. This feature supports multiple layers of maps that can link to one another, creating a graphical hierarchy.

Alert Monitoring

Rules Manager provides a step-by-step wizard to monitor for scheduled events that trigger one or multiple actions. These can be simple snapshot emails on motion during specific time frames or complex multi-step trigger and action (Such as calling campus security).

Centralized Deployments

Video Insight supports distributed or centralized deployments. When using a centralized server, multiple locations can share a server, maximizing the hardware and reducing the upfront cost and maintenance over time.

Active Directory Integration

Assign camera permission to Active Directory users and groups ensuring proper access rights and single sign-on capabilities. As users come and go, the video system administrators do not have to worry about updates because they are automatically inherited from the AD.

Low Bandwidth Options

Save bandwidth with dual stream configurations that allow users to view groups of cameras in low resolution and switch to high resolution in full screen. Allows users in remote locations to view live and recorded video feed without significant impact to the network.

Flexible Storage Options

Video Insight v5.5 supports all types of storage including local, direct attached, NAS and SAN. This provides the flexibility to store recorded video to a single location or to any number of devices simultaneously. This flexibility allows users to keep some recordings for a longer period of time.

Software Development Kit (SDK)

Provides the ability for third-party software developers to embed live and recorded into their applications or create triggers for the Video Insight Server.

Additional Features and Technical Specifications

User interface

- Intuitive and powerful
- Requires little or no end user training
- Quick search tool for cameras

Live and Recorded Monitoring

- Intuitive access to live and recorded video from any camera in system regardless of location
- Unlimited users
- Create customized layouts and layout groups
- Digital Zoom on any image
- PTZ control options including on screen overlay commands, left navigation control and pop-up menu options
- Picture in Picture of zoomed area
- 180 Degree stitched layouts
- PTZ control with USB Joysticks
- Panoramic/360 dewarped support
- Synchronized Playback

Alert Management

- Pop-up live windows of alarmed cameras
- Red outline in camera layout on alarm conditions
- Alerts can be directed to specific users or groups
- Email or send text message of JPEG or AVI clip
- Pop-up window with detailed instructions for operator
- Alarm actions include changing displays, executing DIO commands displaying instant replay, pushing image to video wall, cycle spot monitor, move PTZ to presets, change recording options and record with audio
- Using Analytic Tripwire, count people entering and exiting facility to keep running total and alert if threshold exceeded

Camera Support

- Deep integration for over 3,000 camera models from 100 manufacturers. Check our website for the complete list
- Universal camera driver provides support for most other cameras via ONVIF, RTSP or HTTP
- Advanced camera features from Axis, Panasonic, IQeye, Sony, Sentry 360, Scallop and ImmerVision
- Resolutions up to 20 Megapixels
- MJPEG, MPEG4, H.264 Compressions
- Multistreaming
- Camera or server side motion detection
- Support for sensitivity and privacy zones
- Camera auto discovery
- Centralized camera management
- Audio inputs and outputs
- Combine audio and video from two independent sources
- Send live video to Axis Decoders
- Trigger Digital Inputs and Outputs
- Support for Axis DIO and Audio device

Licensing

- Licensing in single camera increments
- No base or server fees
- No individual camera MAC address registration
- No extra licensing costs for client applications
- Virtual cameras require only a single license
- Multi-stream connections only require one license
- Arecont 180° and 360° cameras require only a single license

Technology

- Robust scalable Pure 64-bit design
- Developed in open technologies
- Automated failover support
- Load Balancing
- Easy integration with 3rd party application
- Server software runs as a Windows Service
- Clients can connect to a single IP address to access the entire system
- Servers are connected to cameras and clients are connected to the servers. Clients do not connect directly to cameras.
- Email support for SSL and alternate ports, supporting Gmail and Hotmail SSL certificates for secure web client transmissions
- Execute programs or batch files on triggered event

Storage

- Flexible high speed storage design with no limits
- Support for internal and external storage devices including NAS and SAN
- Support for COLDSTORE
- Long Term Storage for recorded video file management.
- Moves recorded video from a single or multiple cameras or servers on a schedule basis.

System Requirements

- OS Compatibility 32-and 64-bit versions of Windows XP, 7, 8, Server 2003, 2008R2, and 2012
- Virtualization support for VMware, Hyper-V and Xen
- Memory and CPU requirements are affected by number of cameras, resolution, FPS, and motion-based recording. Visit website for sample configurations.

Key Features

Recorded

- Intuitive access to recorded video from any camera in system regardless of location
- Frame-by-Frame or variable playback speeds up to 16X
- View single camera or drag and drop up to 16 cameras for Synchronized Playback
- View groups of cameras via drag and drop
- Slider bar provides quick access to events
- Digital zoom on all recorded video
- Save JPEG or print snapshots
- Synchronized video and audio
- Instant replay of last 30 seconds of recorded video
- Create a clip with use of guides marking time interval
- Save clip to local client or server
- Continuous, motion activated, scheduled, event or trigger based recording
- Record up to 30 FPS or as little as 1 image per second, hour or day
- Record always at 1 FPS and higher frame rate on motion or alarm
- Pre- and Post-motion recording
- Support for camera and server side motion detection
- Create sensitivity zones in Windows client or camera configuration
- Motion Event logs provide quick review of video associated with motion or alarm events
- View recorded video from archived servers
- Graphical timeline highlights motion events
- Smart Search
- Progressive download speeds for slow-speed connection
- Automatically manages files and disk space
- Specify maximum retention by camera
- Panoramic/360 De-warped support
- View full aspect ratio of 16:9 or 4:3

Video Export

- Save JPEG or print snapshots
- Clips include visible watermark, server based date/time stamp and camera name
- Option to include MD5 checksum watermark in each clip
- Standalone Player to validate
- Recorded video is saved in camera's native or MJPEG compression in AVI file
- Exported clips include audio
- Synchronized video export of up to 9 video streams in single AVI file
- Standalone Player with Watermark Validation – Review recorded video on any PC while viewing thumbnails and using a scroll bar for precise investigation - includes option to validate a watermark

Live Video

- Full-featured Windows, Web, and Mobile Clients
- iPhone and iPad app available for free on iTunes
- Android app available for free through Google Play
- Mobile App supports live and recorded video from any camera, control of PTZs, and email images
- Web Client supports IE, Safari, Firefox, Opera and Chrome-Active X is optional
- Macintosh support via Web Client
- Support for other smartphone devices including BlackBerry and Windows Phones
- Client applications require little or no end user training
- View live video from any camera across multiple servers
- Quickly navigate between cameras from any server using

- standard Windows Explorer tree structure
- Unlimited users can view live video
- Digital Zoom on any image with mouse click
- Picture-in-Picture of zoomed area
- Create customized layouts and layout groups
- Drag cameras from left navigation tree into layout
- Predefined layouts stored in the database can pull cameras from multiple servers, restricted by security level
- Camera touring or Layout sequencing
- View full aspect ratio of 16:9 or 4:3
- 180° stitched layouts
- Single, Quad and Panorama views for 360° cameras
- Three PTZ control options including on-screen overlay commands, left navigation control and pop-up menu options
- Cycle PTZ presets, pausing for specified interval
- PTZ control with USB Joysticks
- Option to lock down non-admin users from PTZ controls
- PTZ Prioritization – Users can be ranked to determine who has PTZ operations at a specific time
- Search box allows quick access to any camera or server - search by partial name or IP address
- Save JPEG or print snapshots
- Push live video pop-up windows to other logged in users
- 2Way audio allows operators to interact with video
- Create Covert cameras by removing from navigation
- Pause individual camera for instant investigation
- High Performance option renders video in real time
- Run in Full Screen mode with limited menus
- Connect up to four monitors per PC
- Video Wall app supports up to 64 monitors
- Operators can push video to a Video Wall, cycle layouts or view alarms
- Motion alerts displayed for each camera
- Option to play sound on motion alarm
- Launch clients in full screen mode to predefined layouts
- Panoramic/360° De-warped support
- Public View App displays live images directly from camera without connecting to a server
- Lane Viewer App displays live images along with card holder picture and information to verify identity

Facility Maps

- Multi-level mapping provides quick access to cameras
- Mouse over Camera icons for live video pop-up
- Zoom into maps or navigate between multiple layers
- Quick access to recorded video from facility maps
- Launch specified facility map on startup
- View maps from Windows or Web Clients
- Mouse over Layout icons to switch live displays to groups of cameras in the area
- Easy setup requires JPEG, BMP or GIF images and drag and drop camera placement of maps, cameras, layouts or doors

Notifications & Automation

- Pop-up live windows of alarmed cameras
- Red outline in camera layout on alarm conditions
- Play audio file on alarm to alert operator
- Pop-up window with detailed instructions for operator
- Alarm actions include changing displays, execute DIO commands, display instant replay, push image to video wall, cycle spot monitor, move PTZ to presets, change recording options and record with audio

- Email or send text message of JPEG or AVI clip
- Alerts can be directed to specific users or groups
- Powerful Rules Wizard allows easy configuration of an unlimited to take actions after an event
- Motion alerts displayed for each camera
- Option to play a sound on motion alarm
- Send JPEG snapshots on an interval or on motion
- Alter operators of camera side Analytic events
- Using Analytic Tripwire, count people entering and exiting facility to keep running total and alert if threshold exceeded

Enterprise Functionality

- Support for unlimited cameras and recording servers
- Distributed login to any server prevents single point of failure
- Support for both centralized and distributed architectures
- Use existing SQL Server infrastructures or included SQL Express
- Centralized Management – all camera configurations for all servers are done from one easy to use setup screen
- Authenticate users with a Video Insight users database or with integration of users and groups from Active Directory, LDAP or Novell eDirectory
- Assign individual camera permissions to users or groups
- All system and user settings are stored in SQL database
- Centralized storage of user layouts and centrally managed
- Automatic Failover
- Health Monitor – comprehensive monitoring and alerting of system status
- Audit Trail of all user logins and configuration changes stored in a SQL database
- Automatic upgrade of client applications
- Automatic system backup
- Complete system performance statistics including - Storage, Bandwidth, Resolution, Format and Frame Rate
- Users only see assigned cameras regardless of number of servers
- Export camera and server information in Excel format
- Camera Maintenance logging and tracking .Net-based
- Software Development Kit

Security

- Enterprise-wide user management
- Multi-level security including restriction of setup, management, live and recorded viewing, PTZ operation, access to layouts, facility maps, rules and clip creation
- Authenticate users with a Video Insight users database or with integration of users and groups from Active Directory, LDAP or Novell eDirectory
- Assign individual camera permissions to users or groups
- Comprehensive log of all changes to system
- Option to restrict users from logging in from multiple locations
- Limit users to a single login per username
- Option for inserting MD5 checksum into all recorded video files to detect any tampering
- Camera Support
- Deep integration for *2,500 camera models from 100+ manufacturers
- Universal camera driver provides support for almost all other cameras via ONVIF, RTSP or HTTP
- Advanced camera features from Axis, Panasonic, IQeye, Sony, Sentry 360, Scallop and Immervision
- Single, Quad and Panorama views for 360 cameras
- Resolutions up to 20 Megapixel
- MJPEG, MPEG4, H.264 Compressions
- Multicasting support
- Multistreaming
- Camera or server side motion detection
- Support sensitivity and privacy zones
- Camera auto discovery
- Centralized camera management
- Audio inputs and outputs
- Combine audio and video from two independent sources
- Send live video to Axis Decoders
- Trigger Digital Inputs and Outputs
- Technology

- Pure 64-bit Server and Client
- Takes advantage of all available memory
- Optimized for centralization
- Robust scalable design
- Developed in open technologies including Microsoft .Net and SQL Server
- Virtualization support for VMware, Hyper-V and Xen Server
- Automated failover support
- Access live and recorded video or control the server with .NET SDK
- Easy integration with 3rd party application via the well defined SQL tables
- Server Software runs as a Windows Service
- Clients can connect to a single IP address to access the entire system
- Servers are connected to cameras and clients are connected to the servers - Clients do not connect directly to cameras
- Email support for SSL and alternate ports, supporting Gmail and Hotmail
- SSL certificates for secure web client transmissions
- Execute programs or batch files on triggered event

Storage

- Flexible high-speed storage design with no limits
- Support for internal and external storage devices including NAS, SAN and iSCSI
- Support for Pivot3 Cloudbank failover architecture and Dell EqualLogic iSCSI
- Integrator support for Veracity Coldstore
- Intransa Virtual and iSCSI solutions
- Long Term Storage for recorded video file management
- Move recorded video from single or multiple cameras or servers on a schedule basis
- Option to restrict users from logging in from multiple locations

Performance

- 250 two megapixel cameras per operating system
- Deep camera integration technology and storage architecture allow extreme server performance
- Total camera bandwidth of 600 Mbits/sec
- Unrestricted number of clients
- Load balancing
- High Performance live display mode can show up to 36 megapixel images at 30 FPS

Licensing

- Simple per camera licensing available in single camera increments
- No base or server fees
- Individual camera MAC address registration is not required
- No extra licensing costs for client applications
- Virtual cameras require only a single license
- Multi-stream connections only require one license
- Arecont 180° and 360° cameras require only a single license

Support Options

- Lifetime technical support Monday through Saturday
- Unlimited software updates
- Remote control applications for unattended access

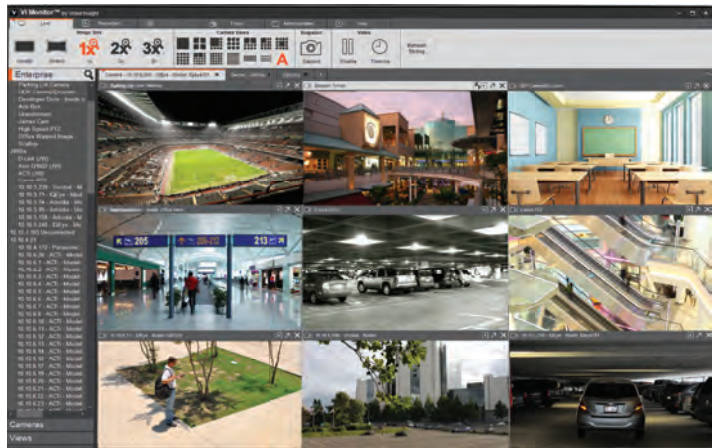
Access Control Integration

- Lenel
- S2
- RS2
- Paxton
- HID
- IMRON
- DSX
- Blackboard
- AMAG

*Complete list available at www.video-insight.com

Comparison Data Sheet

Video Insight is a powerful, yet easy-to-use video management software that allows organizations in education, law enforcement, healthcare, commercial, and transportation the ability to deploy a customized and robust video surveillance system. The NEW Video Insight v6 is more powerful, easier, and - with faster graphical search - it will change the way you look at video surveillance. Below is a feature comparison between version v5.5 and 6.



Features

Features	Monitor Station	VI Monitor	Description
Live Monitoring	Y	Y	
Access Archived Files	Y	Y	
Facility Maps	Y	Y	
PTZ Control	Y	Y	
Access Control Integration	Y	Y	
Layout Management	Y	Y	
Guard Tour Reporting	Y	Y	
Media Player for Playback control	Y	Y	
Synchronized Playback for event viewing	Y	Y	
Variable bitrates, encoders, and FPS to conform to your network's needs	Y	Y	
Audio Playback and Recording	Y	Y	
Dewarping Functionality	Y	Y	
License Plate Recognition	Y	Y	
Health Monitoring	Y	Y	
Decoders for analog camera integration	Y	Y	
Rules Manager functionality	Y	Y	
User, Group and Permission Management	Y	Y	
Storage management for recordings	Y	Y	
System Log	Y	Y	
Maintenance tracking for changes	Y	Y	
Bookmarks	N	Y	Quickly access important clips. Mark events for other users to view at a later time. Easily retrieve specific recordings.
Workspaces	N	Y	Increased ability to multitask. Easy swap between layouts and setups for the best view of a monitored location.
Sleek and modern new UI	N	Y	New Look and updated workflow.
More Functionality for Facility Maps	N	Y	Have more information at your fingertips when viewing the facility map window, for greater ease of use and a better understanding of your facility.
Autofit Feature	N	Y	Automatically fit any number of cameras to the window you're using to view them with the click of a button.
Increased Zoom Options	N	Y	Have more options available when zooming in on specific areas of the cameras.
Increased Reporting for LPR	N	Y	Keep better track of your facility with better monitoring and reporting. More easily understand who visits your facility when.
Spanish Localization	N	Y	Fully functional Spanish language translation. Useful in bilingual facilities, or heavily Spanish speaking areas.
Save Snapshot to Clipboard	N	Y	Makes it easier to instantly paste an image into a program for editing, or rapidly send a file in an email or inhouse messenger.
Views	N	Y	Set up a display that includes a webpage, such as one for weather tracking, a static image such as a company logo, and arrange the cameras any way you want as a saved layout for viewing.

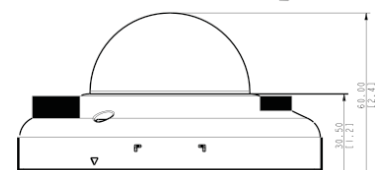
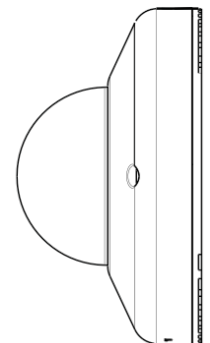
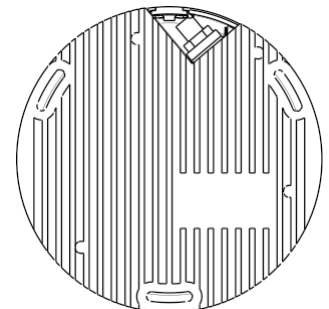
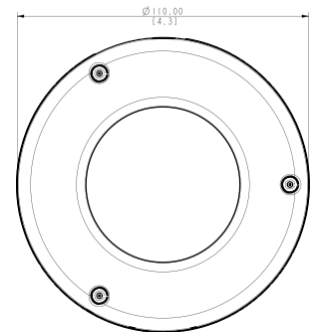
Overview

- 5 megapixel
- Fixed Lens with f1.19 mm / F2.0
- Basic WDR (74 dB)
- 180/360° Fisheye View
- Weatherproof (IP68), Vandal Proof (IK10) and Vibration Proof
- Video Insight VMS license included








Technical Specifications

Device	
Device Type:	Outdoor Mini Fisheye
Image Sensor:	Progressive Scan CMOS
Sensor Size:	1/3.2"
Day / Night:	No
Superior Low Light Performance:	No
Minimum Illumination:	Color: 0.1 lux at F2.0 (30 IRE, 2400°K)
Mechanical IR Cut Filter:	No
IR Sensitivity Range:	No
IR LED:	No
Electronic Shutter:	1/5 ~ 1/2,000 sec (manual mode); 1/5 ~ 1/10,000 sec (auto mode)
Lens	
Focal Length:	Fixed (Fisheye lens), f1.19 mm / F2.0
Iris:	Fixed Iris
Focus:	Fixed Focus
Horizontal Viewing Angle:	180° (overview area), 109.8° (high detail area)
Viewing Angle Adjustment:	Rotation: ±90°
Video	
Compression:	H.264, MJPEG
Max. Frame Rate vs. Resolution:	30 fps at 1920 x 1080; 30 fps at 1280 x 960; 30 fps at 1280 x 720; 30 fps at 640 x 480; 15 fps at 320 x 240
Mode:	Fisheye Streaming; Dewarped streaming: 180°/360° Panorama; ePTZ
Multi Streaming:	Simultaneous dual streams based on two configurations
Bit Rate:	28 Kbps - 6 Mbps (per stream)
Bit Rate Mode:	Constant, Variable
Image Enhancement:	Basic WDR (75 dB); White balance: automatic, hold and manual; Brightness; Contrast; Sharpness; Automatic gain control; Digital Noise Reduction; Flickerless
Privacy Mask:	4 configurable regions
Text Overlay:	User defined text on video
Image Orientation:	Image flip and mirror



Technical Specifications

Audio	
Audio In:	Mic In, able ith .5mm hone ck
Network	
Protocol & Service:	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, NS, DNS, TP, MP, RP, MP, MTP, TP, UPnP, SNMP, Bonjour, Sony VISCA, Pelco D, Pelco P
Ethernet Port:	1, Ethernet (10/100Base T), RJ 45 connector
Security:	IP dddress ltering; TTPS ncrption; assword rotected ser vels; nonymous login; EE 02.1X etwork access control
Alarm	
Alarm Trigger:	Video motion detection (3 regions)
Alarm Response:	Notify control center; Change camera settings; Command other devices; E mail notification with snapshots; Save video or snapshot to local storage; Upload video, Snapshot to FTP
Interface	
Local Storage:	MicroSDHC/MicroSDXC memory card slot (card not included)
General	
Power Source / Consumption:	PoE Class 1 (IEEE802.3af) / TBC
Weight:	TBC
Dimensions (Ø x H):	4.3" x 2.4" (110 mm x 60 mm)
Environmental Casing:	Weatherproof (IP68 rated); Vandal proof (IK10 rated); Vibration proof (EN 50155 Ready without certificate); Transparent dome cover
Mount Type:	Surface, Gang box
Starting Temperature:	4°F ~ 122°F (20°C ~ 50°C)
Operating Temperature:	4°F ~ 122°F (20°C ~ 50°C)
Operating Humidity:	10% ~ 85% RH
Approvals:	CE (EN 55022 Class B, EN 55024), FCC (Part15 Subpart B Class B), IK10, IP68, NEMA 4X,
System Compatibility	ONVIF
Accessories:	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>B MD EP</p>  </div> <div style="text-align: center;"> <p>B MD GB</p>  </div> <div style="text-align: center;"> <p>B MD MK</p>  </div> <div style="text-align: center;"> <p>B MD WM</p>  </div> <div style="text-align: center;"> <p>B PM ST</p>  </div> </div>

Overview

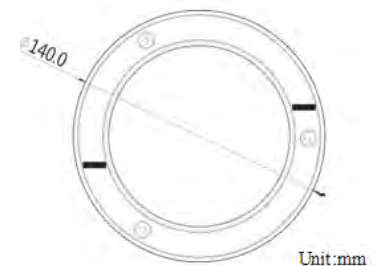
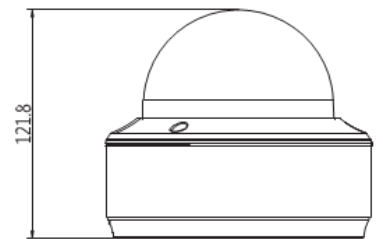
Up to 3 megapixel (2048 x 1536) @ 20 fps resolution

- Motorized VF lens
- True WDR 120db
- Analytics
- Defocus Detection, smart face detection, audio exception detection, intrusion detection, scene change detection & cross line detection.
- Support Environmental Noise Filtering
- IR cut filter with auto switch
- Two-way audio
- 3-axis (pan/tilt/rotation) positioning
- Video Insight VMS License Included




Technical Specifications

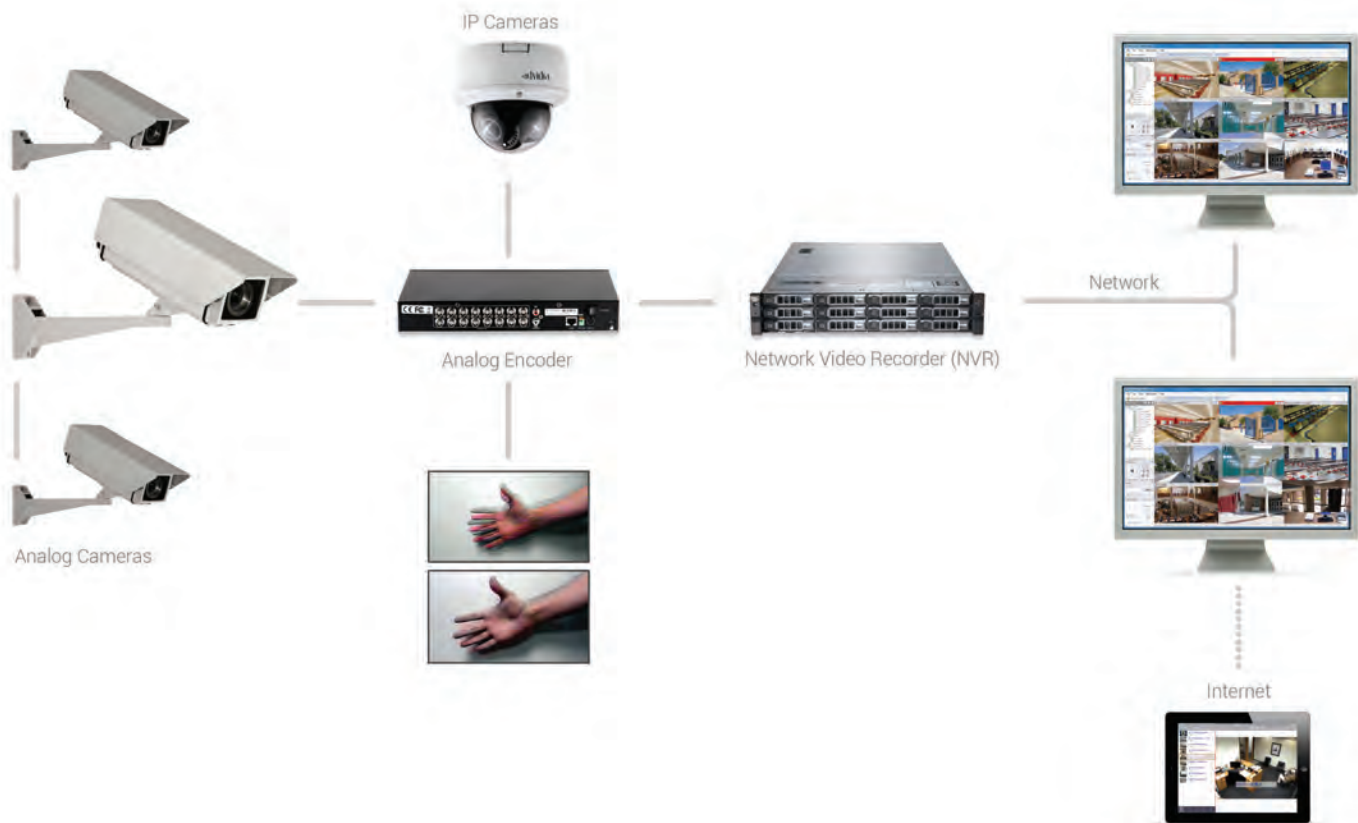
Device	
Image Sensor:	1/3" Progressive Scan CMOS
Min. Illumination:	0.014 Lux @(F1.4,AGC ON), 0 Lux with IR
Shutter Time:	1s to 1/100,000 s
Lens:	2.8 9 mm@ F1.4, angle of view: 91.2° 28.3°
Auto Iris:	DC drive
Angle Adjustment:	Pan:0°-355°, Tilt: 0° ~ 75°, Rotation:0°-355°
Slow Shutter:	Support
Digital Noise Reduction:	3D DNR
WDR Range:	120db
Lens Mount:	φ14
Day/Night:	IR cut filter with auto switch
Compression Standard	
Video Compression:	H.264/MPEG4/MJPEG
Bit Rate:	32 Kbps ~ 16 Mbps
H.264 Type:	Baseline Profile/Main Profile/High Profile
Audio Compression:	G.711/G.722.1/G.726/MP2L2
Audio Bit Rate:	64Kbps(G.711) / 16Kbps(G.726)
Image	
Max. Image Resolution:	2048 x 1536
Frame Rate:	20fps (2048 x 1536), 30fps (1920 x 1080), 30fps (1280 x 720)
EIS (Electronic Image Stabilization):	Yes
BLC (Back Light Compensation):	Yes
Defog:	Yes
Day/Night Switch	Auto/Schedule/Triggered by alarm in
Picture Overlay:	LOGO picture can be overlaid on video with 128 x 128 24 bit bmp format



Technical Specifications

Image setting:	Rotate mode, Saturation, Brightness, Contrast adjustable by web browser
Network	
Alarm Trigger:	Line crossing Detection, Intrusion detection, Scene change detection, Defocus detection, audio exception detection, Motion detection, Face detection, Dynamic analysis, Tampering alarm, Network disconnect, IP address conflict,
Protocols:	TCP/IP,ICMP,HTTP,HTTPS,DHCP,DNS,RTP,RTSP,RTCP, NTP,SMTP,SNMP,IGMP,IPv6,Bonjour
Security:	User authentication, watermark, IP address filtering, anonymous access
System Compatibility:	ONVIF, PSIA,
Interface	
Communication Interface:	1 RJ45 10 M/100 M Ethernet interface
Audio Input:	1 ch 3.5 mm audio interface, Mic in/Line in
Audio Output:	1 ch 3.5 mm audio interface
Alarm Input/Output	1/1
Reset Button:	Yes
General	
Operating Conditions:	22° F – 140° F (30°C 60°C) Humidity 95% or less (non condensing)
Power Supply:	12 VDC ± 10%, PoE (802.3af)
Power Consumption:	Max. 9.5W
Impact protection:	IEC60068 2 75Eh, 50J, EN50102, up to IK10
Dimensions:	Φ 5.51" × 4.80" (Φ 140 × 121.8 mm)
Weight:	3.09lbs (1400g)
Software:	Includes video sight MS license
Accessories:	<p>A 44 FM A 44 OD A POLE MOUNT A 44 PENDANT</p> 

Making Your Analog Surveillance Cameras Go Further With Video Encoders



You've invested time and money in analog cameras for your video surveillance system. The analogs provide a "good enough" image and they still have a lot of life left in them, but you can't help but pay attention to the migration of the video surveillance market to IP video and those crisp, megapixel images.

You don't have to purchase all new IP video cameras to experience IP video technology. Using video encoders you can achieve megapixel IP video quality with your existing analog cameras. And it's a lot more affordable than you'd think – with some options ringing up at less than \$100 per camera.

The diagram above shows how you can use video encoders in

conjunction with additional IP cameras to create a low cost hybrid solution.

How do encoders work?

Analog cameras send images as native analog video – video that cannot directly connect to your IP network. An IP video camera, however, can directly connect to an IP network (just like computers do).

Using video encoders, you connect your existing analog cameras to an encoder, which then takes the native analog video and outputs it as digital video which can then be sent over an IP network.



Analog Image

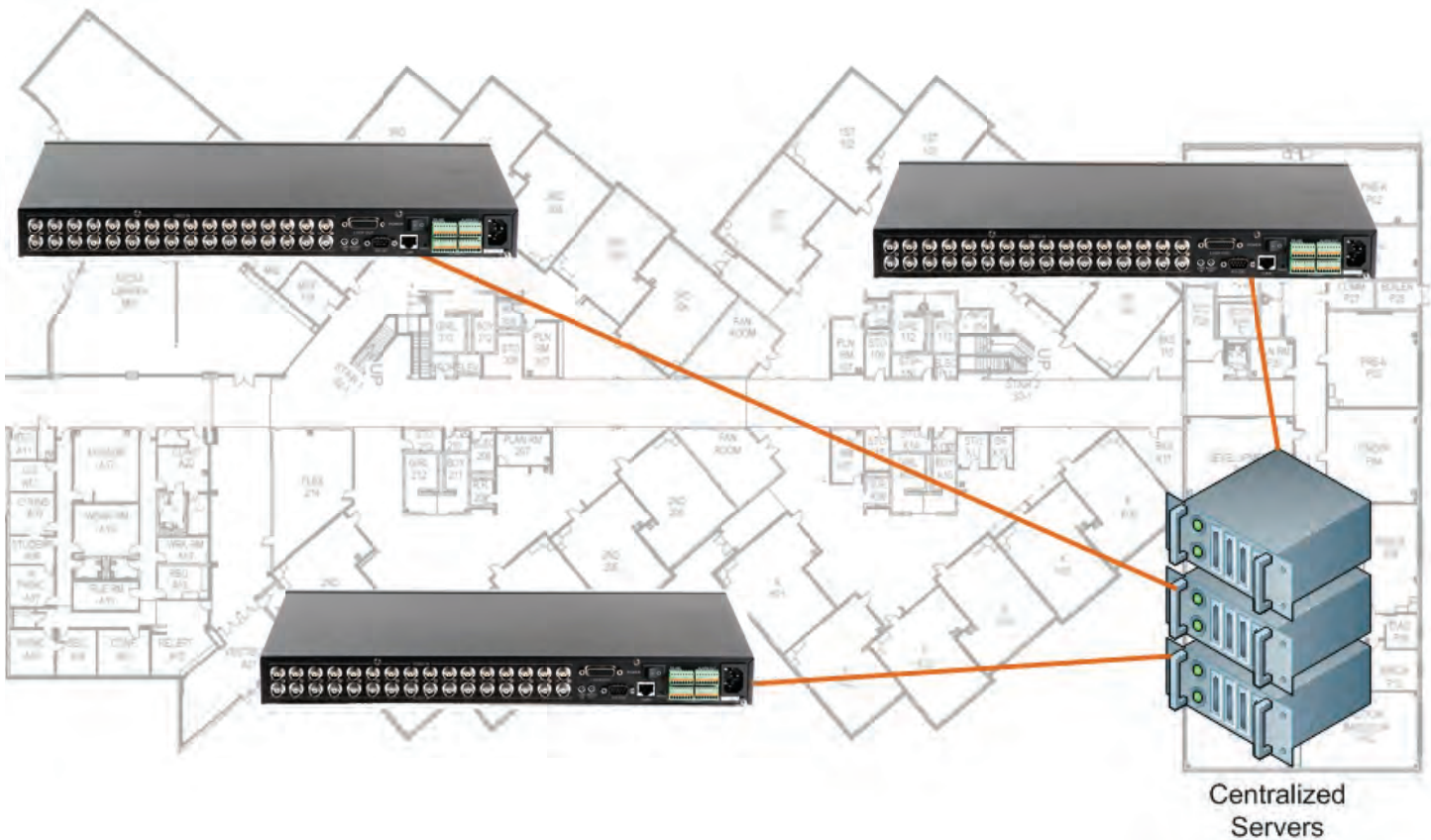


De-Interlaced Image

Most analog cameras/DVRs capture images at 320x240 at 6 frames per second (FPS). Using a video encoder, however, de-interlaces the images, resulting in a capture at 720x480 at 30 FPS. The result is a superior megapixel image.

Encoders Offer More Than Just a Pretty Picture, Especially Coupled With a Strong VMS

In addition to achieving better image quality through megapixel resolution, using video encoders to obtain IP video maximizes your network infrastructure – allowing you the capability to centralize your system if you desire. Consolidate the DVRs strung around your facility with up to 160 encoder ports on one server, for example. If a DVR fails, replace it with an encoder at a much lower cost.



Migrating to IP video from analog using video encoders sets the foundation for a video management system (VMS) where you can easily add existing and new cameras – analog or IP – to your network. Would you like to add megapixel images to the parking lot, for example, in order to increase coverage and, perhaps, get a discernible image of a license plate on a suspicious looking vehicle?

Just because Video Insight is easy to use, however, doesn't mean it isn't sophisticated. The straight-forward user interface for Video Insight Monitor Station immediately gives users a clear idea of how to add cameras, view cameras, retrieve recorded video and make video clips, among many other features. You can easily configure your cameras to integrate with building and campus facility maps which can also be layered.

Cameras can be viewed from the Monitor Station or from the internet via the Web Client or smartphone and tablet applications (including iPad/iPhone and Android).

On a more technical level, Video Insight provides Active Directory Support including LDAP integration which minimizes the need for employees to toggle various usernames and passwords while also reducing the amount of technical support needed to create user names and assign camera permissions for each video user. The powerful web client doesn't require ActiveX plug-ins and the system provides integrated failover. Video Insight also integrates seamlessly with access control and analytics programs. If any technical or user issues do arise when using Video Insight, the U.S.-based technical support team offers a wealth of knowledge and a one-hour callback guarantee.

One of the most attractive features of Video Insight, which operates on an open architecture platform, is its scalability which can achieve several hundred cameras per server. And you aren't limited to camera selection as you improve upon your analog-to-IP system because Video Insight supports more than 1,300 cameras from 60 manufacturers, giving you the ultimate in choice when adding or replacing cameras.

Despite the fact that IP video sounds more complicated than analog – it's actually an easier system to manage, if you have the right software. Award winning Video Insight VMS software is an excellent choice to manage your analog cameras and encoders – and any new IP cameras you will add – because it is easy to use and requires virtually no training.

The Video Insight VP-16 Encoder Will Help You Make the Move From Analog to IP

After you've made the decision to convert from analog to IP, the next step is choosing the right encoder and the best software. The Video Insight VP-16 is a 16-port video encoder bundled with Video Insight software that will help you achieve the perfect analog-to-IP video migration and at a dramatically lower cost – less than \$100 per channel. This simple, per camera pricing is all inclusive and requires no additional fees.

The VP-16 includes the complete suite of Video Insight enterprise software, and:

- All channels H.264 compression, D1 Resolution at 30 FPS
- Encoder based motion detection
- Deinterlaced image
- 16 video loopouts to power existing analog monitors and video walls
- 1U Rackmount case
- Single 100/1000 Network Port
- Single 110v internal power supply



The Price is Right (No Matter the Implementation Size)

Unlike many IP VMS systems, Video Insight is affordable, and there are no hidden fees for site licenses or remote viewing. Video Insight has more than 25,000 customers including 4,500 schools and universities (with hundreds of buildings managed by one system) to smaller firms seeking an initial transition from existing analog to IP.

There's no argument that IP video is superior to analog. But investing money into new camera hardware when you have existing hardware that's operational doesn't make much budget sense. Making what could amount to a nominal investment to upgrade your images from analog to IP, however, makes perfect sense. Choosing a trusted VMS software provider such as Video Insight bundled with a solid encoder, the VP-16 – at an amazingly affordable price – is one of the best ways for your firm to make your analog surveillance cameras go further with video encoders.

To learn more visit www.video-insight.com

Video Insight offers intelligent and user-friendly state-of-the-art IP video surveillance systems. Headquartered in Houston, Texas,

Video Insight software is used in thousands of businesses including schools, universities, hospitals, banks, hotels, restaurants, retail businesses, and government facilities. Visit our website or call 713.621.9779 for more information.





REQUEST FOR PROPOSAL
SECURITY/SURVEILLANCE SYSTEM

PREPARED FOR

MCLEOD COUNTY

Prepared by:
Honeywell Building Solutions
September 30th, 2016

“Honeywell helps customers increase energy efficiency, be sustainable, improve quality, to reduce operating costs and create a safer, more comfortable environment.”

DISCLAIMER

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TAB 1 – MINIMUM CRITERIA



Honeywell Building Solutions
1985 Douglas Drive
Golden Valley, MN 55422

1. COVER LETTER

McLeod County
830 11th Street East, Suite 10
Glencoe, MN 55336-2200

Attn: Scott Grivna

Honeywell is pleased to provide this security proposal for McLeod County. The County has been a valued customer of Honeywell for many years and we look forward to expanding that partnership with this Honeywell security solution.

Per the original Request for Proposal (RFP) dated August 30, 2016 and two subsequent addendums- *Addendum A* dated September 23rd, 2016 and *Addendum B* dated September 29, 2016, the solution presented to the County is a state-of-the-art design based on the latest technology available in the security industry today.

One example of that technology would be the ability to use smart phone technology as a credential and a Photo ID much the same you would for a physical card. You would now have the ability to manage your cardholder database by simply sending an app to the user with a predefined access level in place.

For the IP video system, we will be using the latest in IP video solution technology from Axis Communications, the leading provider of IP video solutions in the world.

Honeywell Price:

Base Bid:	\$421,354.00
Option A:	\$2,480.00
Option B:	\$4,571.00

A detailed list of equipment, labor and material provided as well as a breakout for each building is provided in the body of the RFP.

Thank you for this opportunity!

Respectfully Submitted,

John Barry
Senior Account Manager
Honeywell Building Solutions
john.barry@honeywell.com
764-402-4306

2. A BRIEF PROFILE OF THE FIRM

Honeywell International is a Fortune 100 diversified technology and manufacturing leader, serving customers worldwide with aerospace products and services; control technologies for buildings, homes and industry; automotive products; turbochargers; and specialty materials. Honeywell's shares are traded on the New York, London, and Chicago Stock Exchanges. Headquartered in Morris Plains, New Jersey, Honeywell employs approximately 127,000 employees in more than 70 countries worldwide. We have an unrelenting focus on quality, delivery, value, and technology in everything we make and do.

130 Years of Innovation

Honeywell's story stretches back more than 130 years when an inventor named Albert Butz patented the furnace regulator and alarm. He formed the Butz Thermo-Electric Regulator Co., Minneapolis, on April 23, 1886, and a few weeks later invented a simple, yet ingenious device that he called the "damper flapper."

Our history encompasses several predecessor companies and the inspiring work of tens of thousands of people. But our core mission and values have been consistent from the start:

- Our vision for a secure, comfortable, more efficient future...
- Our steadfast belief in the power of innovation ...
- And our relentless insistence on continuous improvement.

From our genesis in 1885 to today, these are the principles that led us to the advancements and innovations of the past century and a quarter ... And they'll continue to inspire and guide us as we create new solutions for the challenges of tomorrow.

<u>Years</u>	<u>Former Firm Name</u>
2000 - Present	Honeywell International Inc.
1963 – 2000	Honeywell Inc.
1927 – 1963	Minneapolis-Honeywell Heat Regulator Company
1916 – 1927	Honeywell Heating Specialty Company
1893 – 1916	Electric Heat Regulator Company
1885 – 1893	Butz Thermo-Electric Regulator Company

Org Structure

The Honeywell parent company is driven by three business units.

- Aerospace
- Automation and Control Solutions (ACS)
- Performance Materials and Technologies

Honeywell Building Solutions (HBS), one of the business units that make up ACS, will be responsible for the work proposed in this response. HBS installs, integrates and maintains the systems that keep your facility safe, secure, comfortable, productive and energy efficient — from building automation and management solutions that increase facility performance to security and life safety solutions that help mitigate risk.

We work with thousands of commercial, industrial, municipal, federal and utility customers across the globe to identify challenges and provide customized solutions — solutions that provide the data you need to make better facility decisions and increase the ROI of building equipment.

From simple service and maintenance to comprehensive design, installation and optimization of multiple systems, we can keep you performing at your best — no matter where you are in the world.

Look to HBS to provide world-class solutions for all facilities operational needs, including:

- ◆ Building Automation and Control
- ◆ Emergency Communications
- ◆ Fire and Life Safety Systems
- ◆ HVAC Install, Maintenance and Retrofit
- ◆ Integrated Energy Services
- ◆ Integrated Security Solutions

3. THE OVERALL QUALIFICATIONS OF THE BUSINESS

HBS is one of the major players in the Building Automation and Controls, Life Safety, Security and Integrated Systems industry, as well as in the Automation Maintenance, Fire, Security, Mechanical and Energy Services industry. HBS has customers in all industries and government branches. We service the private, public building and construction markets including multi-location retail, commercial office space, healthcare, life sciences, federal government, state and local government, educational, and industrial clients.

HBS Main Lines of Business

HBS is currently providing systems and solutions installation and maintenance services in the following segments:

Building Automation - Honeywell offers a comprehensive service program for building automation systems as well. These systems are designed to control energy usage by ensuring that HVAC systems run only when required based on occupancy or other building requirements. Here again, Honeywell technicians are able to maintain not only systems manufactured by Honeywell but by competitors as well.

Security and Fire Solutions - HBS offers complete fire and security system design and installation. Fire alarm systems are designed by NICET trained engineers who are knowledgeable in state and local code requirements. Security systems include standard application; i.e. intrusion alarms, video, as well as card access to monitor access based on authorization. Honeywell also can offer an asset tracking strategy that will allow a plant or facility to monitor the movement of specific pieces of critical inventory as it travels from one department to another.

Security System Maintenance - This support service approach is designed to ensure that the security system that is in place to protect your employees and assets is working properly twenty four hours per day, seven days per week. Systems support includes card access, intrusion alarms, CCTV network and more.

Fire Alarm System Maintenance - Fire alarm support services are provided by NICET trained Fire Alarm technicians. NICET trained technicians understand the critical communications link between field mounted devices, control panels located throughout your facility and in some cases the external link to the local fire department. They also understand state and local codes and the requirements that need to be met to maintain the integrity of your systems.

Mechanical Systems - This includes heating, ventilation and air conditioning systems that are designed to distribute conditioned air throughout a facility. Chillers, boilers, air handling equipment, control systems are typical of the kinds of systems that this service is designed to

address. To optimize building efficiency and minimize cost, preventive maintenance is provided on equipment based on age, runtime and manufacturer's specification. By providing the right amount of preventive maintenance unexpected break down costs are avoided and equipment life is extended.

Temperature Control Maintenance - HBS provides support service for temperature control systems as part of a mechanical maintenance program or as a stand alone offering. Maintenance service includes coverage of electric, electronic, pneumatic and direct digital control systems. With the advent of open systems architectures, HBS is able to maintain systems that were designed and installed by Honeywell as well as competitors' systems.

Energy Solutions - Honeywell will work with building owners/facility managers to develop the right strategy to conserve energy and reduce overall cost of operations. Energy Solutions will include the analysis of the mechanical HVAC systems, lighting systems, compressed air system and the approach that the facility is using to purchase gas/electricity.

Industrial Solutions - HBS provides many of these services to large, industrial customers that have unique requirements. HBS can assist in monitoring and tracking emissions to help meet state and federal guidelines, and help reduce downtime and scrap by identifying issues in the production process with our line efficiency tracking system. HBS can automate and control the production process and reduce energy cost by analyzing how facilities operate, how compressed air is being used and how demand is affected by run time strategies.

Control Products - Honeywell designs and manufactures products for the residential, commercial and OEM markets. These products are distributed by HBS as well as wholesalers, retailers, and original manufacturers and are used by contractors, homeowners and commercial buildings. These products are designed to provide comfort and the control of water, gas and the distribution or purification of air.



TAB 2 – REQUIRED DOCUMENTS

AIA Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

HONEYWELL INTERNATIONAL INC.
1985 Douglas Drive North
Golden Valley, MN 55422

OWNER:

(Name, legal status and address)

MCLEOD COUNTY
630 11th Street, Suite 10
Glencoe, MN 55336

BOND AMOUNT: Five Percent of the Base Bid Plus The Total Amount of All Additive Alternates (5%)

PROJECT:

(Name, location or address, and Project number, if any)

County Security/Surveillance System

SURETY:

(Name, legal status and principal place of business)

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
650 Elm Street

Manchester, NH 03101

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 30th day of September 2016

(Witness)

(Witness)

HONEYWELL INTERNATIONAL INC.

(Principal)

(Title) Paul B. Piazza, Assistant Treasurer
NORTH AMERICAN SPECIALTY INSURANCE COMPANY

(Surety)

(Title) Joyce M. Houghton
Attorney-in-Fact

CAUTION: You should sign an original AIA Contract Document, on which this text appears in RED. An original ensures that changes will not be obscured.

1011

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NAS SURETY GROUP

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Manchester, New Hampshire, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Schaumburg, Illinois, each does hereby make, constitute and appoint:

HARRY C. ROSENBERG, DAVID C. ROSENBERG, MATTHEW J. ROSENBERG, JOYCE M. HOUGHTON,
JULIA R. BURNET, DENISE M. BRUNO, JONATHAN F. BLACK, MICHELLE G. HIGGINS and ELIZABETH P. CERVINI

JOINTLY OR SEVERALLY

its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of: FIFTY MILLION (\$50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

*RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached.



By [Signature]
Steven P. Anderson, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company



By [Signature]
Michael A. Ito, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company

IN WITNESS WHEREOF, North American Specialty Insurance Company and Washington International Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 30th day of December, 2015

North American Specialty Insurance Company
Washington International Insurance Company

State of Illinois ss:
County of Cook

On this 30th day of December, 2015, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



[Signature]
M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Assistant Secretary of North American Specialty Insurance Company and Washington International Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company and Washington International Insurance Company, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 30th day of September, 2016

[Signature]
Jeffrey Goldberg, Vice President & Assistant Secretary
Washington International Insurance Company & North American Specialty Insurance Company

MEMORANDUM OF INSURANCE

This memorandum is issued as a matter of information only to authorized viewers for their internal use only and confers no rights upon any viewer of this Memorandum. This Memorandum does not amend, extend or alter the coverages described below. This Memorandum may only be copied, printed and distributed within an authorized viewer and may only be used and viewed by an authorized viewer for its internal use. Any other use, duplication or distribution of this Memorandum without the consent of Aon Risk Services, Inc. is prohibited. "Authorized Viewer" shall mean an entity or person which is authorized by the insured named herein to access this Memorandum via <http://honeywell.com/sites/moi/>. The information contained herein is as of the date referred to above. Aon Risk Services, Inc. shall be under no obligation to update such information.

Producer: Aon Risk Services Northeast, Inc. Questions please contact: ACS.Chicago@aon.com	INSURERS AFFORDING COVERAGE			
Insured: HONEYWELL INTERNATIONAL INC. P. O. BOX 1219 101 COLUMBIA ROAD MORRISTOWN, NJ 07962	Insurer	A	Greenwich Insurance Company	
	Insurer	B	XL Insurance America	
	Insurer	C	XL Specialty Insurance Company	
	Insurer	D		

Coverages

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS MEMORANDUM MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED BELOW IS SUBJECT TO ALL THE TERMS, CONDITIONS AND EXCLUSIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	Type of Insurance	Policy Number	Policy Effective Date	Policy Expiration Date	Limits
A	General Liability <input checked="" type="checkbox"/> Commercial General Liability <input type="checkbox"/> Claims Made <input checked="" type="checkbox"/> Occur. Gen'l Aggregate Limit Applies <input checked="" type="checkbox"/> Policy <input type="checkbox"/> Project <input type="checkbox"/> Loc	RGC943763003	4/1/2016	4/1/2017	Each Occurrence \$ 5,000,000 Damage to Rented \$ 5,000,000 Med Exp (Any one) \$ 50,000 Personal & Adv Injury \$ 5,000,000 General Aggregate \$ 5,000,000 Products – Comp/Op. \$ Included
A	Automobile Liability <input checked="" type="checkbox"/> Any Auto <input type="checkbox"/> All Owned Autos <input type="checkbox"/> Scheduled Autos <input checked="" type="checkbox"/> Non-Owned Autos	RAC943764203 RAC943764303 (NH) RAO943764503 (NH)	4/1/2016	4/1/2017	Combined Single Limit \$ 5,000,000 Combined Single Limit \$ 1,000,000 Excess Auto NH \$ 4,000,000 Bodily Injury (Per Person) \$ Property Damage \$
	Excess/Umbrella Liability <input type="checkbox"/> Occurrence Reported <input type="checkbox"/> Claims Made <input type="checkbox"/> Occur. <input type="checkbox"/> Deductible <input type="checkbox"/> Retention \$				Each Occurrence \$ Aggregate \$
B C C C	Workers' Compensation and Employers' Liability (Insured States)	RWD943540303 RWC943540203 (AK, WI)	4/1/2016	4/1/2017	xx Statutory Limits E.L. Each Accident \$ 5,000,000 E.L. Disease – Each \$ 5,000,000 E.L. Disease – Policy Limit \$ 5,000,000
C	Excess Workers' and Employers' Liability Self-insured States only	RWE943540403 (AZ, OH, WA) RWE943540503 (NM)	4/1/2016	4/1/2017	Excess Workers' Compensation statutory limits excess of \$2,000,000. NM in excess of \$250K Employers' Liability: \$5 million for each

Additional Information

The following coverage endorsements apply to the extent the coverage is required by contract:

- Blanket additional insured where required by written contract endorsement is included on the applicable policies above, except Workers' Compensation.
- Compensation.
- Blanket contractual liability is included on the applicable policies shown above, except Workers' Compensation.
- A waiver of subrogation where required by written contract is included on the applicable policies shown above.
- Honeywell will provide the ISO endorsement form numbers where required by written contract upon request.

This Memorandum of Insurance serves solely to list insurance policies, limits and dates of coverage. Any modifications hereto are not authorized. Any party with which the named insured is contractually required to include special status is automatically granted such status. However, coverage under the policy only applies to the extent of the coverage required by such contractual requirement and for the limits of liability specified in such contractual requirement, but in no event for insurance not afforded by the policy nor for limits of liability in excess of the applicable limits of liability of the policy. Any questions on this form may be referred via email to the Aon Risk Services, Inc. email address noted above.

3. AUTHORIZED INSTALLER AND MAINTENANCE PROVIDER

Honeywell International is the Original Equipment Manufacturer (OEM) of the solution being proposed under this RFP. Honeywell Building Solutions Division (HBS), a division of Honeywell International is authorized to sell, install and service these products to McLeod County. This includes all access control and video equipment specified.

Submitted by:

John Barry
Senior Account Manager
Honeywell Building Solution

4. FIVE-YEAR MAINTENANCE SUPPORT GUARANTEE

Honeywell shall offer a maintenance contract to McLeod County for a period of at least 5 years, with renewable options upon expiration of agreement.

This contract will apply to both the card access and IP video systems.

This contract can be co-written by both parties to include services outside standard repair and replace language. Other services may include:

- Preventive maintenance all panels and field devices
- Software Updates
- Proactive Services via EBI software to detect issues before they become serious enough to cause downtime
- Emergence Service with 24/7 coverage

A list of additional service is available upon request.

1985 Douglas Drive North
Golden Valley, MN 55422
763-954-5671 - work
763-482-4306 - mobile
john.barry@honeywell.com

From: Scott Grivna [mailto:Scott.Grivna@co.mcleod.mn.us]
Sent: Friday, September 23, 2016 10:08 AM
To: Barry, John <John.Barry@Honeywell.com>
Cc: Vincent Traver <Vincent.Traver@co.mcleod.mn.us>
Subject: RE: Prints for RFP

McLeod County RFP Questions- Honeywell 9/21/16

1. Can a 128 bit encryption panel using ISAKMP/IKE authentication panel be used for access control? This solution implements an encapsulated security protocol (ESP) using the 3DES (768-bit length) algorithm. This is a very high security panel used in many similar applications as McLeod County

For **integrity validation**, this solution uses the MD5 algorithm.
Using the panel in the specification is neither necessary nor cost effective.

Change verbiage in addendum to require the 128 encryption but not 256.

2. Are the new readers for the card access system to be **capable to use smart phones** as credentials in place of physical access cards (smart phone ready)? Both types of credentials (smart phone/access card) can be used simultaneously but it would be recommended to have the ability to use smart phone technology as this is the direction new systems are going. Existing readers can be updated over time to accept this technology. For the time being the existing readers can use access cards.

Installing analog readers now and then switching to smart phone technology at a later date would not be cost effective.

We are not requiring this but you can propose it as an option.

3. How many credentials are required for the overall access system?
 - a. 1000 – assuming we can't use current credentials. We intend to reissue all credentials once this system is in place.
4. Clarification that County will provide all PC hardware for access control and video systems.
 - a. Yes, we clarify the **McLeod County will provide hardware.**

Scott Grivna
McLeod County
Purchasing/Bldg. Maint. Supervisor
320-864-1326
Scott.Grivna@co.mcleod.mn.us

Barry, John

From: Scott Grivna <Scott.Grivna@co.mcleod.mn.us>
Sent: Tuesday, September 27, 2016 8:37 AM
To: Barry, John
Cc: Singana, Sudhakar Reddy; Earlywine, Tommy
Subject: RE: Prints for RFP

1. Should just read "Main Body of Response."
2. 6.01/6.02 only deal with quoting the hardware to store the video in a centralized location and is Optional. We would like to have 2 centralizes storage devices, one at the HATS building in Hutchinson, and one at the Courthouse in Glencoe.

To answer your final question, yes, we are looking for hard numbers.

Scott Grivna
McLeod County
Purchasing/Bldg. Maint. Supervisor
320-864-1326
Scott.Grivna@co.mcleod.mn.us

From: Barry, John [mailto:John.Barry@Honeywell.com]
Sent: Monday, September 26, 2016 10:26 PM
To: Scott Grivna
Cc: Singana, Sudhakar Reddy; Earlywine, Tommy
Subject: RE: Prints for RFP

Scott,

2 questions on RFP submittal

1. Tab 4, Page 7. What is meant by Main Body of Response (Sections 1-8- with original only)?
2. Tab 5, Page 37 Section 9.02- the options are already in the base bid the way I read it.
6.01 asks to incorporate the DVR contents of LEC, HHS, and NC. If you look at the Base System Requirements, with the exception of the Law Enforcement Center (LEC), both HHS and NC require "incorporating current analog cameras".
6.02 talks about Solid Waste DVR's incorporated in to new system but this is already part of the base bid (5.09). Also, the Fairgrounds have no storage now so they would also be part of the base bid.

To confirm a brief discussion we had, are you looking for a hard figure or budgetary number?

Please advise

Thanks

Scott

John Barry
Senior Account Manager
Honeywell Building Solutions

McLeod County

Security/Surveillance System

Addendum A

September 23rd, 2016

Adjustments to sections in the original RFP below are in red.

3.02 Upon completion of this project, the County shall have a security/surveillance system capable of providing the following:

K. The Physical Access solution should entail gateways that can support 250,000 cached credentials and 150,000 cached events. All communication should be 128-bit Advanced Encryption Standard (AES) encrypted.

3.03 Existing Infrastructure

B. Wide Area Network

1. Glencoe

a. All buildings are fiber connected at 10Gb:

- i. Courthouse & Law Enforcement Center (main data center)
- ii. Health & Human Services
- iii. North Complex
- iv. Annex

2. Hutchinson

a. All buildings are fiber connected at 10Gb:

- i. HATS (secondary data center)
 - ◆ 10Gb Fiber connection and 100Mb failover connection to Courthouse
- ii. Extension Office
- iii. Solid Waste

5 BASE SYSTEM REQUIREMENTS (UPDATED COUNTS AND ADDRESSES FROM MEETING)

5.01 The COUNTY reserves the right to accept or reject in any combination which buildings are selected for final approval based on budgetary constraints.

5.02 McLeod County Court House (830 11th St. E. Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	32 new doors with access readers
Add Cameras	10 new IP cameras
Management Software for Access	1 Software program
Management Software for Cameras	1 Software program

5.03 McLeod County Court Administration (830 11th St. E. Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	4 current doors with access readers
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5.04 McLeod County Law Enforcement (801 10th St. E Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	6 current doors with access readers. 7 new doors with access readers
No cameras in the Law Enforcement building are a part of this project	

5.05 McLeod County North Complex (2391 Hennepin Ave N Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	6 current doors with access readers and 6 new doors with access readers
Incorporate Current Analog Cameras and add	6 current analog cameras and 3 new IP cameras

5.06 McLeod County Annex (2397 Hennepin Ave N Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add New Camera	1 360 degree camera in main hallway

5.07 McLeod County Glencoe HWY/LEC Shed (2397 Hennepin Ave N Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add Cameras	2 camera outside covering both buildings

*We would prefer conduit for cables run in the shops to protect them, it's negotiable based on cost.

5.08 McLeod County Health and Human Services (1805 Ford Ave N Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	14 current doors with access readers and 1 new door with access reader
Incorporate Current Analog Cameras and add new	2 current analog cameras and 5 new IP cameras

5.09 McLeod County Solid Waste (1065 5th Ave SE Hutchinson, MN 55350)

Door Access Readers and Applicable Hardware	18 current doors with access readers on Keri System. 4 Current Honeywell readers. Add 2 doors with access readers.
Incorporate Current Analog and IP Cameras	29 current cameras to integrate into new system

5.10 McLeod County Fairgrounds (840 Century Ave SW Hutchinson, MN 55350)

Door Access Readers and Applicable Hardware	3 current doors with access readers on a Keri System. Add 6 doors with access readers.
Add Cameras	Add 3 cameras in Commercial Building and 1 in Dairy Building

5.11 McLeod County Brownton HWY Shop (208 1st Ave S Brownton, MN 55312)

Door Access Readers and Applicable Hardware	1 access readers for walk in door
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*We would prefer conduit for cables run in the shops to protect them, but it's negotiable based on cost.

5.12 McLeod County Silver Lake/Lester Prairie HWY Shop (1995 Falcon Ave Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	2 access readers for walk in doors on each end of building
---	--

*We would prefer conduit for cables run in the shops to protect them, but it's negotiable based on cost.

McLeod County

Security/Surveillance System

Addendum B

September 29th, 2016

Adjustments are highlighted below in Red:

IMPORTANT DATES:

RFP Advertised	Thursday, September 1st
Mandatory Pre-Proposal Conference	Friday, September 16th
Last Day for Questions	Wednesday, September 21st
Last Addendum Issued:	Friday, September 29th
Proposal Due Date	Wednesday, October 5th
Present at Board	Tuesday, October 18th
Project Completion:	Friday, January 27 th , 2017

SEALED SUBMITTAL REQUIREMENTS: Please include one (1) original and one (1) paper copy, as well as, one (1) electronic copy in PDF format for a total of three (3) complete sets of the Proposal for a Security/Surveillance. Submittal shall be **SEALED** and submitted by **Friday, September 30th, 2016 at 2:00 pm**. Send proposals to the following address:

One original for time/date stamp, one (1) paper copy, and one electronic copy with original.	
McLeod County Attn: Scott Grivna 830 11th Street East Suite 10 Glencoe, MN 55336-2200	

Proposal is to be signed only by persons authorized to enter into a contract with McLeod County.

RESPONDENT'S SIGNATURE

COMPANY NAME



**TAB 3 – EXECUTIVE SUMMARY/
OVERVIEW**

1. SCOPE OF WORK

Honeywell is pleased to provide this Card Access/IP Video solution for McLeod County. With over 115 card readers and 62 cameras installed over 14 buildings throughout McLeod County, this will be a significant advancement toward the safety and well-being of all who visit these campuses.

This plan will also create more efficiency as new doors receiving electronic card readers will give way to physical keys that required replacement when missing as well as needing expensive re-coring when a key was lost or stolen.

Our proposed solution will bring the very latest in security technology from the one of the industry leaders in security – **Honeywell**.

Video

Using Axis mega-pixel cameras for crisp, clear video feeding video back to Honeywell's Digital Video Manager (DVM) storage array, will offer a state-of-the-art video system found at other county and state buildings in Minnesota as well as many installations throughout the world.

With a system capable of handling over 4,000 cameras, the Honeywell DVM solution is scalable and can grow with you as other areas of the County require video surveillance. The open architecture and third party integration of DVM allows the County to provide the necessary servers and workstation to help keep cost down and allow your IT professionals to help manage the system.

Access Control

With Honeywell's **access control platform**, you will be introduced to technology only recently introduced including Bluetooth Enable (BTE) card readers. These readers can utilize your standard HID card you are now using or you can go one step further and use a smartphone as a credential and open doors by applying the phone as you would a card. This makes for much more efficient card management and is more convenient for the cardholder to remember their credential.

Honeywell's 1 and 2 reader panels will make for easier installation, therefore reducing installation cost, in areas where cabling back to a central panel would require long wire runs and increased cost. Also, for buildings that are only requiring 1 or 2 readers, this is an ideal solution.

Using Honeywell's Enterprise Buildings Integrator (EBI) software to manage cardholders and set access levels for doors will allow you to use the very latest in security software. EBI is Underwriters Laboratories (UL) listed ALVY-UL294 for Access Control.

System Integration

One of the core values of a Honeywell EBI solution is the ability to provide components as standalone- separate IP Video and Card Access systems- or to easily integrate the systems through the software.

Now opening a door at a specified time, such as after hours, could have a video file attached to it for easy viewing by an operator or staff member. Or for emergency doors, an alarm can be sent to a mobile device when a door is opened and the accompanying video will automatically play when the file is opened.

And since the County also has Honeywell EBI software for automation, integration is possible among all 3 components- IP Video, Access Control, and HVAC.

Other systems such as fire alarm, visitor management and mass notification can be integrated in to EBI.

2. TECHNICAL SUMMARY OF THE SYSTEM PROPOSED

Honeywell is pleased to provide an advanced security solution for McLeod County. The hardware and software found in this plan is the latest technology available in the market today. This design offers open architecture and 3rd party integration allowing you to use existing infrastructure as well as newer products that become available.

Access Control:

With the integration of 43 existing readers as well as 82 new locations, you will now have one platform to control the entire county- eliminating the 3 different systems you had before. Control of all access doors will be managed through one database and accessible through operator stations.

1. *Control Panels*

Honeywell will use modular control panels for the most efficient installation and less disruption possible. With panel sizes ranging from 1-32 readers, panels will be sized accordingly per building and per location. This would include the use of 1 or 2 door panels in difficult locations where long wire runs would be prohibitive.

2. *Card Readers*

HID card readers will be installed at the 82 new locations. The County's existing credentials can be used at these doors to avoid the task of re-badging employees. Additionally, the readers provided will be Blue Tooth Enabled (BTE). This is the latest technology in card access systems and will allow a smart phone to act as a credential. This has many advantages including programming a credential (phone) remotely and not having to physically hand cards over to users.

3. *Software*

Honeywell's EBI software is a feature-rich program allowing you to easily manage your cardholder database and access reports at either a workstation or remotely using Honeywell's EasyMobile application.

4. *Integration*

Other components that can be integrated in to EBI include: mass notification, fire alarm, visitor management, asset tracking (attaching transmitters to high value assets) and Honeywell Energy Manager.

IP Video:

Integrating 25 analog cameras and adding 62 new IP cameras will be done through the Digital Video Manager (DVM) video management system.

DVM is built upon industry standard open networking, PC hardware, and software applications that take advantage of cost-effective, powerful components.

Using commercial off-the-shelf hardware allows you to use the cameras, PC, storage, and networking hardware of your choice – there is no need to pay premiums for proprietary hardware. Unlike proprietary Digital Video Recorders (DVRs) and Network Video Recorders (NVR's), DVM allows you to obtain system hardware and software upgrades independently which helps lower your support costs. Use of off-the-shelf components also promotes ease of DVM integration into your existing enterprise system support strategy, further simplifying support needs and reducing the cost of ownership.

The basic architecture of DVM consists of a Database Server and a Camera Server that can be installed on the same machine. Additional Camera Servers, Backup Camera Servers and Analytics Servers can be added to the architecture to support larger numbers of cameras. Video Streaming Servers support video distribution to mobile devices, allowing security personnel to be more mobile and more effective in the field.

1. Cameras

Axis megapixel cameras will be installed per the specifications. A combination of different cameras using varying fields-of-view will be used. These include cameras with 90, 180, 270 and 360 degree viewing angles.

Each camera will have an SD card installed to allow for storage in the event of video is not able to be transmitted back to the camera server.

2. Database Server

The camera database server specifications are included in this RFP. One database server is required per system and can handle up to 4,000 cameras. Having McLeod County provide the hardware for this solution allows for cost saving as well as better operational control as the County IT department can manage the hardware.

3. Camera Servers

Camera servers specifications are also included in this RFP. Depending on cameras setup, each server can hold between 40 and 100 cameras. Two camera servers are recommended for this solution- one centrally located in the courthouse/LEC/Admin building and one in the Solid Waste IT room.

Option 1 also includes a redundant server for backup storage.

4. Analog converters

Axis analog-to-digital video encoders will be used for the County's 43 existing cameras. Encoders will be put in to an Axis blade rack installed in the IT room of building.

5. DVM Console Advanced Feature Module

The DVM Console Client provides a professional surveillance client designed to support the advanced needs of control room operators. DVM Console provides a powerful, yet flexible,



user interface based on extensive usability studies focused on increasing operator productivity.

The advanced features and intuitive interface provide agile navigation and contribute to improved situational awareness and reduced incident response times.

Please refer to Tab 15 for more details on the DVM Console documentation.



TAB 4 – MAIN BODY OF RESPONSE

Page 7 of RFP , Tab 4 reads “Main Body of Response (Sections 1-8) (With original only).

Upon email clarification to this tab, the response was “should just read Main Body of Response”.

The interpretation therefore is that this tab refers to the rest of the Tabs in this RFP.



TAB 5 – COST

1. BASE

<u>Building</u>	<u>Cost</u>
Courthouse	\$ 174,212.00
Administration	\$ 11,684.00
Law Enforcement	\$ 36,171.00
North Complex	\$ 34,748.00
Annex	\$ 12,820.00
Hwy/LEC Shed	\$ 14,064.00
Health Hum Srv	\$ 31,316.00
Solid Waste	\$ 48,971.00
Fairgrounds	\$ 43,230.00
Brownnton Hwy Shop	\$ 5,301.00
Silver Lake/Lester Prairie Hwy Shop	\$ 8,837.00
Base Total:	\$ 421,354.00

2. OPTION 1

Courthouse Option 1	\$ 2,480.00
HATS Option 1	\$ 4,571.00
Base Total:	\$ 7,051.00

note: HHS and NC DVR analog camera conversion already part of plan per addendum A



**TAB 6 – BILL OF MATERIAL,
EQUIPMENT SPECIFICATIONS AND
DRAWINGS**

<i>Frontend Devices</i>				
Item	Part Number	Quantity	Description	Vendor
EBI Software- Access Control				
1	EBI-DBR006	1	6 Reader Adder to Database Size	HONEYWELL
2	EBI-DBR050	2	50 Reader Adder to Database Size	HONEYWELL
3	EBI-DBP00250	4	250 Point Adder to Database Size	HONEYWELL
4	EBI-TMIFTEMA	1	Temaline Integration	HONEYWELL
5	EBI-OPPHOTOID	1	Integrated PhotoID license	HONEYWELL
Digital Video Manager IP Video Management Software				
1	DVM-CACNT	62	Digital Video Manager- 1 Camera	HONEYWELL
2	DVM-OPSSS	62	Same Source Video Streaming	HONEYWELL
3	DVM-ZZDVD600	1	DVM R600 Software on DVD	HONEYWELL
4	DVM-CLIE	5	DVM Internet Explorer Client (Station License)	HONEYWELL
5	DVM-CLCONCT	1	DVM Console Client	HONEYWELL
6	DVM-IFAXH264	1	Axis H.264 Integration	HONEYWELL
7	DVM-OPMOT	1	Motion Search on Recorded Video	HONEYWELL
8	DVM-VAPREM	1	Video Motion Detection - Premium	HONEYWELL
Control Room Devices				
ACCESS SYSTEM				
1	TS2	7	TEMASERVER CONTROLLER FOR UP TO 16 DOORS	HONEYWELL
2	TK_S014M	81	TEMALINE DUAL WIEGAND INTERFACE MODULE. SUITABLE FOR A SINGLE DOOR. WITH 2 X DI & 2 X DO.	HONEYWELL
3	TK_C21P	7	DIGITAL I/O MUDULE - FOR 4 SUPERVISED	HONEYWELL
4	VMC-02WENN1	10	Tema-Voyager Multi-2, manages up to 2 single side door	HONEYWELL
5	VMC-03WENN1	0	Tema-Voyager Multi-3, manages up to 3 single side door	HONEYWELL
6	VMC-04WENN1	6	Tema-Voyager Multi-4, manages up to 4 single side door	HONEYWELL
7	VMA-06	16	Tema-Voyager Multi Relay Output Board	HONEYWELL
8	VMS-KIT	9	Resistors and diodes kit	HONEYWELL
9	14506635-002	10	F/S CABINET ROUGH-IN RING	GENESIS
10	14506636-002	10	F/S CABINET DOOR WITH LOCK	GENESIS
11	14506747-002	10	F/S CABINET SUB PANEL	GENESIS
12	14505159-001	10	PANEL TAMPER SWITCH	HONEYWELL
13	AX-AL600ULB	7	ALTRONIX 6A POWER SUPPLY BOARD ONLY	ALTRONIX
16	AX-RDC12 / 24	81	12V/24V DC, PLUG-IN, 10A, DPDT RELAY WITH BASE	ALTRONIX
17	IM-1270	7	12V DC, 7AH BATTERY	ULTRATECH
18	EOL-100	7	End of line Resistor - 100 Ohm	UTC
19	1550107	5	Kit of resistors (50yellow, 50white, 50black)	HONEYWELL
Field Devices				
ACCESS SYSTEM				
1	900PMNTEKEA003	82	RP10 HID Bluetooth Enabled (BTE) Card Readers	HID
2	CRD633ZZ-xxxxx		Mobile Credentials	HID
3	SEC9X-CRD-MAD-xxxx	0	HID Mobile Access – BLE Admin Card	HID
4	SEC9X-CRD-E-MKYD	0	HID Mobile Access – Configuration Card	HID
5	CK-IS310WH	115	REX Motion Sensor	HONEYWELL
6	SR-1078BR	120	1"Recessed DPDT Contact	Interlogix
CCTV SYSTEM				
1	Z4-0815001	10	AXIS P3707-PE Network Camera (180 degree field of view	Axis
2	Z4-0801001	12	AXIS Q3708-PVE Network Camera (270 and 360 degree field of view camera)	Axis
3	Z4-0951001	3	AXIS P3224-VE Network Camera (90 Degree field of view	Axis
4	Z4-5507511	7	AXIS T94M02D PENDANT KIT FOR P3707-PE	Axis
5	Z4-5504821	7	T91D61 WALL MOUNT	Axis
6	Z4-5017641	3	AXIS T91A64 BRACKET CORNER	Axis
7	Z4-5504621	3	AXIS T91B61 WALL MOUNT	Axis
8	Z4-5017671	1	AXIS T91A67 MOUNT POLE	Axis
9	Z4-0418001	11	P7224 VIDEO ENCODER	AXIS
10	Z4-0267001	5	291U/ 1U/ VIDEO/ BLADE-RACK	AXIS

Honeywell Building Solutions

Honeywell
1985 Douglas Drive
Golden Valley, MN 55422

McLeod County Security RFP

Project Labor Hours Estimate

Includes:

1. Cabling
2. Device installation
3. Panel Installation
4. Software installation
5. Electronic lock installation
6. Programming
7. Graphics/Asbuilts
8. Commissioning
9. Training

Base Hours: 1,842

Option 1 Hours: 8

Option 2 Hours: 12

McLeod County - Court House/Law Enforcement Center

Electrified Locking Hardware

Floor Plan	Door #	Qty	Mfg	Part #	Description	Total
CHLEC1A	#1			?? Dbl Dr/??Fr	NEW DOUBLE DOOR "HG 16"	
		1	VD/ACSI	1550K-MDV	Quiet Electric Retraction Motor Drive (requires 1amp/24VDC filtered and regulated power)	
		1	ACSI	BB1279/1108-??	4.5 x 4.0, Eight Cond (verify size and weight)	
				Note:	1) Hdwr Sched gives no size for hinges	
					2) The above assumes electrification of one	
					3) No Request to Exit Micro Switch Provided	
CHLEC1A	#2				OLD UNIT LOCK PREP	
		1	Schlage	ND80LEU-RX-626	Fail Secure, Electrified Cylindrical Leverset w/ Request to Exit Micro Switch (reuse existing cylinder)	
		1	ACSI	BB1279/1108-??	4.5 x 4.5, Eight Cond (verify size and weight)	
				Note:	1) Wrap Around and Hinges are Brushed Bronze - Lock and Hinge are Satin Chrome	
					Tot...	
CHLEC1A	#3				EXISTING 99 L EXIT DEVICE	
		1	VD	9300-24VDC-32D	Fail Secure, Surface Applied Rim Electric Strike	
				Note:	1) No Request to Exit Micro Switch Provided	
					T...	
CHLEC1A	#4				EXISTING MORTISE LEVERSET	
		1	VD	6210-24VDC-32D	Heavy Duty, Fail Secure, Electric Strike	
				Note:	1) No Request to Exit Micro Switch Provided	
					Tc	
CHLEC1A	#5				OLD UNIT LOCK PREP	
		1	Schlage	ND80LEU-RX-626	Fail Secure, Electrified Cylindrical Leverset w/ Request to Exit Micro Switch (reuse existing cylinder)	
		1	ACSI	BB1279/1108-??	4.5 x 4.5, Eight Cond (verify size and weight)	
				Note:	1) Wrap Around and Hinges are Brushed Bronze - Lock and Hinge are Satin Chrome	
					2) Door has no closer	
CHLEC1A	#6				OLD UNIT LOCK PREP	
		1	Schlage	ND80LEU-RX-626	Fail Secure, Electrified Cylindrical Leverset w/ Request to Exit Micro Switch (reuse existing cylinder)	

Floor Plan	Door #	Qty	Mfg	Part #	Description	Total
		1	ACSI	BB1279/1108-??	4.5 x 4.5, Eight Cond (verify size and weight)	
					Note: 1) Wrap Around and Hinges are Brushed Bronze - Lock and Hinge are Satin Chrome	
					2) Door has no closer	
					Total:	
CHLEC1A	#7				EXISTING MORTISE LEVERSET	
		1	VD	6210-24VDC-32D	Heavy Duty, Fail Secure, Electric Strike	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	
CHLEC1A	#8				HOLLOW CORE WOOD RES DR/FR	
		1	Schlage	ND80LEU-RX-626	Fail Secure, Electrified Cylindrical Leverset w/ Request to Exit Micro Switch (reuse existing cylinder)	
		1	RCI	X-DC	Current Transfer Door Cord	
					Note: 1) Wrap Around and Hinges are Brushed Bronze - Lock and Hinge are Satin Chrome	
					Total:	
CHLEC1B	#1				NEW DOOR BY GC "HG 33"	
		1	BY OTHERS	NO CHANGE	Schlage L9092EU Electrified Mortise Leverset	
		1	BY OTHERS	NO CHANGE	VD Power Transfer	
		1	BY OTHERS	NO CHANGE	VD Power Supply	
					Note: 1) No Request to Exit Micro Switch Provided	
					2) Not clear as to why a PS is provided	
					Total:	
CHLEC1B	#2				NEW DOOR BY GC "HG 32"	
		1	BY OTHERS	NO CHANGE	Schlage L9092EU Electrified Mortise Leverset	
		1	BY OTHERS	NO CHANGE	VD Power Transfer	
		1	BY OTHERS	NO CHANGE	VD Power Supply	
					Note: 1) No Request to Exit Micro Switch Provided	
					2) Not clear as to why a PS is provided	
					Total:	
CHLEC1B	#3				NEW DOOR BY GC "HG 35"	
		1	BY OTHERS	NO CHANGE	Schlage L9092EU Electrified Mortise Leverset	
		1	BY OTHERS	NO CHANGE	VD Power Transfer	
		1	BY OTHERS	NO CHANGE	VD Power Supply	
					Note: 1) No Request to Exit Micro Switch Provided	

Floor Plan	Door #	Qty	Mfg	Part #	Description	Total
					2) Not clear as to why a PS is provided	
					Total:	
CHLEC1B	#4				NEW DOOR BY GC "HG 31"	
		1	BY OTHERS	NO CHANGE	Schlage L9092EU Electrified Mortise Leverset	
		1	BY OTHERS	NO CHANGE	VD Power Transfer	
		1	BY OTHERS	NO CHANGE	VD Power Supply	
					Note: 1) No Request to Exit Micro Switch Provided	
					2) Not clear as to why a PS is provided	
					Total:	
CHLEC1B	#5				NEW DOOR BY GC "HG 11"	
		1	BY OTHERS	NO CHANGE	VD QEL99NL - Electric Retraction Exit Device	
		1	BY OTHERS	NO CHANGE	VD EPT2 Electric Power Transfer	
		1	BY OTHERS	NO CHANGE	PS902/2RS Power Supply	
CHLEC1B	#6				EXISTING (not seen)	
		1	Existing	NO CHANGE	NO CHANGE	
					Total:	
CHLEC1B	#7				EXISTING (not seen)	
		1	Existing	NO CHANGE	NO CHANGE	
					Total:	
CHLEC1B	#8				NOT SEEN ON SITE VISIT	
		1	TBD	TBD	TBD	
					Total:	
CHLEC1B	#9				EXISTING (not seen)	
		1	Existing	NO CHANGE	NO CHANGE	
					Total:	
CHLEC1B	#10				EXISTING (not seen)	
		1	Existing	NO CHANGE	NO CHANGE	
					Total:	
CHLEC1B	#11				EXISTING (not seen)	
		1	Existing	NO CHANGE	NO CHANGE	
					Total:	
CHLEC1B	#12				EXISTING (not seen)	
		1	Existing	NO CHANGE	NO CHANGE	
					Total:	
CHLEC1B	#13				NOT SEEN ON SITE VISIT	

Floor Plan	Door #	Qty	Mfg	Part #	Description	Total
		1	TBD	TBD	TBD	
						Total: 505
CHLEC2A	#1				NEW SINGLE DOOR (no hdwr grp)	
		1	TBD	TBD	TBD	
						Total:
CHLEC2A	#2			SCW Dr/Wd Fr	OLD DOOR W/ SCH MORT LOCK	
		1	Von Duprin	6215-24VDC-32D	Heavy Duty, Fail Secure, Electric Strike	
					Note: 1) No Request to Exit Micro Switch Provided	
						Total:
CHLEC2A	#3				NEW DOOR BY GC "HG 31"	
		1	BY OTHERS	NO CHANGE	Schlage L9092EU Electrified Mortise Leverset	
		1	BY OTHERS	NO CHANGE	VD Power Transfer	
		1	BY OTHERS	NO CHANGE	VD Power Supply	
					Note: 1) No Request to Exit Micro Switch Provided	
					2) Not clear as to why a PS is provided	
						Total:
CHLEC2A	#4			SCW Dr/Wd Fr	OLD DOOR W/ SCH MORT LOCK	
		1	Von Duprin	6215-24VDC-32D	Heavy Duty, Fail Secure, Electric Strike	
					Note: 1) No Request to Exit Micro Switch Provided	
						Total:
CHLEC2A	#5				NEW SINGLE DOOR (no hdwr grp)	
		1	TBD	TBD	TBD	
						Total:
CHLEC2A	#6			SCW Dr/Wd Fr	SCH MORT LOCK	
		1	Von Duprin	6215-24VDC-32D	Heavy Duty, Fail Secure, Electric Strike	
					Note: 1) No Request to Exit Micro Switch Provided	
						Total:
CHLEC2A	#7			SCW Dr/Wd Fr	OLD DOOR W/ SCH MORT LOCK	
		1	Von Duprin	6215-24VDC-32D	Heavy Duty, Fail Secure, Electric Strike	
		2	MLS	CUSTOM	Covert Plates (conceal holes from Simplex)	
		1	Schlage	ND80PD-RHO-626	Heavy Duty, Store Rm Function, Leverset	
					Note: 1) No Request to Exit Micro Switch Provided	
						Total:
CHLEC2A	#8			SCW Dr/Wd Fr	OLD DOOR W/ SCH MORT LOCK	
		1	Von Duprin	6215-24VDC-32D	Heavy Duty, Fail Secure, Electric Strike	

Floor Plan	Door #	Qty	Mfg	Part #	Description	Total
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	50
CHLEC2A	#9			SCW Dr/Wd Fr	NEW RESIDENTIAL GRADE DOOR/Wd Fr	
		1	Von Duprin	6215-24VDC-32D	Heavy Duty, Fail Secure, Electric Strike	
		1	Schlage	ND80PD-RHO-626	Heavy Duty, Store Rm Function, Leverset	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	50
CHLEC2A	#10				NEW DOOR BY GC "HG 16"	
		1	VD/ACSI	1550K-MDV	Quiet Electric Retraction Motor Drive (requires 1amp/24VDC filtered and regulated power)	
		1	ACSI	BB1279/1108-??	4.5 x 4.0, Eight Cond (verify size and weight)	
					Note: 1) Hdwr Sched gives no size for hinges	
					2) The above assumes electrification of one	
					3) No Request to Exit Micro Switch Provided	
					Total:	50
CHLEC2A	#11			SCW Dr/HM Fr	Existing Mort and Strike	
		1	Existing	NO CHANGE	L9080 Mortise Leverset	
		1	Existing	NO CHANGE	VD 6210 Electric Strike	
					Total:	50
CHLEC2A	#12			SCW Dr/HM Fr	Existing Mort and Strike	
		1	Existing	NO CHANGE	L9080 Mortise Leverset	
		1	Existing	NO CHANGE	VD 6210 Electric Strike	
					Total:	50
CHLEC2A	#13				Existing Exit Device	
		1	VD	9300-24VDC-32D	Fail Secure, Surface Applied Rim Electric Strike	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	50
CHLEC2A	#14				NEW Double DOOR (no hdwr grp)	
		1	TBD	TBD	TBD	
					Total:	50
CHLEC2B	#1				NEW DOOR BY GC "HG 2"	
		1	VD/ACSI	1550K-MDV	Quiet Electric Retraction Motor Drive (requires 1amp/24VDC filtered and regulated power)	

McLeod County - FAIRGROUNDS

Electrified Locking Hardware

Floor Plan	Door #	Qty	Mfg	Part #	Description	Total	
Fairgrounds	#1		Poultry Bld	HM Sgl Dr/HM Fr	Existing Exit Device and Electric Strike		
		1	Existing	NO CHANGE	Low End Corbin Exit Device		
		1	Existing	NO CHANGE	HES Strike (assumes functional)		
		3	Existing	NO CHANGE	Non Tempalte/Non BB Hinges		
		1	Existing	NO CHANGE	Low End Door Closer		
					Note:	1) Exit Device Should Be Replaced	
						2) Hinges Should Be Replaced	
						3) Door Closer Should Be Replaced	
				Total:			
Fairgrounds	#2		Ctry Diner	HM Dbl Dr/HM Fr	Existin Exit Device & Manual Flush Bolts		
		1	VD/ACSI	1550K-MDV	Quiet Electric Retraction Motor Drive (requires 1amp/24VDC filtered and regulated power)		
		1	ACSI	BB1279/1108-626	4.5 x 4.5, Eight Cond (verify size and weight)		
					Note:	1) No Request to Exit Micro Switch Provided	
						Total:	
Fairgrounds	#3		Dairy Brn	HM Dbl Dr/HM Fr	2) Existing PHI SVR Exit Devices		
		1	Existing	REMOVE	Surface Vertical Rod Exit Device (remove RHR leaf device)		
		1	Von Duprin	99NL-626	Rim Exit Device		
		1	VD/ACSI	1550K-MDV	Quiet Electric Retraction Motor Drive (requires 1amp/24VDC filtered and regulated power)		
		1	ACSI	BB1279/1108-626	4.5 x 4.5, Eight Cond (verify size and weight)		
		1	Von Duprin	4954-SP28	Steel Removable Mullion		
					Note:	1) No Request to Exit Micro Switch Provided 2) Recommend replacing the remaining SVR exit device.	
				Total:			
Fairgrounds	#4		Com. Bld		Existing Exit Device and Electric Strike		
		1	Existing	NO CHANGE	HES Electric Strike		
					Note:	1) No Request to Exit Provided	
					Total:		
Fairgrounds	#5		Com. Bld	HM Dbl Dr/HM Fr	2) Existing PHI SVR Exit Devices		
		1	Existing	REMOVE	Surface Vertical Rod Exit Device (remove RHR leaf device)		
		1	Von Duprin	99NL-626	Rim Exit Device		
		1	VD/ACSI	1550K-MDV	Quiet Electric Retraction Motor Drive (requires 1amp/24VDC filtered and regulated power)		

McLeod County - North Complex

Electrified Locking Hardware

Floor Plan	Dr #	Qty	Mfg	Part #	Description	Total
NC1	#1			G&A Dr/Fr	Latch Lock	
		1	AR	4900-628	Latch Lock Assemble	
		1	AR	4591-628	Push Paddle Assembly	
		1	AR	7400-24VDC-32D	Electric Strike	
		2	MLS	CUSTOM	Pair Mounting Tabs	
					Total:	
NC1	#2			G&A Dr/Fr	Latch Lock	
		1	AR	4900-628	Latch Lock Assemble	
		1	AR	4591-628	Pull Paddle Assembly	
		1	AR	7400-24VDC-32D	Electric Strike	
		2	MLS	CUSTOM	Pair Mounting Tabs	
					Total:	
NC1	#3				Not Seen on Site Visit	
		1	TBD	TBD	TBD	
					Total:	
NC1	#4				Existing Electric Strike	
		1	Existing	NO Change	Electric Strike	
					Total:	
NC1	#5				Existing Electric Strike	
		1	Existing	NO Change	Electric Strike	
					Total:	
NC2	#1				Existing Exit Device and Electric Strike	
		1	Existing	NO Change	HES 9600 Electric Strike	
					Total:	
NC2	#2				Not Seen on Site Visit	
		1	TBD	TBD	TBD	
					Total:	
NC2	#3				Not Seen on Site Visit	
		1	TBD	TBD	TBD	
					Total:	
NC2	#4				Existing Electric Strike	
		1	Existing	NO Change	Electric Strike	

McLeod County - HEALTH & HUMAN SERVICES "HHS"

Electrified Locking Hardware

Floor Plan	Door #	Qty	Mfg	Part #	Description	Total
HHS1	#1			G&A Dr/Fr	Existing Exit Device and Electric Strike	
		1	Existing	NO CHANGE	Sargent Exit Device	
		1	Existing	NO CHANGE	HES Strike (assumes functional)	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	
HHS1	#2			SCW Dr/HM Fr	Existing Exit Device and Electric Strike	
		1	Existing	NO CHANGE	Sargent Exit Device	
		1	Existing	NO CHANGE	HES Strike (assumes functional)	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	
HHS1	#3			SCW Dr/HM Fr	Existing Leverset and Electric Strike	
		1	Existing	NO CHANGE	Schlage Leverset	
		1	Existing	NO CHANGE	Strike (assumes functional)	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	
HHS1	#4			SCW Dr/HM Fr	Existing Leverset and Electric Strike	
		1	Existing	NO CHANGE	Schlage Leverset	
		1	Existing	NO CHANGE	Strike (assumes functional)	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	
HHS1	#5			SCW Dr/HM Fr	Existing Leverset and Electric Strike	
		1	Existing	NO CHANGE	Schlage Leverset	
		1	Existing	NO CHANGE	Strike (assumes functional)	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	
HHS1	#6			SCW Dr/HM Fr	Existing Exit Device and Electric Strike	
		1	Existing	NO CHANGE	Sargent Exit Device	
		1	Existing	NO CHANGE	HES Strike (assumes functional)	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	
HHS1	#7			G&A Dr/Fr	Existing Exit Device and Electric Strike	
		1	Existing	NO CHANGE	Sargent Exit Device	
		1	Existing	NO CHANGE	HES Strike (assumes functional)	
					Note: 1) No Request to Exit Micro Switch Provided	
					Total:	
HHS1	#8			G&A Dr/Fr	Existing Exit Device and Electric Strike	

Floor Plan	Door #	Qty	Mfg	Part #	Description	Total
		1	Existing	NO CHANGE	Exit Device	
		1	Existing	NO CHANGE	HES Strike (assumes functional)	
				Note: 1) No Request to Exit Micro Switch Provided		
					Total:	
HHS2	#1			SCW Dr/HM Fr	Existing Exit Device and Electric Strike	
		1	Existing	NO CHANGE	Sargent Exit Device	
		1	Existing	NO CHANGE	HES Strike (assumes functional)	
				Note: 1) No Request to Exit Micro Switch Provided		
					Total:	
HHS2	#2			G&A Dr/Fr	Existing Exit Device and Electric Strike	
		1	Existing	NO CHANGE	Sargent Exit Device	
		1	Existing	NO CHANGE	HES Strike (assumes functional)	
				Note: 1) No Request to Exit Micro Switch Provided		
					Total:	
HHS2	#3			SCW Dr/HM Fr	Existing Leverset and Electric Strike	
		1	Existing	NO CHANGE	Schlage Leverset	
		1	Existing	NO CHANGE	Strike (assumes functional)	
				Note: 1) No Request to Exit Micro Switch Provided		
					Total:	
HHS2	#4			SCW Dr/HM Fr	Existing Leverset and Electric Strike	
		1	Existing	NO CHANGE	Schlage Leverset	
		1	Existing	NO CHANGE	Strike (assumes functional)	
				Note: 1) No Request to Exit Micro Switch Provided		
					Total:	
HHS2	#5			SCW Dr/HM Fr	Existing Leverset and Electric Strike	
		1	Existing	NO CHANGE	Schlage Leverset	
		1	Existing	NO CHANGE	Strike (assumes functional)	
				Note: 1) No Request to Exit Micro Switch Provided		
					Total:	
HHS2	#6			SCW Dr/HM Fr	Existing Passage Function Leverset	
		1	Schlage	ND80EU-RX-626	Heavy Duty, Fail Secure, Electrified Cylindrical Leverset w/ Request to Exit	
		1	Hagar/ACS	BB1279/1108-626	4.5" x 4.5", Eight Conductor Current Transfer Hinge	
		2	Hagar	BB1279-626	4.5" x 4.5", Ball Bearing Hinges	
		1	LCN	4040XP-AL	Heavy Duty, Door Closer	
					Total:	
HHS2	#7			SCW Dr/HM Fr	Existing Exit Device and Electric Strike	

DVM Database Server:

- Quad Core Intel® Xeon® E5-2403 1.8GHz or AMD equivalent
- 8GB RAM
- Two separate hard drives or two sets of RAID arrays.
- 1TB Hard Disk storage
- DVD Drive
- 1000 Mbps NIC for network connection to the other components of the DVMS
- Graphics card supporting 1280x1024 pixel resolution and 24-bit color – see client PC specifications if Database Server also used as a client machine
- Windows Server 2012 R2 or 8.1
- Microsoft SQL Server 2014
- Microsoft Internet Explorer 9, 10 or 11

The Database Server must provide the following system fault tolerance:

- Support RAID 0+1, 1, 3 or 5 for the Operating System
- Support RAID 0+1 or 1 for the DVMS database (SQL Server 2014)

DVM Camera Server:

- Server level hardware specification
- Quad Core Intel® Xeon® E5-2403 1.8GHz or AMD equivalent
- 8GB RAM
- Two separate hard drives or two sets of RAID arrays.
- **Hard Disk storage sized to meet the Camera Video Recordings**
- DVD Drive
- 1000 Mbps NIC for network connection to the other components of the DVMS
- Graphics card supporting 1280x1024 pixel resolution and 24-bit color – see client PC specifications if Database Server also used as a client machine
- Windows Server 2012 R2
- Microsoft SQL Server 2014 Microsoft Internet Explorer 9, 10 or 11

The system shall support deployment within a virtual infrastructure supporting at least VMware ESX/ESXi 4.0 and later and Windows 2008 R2 Hyper-V and onwards.

DVM Console:

- Intel Core i5-3570 CPU @3.40Ghz or AMD equivalent Hyper threaded
- 4GB RAM
- 500GB Hard Disk storage
- DVD Drive
- 100/1000 Mbps NIC
- Microsoft Windows 7 or Windows 8.1

- Video Graphics Card: Any card able to provide a Windows Experience Index subscore of 6.9 or higher (AMD Radeon HD7470 or equivalent)
- Microsoft Internet Explorer 9, 10 or 11

Operator Workstation:

- Quad-Core Intel® Core i5-3570 @3.40Ghz or AMD equivalent
- 4GB RAM
- 500GB Hard Disk storage
- DVD Drive
- 1000 Mbps NIC
- Microsoft Windows 7
- Video Graphics Card supporting 24-bit color and with 128MB onboard video RAM
- Microsoft Internet Explorer 9, 10 or 11

Optional Hardware/Software Requirements

McLeod County Court House

Scalable Video Storage Solution

- No Hardware or Software Required as Storage is part of base solution

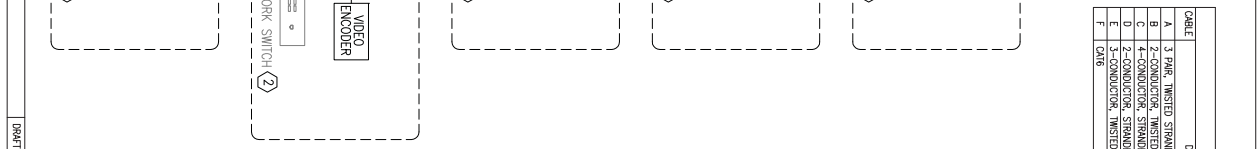
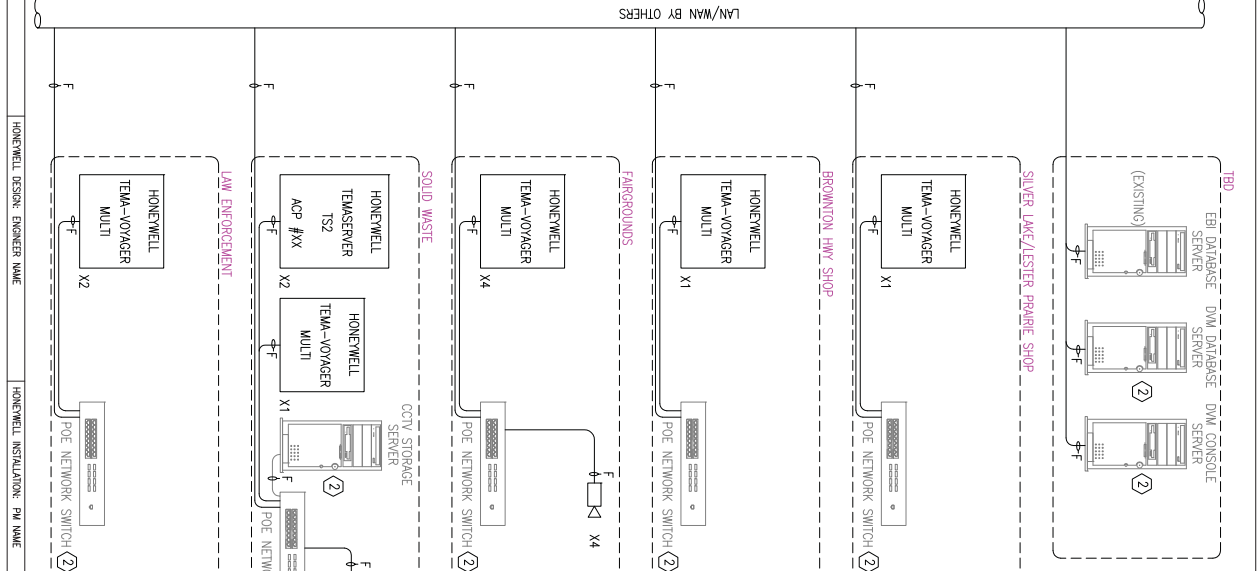
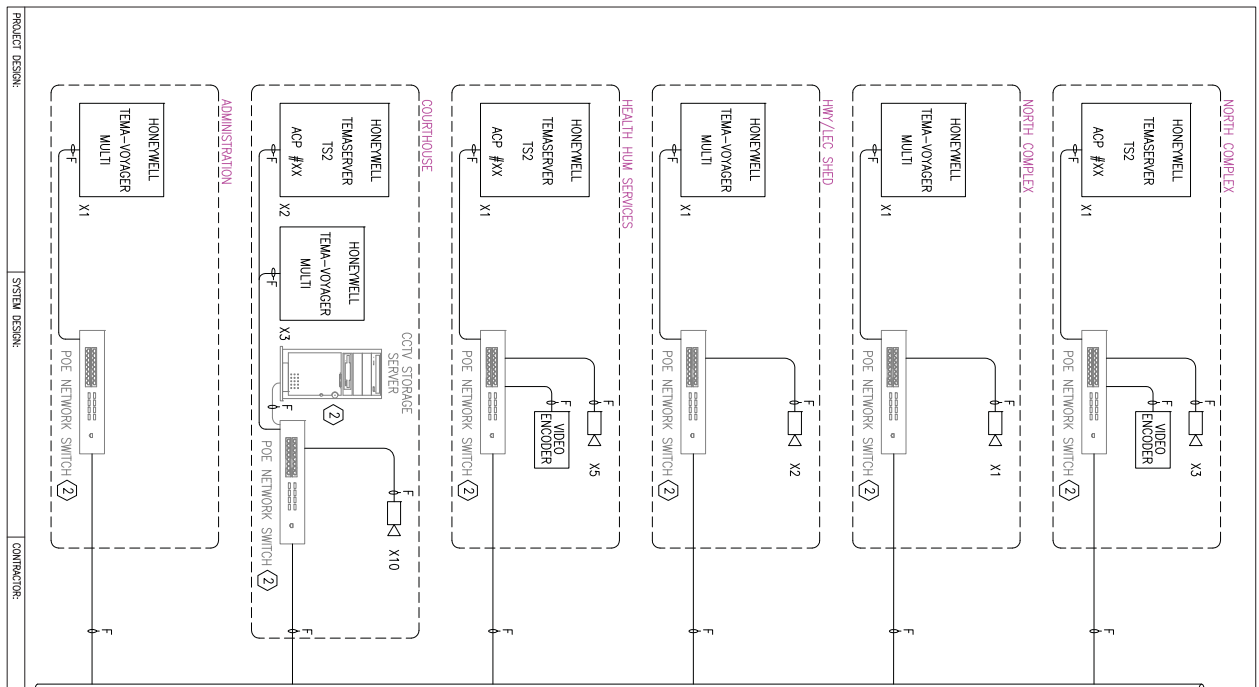
McLeod County HATS

Secondary Scalable Video Storage Solution (Redundancy)

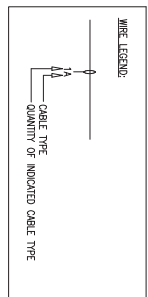
- No Hardware in Proposal- Storage PC provided by County

Software- Redundancy module in DVM software proposed (Please refer to Tab 5 item 2 in Summary RFP costs)

Please refer to Tab 15 for detailed product sheets.



CABLE	DESCRIPTION	MAXIMUM DISTANCE
A	3 PAIR, TWISTED STRANDED, SHIELDED, #22 AWG	150 METER
B	2-CONDUCTOR TWISTED PAIR STRANDED, UNSHIELDED, #22 AWG	240 METER
G	2-CONDUCTOR TWISTED PAIR STRANDED, UNSHIELDED, #22 AWG	240 METER
H	2-CONDUCTOR TWISTED PAIR STRANDED, UNSHIELDED, #22 AWG	240 METER
E	1-CONDUCTOR TWISTED STRANDED, UNSHIELDED, #24 AWG	1210 METER
F	1-CONDUCTOR TWISTED STRANDED, UNSHIELDED, #24 AWG	1210 METER
CM6	NETWORK COMMUNICATIONS	100 METER



SYMBOL	DESCRIPTION	DEVICE
CR	CARD READER	
DC	DOOR CONTACT	
EM	REQUEST TO EXIT MOTION SENSOR (RPE)	
ES	ELECTRIC STRIKE	
ML	MAG LOCK	
KB	DOOR RELEASE BUTTON	
KS	KEY SWITCH	
SI	SUPERSEDED INPUT	
OB	OUTPUT	
JB	JUNCTION BOX	
IP	IP CAMERA	

GENERAL NOTES:

- CABLE SPECIFICATION SHOWN IN THIS DRAWING ARE AS PER MANUFACTURER'S RECOMMENDATION. PRODUCT SELECTION AND LOCAL CODES SHALL BE REFERRED DURING CABLE SELECTION.
- APPROPRIATE CABLE SHALL BE SELECTED WHEN THE ACTUAL WIRING DISTANCE GOES BEYOND RECOMMENDED DISTANCE.
- LAN COMMUNICATION IS LIMITED TO 4200 FEET (1280 METERS)
- LAN DEVICE POWER DISTANCE
 - 16 AWG - DISTANCE OF 400 FEET (120 METERS)
 - 14 AWG - DISTANCE OF 600 FEET (180 METERS)
 - 12 AWG - DISTANCE OF 1000 FEET (300 METERS)
 - BEYOND 1000 FEET (300 METERS) CONTACT HONEYWELL PROJECT MANAGER

KEYED NOTES:

- 120VAC PROVIDED BY OTHERS
- NETWORK SWITCHES, SERVERS, RACKS & UPS WILL BE PROVIDED BY OTHERS
- CONNECTIVITY BETWEEN PROVIDED NETWORK SWITCH & SCHOOL LAN/WAN BY OTHERS.

REV	DESCRIPTION	DATE	BY	CHKD	APP'D
REV F	HIGH LEVEL RISER		BT		
REV E			BT		
REV D			BT		
REV C			BT		
REV B			BT		
REV A			BT		



TAB 7 – RESPONDENT ASSUMPTIONS

1. LIST OF EQUIPMENT

The following hardware is to be provided by McLeod County for each the access control and IP video systems.

Access Control:

1. EBI servers- None needed as County already has an EBI Server in place
2. EBI stations- None needed as County already has two stations in place

IP Video:

3. DVM database servers- 1 (see specs below)
4. DVM camera servers- 2 required (see specs below). Additional depending on bandwidth consideration. **ALTERNATE #2 would require a camera server for redundant storage**
5. DVM console server- 1 (see specs below)
6. Additional workstations (not required. Specs below). System has 5 IE licenses that do not require a system workstation. They can be viewed on county PC's with proper credentials.
7. # of POE camera network switches- see attached POE and Non POE ports required

DVM Database Server:

- Quad Core Intel® Xeon® E5-2403 1.8GHz or AMD equivalent
- 8GB RAM
- Two separate hard drives or two sets of RAID arrays.
- 1TB Hard Disk storage
- DVD Drive
- 1000 Mbps NIC for network connection to the other components of the DVMS
- Graphics card supporting 1280x1024 pixel resolution and 24-bit color – see client PC specifications if Database Server also used as a client machine
- Windows Server 2012 R2 or 8.1
- Microsoft SQL Server 2014
- Microsoft Internet Explorer 9, 10 or 11

The Database Server must provide the following system fault tolerance:

- Support RAID 0+1, 1, 3 or 5 for the Operating System
- Support RAID 0+1 or 1 for the DVMS database (SQL Server 2014)

DVM Camera Server:

- Server level hardware specification
- Quad Core Intel® Xeon® E5-2403 1.8GHz or AMD equivalent
- 8GB RAM
- Two separate hard drives or two sets of RAID arrays.
- **Hard Disk storage sized to meet the Camera Video Recordings**

- DVD Drive
- 1000 Mbps NIC for network connection to the other components of the DVMS
- Graphics card supporting 1280x1024 pixel resolution and 24-bit color – see client PC specifications if Database Server also used as a client machine
- Windows Server 2012 R2
- Microsoft SQL Server 2014 Microsoft Internet Explorer 9, 10 or 11

The system shall support deployment within a virtual infrastructure supporting at least VMware ESX/ESXi 4.0 and later and Windows 2008 R2 Hyper-V and onwards.

DVM Console:

- Intel Core i5-3570 CPU @3.40Ghz or AMD equivalent Hyper threaded
- 4GB RAM
- 500GB Hard Disk storage
- DVD Drive
- 100/1000 Mbps NIC
- Microsoft Windows 7 or Windows 8.1
- Video Graphics Card: Any card able to provide a Windows Experience Index subscore of 6.9 or higher (AMD Radeon HD7470 or equivalent)
- Microsoft Internet Explorer 9, 10 or 11

Operator Workstation:

- Quad-Core Intel® Core i5-3570 @3.40Ghz or AMD equivalent
- 4GB RAM
- 500GB Hard Disk storage
- DVD Drive
- 1000 Mbps NIC
- Microsoft Windows 7
- Video Graphics Card supporting 24-bit color and with 128MB onboard video RAM
- Microsoft Internet Explorer 9, 10 or 11

Building	Sheet	PoE Ports required	Non PoE ports required
North Complex 2391 Hennepin Ave. N Glencoe, MN			
	NC1	2	2
	NC2	1	
Annex 2397 Hennepin Ave. N Glencoe, MN	Annex	2	
Hwy/LEC Shed 2397 Hennepin Ave. N Glencoe, MN	None	3	
Health Hum Srv 1805 Ford Ave. N Glencoe, MN	HHS1	4	2
	HHS2	1	
Courthouse 830 11th St. E Glencoe, MN	CHLEC1A	4	
	CHLEC2A	4	2
	CHLEC3A	5	
Administration same as courthouse	CHLEC3A	2	
Law Enforcement same as courthouse	CHLEC1B		1
	CHLEC2B	1	
	CHLEC3B	1	
Solid Waste 1065 5th Ave SE Hutchinson, MN	Lower		5
	Upper	1	
Fairgrounds 840 Century Ave. SE Hutchinson, MN	Commercial	4	
	4-H	1	
	Agribition	2	
	Poultry	1	

Building	Sheet	PoE Ports required	Non PoE ports required
Brownton Hwy Shop 208 1st Ave. S Brownton, MN	None	1	
Silver Lake/Lester Prairie Hwy Shop 19955 Falcon Ave. Silver Lake, MN	None	1	
TOTALS		41	12

Power Consumption for each PoE Device

Tema Voyager Multi	15.4W
P3707-PE Camera	5.5W
Q3708-PVE Camera	25.5W
P3224-VE	7.1W

2. EQUIPMENT PROVIDED

The following hardware is to be provided by Honeywell for system installation. Please refer to Tab 6 for Bill of Materials.

Access Control

1. Access Control panels, enclosures, power supplies and backup batteries
2. Card Readers, door contacts, REX devices
3. Electronic Locking hardware
4. Enterprise Building Integrator (EBI) Software with Photo ID (printer not included)

IP Video

1. Axis Video Cameras with mounting hardware
2. Axis Analog Converters for existing cameras with rack mounted enclosures
3. Digital Video Manager Software (DVM) with DVM Console Client. Advanced video motion detection and motion search on recorded video included.

3. OTHER ASSUMPTIONS

Access Control

1. All existing devices that will be integrated to new system in working order
2. Existing access cards will be used (no new access cards provided in this RFP)
3. McLeod to provide UPS for backup (system will include battery backup for limited period)
4. McLeod to provide necessary IP ports for access panels connectivity to network

IP Video

1. McLeod to provide necessary IP ports and POE/Non POE switches as listed in this RFP
2. McLeod to provide rack space for analog encoders

General

1. Areas assumed to be Asbestos free
2. Access to all areas M-F 8-5 unless notified in advance by County



**TAB 8 – INSTALLATION
METHODOLOGY AND DRAWINGS**

1. INSTALLATION METHODOLOGY

1. Time Line
 - a. Estimated Start: Nov 1, 2016
 - b. Estimated Completion: January 27, 2017

2. Equipment/System installation time per location
 - a. North Complex- 5 days
 - b. Annex- 1 day
 - c. Hwy/LEC Shed- 1-2 days
 - d. HHS- 5 days
 - e. Courthouse/Admin/LEC- 40 days (includes head-end work)
 - f. Solid Waste- 10 days
 - g. Fairgrounds- 10 days
 - h. Brownton Hwy Shop- 1 day
 - i. Silver Lake/Lester Prairie Hwy Shop- 1 day

Note: several crews will be working on buildings simultaneously.

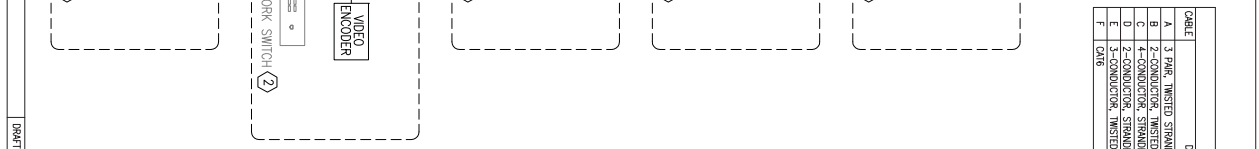
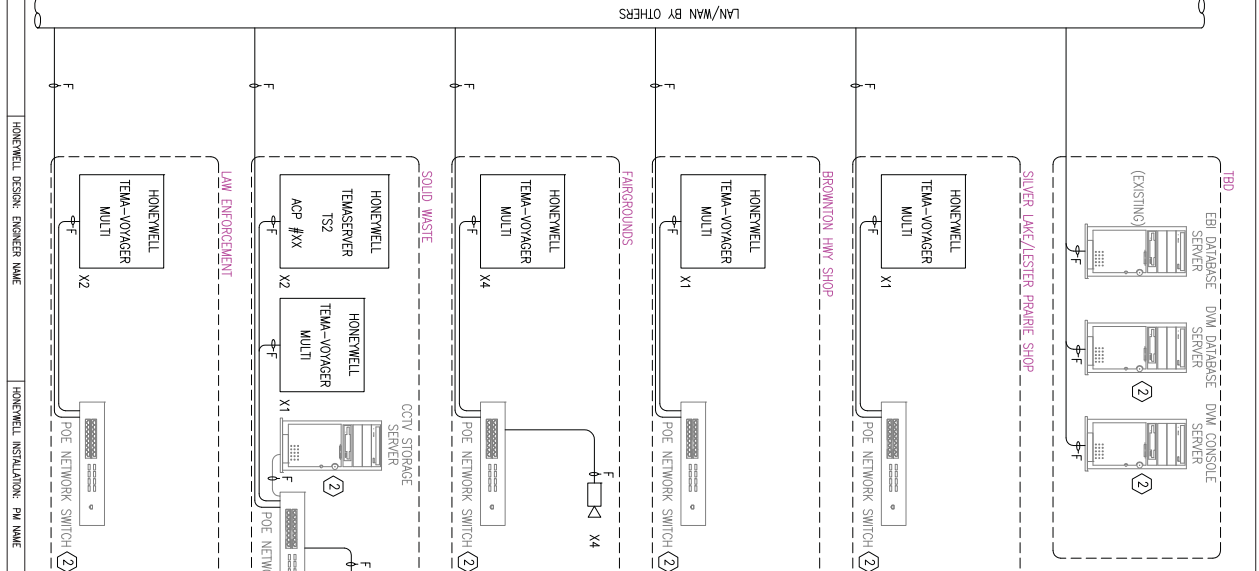
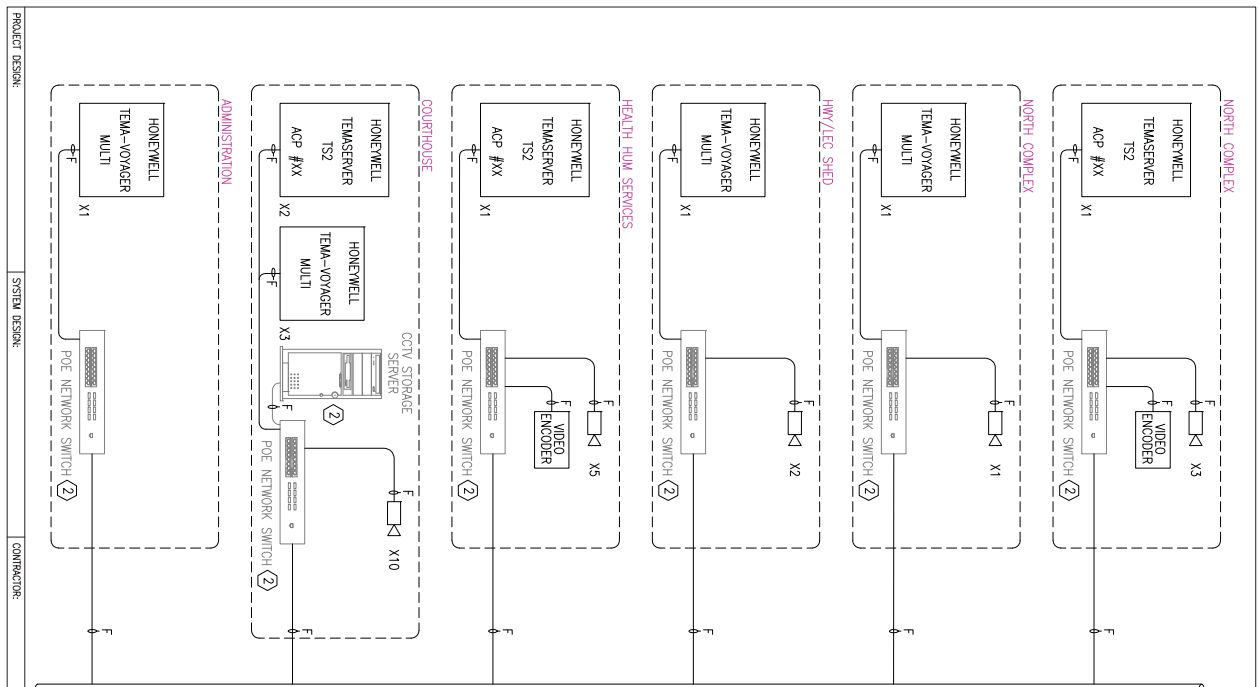
3. Database Collection

As part of the initial setup and commissioning, databases will be populated for both access control and video systems. One advantage of a new access system is the opportunity to “clean up” the existing database of users still in the system but no longer employees of the county.

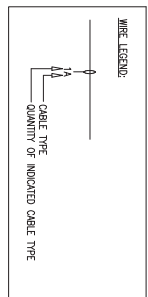
 - a. Access Control
 - i. Readers- programmed in to system as installed
 - ii. Cardholders- programmed in to software throughout installation. Existing system to be used until cut over.
 - iii. Access Levels- programmed in to software throughout installation.
 - iv. Misc.- Any other data can be programmed in as system is set up

 - b. IP Video
 - i. Cameras programmed in to DVM software as installed. Field of view set between installing technician and McLeod personnel for desired viewing angles.
 - ii. Motion detection and other advanced features programmed in as system installed and customer is trained
 - iii. Camera frame rates determined per building using available bandwidth as guide

4. Network Assessment
 - a. Access Control
 - i. Minimal bandwidth required for access system.
 - ii. IP ports required for each panel installed (see diagram in this RFP)
 - b. IP Video
 - i. Camera server storage to be determined after consultation between Honeywell and McLeod personnel. Storage dependent upon frames per second (FPS) transmitted per camera back to server.
 - ii. Bandwidth projections can be calculated by Honeywell personnel per building.
5. Application Deployment
 - a. Access System
 - i. System to go live once all acceptance testing completed. Existing system to remain active until new system in place. New system active by 1/27/17.
 - b. IP Video
 - i. System to go live as cameras installed. Camera database and server to be set up and programmed initially to take on cameras as installed. New system in place by 1/27/17
6. Training
 - a. Access System
 - i. Multiple training sessions are part of this RFP. Time and structure to be set up by McLeod and Honeywell.
 - b. IP Video
 - i. Multiple training sessions are part of this RFP. Time and structure to be set up by McLeod and Honeywell.
7. Acceptance and warranty
 - a. Both system warranties of one year to commence upon McLeod County's acceptance of each system being operational and County personnel having received proper training to operate each system.



CABLE	DESCRIPTION	MAXIMUM DISTANCE
A	3 PAIR, TWISTED STRANDED, SHIELDED, #22 AWG	150 METER
B	2-CONDUCTOR TWISTED PAIR STRANDED, UNSHIELDED, #22 AWG	240 METER
G	2-CONDUCTOR TWISTED PAIR STRANDED, UNSHIELDED, #22 AWG	240 METER
H	2-CONDUCTOR TWISTED PAIR STRANDED, UNSHIELDED, #22 AWG	240 METER
E	2-CONDUCTOR TWISTED STRANDED, UNSHIELDED, #24 AWG	1210 METER
F	2-CONDUCTOR TWISTED STRANDED, UNSHIELDED, #24 AWG	1210 METER
CM6	NETWORK COMMUNICATIONS	100 METER



SYMBOL	DESCRIPTION	DEVICE
CR	CARD READER	
DC	DOOR CONTACT	
EM	REQUEST TO EXIT MOTION SENSOR (RPE)	
ES	ELECTRIC STRIKE	
ML	MAG LOCK	
KB	DOOR RELEASE BUTTON	
KS	KEY SWITCH	
SI	SUPERSEDED INPUT	
OB	OUTPUT	
JB	JUNCTION BOX	
IP	IP CAMERA	

GENERAL NOTES:

- CABLE SPECIFICATION SHOWN IN THIS DRAWING ARE AS PER MANUFACTURER'S RECOMMENDATION. PRODUCT SELECTION AND LOCAL CODES SHALL BE REFERRED DURING CABLE SELECTION.
- APPROPRIATE CABLE SHALL BE SELECTED WHEN THE ACTUAL WIRING DISTANCE GOES BEYOND RECOMMENDED DISTANCE.
- LAN COMMUNICATION IS LIMITED TO 4200 FEET (1280 METERS)
 - 16 AWG - DISTANCE OF 400 FEET (120 METERS)
 - 14 AWG - DISTANCE OF 600 FEET (180 METERS)
 - 12 AWG - DISTANCE OF 1000 FEET (300 METERS)
 - BEYOND 1000 FEET (300 METERS) CONTACT HONEYWELL PROJECT MANAGER
- LAN DEVICE POWER DISTANCE
 - 120W: PROVIDED BY OTHERS
 - NETWORK SWITCHES, SERVERS, RACKS & UPS WILL BE PROVIDED BY OTHERS
 - CONNECTIVITY BETWEEN PROVIDED NETWORK SWITCH & SCHOOL LAN/WAN BY OTHERS.

REV	DATE	BY	CHKD	APP'D	DESCRIPTION
REV F		BT			HIGH LEVEL RISER
REV E		BT			
REV D		BT			
REV C		BT			
REV B		BT			
REV A	09/29/16	BT			ISSUED FOR REVISION

3. COMPLETE NETWORK DIAGRAM

Building	Sheet	PoE Ports required	Non PoE ports required
North Complex 2391 Hennepin Ave. N Glencoe, MN			
	NC1	2	2
	NC2	1	
Annex 2397 Hennepin Ave. N Glencoe, MN	Annex	2	
Hwy/LEC Shed 2397 Hennepin Ave. N Glencoe, MN	None	3	
Health Hum Srv 1805 Ford Ave. N Glencoe, MN	HHS1	4	2
	HHS2	1	
Courthouse 830 11th St. E Glencoe, MN	CHLEC1A	4	
	CHLEC2A	4	2
	CHLEC3A	5	
Administration same as courthouse	CHLEC3A	2	
Law Enforcement same as courthouse	CHLEC1B		1
	CHLEC2B	1	
	CHLEC3B	1	
Solid Waste 1065 5th Ave SE Hutchinson, MN	Lower		5
	Upper	1	
Fairgrounds 840 Century Ave. SE Hutchinson, MN	Commercial	4	
	4-H	1	
	Agribition	2	
	Poultry	1	

Building	Sheet	PoE Ports required	Non PoE ports required
Brownton Hwy Shop 208 1st Ave. S Brownton, MN	None	1	
Silver Lake/Lester Prairie Hwy Shop 19955 Falcon Ave. Silver Lake, MN	None	1	
TOTALS		41	12

Power Consumption for each PoE Device

Tema Voyager Multi	15.4W
P3707-PE Camera	5.5W
Q3708-PVE Camera	25.5W
P3224-VE	7.1W



TAB 9 – ACCEPTANCE TESTING

1. RECOMMENDED INSTALLATION AND ACCEPTANCE TEST PLAN

Acceptance Checklist

1. Access System
 - a. All readers tested to be operational
 - b. Software and database programmed
 - c. Access levels entered
 - d. Access credentials working
 - e. Training Complete

2. IP Video System
 - a. All cameras in focus
 - b. Field of View for each camera acceptable to McLeod personnel
 - c. Database server configured for each camera. Frame rate for allowable bandwidth.
 - d. Camera servers configured for proper storage requirements
 - e. All motion detection and special features programmed
 - f. Training Complete

Honeywell will comply with section 4.07 pp28, 29 of RFP on Project Closeout and acceptance.



**TAB 10 – SOFTWARE UPGRADES
AND ACTIVE DIRECTORY INTERFACE**

1. PROPOSED SOFTWARE UPGRADE MAINTENANCE

- a. Software Upgrades:
 - a. Per section 4.08, pp 29, 30 of RFP
 - i. All patches and updates included during first year warranty.
 - ii. Also includes OS and database tuning, hardware and software diagnosis as needed.
- b. Frequency of Upgrades:
 - a. Software cycles of 24-36 months are typical on major releases of EBI/DVM software.
- c. Last Upgrade
 - a. Both EBI and DVM were upgraded in the past 12 months
- d. Impact of upgrades
 - a. Upgrades are done by qualified Honeywell technicians and usually take 3-5 days to complete depending on complexity of system.
 - b. Downtime is minimal as both systems can run concurrently during a conversion.
- e. Tools for upgrades
 - a. Honeywell will supply the necessary system software with the customer providing the hardware and OS
- f. Installation Team
 - a. Qualified Honeywell technicians will install and commission all upgrades

2. LDAP INTEGRATION WITH MS ACTIVE DIRECTORY

The following can be done using LDAP Integration:

1. Importing Users and groups to manage access
2. AD sync with surveillance system
3. Lost badge and disabling the AD account

About operator-based security

Operator-based security provides a higher level of security than Station-based security. This is the default security choice for EBI. In general, operator-based security with traditional operator accounts works as follows:

- You assign a specific security level to each user.
- Users cannot access any Station functions unless they enter a valid ID and password.
- To access a higher security level than the one they are currently using, users need to log off and log on again as a different operator who has the higher security level.
- Assignable locations are assigned to the operator, irrespective of which Station they are currently logged on to.

If you choose operator-based security, there are several alternatives that you can use:

Account Type Description

Traditional operator account: An account whose definition exists only in the EBI server database. Authentication and authorization is done by the EBI server.

Integrated account: A combination of a Windows user account and an EBI operator account. The Windows user account can be a local account or a domain account. For information to consider when deciding to use local or domain accounts, see 'About integrated security'. Authentication is done by Windows, authorization is done by the EBI server.

Windows group accounts: An integrated account that allows you to add multiple operators by adding the Windows group to the EBI server. The Windows group can be a local Windows group or a domain Windows group. For information to consider when deciding to use local or domain Windows groups, see 'About integrated security'. Authentication is done by Windows. Authorization is done by the EBI server.

LDAP operator account: A combination of an LDAP account and an EBI operator account. Authentication is done by an LDAP server, authorization is done by the EBI server.

There are two aspects to operator-based security: *authentication and authorization*.

Authentication is the process of verifying that a user is known to the system, while *authorization* controls what a known user can do within the system. Accounts are used to restrict access and authority within Station.

For traditional operator accounts, authentication of the user is done by the EBI server against credentials stored in EBI. Authorization is also controlled by EBI using security levels and, if applicable, assignable locations.



**TAB 11 – RESPONDENT AND
SUBCONTRACTORS QUALIFICATIONS**

1. INFORMATION ABOUT THE RESPONDENT

A. Company name: Honeywell Building Solutions, a division of Honeywell International

B. Legal name (if different) : N/A

C. Years in business: 130 years

D. Number of years selling systems similar to this Proposal: >20

E. Contact person: John Barry, HBS Senior Account Manager

F. Full mailing address: 1985 Douglas Drive North, Golden Valley, MN 55422

G. Telephone number: (763) 402-4306

H. Fax number: (763) 954-5397

I. E-mail address: john.barry@honeywell.com

J. Name and phone number of bonding company:

Chubb Group of Insurance Companies
15 Mountain View Road
Warren, NJ 07061
Tel: (866) 324-8222

K. Number of full-time employees: 129,000 globally, 3100 for the Midwest District

L. Number of technical/installation personnel (minimum of four dedicated to this project):
5 HBS employees

M. Names and titles of personnel who would be providing the training for the equipment in this project (attach listing of experience with similar projects)

HBS Technicians, Seth Wilhelm and Johnny Cain

Similar projects:

- Minnesota History Center
- Department of Human Services
- The Judicial Building

N. Name of person who would be project manager for this project (attach listing of experience with similar projects)

Tommy Earlywine has been selected to be Project Manager.

Similar projects:

- Minnesota History Center
- Department of Human Services
- The Judicial Building

O. Dunn and Bradstreet Number

1. Respondent: Honeywell International – 13-969-1877

2. Equipment Manufacturer: Honeywell International – 13-969-1877

2. QUALIFICATION AND REQUIREMENTS

1. List Prime Contractor here:

Honeywell Building Solutions, a division of Honeywell International

Honeywell will act as prime contractor on this project. We have selected the following subcontractors to assist on this project:

- Muska Electric
- Midwest Lock and Safe

Honeywell will oversee and project manage the work of subcontractors and ensure all work meets specification from RFP.

3. EXPERIENCE AND EXISTING CUSTOMERS

How many similar systems has the Respondent sold/installed?

- A. In the area: >20
- B. Statewide: >40
- C. Nationwide: >300

4. REFERENCES

Reference #1

Organization Name:	<u>Itasca County, MN</u>
Address:	<u>123 NE 4th St.</u>
	<u>Grand Rapids, MN 55744</u>
Type of Business:	<u>County Government</u>
Contact Person:	<u>Randy Washburn</u>
Telephone Number:	<u>218-327-7352</u>
Contact Email Address:	<u>randal.washburn@co.itasca.mn.us</u>
Dates of Installation:	<u></u>
Description of Systems:	<u>Digital/IP Video System Installed</u>
Number of Network Locations:	<u></u>

Reference #2

Organization Name: Minnesota Department of Revenue

Address: 600 Robert St. N

State of MN Government Paul, MN 55101

Type of Business: _____

Contact Person: Kyle Jenner

Telephone Number: 651-556-6211

Contact Email Address: kyle.jenner@state.mn.us

Dates of Installation: _____

Description of Systems: Digital/IP Video System Installed

Number of Network Locations: _____

Reference #3

Organization Name: Honeywell International

Address: 1985 Douglas Drive

Golden Valley, MN 55422

Type of Business: _____

Contact Person: Josh Arel

Telephone Number: 763-688-4956

Contact Email Address: josh.arel@honeywell.com

Dates of Installation: _____

Description of Systems: Digital/IP Video System Installed

Number of Network Locations: _____

Subcontractors/ Partners

Business Name	Years Experience	Type of Work	Percent of Project
Muska Electric	50 years	Electrical wiring and device	30%
Midwest Lock and Safe	20 years	Locking Hardware	15%

References for Subcontractor - Muska Electric

Reference #1

Organization Name: Minneapolis Public Schools

Address: 1250 W Broadway Ave
Minneapolis, MN 55411

Type of Business: Public School

Contact Person: Galiena Boyajian

Telephone Number: 612-668-0257

Contact Email Address: galiena.boyajian@mpls.k12.mn.us

Dates of Installation: _____

Description of Systems: _____

Number of Network Locations: _____

Reference #2

Organization Name: Ramsey County LEC

Address: 425 Grove St.
St. Paul, MN 55101

Type of Business: Detention Facility

Contact Person: Jason Degerstrom

Telephone Number: 651-266-9343

Contact Email Address: jason.degerstrom@co.ramsey.mn.us

Dates of Installation: _____

Description of Systems: _____

Number of Network Locations: _____

References for Subcontractor - Muska Electric

Reference #3

Organization Name: Ramsey County buildings

Address: County-wide including Courthouse
St. Paul, MN

Type of Business: County Government

Contact Person: Ed Kohanek

Telephone Number: 651-266-3431

Contact Email Address: ed.kohanek@co.ramsey.mn.us

Dates of Installation: _____

Description of Systems: _____

Number of Network Locations: _____

Reference #4

Organization Name: Boys Totem Town detention facility

Address: 398 Totem Rd
St. Paul, MN

Type of Business: Detention Center

Contact Person: Keith Lattimore

Telephone Number: 651-266-5013

Contact Email Address: keith.lattimore@co.ramsey.mn.us

Dates of Installation: _____

Description of Systems: _____

Number of Network Locations: _____

References for Subcontractor – Midwest Safe and Lock

Reference #1

Organization Name: Saint Johns University
Address: 2850 Abbey Plaza
Collegeville, MN 56321
Type of Business: Higher Education
Contact Person: Gary Jorgenson
Telephone Number: 320-363-3303
Contact Email Address: _____
Dates of Installation: _____
Description of Systems: _____
Number of Network Locations: _____

Reference #2

Organization Name: Sherburne County
Address: 13880 Business Center Dr NW
Elk River, MN 55330-1692
Type of Business: County Government
Contact Person: Bill Marks
Telephone Number: 763-265-3128
Contact Email Address: _____
Dates of Installation: _____
Description of Systems: _____
Number of Network Locations: _____

References for Subcontractor – Midwest Safe and Lock

Reference #3

Organization Name: 3M

Address: _____

Type of Business: Manufacturing

Contact Person: Dave Youngquist

Telephone Number: 651-210-7656

Contact Email Address: _____

Dates of Installation: _____

Description of Systems: _____

Number of Network Locations: _____

Reference #4

Organization Name: General Mills

Address: _____

Minneapolis, MN

Type of Business: Manufacturing

Contact Person: Matt O'Sullivan

Telephone Number: 763-293-2418

Contact Email Address: _____

Dates of Installation: _____

Description of Systems: _____

Number of Network Locations: _____

5. SURVEILLANCE SYSTEM SERVICE AFTER INSTALLATION

A. How many service personnel trained in maintaining the proposed systems does Respondent employ in the County's area? Please indicate location closest to the County.

- 1. Trained Service Personnel: 8 employees
- 2. Location: Golden Valley, MN

B. Provide the address of Respondent's service center(s) closest to the County:

- 1. Company Honeywell Building Solutions
- 2. Address 1985 Douglas Drive North Golden Valley MN
- 3. Telephone Number 763-954-5671

C. Who shall maintain parts inventory? At what location?

- 1. Company Honeywell Building Solutions
- 2. Address 1985 Douglas Drive North Golden Valley MN
- 3. Telephone Number 763-954-5671
- 4. What critical component parts are kept in stock at this location?
Panels and field devices

6. FINANCIAL STATEMENTS

ITEM 8. Financial Statements and Supplementary Data

HONEYWELL INTERNATIONAL INC. CONSOLIDATED STATEMENT OF OPERATIONS

	Years Ended December 31,		
	2015	2014	2013
	(Dollars in millions, except per share amounts)		
Product sales	\$30,695	\$32,398	\$31,214
Service sales	7,886	7,908	7,841
Net sales	<u>38,581</u>	<u>40,306</u>	<u>39,055</u>
Costs, expenses and other			
Cost of products sold	21,775	23,889	23,317
Cost of services sold	4,972	5,068	5,047
	26,747	28,957	28,364
Selling, general and administrative expenses	5,006	5,518	5,190
Other (income) expense	(68)	(305)	(238)
Interest and other financial charges	310	318	327
	<u>31,995</u>	<u>34,488</u>	<u>33,643</u>
Income from continuing operations before taxes	6,586	5,818	5,412
Tax expense	1,739	1,489	1,450
Net income	4,847	4,329	3,962
Less: Net income attributable to the noncontrolling interest	79	90	38
Net income attributable to Honeywell	<u>\$ 4,768</u>	<u>\$ 4,239</u>	<u>\$ 3,924</u>
Earnings per share of common stock—basic	<u>\$ 6.11</u>	<u>\$ 5.40</u>	<u>\$ 4.99</u>
Earnings per share of common stock—assuming dilution	<u>\$ 6.04</u>	<u>\$ 5.33</u>	<u>\$ 4.92</u>
Cash dividends per share of common stock	<u>\$ 2.15</u>	<u>\$ 1.87</u>	<u>\$ 1.68</u>

HONEYWELL INTERNATIONAL INC. CONSOLIDATED BALANCE SHEET

	December 31,	
	2015	2014
	(Dollars in millions)	
ASSETS		
Current assets:		
Cash and cash equivalents.....	\$ 5,455	\$ 6,959
Accounts, notes and other receivables.....	8,075	7,960
Inventories.....	4,420	4,405
Deferred income taxes.....	—	722
Investments and other current assets.....	2,103	2,145
Total current assets.....	20,053	22,191
Investments and long-term receivables.....	517	465
Property, plant and equipment—net.....	5,789	5,383
Goodwill.....	15,895	12,788
Other intangible assets—net.....	4,577	2,208
Insurance recoveries for asbestos related liabilities.....	426	454
Deferred income taxes.....	283	404
Other assets.....	1,776	1,558
Total assets.....	<u>\$ 49,316</u>	<u>\$45,451</u>
LIABILITIES		
Current liabilities:		
Accounts payable.....	\$ 5,580	\$ 5,365
Commercial paper and other short-term borrowings.....	5,937	1,698
Current maturities of long-term debt.....	577	939
Accrued liabilities.....	6,277	6,771
Total current liabilities.....	18,371	14,773
Long-term debt.....	5,554	6,046
Deferred income taxes.....	558	236
Postretirement benefit obligations other than pensions.....	526	911
Asbestos related liabilities.....	1,251	1,200
Other liabilities.....	4,348	4,282
Redeemable noncontrolling interest.....	290	219
SHAREOWNERS' EQUITY		
Capital—common stock issued.....	958	958
—additional paid-in capital.....	5,377	5,038
Common stock held in treasury, at cost.....	(11,664)	(9,995)
Accumulated other comprehensive income (loss).....	(2,535)	(1,459)
Retained earnings.....	26,147	23,115
Total Honeywell shareowners' equity.....	18,283	17,657
Noncontrolling interest.....	135	127
Total shareowners' equity.....	18,418	17,784
Total liabilities, redeemable noncontrolling interest and shareowners' equity.....	<u>\$ 49,316</u>	<u>\$45,451</u>

HONEYWELL INTERNATIONAL INC. CONSOLIDATED STATEMENT OF CASH FLOWS

	Years Ended December 31,		
	2015	2014	2013
	(Dollars in millions)		
Cash flows from operating activities:			
Net income	\$ 4,847	\$ 4,329	\$ 3,962
Less: Net income attributable to the noncontrolling interest	79	90	38
Net income attributable to Honeywell	4,768	4,239	3,924
Adjustments to reconcile net income attributable to Honeywell to net cash provided by operating activities:			
Depreciation	672	667	670
Amortization	211	257	319
Loss on sale of non-strategic businesses and assets	1	11	20
Gain on sale of available for sale investments	—	(221)	(195)
Repositioning and other charges	546	598	663
Net payments for repositioning and other charges	(537)	(530)	(763)
Pension and other postretirement (income) expense	(323)	44	(19)
Pension and other postretirement benefit payments	(122)	(167)	(298)
Stock compensation expense	175	187	170
Deferred income taxes	315	132	262
Excess tax benefits from share based payment arrangements	(81)	(102)	(132)
Other	(8)	(327)	308
Changes in assets and liabilities, net of the effects of acquisitions and divestitures:			
Accounts, notes and other receivables	211	(172)	(365)
Inventories	230	(200)	41
Other current assets	80	120	(421)
Accounts payable	(17)	307	352
Accrued liabilities	(667)	181	(201)
Net cash provided by operating activities	<u>5,454</u>	<u>5,024</u>	<u>4,335</u>
Cash flows from investing activities:			
Expenditures for property, plant and equipment	(1,073)	(1,094)	(947)
Proceeds from disposals of property, plant and equipment	15	18	15
Increase in investments	(6,714)	(4,074)	(1,220)
Decrease in investments	6,587	3,288	1,122
Cash paid for acquisitions, net of cash acquired	(5,228)	(4)	(1,133)
Proceeds from sales of businesses, net of fees paid	1	160	3
Other	(102)	(170)	201
Net cash used for investing activities	<u>(6,514)</u>	<u>(1,876)</u>	<u>(1,959)</u>
Cash flows from financing activities:			
Net increase in commercial paper and other short-term borrowings	4,265	309	930
Proceeds from issuance of common stock	186	265	447
Proceeds from issuance of long-term debt	60	97	1,063
Payments of long-term debt	(880)	(609)	(607)
Excess tax benefits from share based payment arrangements	81	102	132
Repurchases of common stock	(1,884)	(924)	(1,073)
Cash dividends paid	(1,726)	(1,510)	(1,353)
Other	—	(2)	28
Net cash provided by (used for) financing activities	<u>102</u>	<u>(2,272)</u>	<u>(433)</u>
Effect of foreign exchange rate changes on cash and cash equivalents	(546)	(339)	(155)
Net (decrease) increase in cash and cash equivalents	(1,504)	537	1,788
Cash and cash equivalents at beginning of period	6,959	6,422	4,634
Cash and cash equivalents at end of period	<u>\$ 5,455</u>	<u>\$ 6,959</u>	<u>\$ 6,422</u>



**TAB 12 – PROJECT TEAM AND
MAINTENANCE TEAM**

1. INSTALLATION PERSONNEL

Name	Title	Certification
Tommy Earlywine	HBS Project Manager	
Alan Karpa	HBS Technician	EBI Certified
Seth Wilhelm	HBS Programmer	EBI Certified
Johnny Cain	HBS Technician	EBI Certified
Ken Jones	HBS Technician	EBI Certified

ALAN KARPA Specialist Installation Technician	
Job Responsibilities:	<ul style="list-style-type: none"> • Programming of building Security & Fire Systems • Oversight of projects to ensure adherence to schedule and budget
Honeywell Experience:	1 year/ 30 years industry
Notable Projects:	<ul style="list-style-type: none"> • The Colonnade High Rise Building • State of Minnesota Campus • Minneapolis Metropolitan Airports Campus
Training:	Various Honeywell Systems and Integration Platforms
Certifications:	<ul style="list-style-type: none"> – Certified in Honeywell EBI Platforms – Certified in XLS 3000 Platt – Certified in NICET Level Fire Systems

SETH WILHELM Specialist Installation Technician	
Job Responsibilities:	<ul style="list-style-type: none"> • Programming of building Security & Fire Systems • Oversight of Projects to ensure adherence to schedule and budget
Honeywell Experience:	1 year/ 5 years industry
Notable Projects:	<ul style="list-style-type: none"> • North Dakota State University of Medicine Campus • State of Minnesota Campus • Minneapolis Metropolitan Airports Campus
Training:	Various Honeywell Systems and Integration Platforms
Certifications:	<ul style="list-style-type: none"> – Certified in Digital Video Manager – Certified in Temaline Access Systems – Certified in Honeywell EBI Platforms

JOHNEY CAIN Specialist Installation Technician	
Job Responsibilities:	<ul style="list-style-type: none"> • Programming of building Security & Fire Systems • Oversight of Projects to ensure adherence to schedule and budget
Honeywell Experience:	1 year/ 18 years Industry
Notable Projects:	<ul style="list-style-type: none"> • State of Minnesota Campus • Minneapolis Metropolitan Airports Campus • The Colonnade High Rise Building
Training:	Various Honeywell Systems and Integration Platforms
Certifications:	<ul style="list-style-type: none"> – Certified in Temaline Access Systems – Certified in Honeywell EBI Platforms – Certified in NICET Level Fire Systems

KENNETH JONES Specialist Installation Technician	
Job Responsibilities:	<ul style="list-style-type: none"> • Programming of building Security & Fire Systems • Oversight of Projects to ensure adherence to schedule and budget
Honeywell Experience:	1 year/ 20 years industry
Notable Projects:	<ul style="list-style-type: none"> • Minneapolis Institute of Arts • State of Minnesota Campus • Minneapolis Metropolitan Airports Campus
Training:	Various Honeywell Systems and Integration Platforms
Certifications:	<ul style="list-style-type: none"> – Certified in Honeywell EBI Platforms – Certified in PCSC Access Systems – Certified in NICET Level Fire Systems

2. SERVICE INSTALLATION

Service team alignment with McLeod to be determined upon completion of installation.

Name	Title	Certification
Tim Kasper	HBS Technician	EBI Certified
Mike Roban	HBS Technician	EBI Certified
Josh Arel	HBS Technician	EBI Certified
Bob Storkamp	HBS Technician	EBI Certified



**TAB 13 – EXCEPTIONS AND
CLARIFICATIONS**

Exceptions

1. Network Bandwidth Disclaimer

IP video is often transmitted over WAN/LAN. Determining the frame rate per second of cameras (FPS) and resolution can impact the speed at which networks perform.

Honeywell technicians will work with McLeod IT personnel to best determine the FPS and resolution per camera per building to help optimize the video solution being provided by Honeywell.

2. Camera Server Sizing/Storage

The specifications delivered in this RFP did not include the hard drive information necessary for storage as that cannot be determined without further information as to cameras settings and customer expectations. Upon contract award, recommendations will be provided as to size of hard drives necessary to meet needs of County.

3. UPS and emergency power backup

Customer is responsible for UPS backup of critical systems. Backup battery power will be provided by Honeywell as temporary power source in event of primary power loss.

4. Asbestos

It is assumed that no Honeywell technician or its subcontractor will be working in areas where asbestos is present.

5. Existing Access Cards

Existing access credentials will be used for new system. Cards will be compatible with new hardware and software. Cards are not included with this proposal.

6. Bluetooth Enabled (BTE) card readers

This solution does include BTE technology that allows cell phones to be used as credentials rather than physical access cards. While this technology is available as part of Honeywell's solution, it will not be implemented in phase 1 of this project.

Clarification

1. 3-Year Warranty Pricing

While letter “O” on page 20 requests pricing to extend warranty to three years, it was not clear where this price would be inserted in the body of the proposal. To extend the warranty from one year as outlined in section 4.08, letter B “Warranty Period and Maintenance” to three years the following cost would be added to the base price:

\$29,950.00

This would include two additional years of parts and labor warranty on all front-end software, panels, field devices, cameras, electronic locking hardware and all material listed on bill of materials as submitted with this RFP. Customer provided hardware would not be included in this warranty.

2. Warranty Service Availability beyond 3 years

Letter Q on page 21 requests contractor provide service availability beyond the extended warranty period of three years and to specify an annual cost and period of extension. While Tab 2 of the RFP asks for a five-year maintenance support guarantee, it does not request a cost for a service contract in years 4 and 5.

Honeywell will provide a service proposal once the warranty expires (either one year or three years). Since Honeywell provides different levels of warranty coverage, and it is not outlined clearly what is meant by “warranty service beyond three years”, a budgetary range can be used for this exercise of \$15,500.00 to \$35,000.00 per year based on desired coverage.

Also, it is difficult to determine the architecture of the system in 3 years as many additions and modifications will be made to the system influencing the service contract cost.

3. Terms and Conditions

As Honeywell has a current contract with McLeod County, it is possible that current terms and conditions governing that agreement may be used in this potential contract between McLeod County and Honeywell. The terms and conditions outlined in section 2 of the RFP will be reviewed by Honeywell and may contain addendums as was the case with the original agreement.



TAB 14 – EXHIBITS

This section purposefully left blank as exhibits and supporting literature included in other sections/tabs of this RFP



TAB 15 – SALES AND BROCHURES



HONEYWELL BUILDING SOLUTION

Enterprise Buildings Integrator R430 Technical Specification

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Specification and Technical Data

Key Features

- Total integration of Access Control, Security, Surveillance, Heating Ventilation and Air Conditioning, Energy Management and Life Safety systems
- Integration with a diverse range of devices, enterprise systems, Internet and intranet sources allowing integrated building management of key facility control and information
- Mobile user interface extending the power of EBI to your hands. This includes an optimized EasyMobile interfaces for Smart Phones, and the Tablet solution that supports all features of EBI Operator Station
- Uses industry standard hardware with Windows 7 or Windows 2008 R2 Server operating systems. Full support for Virtualization technologies like VMware ESX and Windows HyperV.
- Supports for leading open standards: BACnet, LonMark, OPC and Modbus. Enterprise Web Services are also available to extend your EBI system with powerful value added applications.
- Web-based user interface provides operators or facility engineers easy access and puts the user in control of every situation. Use of modern new HTML5 is featured in key parts of EBI R430
- UL Listed to Standards: UL864 (Accessory and Panels Fire, Smoke Control, Critical & Non Critical Process Control), UL2017 (Signaling Systems), UL916 (Energy Management Systems), UL1017 and UL1076 (Security Systems), UL1610 (Central Station) and UL294 (Access Control)
- Suitable for use in a restricted Pharmaceutical environment requiring conformance to 21 CFR Part 11 for electronic records and electronic signatures
- Designed and developed to International Standards ISO 9001 for quality



Honeywell Building Manager

Building Manager provides tools and data to better manage the environment, resulting in energy efficiency and significant cost savings. Maintenance staff have, at their fingertips, the functionality and information they need to minimize maintenance costs, including:

- Scheduling
- Detailed HVAC information
- Alarm Pager
- HVAC reports



Honeywell Security Manager

Security Manager provides an affordable way of ensuring the security of people, locations, and intellectual property. Its comprehensive approach to access control and security accommodates all of your security requirements including:

- Monitoring and Control of your Intrusion protection systems
- Efficient management of cardholder details
- Access card design and creation, including PhotoID
- Comprehensive control and monitoring of all cardholders at your site, including shift management, guard tour, and visitor management
- Prompt, intelligent alarms, including operator response instructions and deadman timer



Honeywell Life Safety Manager

Life Safety Manager allows monitoring and control of fire alarm systems for fire protection and smoke control. EBI is available with UL864 Listing for Ethernet based life safety control and monitoring. The operator is provided with continuous information about the building's fire protection systems and can actuate a fire alarm or building evacuation from Station.



Honeywell Digital Video Manager

Digital Video Manager seamlessly integrates video and audio surveillance of your facility using cameras connected directly to your LAN, enabling flexible event-based recording and viewing.



Honeywell Energy Manager

Energy Manager monitors, validates and optimizes your energy usage enabling you to help the environment while saving money.



System Architecture

Integrated technology is an enabler for your business giving you the power to achieve operational cost savings, enhance your customer's experience, maximize investments, optimize performance, minimize risk and more. Better position your business to realize the value of integration with Honeywell Enterprise Buildings Integrator Release 430 (EBI R430) and improve business outcomes by seamlessly integrating your building and business systems on a powerful enterprise network.

EBI provides a scalable suite of solutions that can be tailored to key facility management requirements. By combining these solutions, EBI is flexible enough to adapt to a range of industries including large commercial buildings, industrial facilities, airports, university campuses, pharmaceutical and healthcare facilities, and government locations. It can be quickly tailored to meet specialized industry requirements.

In a global business, EBI is the ideal system, allowing the operator interface to be translated into the local language, and enabling centralized monitoring and control of locally or globally distributed sites.

EBI integrates with Open System standards, existing enterprise systems, and with Internet and intranet applications. This allows you to choose the best field solutions for your building and to seamlessly integrate information into EBI for further processing, reporting or distribution.

EBI provides operators, supervisors, and managers with a sophisticated Web-based user interface to enable personnel to easily monitor and control buildings at one or more sites. EBI uses technology such as HTML for creating graphic displays. EBI allows remote Smart Phone and Tablet access for full automated monitoring and control of your facility.

EBI runs on industry-standard personal computers using either Windows 7 or the Windows 2008 R2 Server operating systems. Full support for EBI running in Virtual environments is also available

EBI is a client/server architecture providing a scalable solution that accommodates configurations ranging from a small single-node system to an extended

system with multiple servers and Stations connected across LANs or WANs.

The EBI design is a true Supervisory Control and Data Acquisition System (SCADA) and it delivers the best technologies from Honeywell's SCADA heritage of more than 30 years, is available in EBI. The EBI Server runs on the multi-user, multi-tasking, industry-standard Windows 7 and Windows 2008 R2 Server operating systems, and is also supported on VMware ESX. The server runs application software that communicates with field controllers and updates both its real-time and relational databases.

The EBI Server also acts as the file server for displays and photo images. EBI client Station provides a high resolution, color graphical Human Machine Interface to the EBI Server. Up to 80 concurrent Station connections are available on a single EBI Server. Client software can be loaded on unlimited number of PC's allowing a limitless number of users to access these connections on a first-come, first-served basis. EBI Station software can be installed once using Remote access technologies from Windows or Citrix, and then remote users benefit with a zero footprint connection to login and have full control of their EBI system.

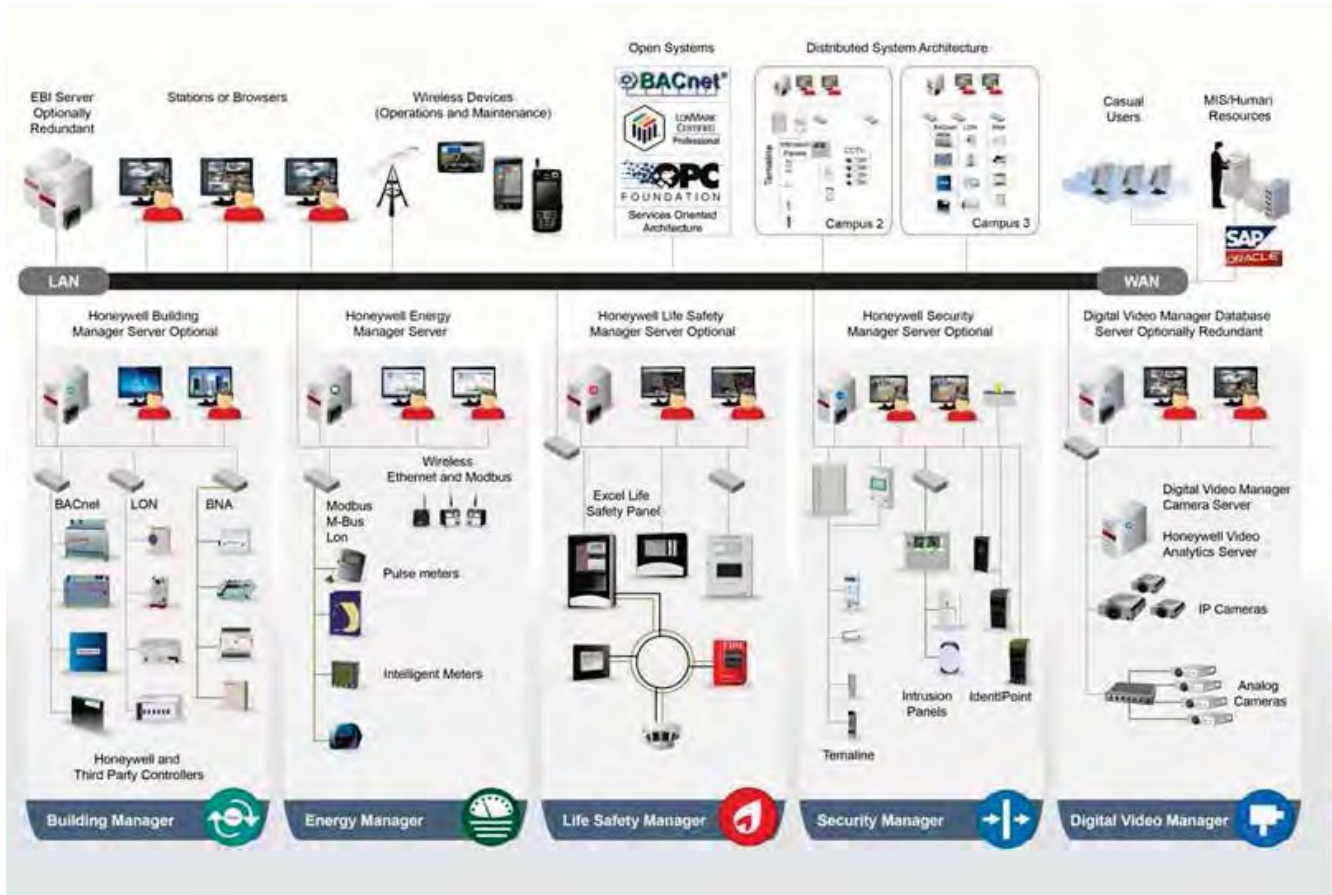
An operator may use EBI Station, a Web browser or a Tablet computer to perform a range of facility management tasks such as:

- View and respond to alarms
- Schedule equipment operation
- View, manipulate, and analyze data acquired from various controllers.
- View custom displays, cardholder information, or photo images and create Photo-ID cards.

EBI also includes Easy Mobile, designed for Smart Phone web browsers to remotely connect, monitor and control the facility providing true system management mobility. This same Easy Mobile solution also operates from desktop computers. The comprehensive networking capability of EBI, based on the industry standard TCP/IP protocol, allows communication

to other EBI systems, PC networks, corporate management information systems, or enterprise systems via local and wide area networks.

Ability to deploy a Remote Desktop Gateway in order to establish secure, encrypted communication via HTTPS



High Availability Architecture

For systems requiring superior fault tolerance, EBI can be configured for high-availability architecture applications to operate in a redundant hot standby configuration. To achieve this level of reliability, there are two servers: one is dedicated as the primary server and the other acts as the standby server. If the primary server encounters a problem, the standby server automatically assumes control and reconnects controllers and clients within 10 seconds without loss of data minimized to a this period. The EBI redundancy solution also insulates you against design faults seen in other solutions, as EBI does not replicate all operating system software between the two servers, ensuring that malware or driver and Operating System problems are NOT replicated to your backup system.

Further options are available to utilize Virtualization technologies and their High Availability / Fault Tolerant solutions. These technologies are supported by EBI and present good options for customers IT departments to explore further cost savings in designing the solution.

Distributed System Architecture

EBI Servers can also be connected together in a Distributed System Architecture, allowing very large or geographically distributed sites to be operated as a single system.

Alternatively, this architecture allows autonomous EBI nodes to communicate alarms and cardholder information through a network with a minimum of engineering effort.

A Distributed System Architecture enables multiple facilities to be operated in an efficient and consistent way across your entire organization without sacrificing the independence of each office.



System Integration

EBI provides an open system architecture that consolidates supervisory functions such as alarm, events, reporting and control into a common user framework. EBI then allows you to choose from a variety of controllers, standard hardware devices, and communications interfaces that can be integrated, into a central system that maximizes the performance of your building or facility. From a modest sized Building Manager system, EBI can be expanded through license to a fully integrated Security, Life Safety, Energy Management and / or Building Management solution. It's Easy.

- Access controllers and access card readers
- Security intrusion detection panels
- HVAC monitoring and control
- Life safety monitoring and control
- Energy management – monitoring and control
- Lighting control
- Digital Video Manager network viewing and control
- Human Resource management systems (SAP, People Soft)
- Time and attendance
- Asset location and tracking
- Maintenance management
- Web applications
- Mobile solutions – PDA, Phone SMS, paging and SNMP notification systems

Mass Notification solutions

EBI supports local or remote equipment connection via RS-422, RS-232, RS-485, or via Ethernet (LAN, WAN or Wi-Fi). EBI gathers information from a wide range of field devices and presents data in a unified

and consistent format. These topologies are all supported and have been deployed into over 21000 EBI customer applications through more than 160 countries.



Honeywell Digital Video Manager



Digital Video Manager seamlessly integrates video and audio (IP Intercom) surveillance of your facility using cameras connected directly to your Network (LAN or WAN), enabling flexible event-based recording and viewing from within EBI. Cameras can be located anywhere in the building and connected back to EBI, removing the need for complex cabling and racks of analog video equipment. Video and audio is digitized using standard video streaming devices and then can be viewed in real-time at any EBI Station, or alternatively into the DVM Console Recording of video and audio can be activated by operators on demand or you can easily automate recording to

be linked with any events from within EBI, using the new EBI Automation Engine. Most importantly, by using pre-recording, the video is captured from before the alarm or disturbance occurred. A recording database can easily be searched to find the right clip for investigators. Digital Video Manager also has advanced Video Analytics algorithms allowing specific behaviors to be detected by cameras and alarmed in EBI. Operators can be alerted to monitors only when there is activity on them. By integrating digital video, EBI provides a flexible, scalable and intelligent surveillance solution.



Honeywell Life Safety Manager

EBI provides a consolidated view of critical building systems during emergency situations, and acts as a single point of control for quick response. Automating complex system relationships through EBI, such as activating dampers, starting smoke purge fans, stopping processes and isolating utilities can save time and minimize damage when an emergency occurs.

The integration of fire protection into EBI also means that the other facility systems are aware of and can be used to assess or respond to alarm conditions. The security system can maintain overall site protection, while unlocking specific doors based on the alarm location to speed egress and allow quick access by emergency responders. Digital video and audio can provide a comprehensive assessment of the alarm location on the EBI Station as soon as the alarm is

received, allowing the operator to immediately assess the event, while also providing continuous recording of any doors being used for egress. EBI can even be used to compile a roster at the designated emergency evacuation point to see that all personnel that were in the area are accounted for.

When a system is trusted to monitor and control life safety functions, it is important to look for products that have been specifically tested and certified for this demanding application. The EBI Life Safety Manager has been tested and listed by experts at Underwriters Laboratories (UL) under many categories including the most stringent category for fire control products, allowing its use as the primary means to monitor and control facility fire protection.



Open System



The philosophy behind EBI is to provide an open solution for integration, and to embrace open technology. The Open System standards supported are listed in the following sections.

HTML

EBI's extensive graphics builder creates displays in native HTML format, ensuring EBI has the most open graphics capability in the market. These displays can be viewed in EBI Stations and also through Microsoft's Internet Explorer web browser.

EBI has powerful new Enterprise Web Services enabling web compliant applications to quickly extend the power of EBI to meet your business needs

BACnet®

Building Automation Control Network (BACnet) is a standard communication protocol developed by the American Society of Heating Refrigeration, and Air Conditioning Engineers (ASHRAE) for Building Automation Systems (BAS) with HVAC and lighting monitoring and control functionality. EBI supports ASHRAE Standard (SSPC 135-2005) including the new Addendum L, implementing both BACnet Operator Workstation Client and Server systems, and BACnet Gateway functionality. EBI supports BACnet over Ethernet and IP communications. A BACnet PICS (Protocol Implementation Conformance Statement) document is available on request which details EBI support for BACnet Standard Objects and Application Services.

LonWorks®

LonWorks is a network of interoperable devices from multiple vendors conforming to the LonMark standard (ANSI/CEA 709.1). EBI supports both Honeywell and third-party LonWorks devices that conform to this LonMark standard. The interface supports both read and write of Network Variables and Configuration Properties. The EBI LonWorks Interface is based on Echelon's LNS (LonWorks Network Services) Database to provide compatibility with third-party LON tools. EBI supports the latest version of LNS (3.2) available from Echelon.

Connections between EBI and LON Networks can be direct (using a PCLTA-10), via a serial port (using a SLTA-10) or via the network using an Ethernet to LonWorks Router.

OPC

EBI supports OLE for Process Control (OPC) 2.0 Data Access. This interface allows EBI to read and write to an OPC Data Server as an OPC client. This capability provides access to a wide range of third-party OPC Data Servers allowing cost-effective integration of third-party devices. An EBI Server can also be an OPC Server. OPC Client and Server capabilities can be used as a means for exchanging data between two OPC-compliant systems to provide integration at a system level.

OPC Alarm and Event Server enables EBI to support mapping of alarm/event properties to OPC notification properties to be processed by an OPC notification client. The OPC Alarm and Event Server support

the OPC Alarm and Events Specification Version 1.02 and the OPC Common Definitions & Interfaces specification Version 1.0.

OPC Historical Data Access is also available with EBI, allowing 3rd party historians to read and write history to EBI. This is commonly used where an incumbent Historian is already used by a company and they need to retrieve the critical Historical data that EBI manages.

OPC Data Transfer is an option in EBI to allow bi-directional information to be exchange to and from remote OPC DA servers. OPC Data Transfer utilizes report by exception communications ensuring for fast and efficient data transfers.

MODBUS

Modbus is a good general-purpose interface and de facto standard communications protocol that can be used to integrate subsystems and Programmable Logic Controllers (PLC) into EBI. The EBI interface is a Modbus "Master" and uses the Modbus RTU, ASCII, or TCP (Ethernet) protocol to integrate Modbus slave PLCs and other subsystems.

ODBC

(ODBC) Open Database Connectivity is an industry-standard for database access. EBI provides read-only ODBC access to its real-time database as well as the relational cardholder database. This may be used to extract information from EBI using ODBC-compliant reporting tools or enterprise management systems.



Operator Interface

In critical situations, it is important to provide data to a user in a clear and concise format. Station, the EBI operator interface displays high-resolution color graphics that can be tailored to the requirements of each individual facility. Extensive use of Web-style menus, toolbars, and icons allow intuitive navigation and fast access to important information. The operator interface is designed to accommodate novice and experienced operators alike.

The operator interface allows a user to perform the following tasks:

- Display and control field equipment
- Acknowledge alarms on a priority basis
- Display point status and history information
- Display information about cardholders
- Define and alter time schedules
- Initiate printing of reports
- View, archive and retrieve event logs
- Monitor data communications channels
- Configure system parameters
- Select and control Digital Video and CCTV cameras
- Display information from Internet and Intranet sites
- Record and play back digital video
- View and track moving assets or people
- Responding to alarms is crucial and the operator always needs to see the most important alarm. In Station, there is a dedicated alarm line which indicates the most recent, highest priority, unacknowledged alarm.
- Stations also display status information, including:
 - All points of a certain type in a particular state
 - Points in alarm pending acknowledgment and that have been acknowledged
 - Fire detection points status
 - Communication failures on the System Status Display
- Stations and printers currently off-line

As a convenient alternative, Microsoft Internet Explorer (IE) can be used to provide a fast and secure casual interface to EBI. This HMIWeb Browser interface is very functional but operates without the standard Station features that include the Alarm and Status Zone, and the Station toolbar and menus. As it operates inside Internet Explorer, the user can quickly add favorites within IE to provide immediate access to their preferred EBI graphics. The HMIWeb Browser client operates either via your local network, or through the Internet with some restrictions applicable when used over the Internet.

A convenient tablet based solution, for example using your iPad, is also fully supported now with Station. Provided you deploy using Honeywell's secure best practices, then this can provide a fast modern method to control your entire facility from anywhere in the world.

Mobile Access - Determining your security requirements

The issue of security affects not only your physical facility, but also its operations. To help you decide which type of remote access is appropriate for your security situation, we encourage a design review with Honeywell experts to ensure your system remains protected and secure.

- In simple remote access, the EBI server is located in the DMZ and exposed to the Internet; increasing the risk your system data may be captured, modified, or deleted by unauthorized users.
- In enhanced remote access, the EBI server is secured within the building control network behind a firewall. If you do not have a virtual private network, for enhanced remote access you can deploy a Remote Desktop Gateway to encrypt communication via HTTPS.

Implementing and using IPsec policies to encrypt your communication sessions is a strategy you can use in conjunction with remote access. This is fully supported by EBI Operator / Station in R430.



HMIWeb

Custom displays are created using HMIWeb Display Builder. A typical custom display includes a static background, and dynamic objects that indicate the status and alarm condition of relevant devices. Popup faceplates showing more information about a device can also be used. Also, controls, such as buttons, can be added so that users can execute tasks, call up other displays and generate reports. The HTML format of custom displays provides interoperability with other Web technologies and Web authoring tools.

Video Integration

Video and audio surveillance is essential for monitoring what is happening in any facility. EBI can integrate live video into custom displays, enabling one operator to view many parts of a building from a central location. It also allows remote verification of cardholders against their stored photo image for additional control of access to regulated areas. Operators may also select and control PTZ cameras using display controls. Video may be integrated from traditional analog CCTV systems or from Honeywell's Digital Video Manager solution.

Web Enabled

HMIWeb displays make use of Web technologies. Not only can they be created with native HTML content, they can be viewed in either Station or in Windows Internet Explorer. Full control of your facility is possible through a browser when connected over a local network. When used over the internet, then control of EBI graphics and displays remains identical, with some restrictions applied to security controls and video surveillance. EBI's embracement of open technologies ensures that operators have the best information at their fingertips.

EBI can integrate existing intranet or Internet pages into your custom displays, enabling EBI data to be matched with external information such as weather, utility prices or key company policies and procedures. Alternatively, data from EBI can be integrated into your company intranet, providing building occupants with live data regarding their comfort or other facility information. All such access can be strictly controlled.

Honeywell Easy Mobile

The Browser Independent and Zero Install solution, provides an optimized EBI user interface designed for Smart Phone. This provides anywhere and anytime supervisory monitoring and control. Easy Mobile can operate over either LAN, WAN, or 3G+ connections and delivers fast lightweight EBI information. The Easy Mobile supports:

- Live data updates and live trending

Each user may have a default Point list assigned to them

- More than 300 concurrent users tested

Alarm page showing most recent highest priority alarms

- Wildcard Search of points
- Point faceplate information with live updates and alarm acknowledgement
- Control of Point data from the same system faceplate
- In-line control of points, improving workflow by removing additional steps to call up additional web pages

- List based display of point information grouped together into meaningful collections
- Consistent support of Operator Security
- Trend object showing recent, past hour and also overnight information



- All changes are logged into the EBI
- AJAX based client with no ActiveX or Java Virtual Machine (Java runtime) to install



Support for secure encryption

As the user interface is optimized for Mobile devices with low bandwidth and expensive data services, then importantly high graphics capabilities are not supported. This ensures monthly service provider costs are reduced and the user interface is optimized for speed.

Operator Security

EBI offers numerous sophisticated methods for controlling access to sensitive data.

Operator Sign-On

Each operator has a unique identification (such as full names) and password that defines their security profile. All EBI passwords are encrypted when stored and transferred. If an operator continually attempts to sign on to an EBI Station without the correct operator password, he/she will be locked out of the system for a configurable amount of time.

It is also built to provide user authentication using your Windows User Group Account, or via an LDAP server, to ensure operators have quick consistent access into

EBI. This ensures operators only need to remember one set of credentials, and need only sign on to the system once.

Security and Control Levels

In EBI, it is possible to restrict and control what activity operators can perform by giving them different security levels. The system supports six different levels of operator security.

In addition to this, EBI incorporates control levels to limit manual control of doors, locks or sensors. Only operators with appropriate control levels can issue commands to these points. EBI can also restrict the commands an operator can issue, for example an operator may be allowed to lock a door but not unlock it.

Certificate Based Credentials over HTTPS

New in EBI is the support to operate and control your system remotely over public networks. To support this, EBI now relies on HTTPS connections (secure web connections) and also requires use of certificates to authenticate users and applications from accessing EBI. HTTPS helps by providing a secure channel over an insecure network, and this is key to ensuring your EBI system information remains protected



Compliance to 21 CFR PART 11

In highly regulated environments such as Pharmaceutical processing plants, a supervisor must formally approve any changes to a validated environment. EBI provides supervisors the ability to review and approve changes to the system configuration using electronic signatures. An electronic signature can be either a single or a double signature and “signing” requires operators to re-enter their password along with reasons and meanings behind the change in the system.

Real-Time-Database

EBI provides overall system management by collecting information from its field devices and using this intelligently to improve system monitoring and control. For example:

- A point exceeding a given temperature automatically triggers a particular report
- A perimeter fence alarm triggers cameras to switch to the appropriate location
- An alarm triggers a camera to begin recording

EBI communicates to controllers that have distributed intelligence. The local controller determines normal access control decisions or HVAC control strategies without input from the server. If the communications link between a controller and the server fails, normal system functions continue to operate and the controller buffers transactions. When the communications link is re-established, this information is reported back to the server. Changes in the server database may be downloaded to the relevant subsystem controllers.



Global Schedule

EBI provides extensive scheduling functions in its modern easy to use Global Schedules package. Integrated into every EBI system, the powerful HTML5 based user interface, allows you to create a single schedule to control multiple locations and numerous resources across different controller types. Global Schedules unifies the different controllers into the same common user interface, allowing facility managers to simply and easily monitor and change the scheduling of their facility.

Other features supported within EBI Global Schedules include:

- Easily create (or change) one-off, recurring and exception schedules
- Use the one schedule to control multiple locations across different controller types.
- Create schedules that span more than one day.
- Configure an unlimited number of holidays and temporary exceptions with a start and end date.
- See at a glance in a calendar view which holiday and exception schedules have been configured.
- Apply a schedule to multiple resources in one step.
- Apply multiple calendars to multiple resources in one step.
- Set up holidays in multiple regions.
- Create schedules in multiple time zones.

- Configure a time for the daily automatic downloading of schedules.
- Use Global Schedules within a DSA architecture.

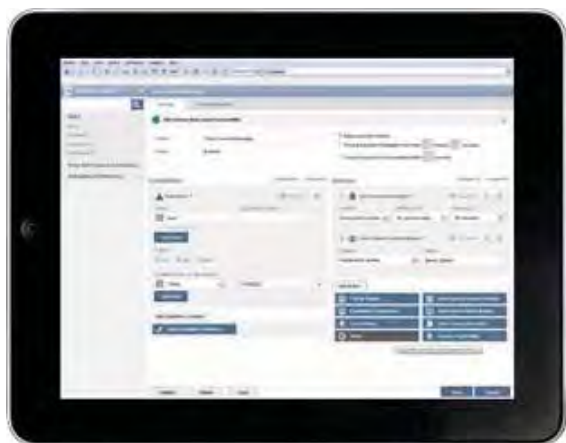
Global Schedules also provides an audit trail for tracking changes to schedules. For example, if an engineer or operator overrides a schedule, an “event” is generated in EBI, so that the event or exception can be reviewed by management.

Global Schedules includes extensive audit logs and download summaries, showing controller download details, to enable immediate visibility that your schedule is loaded to the correct resource within your facility. Secure in the knowledge your schedules are downloaded, you remain assured that your facility will be well managed

Automation Engine-Integration Made Easier

The new Automation Engine is an event-based rules engine that simplifies the automation of routine integration tasks and reduces the need to write complex, time-consuming scripts. It replaces the need for many existing solutions like Server Scripting, Algorithms and Event Initiated Programs.

Facility-wide rules, such as activating a camera recording when an incident occurs, can be configured in seconds. Integration is made easier, enabling you to realize the benefits of intelligent automation driving operational efficiencies



Automation rules can be configured to perform various routine tasks such as:

- Sending live video from a camera located by a door to a selected Station if that door is forced open.
- Calling up a plant display on a specific Station when a point associated with the plant goes into alarm.
- Locking all doors in a specific area if an alarm is raised.

Automating repetitive tasks can enable a faster response to events in your facility with greater precision and accuracy. Automation can also increase productivity, maintain a higher degree of situational awareness, and reduce operator fatigue.

Automation rules assist the operation of everyday tasks in two ways:

- Offloading tasks, for example, by automating operations that do not require operator intervention. For example, changing the state of a point, starting a video recording, and so on.
- Task sharing, which includes prioritizing operator work, managing content automatically (for example, performing cardholder comparisons and displaying video to an alarm monitor) and supporting task distribution.

Automation rules can be exported from one server and imported into another to facilitate system configuration and maintenance.

The Automation Engine also has many advantages over using traditional application level scripting, or using complex tools like VB or Jscript:

- Easier to configure. You can now set up your automation tasks using an intuitive user interface that requires little or no engineering experience or familiarity with scripting languages. The user interface also helps you implement automation more consistently, even when working with sites with different automation requirements. You can use multiple points in triggers, either by manual selection or by using wildcard characters, reducing implementation time.
- Some common library scripts are not required because the required logic is integrated into the automation rules engine.

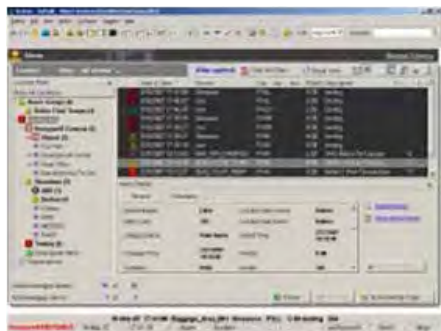
- More reliable. Automation rules have error handling and diagnostic mechanisms, such as the ability to audit rule execution through rule-generated events.
- Less complex. The new Automation Rules work with all types of EBI points. No longer are there added complexities from using 3rdparty controllers.
- Increased productivity. Once single Automation Rules can be used for 1 point, or thousands of points in your system using wildcards. These rules once configured can be exported and stored, or reused in other EBI applications making it easier to complete system configuration.
- More economical. Automation rules are enabled and operational on every EBI system!

Point Groups

EBI can group points based on alarm inputs, outputs, controller, area, doors, or elevators. An operator can then control a group or monitor it as one entity. A summary display shows information about the groups, including the number of points in a group and the number of points in each state.

Database Partitioning

EBI can easily support the complex requirements of large or multi-tenanted systems. Using the EBI Enterprise Model, your facility is logically partitioned into separate Locations and your Cardholders are logically partitioned into separate Organizations. Each Location / Organization may include a logical set of points, cardholders, cards, reports, and displays. Each operator is then allowed to view, monitor, and control only those points or cardholders within their designated Location or Organization. In this way, you can easily prevent operators from viewing information from another tenancy or another part of the system that is not relevant to them.



Alarm Management

The comprehensive alarm management facilities of EBI ensure that operators are immediately notified of any attempted security violations or building anomalies. Operators can easily respond to alarms and quickly find relevant information by using the dedicated function keys.

Acknowledge

Use the mouse to select the alarm point on the display and either press the acknowledge key, or use the convenient right click context menu, to acknowledge the alarm. This action will automatically be recorded in the system event file and optionally on an alarm printer.

Alarm Summary

Press the Alarm Summary key at any time to view a display showing all currently active alarms. The alarm messages are color-coded to show priorities. From the summary display, you can acknowledge alarms and access an associated display defined for each point. You can sort alarms or filter only for certain characteristics. You can even add comments to alarms or print an appropriate alarm list.

Associated Display

Select the Associated Display and be immediately taken to a graphic showing where in your facility the alarm is coming from.

EBI annunciates alarms as follows:

Audible Tone

The audible tone is based on a *.wav file on each Station.

Alarm Line

A dedicated alarm line appears on all displays and shows the most recent, highest priority, unacknowledged alarm in the system.

Alarm Indicator

An alarm indicator appears on all displays and flashes when there are any unacknowledged alarms.

Alarm Summary Display

An alarm summary display shows all alarms in the system and color-codes them to indicate priority and severity.

Alarm Printer Output

Alarm messages are printed on the alarm printer for a hard copy record.

Alarms annunciate at Stations even if no user is currently signed on. Even if Station is minimized, the audible tone sounds and the Station icon flashes to indicate that there is an alarm. Alarms can drive an external communicator such as a light or siren.

Alarms can be associated with different point states for digital points or special conditions such as high or low values or rates of change for analog points. Each alarm is assigned a different priority: journal, low, high or urgent. Each alarm priority supports up to 15 sub-priorities within it. This allows for sophisticated alarm prioritization. Alarms can easily be sorted and filtered.

It is possible to automatically elevate an alarm to the next highest priority level or generate an additional alarm if an operator does not acknowledge an alarm within a certain time, ensuring alarms are always handled promptly.

For each alarm EBI can automatically keep count of how many times this same alarm has recurred, which allows the Alarm Summary Display to remain less cluttered as common or nuisance alarms are aggregated into a single alarm message. In addition EBI automatically calculates alarm metrics to quickly tell you the number of urgent, high and low priority alarms you have in each location. These alarm metrics can be historized and trended, and reported on at shift boundaries or other times.

With the Advanced Alarm Management feature, you can provide further information to assist operators. When an operator acknowledges an alarm, they proceed to an alarm instruction page which details appropriate alarm handling procedures. After following these procedures, the operator can enter a response that indicates the actions taken to correct the situation, or can choose from a pre-configured list of responses. This ensures operators have the information they need to be fully responsible and accountable for handling alarms. Operator responses are logged to an event file for subsequent analysis.

Alarm Pager

Alarm Pager is an additional EBI option which allows alarms to be routed to pagers, mobile phones, email and SNMP managers. This is ideal if your operators need to move around the facility but want to be notified of critical alarms. It is possible to nominate a range of points and the alarm priority which will cause the external system to be notified. For example, you may wish to send urgent priority alarms on your chiller to the Building Supervisor, but high and urgent priority alarms from security points to the Head of Security.

The Alarm Pager option uses the industry standard Paging Entry Terminal (PET) protocol, Telocator Alphanumeric Protocol (TAP), or the UCP protocol to communicate with Pager Service Providers for telephone paging. Alarm Pager may optionally also direct connect through your local GSM modem, removing dependence on SMS service providers and delivering a simple direct connect mobile interface for your alarms. This GSM support includes the ability to remotely acknowledge the alarm incident via an SMS message, thereby confirming the incident has been seen and confirmed.

When combined with the Easy Mobile client, Alarm Pager delivers a self contained alarm management and control interface all accessible from your mobile phone device.

Honeywell Instant Alert Plus

Integrated with the powerful new EBI Automation Engine, IA+ provides a Cloud Based mass notification solution, extending the depth and breadth of EBI. You can now notify everyone in your facility, when there is a building fault, or critical event. This can extend from simple maintenance events, for example all tenants in a building being informed that HVAC control problems are now repaired, to security and life threatening issues, like evacuate an airport, a tunnel, a school or healthcare location.

Event Management

Events include alarms, point changes of state, cardholder movements, changes in system status and all operator actions. As system events occur, EBI creates a journal of the events in an event file. Journalized event entries include a description, condition, message, time of occurrence, and responsible operator.

The system event file stores event data in an on-line buffer. It is possible to store as many events as necessary—subject only to disk space on the server. When the on-line buffer becomes full, EBI transfers the event data to an archived buffer and notifies the operator to save the file to external media. The on-line buffer can continue to store events without interruption. An operator can retrieve current or archived system event data for use on-line or in the reports.



History and Trending

EBI provides continuous history about how operational data and points in the system have been changing with time. EBI can sample and store analog and status point values as historical data. EBI supports a range of different history collection rates. Both snapshots and averages are collected, allowing you to view what was happening on the system at any instant in time or over a longer period. This also includes the ability on the same trend display to simultaneously review point values alongside system event information, alarms, operator changes and advisories. This enables you to quickly perform root cause analysis from a single display.

This historical data can be viewed in several ways, for example as graphical trends (such as line or bar

charts), as lists of numeric values and as event information from the EBI event Historical data can also be used in reports, application programs and archived to off-line media for long term storage.

Included in each EBI system are 1000 standard trend displays, each able to support the display of historical data for up to thirty-two points, and each can also plot two sets of data against each other (X-Y plots). The historical period of interest and the use of auto scaling for all data samples ensure the Trend Displays quickly provide meaningful important data. Operators can zoom in on trends for closer inspection, and look forwards or backwards in time using a scroll bar or by directly entering the time of interest. Operators can even copy and paste trend data directly into Microsoft Excel for deeper forensic analysis of their system

Reporting

EBI provides comprehensive reporting facilities including a range of standard reports, the ability to create custom reports, the ability to export and import information and the ability to use other standard reporting systems with EBI. Combining existing services along with SQL Server Reporting Services (SSRS), EBI protects your existing investments and work processes during upgrades, whilst providing powerful and dynamic SSRS reports delivers a framework for enabling advanced custom reports to be added very simply to the system.

Some examples of standard reporting are as follows:

- All points in alarm over a configurable time period
- All points in manual
- All activities by a certain operator
- All activities for a certain group of points
- All movements of cardholders through selected doors
- All movements through any doors by a specified cardholder
- All information pertaining to access configuration information
- All information about a group of cardholders
- How often a point has changed state

- How many times a cardholder has used a card
- All cardholders in a specific Location or Zone
- Unused Cards within a configurable date period
- Unused Door Access enabling tighter compliance to Sarbanes Oxley standards
- Global Schedules download summary reports
- Point History Report

The optional Point History report shows in a single report, the point history for 32 points including Trend Charts, and cross referenced with Alarm and Event details for these points. Summarized with a table showing min / max / average and other statistical information, the Point History report delivers complete traceability of your building management system.

All standard reports can be generated on demand from the reporting subsystem or from a custom display. Reports may be initiated directly from viewing alarms and events. Reports may also be generated periodically, such as once per day, or may be initiated by an event.

EBI also provides ODBC (open database connectivity) access to its database from any ODBC-compliant tool.

Cardholder Data can also be either exported or imported from EBI, allowing integration to and from external systems in either ASCII, XML or direct from any ODBC compliant database.

EBI also utilizes the SSRS to deliver powerful custom reports which can be configured and tailored via Visual Studio 2008, or the simple custom report tools delivered within SSRS. This allows user defined reports to access EBI point data, or event history, or cardholder data to deliver customer report layouts as needed



Card Holder Management

EBI provides an easy-to-use cardholder management system with a database that supports a virtually unlimited number of cardholders. The EBI cardholder management database is a relational database designed for maximum flexibility. Cardholders have 94 user fields pre-configured to hold commonly required information such as employee number or location. However, you can change all of these user fields to match your own requirements. In addition, user fields can be added or removed to create your own cardholder database structure.

The layout of cardholder information on displays in EBI can also be changed to reflect your set of user fields and your own design preferences. For example, some fields may be configured as free format text boxes whereas others may display a list of pre-configured choices.

Editing Cards and Cardholders

Multiple cards may be assigned to each cardholder to allow a flexible approach to dealing with situations such as lost cards, forgotten cards or the need to issue two cards to a cardholder.

Cards and cardholders are easily added to the system. Cards may be assigned to cardholders or remain as “unissued” cards. Whenever card or cardholder information is changed, the event management systems records the operator and the change made.

Multiple cardholders may be simultaneously edited at one time by using the “multi-select” capability. This is a very useful feature when you need to change some information which applies to many cardholders.

Templates make it easy to add a new cardholder to particular group. For example, a “Sales Cardholder” template might contain all the relevant information for the sales department. Operators then use this template when adding new sales staff to the cardholder database.

Searching for cardholders

It is easy to search for cardholders and cards. By entering the first couple of letters of the cardholder’s name or any searchable field, an operator can call up all cardholders who match that search. The operator

can even do searches on multiple fields at a time such as all cardholders in the sales department who are currently “active”. Similarly, operators can search for points, access levels, zones, time periods, operators and many other system components.

Photo Identification

EBI can be used to generate photo identification badges displaying a cardholder’s image and/or signature. Images can be captured with various devices such as video cameras, digital cameras, signature tablets or scanners. These images are displayed on the cardholder detail display and can be printed on a photo identification card. EBI supports the TWAIN standard for interfacing to image capture devices allowing all Windows supported cameras to be used for PhotoID. It also supports the WinTab standard for interfacing to signature capture pads.

Photo identification cards can be designed using HMIWeb graphical Display Builder, and printed on any Windows-supported card printer. EBI also supports the ability to add pictures, logos, magnetic stripe encoding and bar codes to photo identification cards. You can also use chroma key or image ghosting for extra security.

Biometric Support

EBI provides fully-integrated support for certain biometric access control devices. Other biometric devices such as fingerprint and retinal scan units that have an industry standard wiegand output to connect to an access control panel similar to a card reader are also supported.

Cardholder Import and Export

The EBI cardholder data can be updated from external systems such as the PeopleSoft Human Resources database or SAP Enterprise Management System. This removes any requirement for duplicate data entry and enables the access control system to be kept up-to-date with the HR system. Personnel data flows one way, from the HR system to the EBI database. Updates can be on a manual or a periodic basis.

In addition to this, it is also possible to send Time and Attendance data and cardholder details from EBI back

to enterprise systems. This information can be used to calculate how long particular cardholders have been on site for occupational health and safety purposes or for payroll purposes.

A SOAP compliant web service is also available for developing real time interfaces to the cardholder database. Cardholder Services is detailed in the details on extending your system on page 20

Access Control

EBI provides comprehensive access control and security management which is easy to configure and manage.

Zones

To control access to your facility, you will need to group physical areas that have the same access requirements into “zones”. Both entry to and exit from a zone can be controlled by an access card reader.

When a cardholder moves through the facility, the zone that he/she enters is displayed in EBI when an operator calls up the cardholder details. EBI can also provide a list of all cardholders in a particular zone and can enable anti-passback zones. EBI supports a single level of global anti-passback where a cardholder entering a site through an entry card reader cannot access this reader again without first exiting the site via an exit reader.

Time Periods

Time periods are used to specify the times when cardholders have access to certain zones. Each time period defines a group of days such as Monday through Friday, and an associated start and stop time range such as 8:00 AM to 5:00 PM. Only authorized users can change Time Periods, which are automatically saved and downloaded to relevant access controllers by EBI.

Access Rights

In order to specify access requirements, cardholders may be assigned up to sixty four access rights. This number may be extended if the access controller technology supports more than sixty four. Each access right consists of Access Levels or Temaline Behavior

Models. An Access Level is defined by a Time Period and Zone pairs that specify which parts of the facility cardholders are able to access at which times. For example, one access level may define access to the Car Park zone for 24 hours and the Office zone during business hours. Only authorized users can change Access Right assignments. Access Right changes are automatically saved and downloaded to relevant access controllers by EBI.

Access events are generated every time a cardholder uses an access card to attempt to get through a door. Access event entries include the date, time, door, and cardholder who attempted the access, and whether access was granted or denied. If access was denied, an associated message indicates the reason.

Elevator Control

EBI can control access to different floors of the building through elevator control. Elevators can be scheduled to provide general access during the day and restricted access after hours. When access is restricted, cardholders must be validated by using a card reader in the elevator prior to access being successfully granted. Floors and elevators can be linked to access control zones and access levels.



Muster Stations

Temaline Muster Station provides the ability to electronically manage a muster point in the event of an emergency. Any TemaServer or TemaKey equipped with a graphic display can be configured as a Muster Station. Cardholders are linked to a Muster station via the behavior models as for the other types of readers in the system.

Each Muster Station supervises specific zones of the plant displays a list of cardholders still present in these zones (including detail on their last recorded zone).

Temaline Redundancy

Temaline includes a Shared Load architecture enhancing system availability by protecting itself in the event of a TemaServer failure.

This added level of hardware redundancy is achieved using redundant pairs of TemaServers. During normal system operation each TemaServer manages its devices. Should one of the TemaServers fail, the remaining TemaServer takes over the management of the orphaned devices without any degradation or loss of system functionality.



Advanced Security Option

EBI provides some extended functions for ensuring the safety of security staff.

Deadman Timer

The Deadman Timer option monitors operator activity at a Station. It provides a safeguard to ensure that an operator is actively at their post and that all alarms are acknowledged promptly. If there is no operator activity for a defined period, EBI automatically signs off the operator. A warning message will notify the operator before this happens. If that operator does not sign onto the system again, EBI automatically controls an output to alert help.

The Deadman Timer can also be used to check whether alarms have been acknowledged and will alert others if alarms are not being promptly attended to even if there is other system activity. In addition, the Deadman Timer can even generate dummy alarms to keep the operators busy.

The Deadman Timer allows you to feel confident that your operators are at their posts and performing their duties.

Guard Tour

EBI can track a guard through defined tours of a building or facility using a Guard Tour. Guard Tours can be programmed using any logical combination of card readers and input points as tour checkpoints. At each point along the tour, it is possible to switch cameras, disable alarms, or toggle lights.

For every tour checkpoint, the user specifies a time allowance for the guard to arrive at that location and points which are controlled when the guard arrives. For example, these points may be used to turn lights on or off.

If a guard reaches the next step in the tour too early or too late, a late arrival alarm is generated, door alarms are enabled, and digital input points are set to the secure mode.

The Guard Tour ensures that guards are monitored at each step on the tour and, should there be problems, the control Center is immediately notified.



Visitor Management

EBI provides some extended functions for ensuring the safety of security staff.

Reception Management

EBI Reception Manager provides an optional solution for managing visitors to facility and provides complete integration all of EBI's supported access control systems. The seamless integration is critical as it provides levels of security and visitor control that cannot be provided by stand-alone solutions.

In addition to capturing visitor data, the visitor management package also permits the issuing of visitor access cards and temporary staff cards while the powerful reporting capabilities help identify the location of visitors present in the building any given time.

Temporary and Visitor Cards

Temporary and Visitor cards are configured in the system and then physically stored in an archive kept by reception staff. The cards can then be issued and enabled on demand – either for a new visitor or an employee whose card has temporarily been misplaced.

Visitor Pre-registration

Visitor pre-registration helps speed up the visitor check-in process by allowing staff to enter details for their visitors prior to their arrival.

The reception has access to an on-line list of pre-registered visitors and simply has to complete any outstanding details, issue a card (or print a pass) if needed and start the visit.

Visitor Check-in/Check-out

The reception desk manages all visitor check-in/out operations including:

- Record personal and identification data
- Use the address book to identify a contact person for the visit

- Record all data concerning the visit and, if appropriate, assign a card and associated access rights
- Print a visitor's pass on paper or card
- Suspend and continue a check-in operation to allow time to trace the desired contact person
- Terminate the visit if it is not possible to trace the desired contact person.
- Modify data associated with the current visit without terminating the visit itself (for example, extend the card expiry date, enter notes regarding the visit).

WEB Reception Management

The WEB Reception Management module improves the Reception Manager functionality by providing an Internet Explorer-based web browser connection to the Reception Manager database. The browser connection provides more stations, better performance and reduces engineering by eliminating the need for manual software installation. The functionality includes:

- Customized Human Machine Interface
- Check-in and check-out of visitors
- Visitor pre-registration
- Temporary card assignment and return
- Cardholder present in zone report
- User status

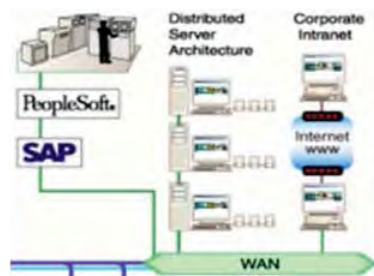


Asset Locator

Asset Locator provides the ability to immediately identify where key high-value assets are in the facility. By integrating the latest technology in IR and RF tagging, EBI can track your valuable assets as they move around the facility. All that is needed are the asset tags and a number of detectors that are easily installed into the ceiling of the building.

An operator can find a piece of equipment by calling up a custom display that shows the layout of the building and the location of the asset. Cameras can also be triggered to follow the asset as it moves. If assets move out of the detector's view, then alarms can be generated to alert operators to lost assets. The tags also provide a duress function so, when worn by staff, provide additional security and peace of mind.

It is also possible to monitor a contact with an asset locator tag. By doing this, runtime hours of equipment items can be monitored.



Extending the System

EBI provides a suite of tools which enable you to create your own powerful applications on top of EBI's functionality, enabling value added of your EBI system. Such application extensions enable EBI to meet the specific needs of your facility but all operated within and upon a standard platform. Your integration options are limitless.

There are several options available to customize your EBI system, ranging from HMIWeb Display Builder for creating custom displays, to the new Automation Engine, to the new Enterprise Web Services for creating custom applications and interfaces:

Automation Engine

A user-configurable set of rules to automate routine, repetitive tasks such as display callup, cardholder comparison, video recording, point control. The rules are designed to be easy to configure and reduce the need for creating server scripts and algorithms. more information is available on page XX

Enterprise Web Services (EWS)

Extending the power of EBI is much simpler using the new Enterprise Web Services (EWS). These modern web services provide a simplified collection of APIs that allow custom interfaces, queries, web pages or business systems to openly interface with EBI. Examples include being able to search and query entities such as points and alarms, read and write point parameter values, enable and disable entities such as channels, point servers, controllers, raise alarms and events, acknowledge alarms and read history.

Enterprise Web Services benefits your business operations by providing:

- Multiple language support (.Net, WCF, C++, HTML5 with JavaScript) means it's easier to hire app developers and IT maintenance staff to support your system.
- Peace of mind, bringing the latest stringent industry security standards for integration with applications and your other systems.
- Modern architecture means you can build the most contemporary real time applications in the shortest possible time.
- High performance lets you connect more applications and users at the same time. It scales to your needs, no need to limit your business processes.
- Seamless migration of your apps and integrated systems means less downtime and more flexibility when you decide to upgrade.

Cardholder Services

The Cardholder Web Services provides the ability to develop SOAP compliant applications to read and write to and from the EBI Cardholder Database in a controlled and secure manner. Cardholder services is available in either a secure read only license, or optionally a read/write capability allowing for applications to have a powerful; real time interface from EBI and also optionally to update and append the cardholder database with information from Human Resource systems and external databases.

Cardholder Services replaces the existing EBI Cardholder Object Model API, and with its improved functionality it allows for enhancement functionality in a new modern programming interface.

CMS Customization toolkit

A collection of configuration tools that allow changing the structure of the cardholder database (by adding, changing or deleting user fields), changing the look and feel of the cardholder displays or even changing how certain operations work. This customization toolkit is included as part of the Cardholder Services option.

Web toolkit

A collection of ActiveX controls that provides dynamic data from the EBI server to an web page. This is provided for backward compatibility only to older releases of EBI

Server Scripting

This powerful and now optional scripting environment allows you to write simple automation applications that perform additional functions when, for example, alarms occur, reports are generated and points return to normal. Scripts are created in an integrated script editor using Microsoft VBScript, a popular scripting language. Server Scripting is for those more complex automations where the powerful Automation is not able to be used. The power and flexibility available with server scripting is only limited by the application developers skill.

Microsoft Excel Data Exchange

Microsoft Excel Data Exchange is used to link EBI and Microsoft Excel. A wizard in Microsoft Excel enables connection to the EBI server and to points. The values of these points can then be used in your Excel spreadsheets and be automatically updated.

Network API

This option is intended for existing EBI customers who have relied on it in previous releases. We recommend all new projects use the new Enterprise Web Services. The Network API allows application developers to simple point information from EBI for use in another application, it is possible to use the Network API to read and write point data.

Web Toolkit

Web toolkit is provided in EBI R430 for legacy customers upgrading from previous releases to EBI R430. We recommend new projects use Enterprise Web Services and not the Web Toolkit.

Web Toolkit user to provide the information required to link EBI to your corporate intranet or the Internet. The toolkit allowed users to develop Web pages which incorporate live EBI data.

History report

The History report produces historical data, such as the maximum and minimum values, for points that match the search criteria, and that have been configured for history collection. Historical data can also be shown in graphical form and you can also include event information for each point.

System Configuration Tools

Quick Builder

EBI is configured using an extremely flexible and powerful engineering tool called Quick Builder. Quick Builder allows both “novice” and “power users” to configure points, controllers, Stations, and printers.

Novice users will benefit from the intuitive interface and context-sensitive help, and can start their projects by modifying a sample database. Power users can take advantage of the many powerful features, such as filtering and multiple point editing. Quick Builder ensures systems are implemented quickly and easily with automated discover wizards available for many of the interfaces to identify controllers and points to add to the EBI database.

HMIWeb Display Builder

HMIWeb Display Builder is an object-based, fully integrated custom display builder for development of site-specific graphical floor plans in HTML, card layouts, faceplates and alarm handling procedures.

It is easy to create displays with simple point and click operations. For example, to create a button that calls another display, you simply click on the button icon, draw the required size button, double-click on it, and enter the target page.

Static objects include text, rectangles, arcs, and circles. Dynamic objects include text, buttons, indicators, charts, check boxes, combo boxes, and

scrollbars. It is easy to link dynamic objects to the database by double-clicking and choosing the point ID from a list box, allowing the display to show the doors, temperature sensors and cameras in the facility.

HMIWeb Display Builder allows incorporation of live video elements at any size, using the live video tool. This enables you to complement your custom displays with live video data where an operator can actually see what is happening at the time.

EBI provides a library of common symbols and indicators used in building management systems, enabling you to achieve a consistent look and feel. EBI also allows you to embed ActiveX controls and ActiveX documents in displays.

Advanced users may add their own scripts to displays to animate them. HMIWeb Display Builder provides a VBScript editor and an object model for all display elements. Some examples of what can be done include:

- Animating fans and other equipment to show real actions
- Changing colors in response to system temperatures
- Validating data entry from operators
- Alerting operators to special conditions with messages
- HMIWeb Display Builder saves displays in HTML format which, if required, can be round tripped through other HTML editors.

Product Data Summary	
System Architecture	True SCADA functionalities
Client/server architecture	Real-time database
Windows 7, Windows 2008 R2 Server	Embedded Microsoft SQL Server 2008
VMware ESX or similar Virtual platforms - subject to Technical Risk Review	SQL Reporting Services
Scalable from single server to Distributed System Architecture	Points: Analog, digital, totalizer, access, flexible, container, Point Server, Remote

Architectures	
Single server	Distributed System Architecture
Redundant hot standby server	Virtual fault tolerant solutions are supported

Networking	
Uses industry-standard TCP/IP networking over Ethernet	Controllers may be connected via Ethernet
IPSec used for secure operator communications	Remote fully functional client connections available over LAN, WAN, 4G or 3G
Flexible station licensing based on the number of simultaneous connections	

Open Systems Support	
HTML graphics	OPC HDA
LonWorks - LonMark standard (ANSI/CEA 709.1)& LNS 3.2	Enterprise Web Services
BACnet - ASHRAE BACnet standard (SSPC 135-2008) with approved Addendum L. B-OWS Profile	Modbus, Modbus RTU, Modbus TCP
OPC – OLE for Process Control	ODBC database access
OPC Data Access 2.0 (Client and Server)	XML interface via SQL Reporting services
OPC Alarm and EventServer 1.02	

Operator Interface	
Station and HMIWeb Browser	Cut, copy, and paste facilities for easy editing of text
Windows 7, Windows 2008 R2 Server	User input devices include keyboard, mouse, trackball (optional), touchscreen (optional)
Internet Explorer 9	Support for 21 CFR Part 11 electronic signatures
Use Station Client software or Internet Explorer Browser	Using Windows Terminal Services - support for up to 50 Mobile Stations on Tablet computers (iPad, Android or similar) from a single RAS server
Over 300 preconfigured standard displays	Easy Mobile
1000 Standard Trends	Designed to support unlimited connections and tested to support over 300 concurrent users.
User configurable object-based custom displays	AJAX base client, with no ActiveX or Java Runtime (JVM) to install
Optimized for display resolution of 1280 x 1024 or higher	Designed for 3G network connections or higher. Operable over any LAN and WAN IP connection
Embed live video	Zero footprint. Compatible with all modern browsers (safari, IE, Firefox, Nokia, Blackberry)
SafeBrowse for secure Internet/intranet integration	Wildcard Point search return first 60 matching points
Animation using VB or Java Scripts	Support for 40 most recent alarms
3 rd Party document integration	Integrated operator security
Launch Windows applications directly from displays	Point Faceplate allows live updates, Point control and alarm acknowledgement
Easy point and cardholder search with wildcard support	Point faceplate links to live trend widget showing EBI historical data in simple convenient trend with fast, recent and shift historical data displayed

Operator Security	
Six levels of access to system functions:	Windows Group support for common operator credentials
View Only	Prompt for periodic change of passwords
Acknowledge Only	Events logged by operator ID or full operator name
Operator	Individual operator profiles or Group Profiles including Scope of Responsibility (SOR)
Engineer	Effective data partitioning of facility into different locations
Supervisor	Command assignment to control different output states
Manager	Operator sign-on can be restricted to certain Stations and certain times
Up to 255 control levels for operator-initiated actions	Automatic change of Scope of Responsibility by time
Automatic idle time logout	Use Windows operator accounts or Windows Group Accounts, or LDAP credentials for authentication in EBI
Windows Single Sign-on	

Real-time Database	
Connects to HVAC, security, access control, industrial process control, fire detectors, energy meters, analog CCTV, and digital CCTV controllers	Logic calculations
Database partitioning into a hierarchy of locations (up to 10 levels deep)	Composite hierarchical point alarming
Point groups	Report, task or display request activated by access card or status change
Automation Engine	Group point control
Event-initiated programs include:	Location or group alarm inhibit
Arithmetic calculations	

Alarm Management	
Configurable color-coded alarm summary display page with filtering by alarm priorities and area	Additional messages can be attached to an alarm
2000 concurrent alarms in alarm list, each with a count available for number of times occurred since last acknowledgement	Alarm acknowledge (writes through to controller)
Four levels of alarm priority with fifteen sub-priorities	Individual alarm prioritization of different input states for the same point
Sort and filter alarms, add comments to alarms	Single line alarm processing (recurring individual alarms can be displayed as a single alarm with a count)
Alarm segregation through database partitioning	Alarms and events can trigger reports
Location tree summary of alarms	Alarm annunciation can use custom sound files (*.wav)
Alarm parameters can be adjusted on-line	Automatic alarm priority elevation if alarm unactioned
Dedicated alarm zone displays most recent highest priority alarm	Analog point alarm types include <ul style="list-style-type: none"> • PV High • PV Low • PV High High • PV Low Low • Deviation High • Rate of Change • Transmitter High • Transmitter Low
All alarm and return-to-normal conditions logged in event summary	Alarm Pager
Individual or page acknowledgment of alarms	Transmits alarms to pagers using PET, TAP or UCP protocols. This enables SMS alerts to be sent to Mobile Phones.
Automatic link to optional alarm instruction page or associated display page or digital video clip	Transmits alarms to email using SMTP
Alarm handling responses logged into event summary	Transmits alarms to SNMP managers as SNMP traps.

Historization

Virtually unlimited historical record of both live and derived data can be stored.	1 hour average
Intervals include:	8 hour average
1, 2 or 5 second snapshots	24 hour average
1 hour snapshot	Collection is configured per point
8 hour snapshot	Composite point parameters can all be historized
24 hour snapshot	Archive to off-line local or network attached storage
6 minute average	

Trending

Multiple formats include:	Configurable sample densities
1000 trend displays	Configurable sample periods
Multi Line (points)	Time of interest entry
Multi-Line (point trend with events)	Individual pen enable/disable
Single (bar graph)	Rubber band zoom
X Y Plot (point plot)	Hairline cursor readout
Numeric (tabular)	Copy and paste trend data to Microsoft Excel
On-line change of trend type	Embed trends in custom displays
Up to thirty-two parameters on one trend	

Underwriters Laboratory Listing

EBI R410 is UL listed to the following standards.	QVAX-UL864-Critical&NonCritical Process Control
ALVY-UL294-Access Control	UDTZ-UL2017-Signaling Systems
AMCX-UL1610-Central Station	UOXX-UL864 Accessory Fire
APOU-UL1017-Security Systems	UOJZ-UL864-Panels Fire
APOU-UL1076-Security Systems	UUKL-UL864-Smoke Control
PAZX-UL916-Energy Management Systems	

Reports

Periodic, demandable, or event driven reports
 Microsoft SQL Server 2008 Reporting Services (SSRS) delivery of simple custom report interface with EBI. Allowing graphic interface for reporting

cardholder, system event, point history and real time point information. Existing Standard report also are deployed using Crystal reports technology (Crystal)

Historization	
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1 hour snapshot	Collection is configured per point
8 hour snapshot	Composite point parameters can all be historized
24 hour snapshot	Archive to off-line local or network attached storage
6 minute average	

Report	Description	Type
Access Level	Lists all access levels matching a specified search criteria and the zones, Time periods.	Crystal
After Hours	Lists all points changing state matching a certain search criteria occurring over a specified range of time.	Crystal
Alarm/Event	Lists all alarms or events matching a certain search criteria occurring over a range of time.	Crystal
Alarm/Event	This Sample reports lists a summary of alarms and events by location and by date and time. It includes a graphic summary.	SSRS Custom Report Sample
All points	Lists all points which match a specified search criteria.	Crystal
Cardholder (visitor) Detail	Lists all information for cardholders who correspond to a specified search criteria.	Crystal
Cardholder List	Lists card details for cards corresponding to specified search criteria based on any cardholder field.	SSRS
Card Usage	Shows the total number of access movements (including no movements) for cardholders over a given period of time.	Crystal
Cardholder Zone	Lists all cardholders who have access to the specified zones.	Crystal
Door History Employee List Group Card Trail	Lists all cardholders that accessed any specified door or group occurring over a specified range of time. Lists all employees in a defined organization Lists all doors accessed by an individual or group of cardholders during a specific range of time.	Crystal SSRS
Microsoft Excel	Runs a Microsoft Excel spreadsheet.	Custom Report
ODBC	ODBC Driver enables custom reports to be built external to EBI database	Custom Report
Occupancy	Lists cardholders in specified zones at that time.	Crystal
Point Attribute	Lists all points specified by the following attributes: Out of service, Alarm suppressed, Abnormal input levels, In Manual mode and Nominated state.	Crystal
Point State Changes	Lists all information about Time Periods matching a specified search criteria.	Crystal
Present in Zone	Lists all cardholders present in defined zone. Useful for auditing and mustering.	SSRS

Time Period	Lists all information about Time Periods matching a specified search criteria.	Crystal
Unused Cards	Lists cards that have not accessed any door or zone within defined date / time range. Useful for compliance auditing	SSRS
Unused Door Access	Lists Doors that have unused access privileges, to enable further tightening of security to support compliance audits and threat modeling.	SSRS
Zone Access	List all cardholders that have accessed a Zone in predefined date / time range. Used for compliance auditing.	SSRS
Zone Information	Lists all information about Zones matching specified search criteria.	Crystal
Point History (optional)	The History report produces historical data, such as the maximum and minimum values, for points that match the search criteria, and that have been configured for history collection. Historical data can also be shown in graphical form and you can also include event information for each point.	SSRS
Global Schedules Download Summary	Detailed summary of Downloaded Schedule information, to provide full traceability to each controller	SSRS

Cardholders

All cardholders may have the following:

Cardholder first name and last name	Card expiration date
94 configurable user fields delivered (easily customized or expanded)	Personal Identification Number or (PIN)
Organization	Long access (controller-specific)
Address	Escort required (controller-specific)
Comments	Escort capable (controller-specific)
Alarm priority	Cost override (controller-specific)
Cardholder State (Active, inactive, Left Company)	Event lockout override (controller-specific)
Card trace option	Card Class A, B (controller-specific)
64 access levels per cardholder as standard(controller-specific)	Support for over 100,000 cardholders
Last door accessed	Fully customizable user-defined database fields
Cardholder commencement date	Comboboxes to preprogram cardholder field choices
Cardholder expiration date	Card and cardholder commencement and expiration dates
High resolution color image of cardholder	Up to 64 access levels per cardholder
Cardholder signature	Automatic trace of cardholder through the facility
Cardholders may be assigned one or many cards. Each card has the following information:	Card pending expiration notification
Card number	Multi-select and multi-edit of cardholder
Card credential type	Visitor and employee cardholder types supported
Card state (active, inactive, lost, stolen, expired)	Templates for cardholder management
Card commencement date	Powerful searching and sorting of cardholders

Photo Identification

TWAIN interface for image capture supporting all Windows compatible cameras. MCI is only supported on Windows XP or Windows 2003.	Bar code
Configurable card layouts and image size	Magnetic stripe encoding
Easy search and navigation facilities	Chromakey and ghosting
Batch printing of cards	Collection is configured per point
6 minute average	

Access Control

1024 access levels containing 256 zone/time period pairs	Complete or modified data download to controllers
1024 card reader zones each containing 128 doors	ASCII import/ export of all access components
256 time periods	Support for one level of global perimeter anti-passback, with nested anti-passback available with Temaline access control solution

Application Development

Enterprise Web Services:	API: general purpose application development interface
Network API: allows simple network connected programs to read and write point data	Cardholder Services: specific SOAP compliant interface for accessing cardholder data.
Microsoft Excel Data Exchange: Wizard for getting point and history data into Microsoft Excel from EBI	User Scan Task Kit: allows development of loosely integrated controller interfaces
Web Toolkit: allows point data to be incorporated onto web pages	

Quick Builder

Graphical engineering tool	Multipoint edit
Preconfigured typical system databases	User defined fields
Easy creation of point, hardware, Stations and printers	Import/export facility
Hierarchical system modeling	

HMIWeb Display Builder	
Object-based display building package with dynamic display objects such as:	Snap to grid
Shapes	Zooming
Live Video	Resizing objects
Alphanumerics	Horizontal and vertical spacing
Checkboxes	Library of commonly used symbols
Card Image	Remote engineering support
Comboboxes	Printed Documentation
Pushbuttons	Installation Guide
Charts	Overview Guide
Many standard drawing features including:	Operators Guide
Tool Palette	Configuration and Administration Guide
Color palette	Building Management Guide
Alignment	Internationalization
Group/Ungroup	Support for operator interface in localized languages

Analog CCTV Controllers	
Camera and monitor switching on alarm	Honeywell / AdemcoVideoBloX
For selected switchers, camera selection, and automatic PTZ control from operator display or keyboard	Pacom/Pelco
Honeywell Maxpro	
Digital Video Systems:	
Honeywell Digital Video ManagerR500 with SP1	

Industrial Process Control	
Experion PKS R430 via DSA	Experion PKS R410 via DSA

Security Controllers	
Honeywell SMP or HSM	Honeywell FS90 Plus
Tecom Challenger	Galaxy
Honeywell I9000	

Life Safety Controllers	
Honeywell XLS1000	Honeywell XLS80e
Honeywell XLS2000	Honeywell XLS140
Honeywell XLS3000	Honeywell XLS200
Honeywell FS90 Plus	

PLCs	
Honeywell UMC 800, HC900	Allen Bradley PLC2/5, ContoLogic, CompactLogix, SLC5/03, and others via OPC
Modbus, Modbus Plus, Modbus RTV, Modbus TCP	OPC V2 DA compatible devices
Honeywell LCS620 PLCs	

Software Options	
Asset Locator	Web Toolkit
Deadman Timer	User Scan Task and Applications Toolkit
Alarm Pager	Microsoft Excel Data Exchange
Group Control	Network API
Guard Tour	Integrated Photo ID
UL Listing Compliance	Communications Encryption
Pharmaceutical Compliance Restrictions	

Product Specifications	
Server Platform	
Processor: 3.0 GHz Pentium™ 4 processor or higher	Network Protocols: TCP/IP
Memory: Minimum of 4 GB RAM	Pointing Device: Mouse
Keyboard: with 12 function keys	Hard Disk: 100 GB drive (NTFS)
Display Resolution: 1280 x 1024 x 65K colors	Operating system: Windows 7 or Windows 2008 R2 Server
DVDROM Drive	Browser: Internet Explorer 9.0

Operator Station (Client) Platform	
Processor: 3.0 GHz Pentium™ 4 processor or higher	Pointing Device: Mouse
Memory: 2 GB minimum	Operating systems: Windows 7, Windows 2008 R2 Server
Display Resolution: 1280 x 1024 x 65K colors	Network Protocol: TCP/IP
Hard Disk: 60 GB drive (NTFS)	Browser: Internet Explorer 9.0
Keyboard: 12 function keys	

Database Sizing

The EBI base package includes licensing for 250 points and 12 readers. Additional licensing for points can be purchased in quantities of the following packages to a maximum of 65,000 points per single EBI Server:

- 250 point adder
- 2,500 point adder
- 20,000 point adder

Additional licensing for readers can be purchased in quantities of the following packages to a maximum of 2,000 readers:

- 6 reader adder
- 50 reader adder
- 400 reader adder

Items	Maximum Number per single EBI server
Cards	Greater than 100,000 subject to hardware limitations
Points	65,000 per server 180,000* per system * More than 180,000 with Technical Risk Review and Approval
Access Levels	1024
Zones	1024
Time Periods	256
Alarms	2000* unique concurrent alarms. * Each alarm instance can be aggregated of an unlimited number of occurrences of the same alarm message
Operator Stations	Licensed individually up to 80 concurrent connections
Easy Mobile Clients	Tested to 300 connections Unlimited concurrent users.
Printers	50
Channels	90

Controllers	255* * This is per EBI server when using scan task based interfaces.
Reports	1000 scheduled standard reports Custom Reports may be configured within SQL reporting Services and this number is not limited
Events	100,000 per 60 MB of disk space available
Assignable Locations	1000
Users	1000
Number of DSA connected Servers	10* * More than 10 with Technical Risk Review and approval
Number of Connected Point Server per single EBI	10* * More than 10 with Technical Risk Review and approval

Items	Specifications	Comments
Description		
Distributed System Architecture (DSA) is an option that enables multiple EBI servers to share data, alarms and history without the need for duplicate configuration on any server.		
Maximum number of DSA for Points connected EBI servers	10* * More can be supported subject to Technical Risk Review and approval.	This is the total number of EBI servers on the DSA connected network.
DSA Data Publish		
Maximum number of parameters/s to all remote servers ¹	3000	
Maximum number of remote servers for publishing to	30	

DSA Data Subscription		
Maximum number of parameters/s from each remote server ¹	2000	
Maximum number of remote servers that this server can subscribe to	30	
Total number of parameters/s from all remote servers	10,000	
DSA Request Response		
(Device read) Maximum number of list reads from DSA Server per second	1	
(Device read) Maximum number of items/list supported ^{1,2}	2000	
(Device read) Sustained read rate (items/second) ^{1,2}	500	
DSA Trend		
Maximum number of Trend pens published to all remote servers ^{1,2}	20	
Maximum number of Trend pens that this server can subscribe to from all remote servers ^{1,2}	100	
<p>Note 1 – Ability to deliver published data rate depends upon throughput of underlying network. For example for a heavily loaded EBI BNPS system there may not be sufficient bandwidth to the legacy controllers to deliver an additional 2000 parameters/s via DSA. Refer to the documentation associated with each legacy control network for more information.</p> <p>Note 2 – Device reads should be used with caution. It is possible to overload the underlying process control network if too many device reads are done.</p> <p>Note 3 – These values are based upon the standard history configuration settings</p>		

DSA Central Control Room Topology ¹	
Maximum number of remote servers that this server can subscribe to	60
<p>Note 1 – The DSA Central Control Room (CCR) topology is a topology where an EBI server is a subscriber to a large number of remote DSA servers. The key features of this topology are: The CCR server is not directly connected to any controllers. It can only have Stations or Browser clients connected</p> <p>The CCR server can be redundant The remote servers must obey the standard DSA limits (including the maximum number of remote servers that this server can subscribe/publish to) The CCR server must obey the standard DSA limits (except for the maximum number of remote servers that this server can subscribe to)</p>	

DSA for Points - Over Satellite

Available Network Bandwidth ²	Round-trip latency ³	Time to load schematic, subscribing server ^{4,5}	Delay to display data on subscribing server ⁶	Time to load trend on subscribing server ⁷
128 Kbps 1	300ms	4s	3s	8s
128 Kbps	700ms	8s	4s	18s
256 Kbps	300ms	3s	2s	8s
256 Kbps	700ms	8s	3s	16s
512 Kbps	300ms	3s	2s	6s
512 Kbps	700ms	7s	3s	12s
1 Mbps	300ms	3s	1s	6s
1 Mbps	700ms	7s	2s	12s

- Note 1** - Minimum supported bandwidth for DSA over satellite communication is 128Kbps (in both directions).
- Note 2** - Available Network Bandwidth” means dedicated continuously available bandwidth for DSA use between two DSA for Points connected servers, and not shared bandwidth with other applications.
- Note 3** - Tested with networking equipment that simulated satellite communication. Latency defines the time it takes for a packet of data to get from one designated point to another. Round-trip latency is time for the message to be sent and the response to be received.
- Note 4** - Assumes the data is already subscribed to on the publishing server. Call up time (compared to a local server) is primarily due to link latency and link bandwidth. Test schematic did not contain complex graphics elements such as shapes or alarm icons and contains 500 parameters from the publishing server only.
- Note 5** - Measured time is time to call up the display on a console station on the subscribing server.
- Note 6** - Compared to display time on a console or flex station on the publishing server. Assumes that all 500 parameters on the publishing server are changing each second.
- Note 7** - It is recommended that a maximum of 8 pens for remote point parameters be put on the trend with a maximum of 800 samples per trend. Testing was conducted with 8 pens with a trend of 720 samples. All pens were from the publishing server.

DSA over WAN 5

Available Network Bandwidth ¹	Max Network Throughput (Parameters / Second) ^{2, 3, 4}
64 Kbps	100
128 Kbps	200
256 Kbps	400
512 Kbps	800
1Mbps	1000
2 Mbps	2000
10 Mbps	10000
Printers	50
Channels	90

- Note 1** – Available Network Bandwidth” means dedicated continuously available bandwidth for DSA use between two DSA connected servers, and not shared bandwidth with other applications.
- Note 2** – Maximum traffic on any individual network segment.
- Note 3** – Combined DSA traffic in both directions.
- Note 4** – Max Network throughput is also applicable to the equivalent network speed in the DSA Over Satellite table.
- Note 5** - Previously, connection numbers have been specified for each of the network speed bands. Due to increases in PC and networking performance, this is no longer considered to be a relevant performance parameter and has been removed

DSA Interoperability

DSA interoperability is defined as a DSA-based runtime connection between servers. The following table describes supported interoperability between various EBI and Experion releases.

Can Interoperate with

EBI Release	EBI R430	EBI R410	EBI R400	EBI R310	CPO Manager R100	Experion R430	Experion R410
EBI R430 - DSA for Points - DSA for Cardholders	Yes Yes	Yes No	Yes No	No No	Yes* N/A	Yes N/A	Yes N/A
EBI R410 - DSA for Points - DSA for Cardholders	Yes No	Yes Yes	Yes No	Yes** No	Yes* N/A	Yes N/A	Yes N/A
EBI R400 - DSA for Points - DSA for Cardholders	Yes No	Yes No	Yes Yes	Yes No	Yes* N/A	No N/A	Yes N/A
EBI R310 - DSA for Points - DSA for Cardholders	No No	Yes** No	Yes No	Yes Yes	No N/A	No N/A	No N/A
CPO Manager R100	Yes*	Yes*	Yes	No	No	Yes*	Yes*
Experion R430 - DSA for Points	Yes	Yes	Yes	No	Yes*	Yes	Yes
Experion R410 - DSA for Points	Yes	Yes	Yes	No	Yes*	Yes	Yes

* DSA for points only supported for CPO-M as publisher.

** DSA for Points to EBI R310 is limited to EBI R410 using Windows 2003 Server.

Input Capabilities

Automation Engine can trigger a rule base on any event in EBI. This extends to provide the functionality previous seen in:

- Algo 10 General Logic excluding absolute time of day delay – please see below for Algo 10 explanation
- Algo 68 Value Transportation
- Algo 71 Access Point task request (display callup and camera actions only)
- Algo 91 Event activated recording
- Algo 77 Change Display Request
- Algo 78 Group Control of Points

Plus ability to have advanced input conditions:

- Ability to match alarms and events using wildcard * and ?
- Ability to match alarms and events using “All points in location x”

Output Capabilities

- Display callup with association (ie. Call up associated display configured on the point detail)
- Command a group of points with delay between points
- Point Value transportation
- Call up configured DVM views on a station
- Call up an associated camera to a Station (direct or associated Station)
- Initiate recording on an associated camera
- Cardholder comparison

Camera Association is new in R430. This allows ability to trigger associated Cameras

- For example, “If access denied event occurs on any doors on level 1, start recording on associated camera”
- Or “If any intercom alarm is received in location x, call up associated camera on Station y”

Instant Alert Plus Notification. This allows an event in EBI to trigger an alert to IA+, allowing for mass notification through your IA+ subscription, or alternatively allowing rapid messaging to extended maintenance teams for any controller or equipment faults

Notification Performance

Items	Specifications	Comments
Alarm and Event Notifications		
Maximum number of events (burst condition) ¹	1,500 events	The EBI server alarm system will handle an event burst of up to 1,000 events, with a minimum time between consecutive bursts. An “event burst” is
		defined as a group of events greater than 40/sec, received from all connected event servers in a period of less than 3 seconds.
Formula to calculate the time period required between consecutive bursts, to allow for event processing	$\Delta T = BS / (60 - ER)$ Where: ΔT = # of seconds required between bursts BS = Burst Size (number of events in the burst) ER = Event Rate between bursts	Examples: 1000 event burst and no events between bursts: $\Delta T = 1,000 / 60 = 25$ seconds 500 event burst with 30 events/sec between: $\Delta T = 500 / 10 = 50$ seconds
Maximum number of sustained events/second ¹	15,000/hour, with peaks of up to 60/ sec	
Maximum number of sustained alarms/second ¹	30/sec	
Maximum duration of events in online events file	12 weeks	
Maximum number of events in online events files	1.2 million	Event archiving can be used to access older events. Approximately 60 MB of hard disk space is required for every 100,000 events archived

General Server Scripting Specification		
Items	Specifications	Comments
Description		
<p>Server scripting is an optional item. It further extends the behavior of the server-resident subsystems and its run time objects. Examples of server objects are points and parameters, reports, assets and tasks (application programs). Scripts can run by the server either periodically or when a specified event occurs. Standard displays support the monitoring of the status of running scripts.</p>		
Description		
Maximum script size	Short scripts only (typically less than 50 lines)	<p>Server scripting has been optimized for relatively short scripts and is not designed for implementing control strategies. If a task is computationally intensive, or requires extensive file handling, custom applications can be used instead of scripts – see section 3.6 “Application Development Toolkit”. Some tasks qualify for both categories, and the rules are flexible when deciding what tasks can and cannot be performed by server scripts, see the following section.</p> <p>Where possible, existing server functionality should be used in preference to writing server scripts. Standard server functionality optimizes the task implementation.</p>

Automation Engine versus Server Scripting versus Custom Applications			
Tasks	Automation Engine	Server Scripting	Custom Application
Extend server functionality via information transfer	Yes	Yes	Yes
Relatively short processing (< 50 lines of code)	N/A		
No Code	Yes	Yes	
Used to provide linkage to other applications via automation servers	Yes	Yes	Yes
Code is interpreted at run-time.	N/A	Yes	No
Code is compiled and optimized at build time.	No	No	Yes
Computationally intensive	No	No	Yes
Optimized for supervisory control	Yes	No	Yes
Iterative code	N/A	No	Yes
Relatively complex user interface requirements	No	No	Yes
Extensive file handling	N/A	No	Yes
Script (program) state preserved on failover	Yes	No	No
Language	N/A	VBScript	Visual Basic, C++, etc.

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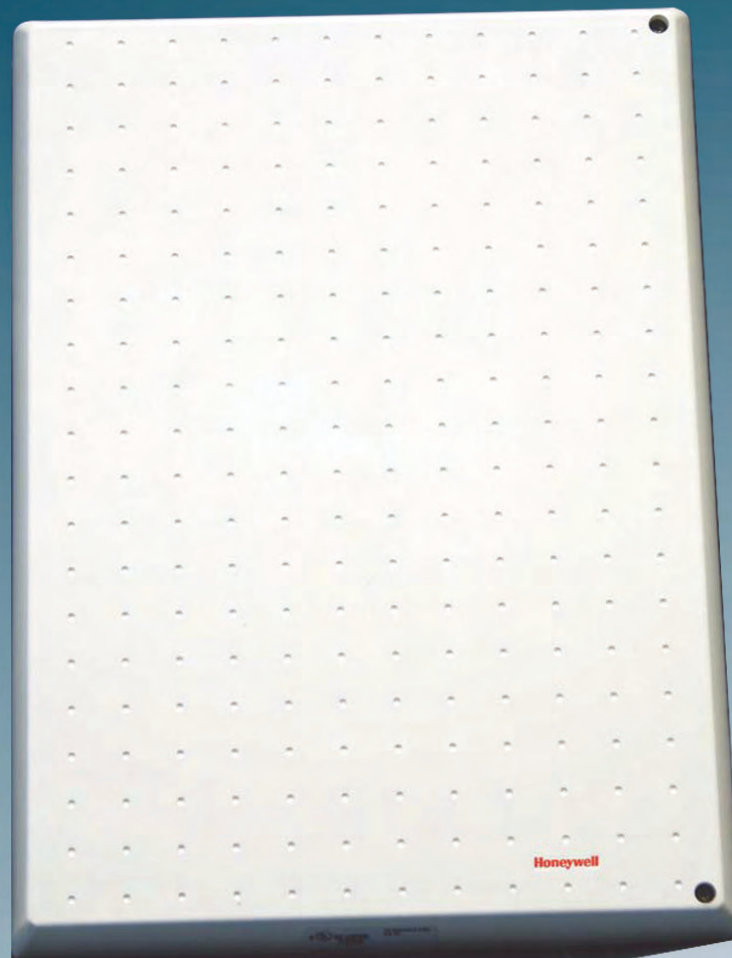
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INCREASED SECURITY, FLEXIBILITY
AND PERFORMANCE

The New Generation of Temaline Controller

TemaServer TS2

The new generation of Temaline controllers provide increased security, flexibility, performance and are even easier to configure.

The TS2 remains a fully autonomous controller and continues to offer a high level security solution that you can trust, as Temaline has always offered.

Thanks to the peer-to-peer communication the TS2 offers the full

availability of peripheral devices even in case of disconnection from the supervisory centre.

The unique shared-load capability ensures 100% availability of your field devices in the case of failure of a controller.

Higher performance

- The TS2 memory allows you to manage up to 250k cards. The factory default setting is to manage 100k cards complete with personnel names, 100k transaction buffer and 10k event buffer.

Number of cards	Transaction buffer	Event buffer
100,000	100,000	10,000

- The memory is fully configurable enabling it to be used in a way that best meets the project needs: eg in a large facility it will be configured to accept the maximum number of cardholders.
- The new TS2 supports up to 16 doors with a reader on each side of the door.
- With on-board 100MB Ethernet connection the new TS2 is able to maximise the usage of the network capacity, making the firmware and data download faster.
- All Temaline 'TemaKey' devices are supported by TS2.

More secure

Communication with the supervisory level can be set as IPSEC (Internet Protocol Security). This ensures the origin of data authentication, data integrity, data confidentiality (encryption) and replay protection – ensuring total security of the communications.

The communication with field devices includes command authentication to ensure that commands sent to outputs are

coming from the right and certified source. It also encrypts the card numbers to avoid any 'capturing' from sniffer devices – making security system breaches from external devices virtually impossible.

With the possibility to be configured in a redundant architecture, the TS2 can guarantee full availability of your security system 24/7.

More flexible

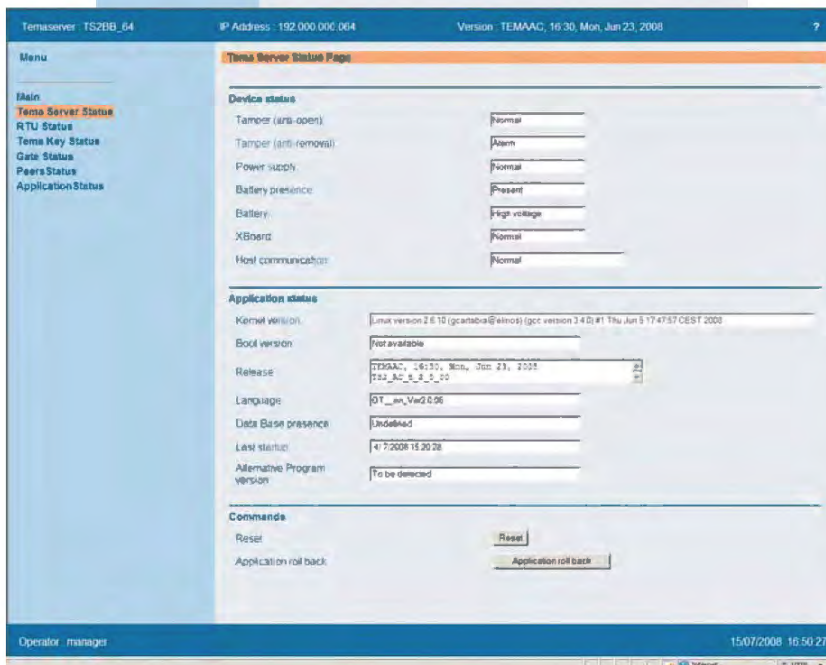
TS2 supports Access Control, T&A and Lift Management in one application allowing you to optimise the use and the distribution of your devices.



Easier to use

An intuitive Web interface makes the TS2 available via any Web browser. This makes it easy to configure, download the latest firmware or carry out any maintenance activity.

Different operator profiles enable the correct operability for the operator and a 'user wizard' makes field device commissioning very easy and minimises errors.



Technical Features



- Microprocessor Freescale Coldfire MCF5471, 32bits with Linux O.S.
- 128 MB of high performance DDR SRAM
- 64MB of FLASH memory
- Management of up to 16 doors with readers on both sides of the door
- Management of up to 64 I/O
- Autonomous clock/calendar with geographic time zone support and daylight saving time. Ten days of autonomy in case of power failure
- Battery backup, with full functionality for 90 minutes in case of power failure and signalling of the battery-charge status
- Low voltage power-supply (12V DC/AC) for safety during maintenance
- Tamper protection of the unit to detect unauthorised opening
- Watchdog protection for recovering in case of malfunctions

Key Features

- Management of up to 16 doors
- Up to 250,000 cards memory
- 10/100MB direct LAN/WAN connection
- Based on Linux Operating System
- Built-in Barracuda Web server
- WEB pages
- IPSEC with 3DES encryption on LAN communication
- Command authentication on LON devices
- Card number encryption



Specifications

Specification	TemaServer TS2	
Technical		Microprocessor 32bits - Freescale Coldfire MCF5471 Operative system LINUX
		Flash memory High reliability NOR Flash Spansion 64 Mbytes
		SDRAM memory High performance DDR 128 Mbytes
		Real time clock Internal RTC; retention time 10 days using super capacitor
		Security screw 2 Torx screw
		Anti-tampering 1 internal switch (against opening)
		Battery recharge time 80% of capacity in 8 hours
		Battery autonomy 90 minutes (Battery 100% efficiency)
		LONWORKS™ connection Unshielded twisted-pair cable in free topology (MIP FT3150)
Electrical	Supply Voltage	12V DC -20% / +20%
	Power Consumption	400mA (nominal), 600mA max. (during battery recharge time)
	Interface	10/100 BaseT standard unshielded cable on RJ45 - Auto-MDIX: automatically detects and corrects for straight or cross-over cables
Physical	Protection Rating	IP55
	Dimensions	W = 221mm H = 305mm D = 47mm
	Weight	2.4 Kg (including frame and battery)
	Colour	Grey RAL7035
	Case material	ABS, rated UL 5VA, 3 mm thick
Environmental	Operating Temperature	-10°C up to +49°C
	Storage Temperature	-20°C up to +50°C
	Storage humidity	Up to 90% not condensing
	Certification	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p>EN60950, EN50130-4, EN55022-B, EN55024, EN50133 Recognition class: 2, 3 Access class: B Environment Class: II RoHS / WEEE compliant device Directives 2001/95/EC, 2011/65/EU</p> </div> <div style="text-align: center;">  </div> </div>

NOTE: Honeywell reserves the right, without notification, to make changes in product design or specifications.

Find out more:

<http://www.temaline.honeywell.com>

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**Digital Wiegand Multi I/O
management device**

The TK_S014 Wiegand module enables connectivity of any standard device which uses the industry standard wiegand protocol, including biometrics.

Also enables step-by-step migration of current installations to save time and move to new Temaline access control technologies and benefits.

MAJOR BENEFITS

Easy to install: The direct LON connection and embedded I/O simplifies installation and engineering and reduces the number of system devices.

Flexibility: Select the reader you prefer in terms of design or re-use existing devices for cost-saving purposes.

Investment protection: As your network grows, the solution can scale and devices can be re-used.

KEY FEATURES

- Standard DIN/Omega RAIL 35
- TK_S014 supports Two “Wiegand 7 Wire” connected card readers and the I/O associated with a single door.
- Echelon “LON” Device
- Tamper-proof housing
- Internal I/O for door control
- Supervised inputs
- RoHS compliant, so environment respectful



TK_S014

Specification		TK_S014
Technical		Temaline Dual Wiegand Interface Module
	Supply Voltage	12 VDC ± 15% 70mA
	Inputs	4 states controlled: normal/close, open, short, cut.
	Outputs	Number: 2
		Current: 0 to 3mA
		Voltage: +10V max
		Power Open Collector (Drain)
	Electrical	Number: 2
		Current: 1.2A holding current (peak max 5A inductive load)
		Voltage: 10V +14V max, (internal power supply) Voltage (absolute max) 10V +30V (from external power supply)
Power Output External		12V ± 15% (line voltage) Current: 200mA max per channel
Physical	Output to control LEDs & buzzer	Type: Open collector.
	Number: 3 each Wiegand channel	
	Function: Red LED, Green LED, Buzzer.	
	Current: 80mA max	
Environmental	Voltage: +14V max	
	Protection Rating	IP31
	Dimensions	H=90 x W=105 x D=70mm
	Weight	0,2kg
Environmental	Operating Temperature	Standard DIN/omega Rail 35
	Operating Humidity	0°C / +50°C
	Certification	Directive EMC 89/336/EEC, 92/31/EEC
		Low Voltage Directive 93/68/EEC; RoHS / WEEE compliant device Directives 2002/95/EC 2002/96/EC

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Digital I/O management device

The TK_C21P module provides 4 Supervised Inputs and 4 Open Collector (Drain) Outputs. The same digital I/O management devices can therefore be used for both access control and light intrusion detection purposes.

The TK_C21P module offers the capability to collect the status of any different kind of digital sensor and to easily command external devices. A flexible device that allows a variety of customised applications.

MAJOR BENEFITS

Easy to install: The direct LON connection and embedded I/O simplifies installation and engineering and reduces the number of system devices.

Free I/O management: Possible to share the I/O of an I/O Module between different modular readers (TemaKeys) or to use the I/O of an I/O Module for both gate management and minimal intrusion detection purposes.


Distributed point management: reduces "home run" wiring and cable costs. Quicker response to field level.

KEY FEATURES

- Standard DIN / Omega RAIL 35
- TK_C21P supports 4 x Inputs & 4 x Outputs
- Echelon "LON" Device
- Tamper proof
- Supervised inputs
- RoHS compliant, so environment respectful



TK_C21P

Specification		TK_C21P	
Technical		Temaline I/O Module	
		Provides 4 Open collector (Drain) Outputs and 4 Controlled Inputs	
		Must be mounted on a standard DIN rail 35	
Electrical	Supply Voltage	12V +/-15% [18V internal PTC protection]	
	Power Consumption	50mA [nominal], 450mA Max [including loads]	
	Lon Cabling Interface	Unshielded twisted-pair cable in free topology (Echelon FT3120E4 RoHS chip)	
	Inputs	Number:	4
		Type:	Supervised
		Current:	0 to 3mA for each input (internal reference)
	Outputs	Voltage:	+14V max. 0V min
Number:		4	
Type:		Power Open drain (MOSFET)	
Current:		1,2A continuous 5A (0,5sec) impulsive	
Voltage:		10V +14V (internal Power supply) Voltage:(absolute max) 10V +30V (from external Power supply)	
Current:		1,2A [5A / 0,5sec peak max – inductive load] Normality O or NC via software setting	
Power Output External	Wire length connection:	Dependant on cable diameter, load current sink and load min power supply	
	On state:	Resistance = typical 20 mOhm Load: 1A = 0.02 V	
	Power Output External	12V ± 15% 300mA Max. (overall) [internal PTC protection]	
Physical	Protection Rating	IP31	
	Dimensions	H=105 x W=90 x D=61mm	
	Weight	0,2kg	
Environmental	Operating Temperature	Standard DIN/omega Rail 35	
	Operating Humidity	-20°C / +60°C	
	Certification	Directive EMC 89/336/EEC, 92/31/EEC Low Voltage Directive 72/23/EEC, 93/68/EEC; EN60950 / EN55022 / EN55024 RoHS / WEEE compliant device Directives 2002/95/EC 2002/96/EC 	

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Tema-Voyager™ Multi



The new controller for higher security

The Tema-Voyager Multi is a new controller within Temaline family that offers the management of a limited number of doors together with high security.

The Tema-Voyager Multi offers in a single device both a controller as well as the readers connection and the I/O management.

The reader connections can be Wiegand or RS485 via OSDP protocol when secure communication with reader is required.

Directly IP connected, it supports both POE and POE+ offering also the ability to directly manage the door unlock.

Telecommunication companies, airports, banks, shop dealers are good examples where this device exploits its best advantages.

KEY FEATURES

- Directly connected to EBI-Temaline supervisory level
- Peer-to-Peer communication with other Tema-Voyager Compact and Temaline devices ensures complete autonomy even in case of failure at the supervisory level
- 10/100Mb and 1Gb encrypted LAN (AES, IPSEC)
- LAN connectivity via:
 - Static IP, DHCP and DNS
- No limitation in number of Behaviour Models per cardholder
- Completely autonomous, DB onboard
- Door management during the database download from the supervisory center
- Management of up to 250K cards
- Simplified connection via POE & POE+ with possibility to manage the unlock of the doors using the optional Relay output board
- Embedded 4 Input and 4 Open Collector Outputs plus 8 fully configurable I/O for door management
- Optional Internal relay Board
- Wall or DIN rail mounting
- Tamper resistant (anti opening)

FLEXIBLE FUNCTIONALITIES

The Tema-Voyager Multi is available in different variations to manage from a single side door up to 4 single side doors, in all the possible configurations detailed in the below table.

In addition is also available the model to only manage I/O.

The device also embeds 4 Inputs and 4 Outputs and 8 additional fully configurable I/O, up to you to decide if you need them to work as Inputs or as Outputs.

Tema-Voyager™ Multi

The new controller for higher security

	Single-side door 1 reader + 1 REX	Double-side door 2 readers	Inputs	Outputs	Flexible I/O
Tema-Voyager Multi-0	0	0	4	4	8
Tema-Voyager Multi-1	1	0	4	4	8
Tema-Voyager Multi-2	2	0	4	4	8
Tema-Voyager Multi-2	0	1	4	4	8
Tema-Voyager Multi-3	3	0	4	4	8
Tema-Voyager Multi-3	1	1	4	4	8
Tema-Voyager Multi-4	4	0	4	4	8
Tema-Voyager Multi-4	3	0	4	4	8
Tema-Voyager Multi-4	2	1	4	4	8
Tema-Voyager Multi-4	0	2	4	4	8

THE ADVANCED FEATURES

Advanced Wiegand management

- The Tema-Voyager Multi checks the power supply of the Wiegand connection to identify if there is a short or a cut
- If a short or a cut is identified the Tema-Voyager Multi sends an alarm to the supervisory center
- In addition also the tamper of the reader connected on the Wiegand is checked and an alarm sent to supervisory level

Maximum benefits from POE and POE+

- The connection to POE and POE+ allows the Tema-Voyager Multi to directly supply up to 4 readers.
- The Tema-Voyager Multi allows full management to un-lock of the doors without any additional Power Supply but simply using the optional relay output board. The number of locks managed depends of course from the power required.

Advanced in Emergency management

- The optional Emergency Relay Output Board allows the Tema-Voyager Multi to interrupt the power supply to doors in case an emergency alarm is raised (typically fire alarm)

TEMALINE ARCHITECTURE

As part of the overall Temaline solution, Tema-Voyager Multi is compatible with Honeywell's Enterprise Buildings Integrator™ (EBI).

Compatibility and Peer-to-Peer communication with the Tema-Voyager Compact and other Temaline devices (TS-AC01 and TS2) offers a security solution capable of managing:

- Access Control
- Time and Attendance
- Muster
- Intrusion
- Lift security

Tema-Voyager™ Multi

The new controller for higher security

SPECIFICATIONS

Technical	
Microprocessor	Freescale i.MX 6 solo 800 Mhz
Memory	RAM: 512Mbytes FLASH: Nor 128Mbytes
Real Time clock	Retention time: 48 hours (big capacitor)
Security screw	4 Torx screws
Construction	Anti-Opening mechanical Tamper, Plastic housing
Mounting specification	Wall or DIN rail mounting
Connectivity	
LAN connection via	10/100Mb and 1Gb POE, or POE+ Encrypted LAN (AES, IPSEC) Static IP DHCP (Dynamic Host Configuration protocol), DNS (Domain Name System)
Electrical	
Supply voltage	10-30VDC POE IEEE 802.3af-2003 POE+ IEEE 802.3at-2009
Power consumption	4,8 W Board only 10-30VDC: max load 36 W POE : max load 15.4W POE+ : max load 25.5W
Current available for Readers and Locks (supported only with optional Relay and Emergency Relay Output Boards)	10-30VDC: max 2100mA @ 12Vcc POE : max 750mA @ 12Vcc POE+ : max 1500mA @ 12Vcc WARNING: please check the limits with the Tema-Voyager Multi Consumption Verifier Tool
Interface	
LAN	10/100Mb, 1Gb encrypted LAN connection (Cable Cat 5/6)
Wiegand	4 lines, alternative to the 4 RS485 lines
RS485	4 lines (OSDP protocol), alternative to the 4 Wiegand lines
Inputs	4 fixed: Supervised or Digital. Supervised inputs with four statuses: Normal, Alarm, Cut, and Short Digital inputs with two statuses: Open, Close Current: 0~10mA for each input Voltage: +14V maximum; 0V minimum
Outputs	4 fixed From the main Board: Power Open Drain (Mosfet) 12V-50mA From the optional Relay Output board: dry contact NO/NC 24V-3A
Inputs/Outputs	8 configurable (characteristics as those fixed)
Mechanical	
Dimensions (W x H x D)	240*140*60mm
Weight	550g
Environmental	
Operating temperature	-10°C to +55°C
Storage temperature range	-25°C to +70°C
Storage humidity	95% without condensation
IP Rating	IP32
Regulatory	
Certifications	CE CTick CFR 47 FCC Part 15 subpart B, 2014 UL 294-S319 (pending) EN 50133-1:1996/A1:2002 EN 50133-2-1:2000 EN 50133-7:1999 EN-55024:2010 EN 55022:2010 Class B EN 50130-4:2011 EN-50130-5:2011 (Environments - Access control) EN 60950-1:2006+A11:2009+A12:2011+A2:2013
Environmental	Rohs/WEEE-compliant – directives 2002/95/EC 2011/65/EC

Tema-Voyager™ Multi

The new controller for higher security

ORDERING

Tema-Voyager Multi	
VMC-00WENN1	Tema-Voyager Multi-0, I/O management only, no wiegand/RS485 connections
VMC-01WENN1	Tema-Voyager Multi-1, manages up to 1 single side door
VMC-02WENN1	Tema-Voyager Multi-2, manages up to 2 single side door
VMC-03WENN1	Tema-Voyager Multi-3, manages up to 3 single side door
VMC-04WENN1	Tema-Voyager Multi-4, manages up to 4 single side door

Accessories	
VMA-06	Tema-Voyager Multi Relay Output board: provides 4 Relay Output, dry contact NO/NC 24V-3A. Up to 3 can be added to a Multi device.(*)
VMA-07	Tema-Voyager Multi Emergency Relay Output board, provides: <ul style="list-style-type: none">• 4 Relay Output, dry contact NO/NC 24V-3A;• 1 Input, dry contact, for emergency alarm, with separate power supply. Up to 1 can be added to a Multi device.(*)

Spares	
VMS-KIT	Resistors and diodes kit.
VMS-RUB	Seal rubber kit, 5 upper, 5 lower.

(*) A Tema-Voyager Multi controller can embed up to max 3 Output boards in total. So it supports up to 1 Emergency Relay Output board plus 2 Relay Output boards.



SAP® Certified

Integration with SAP Applications

Honeywell reserves the right, without notification, to make changes in product design or specifications.

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HID® is a trademark of HID Global.

SAP® is a registered trademark of SAP AG in Germany and in several other countries.

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Honeywell Security Group

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TEMA-VOYMUL-04-EN(0615)DS-E
June 2015

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Honeywell

General Purpose Cabinet

SPECIFICATION DATA



FEATURES

- Half- and full-sized Cabinets available
- Key-locked Door to prevent tampering
- UL listed control unit enclosure meeting UL864 standards
- Similar appearance for HVAC control, fire, security, and automation control panels
- Doors can be installed to open from left or right
- Knockouts for electrical, pneumatic, and raceway piping
- Wall mounting or floor mounting with optional Free-Standing Mounting Legs
- Optional Canopy Light
- Optional Back Coverplate
- Optional Tamper Switch

GENERAL

The Honeywell General Purpose Cabinet ("Cabinet") is constructed from a separately ordered Rough-in Ring, Subpanel, and Door with a lock. Lighting and hardware accessories are available to complete a surface-mounted, a flush-mounted or a lighted,

free-standing installation. The Cabinets are used in HVAC control, fire alarm, security, and automation control systems as convenience panels to group system components in an area easily accessible to the operator for adjustments.

DESCRIPTION

The Honeywell General Purpose Cabinet ("Cabinet") is constructed from a separately ordered Rough-in Ring, Subpanel, and Door with a lock. Lighting and hardware accessories are available to complete a surface-mounted, a flush-mounted or a lighted, free-standing installation. The Cabinets are used in HVAC control, fire alarm, security, and automation control systems. One or more Cabinets can be mounted together to form a panel. For ease of piping and wiring, the usual limit is six Cabinets to a panel.

SPECIFICATIONS

Models:

Half-sized Cabinet:

- Rough-in Ring: 14506635-001
- Door with lock: 14506636-001
- Subpanel: 14506747-001

Full-sized Cabinet:

- Rough-in Ring: 14506635-002
- Door with lock: 14506636-002
- Subpanel: 14506747-002

Material:

Rough-in Ring and Door: 16-gage galvanized steel
Subpanel: 0.050-in. aluminum

Finish:

Rough-in Ring: Black textured paint
Door: Almond textured paint

Home and Building Control

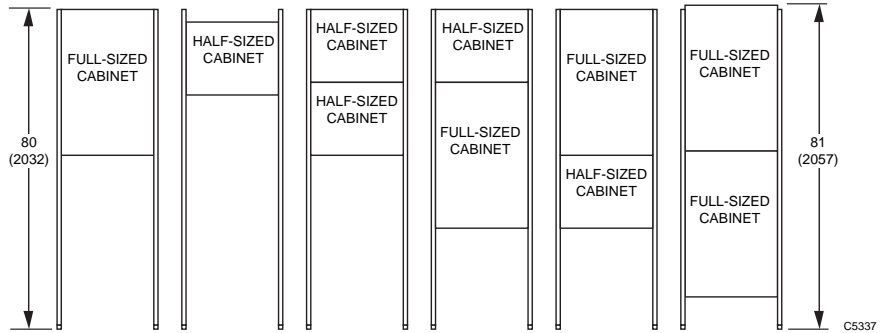
Honeywell Inc.
Honeywell Plaza
P.O. Box 524
Minneapolis MN 55408-0524

Honeywell Latin American Division

Miami Lakes Headquarters
14505 Commerce Way Suite 500
Miami Lakes FL 33016

Mounting:

General Purpose Cabinets on Free-Standing Mounting Legs



Accessories:

Back Coverplate:

- Half-sized: 15753207-004
- Full-sized: 15753207-003
- Canopy Light: 15753239-001
- Free-Standing Mounting Legs: AK3997 (kit)

Hardware to mount a second Cabinet on Free-Standing Mounting Legs: AK3999 (kit)

Ground Strap, 12-in. (305-mm): 14502248-003

Replacement Lock and Key: 14505928-001

Tamper Switch: 14505159-001

Universal Trim Ring: See General Purpose Cabinet Installation Instructions 95-7438

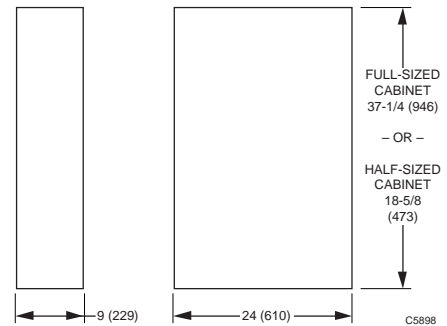
Trim Ring Bag Assembly, four corner pieces and screws: 14503745-001

Trim Ring Extrusion, eight feet (2438.4 mm) in length: 14503384-001

Approvals:

Meets UL 864 Control Units for Fire-Protective Signaling Systems

Dimensions in Inches (Millimeters):



Home and Building Control

Honeywell Limited-Honeywell Limitée
740 Ellesmere Road
Scarborough Ontario

Honeywell Europe S.A.

3 Avenue du Bourget
B-1140 Brussels Belgium

Honeywell Asia Pacific Inc.

30th Floor, Office Tower
Convention Plaza
1 Harbour Road
Wanchai
Hong Kong





AL600ULXB

Overview

AL600ULXB is a UL Recognized power supply/charger that converts a 115VAC 60Hz input into a single 12VDC or 24VDC non power-limited output.

Specifications

Input:

- Input 115VAC, 60Hz, 3.5 amp.

Output:

- 12VDC or 24VDC selectable output.
- 6 amp continuous supply current.
- Filtered and electronically regulated output.
- Short circuit and thermal overload protection.

Battery Backup:

- Built-in charger for sealed lead acid or gel type batteries.
- Automatic switch over to stand-by battery when AC fails.
- Maximum charge current 0.7 amp.

Supervision:

- AC fail supervision (form “C” contacts).
 - Notification trigger is selectable for 30 seconds (factory set) or 6 hours.
- Low battery supervision (form “C” contacts).
- Battery presence supervision (form “C” contacts).

Visual Indicators:

- AC input and DC output LED indicators.

Electrical:

- Operating temperature: 0° C to 49° C ambient.
- 36.85 or 73.70 BTU/Hr.
- System AC input VA requirement: 402.5VA.

Mechanical:

- Product weight (approx.): 0.8 lbs. (0.36 kg).
- Shipping weight (approx.): 0.95 lbs. (0.43 kg).

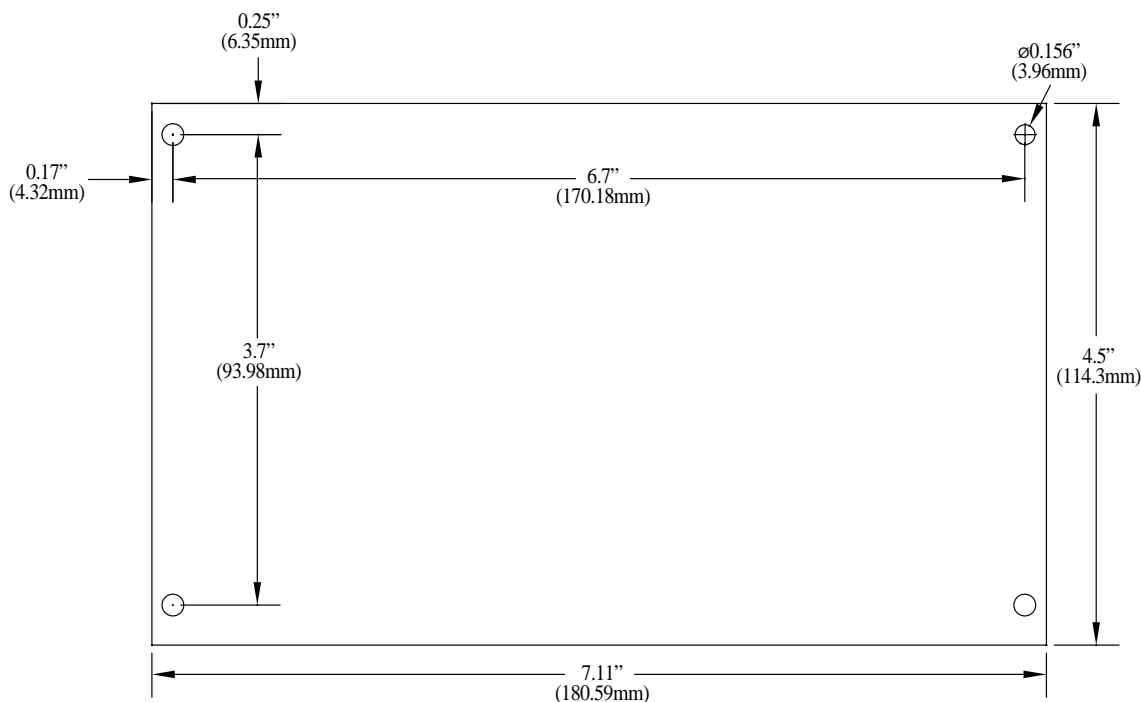
Agency Approvals

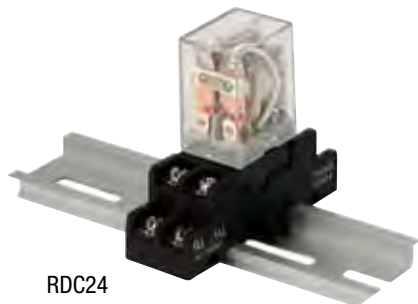


UL Recognized component for Access Control System Units (UL 294),
 Standard for Safety for Fire Protective Signaling Systems (UL 1481).

Board Dimensions (L x W x H approximate):

4.5" x 7.11" x 2.01" (114.3mm x 180.59mm x 51.05mm)



**Overview**

RDC24 is a DIN rail mountable relay which is designed for continuous duty. This rugged, reliable and dependable relay will handle any switching application.

Specifications***Input Voltage:***

- 24VDC operation.
- Current draw: 43mA.

Contact Rating:

- 10 amp/220VAC or 28VDC DPDT contacts.

Electrical:

- Operating temperature: -25° C to 55° C ambient.

Mechanical:

- DIN Rail mountable.
- Dimensions (L x W x H approx.):
2.7" x 1.375" x 2.375"
(68.58mm x 34.93mm x 60.32mm)
- Product weight (approx.): 0.1 lbs. (0.05 kg).
- Shipping weight (approx.): 0.15 lbs. (0.07 kg).

Agency Approvals

UL Recognized.



cUL Recognized.



European Conformity.

PS-1270 12 Volt 7.0 AH

Rechargeable Sealed Lead Acid Battery

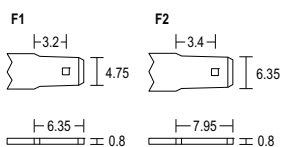


We've Got The Power.™

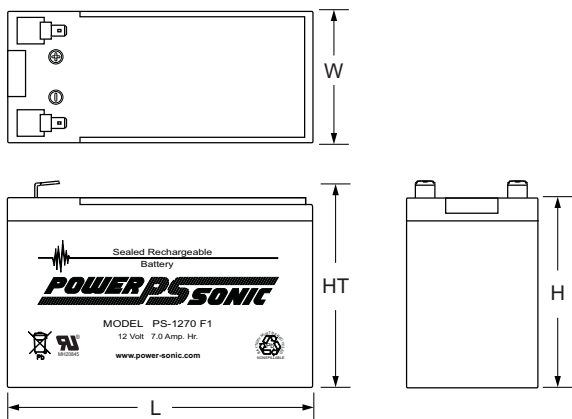


Terminals (mm)

- F1 - Quick disconnect tabs, 0.187" x 0.032" - Mate with AMP. INC. FASTON "187" series — OR —
- F2 - Quick disconnect tabs, 0.250" x 0.032" - Mate with AMP. INC FASTON "250" series



Physical Dimensions: in (mm)



L: 5.95 (151) W: 2.56 (65) H: 3.70 (94) HT: 3.86 (98)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

Features

- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, spill proof construction allows safe operation in any position
- Power/volume ratio yielding unrivaled energy density
- Rugged impact resistant ABS case and cover (UL94-HB)
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized under file number MH 20845

Performance Specifications

Nominal Voltage 12 volts (6 cells)

Nominal Capacity

20-hr. (350mA to 10.50 volts)	7.00 AH
10-hr. (650mA to 10.50 volts)	6.50 AH
5-hr. (1.2A to 10.20 volts)	6.00 AH
1-hr. (4.5A to 9.00 volts)	4.50 AH
15-min. (14A to 9.00 volts)	3.50 AH

Approximate Weight 4.80 lbs. (2.18 kg)

Energy Density (20-hr. rate) 1.49 W-h/in³ (90.95 W-h/l)

Specific Energy (20-hr. rate) 17.50 W-h/lb (38.58 W-h/kg)

Internal Resistance (approx.) 23 milliohms

Max Discharge Current (7 Min.) 21.0 amperes

Max Short-Duration Discharge Current (10 Sec.)..... 70.0 amperes

Shelf Life (% of nominal capacity at 68°F (20°C))

1 Month	97%
3 Months.....	91%
6 Months	83%

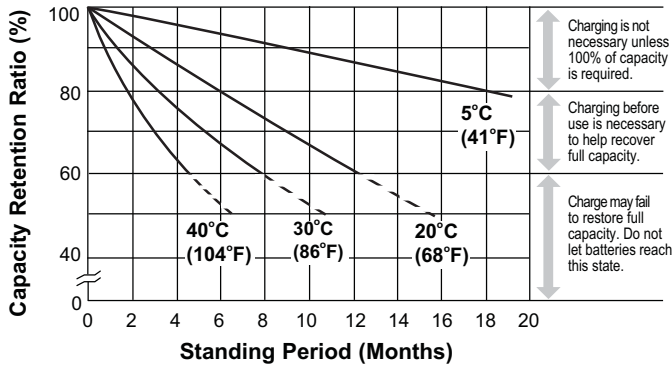
Operating Temperature Range

Charge..	-4°F (-20°C) to 122°F (50°C)
Discharge.....	-40°F (-40°C) to 140°F (60°C)

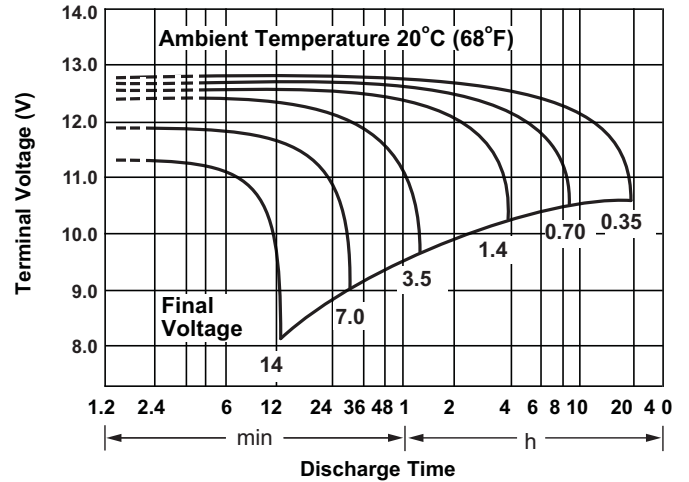
Case ABS Plastic

Power-Sonic Chargers PSC-12800A, 12800A-C

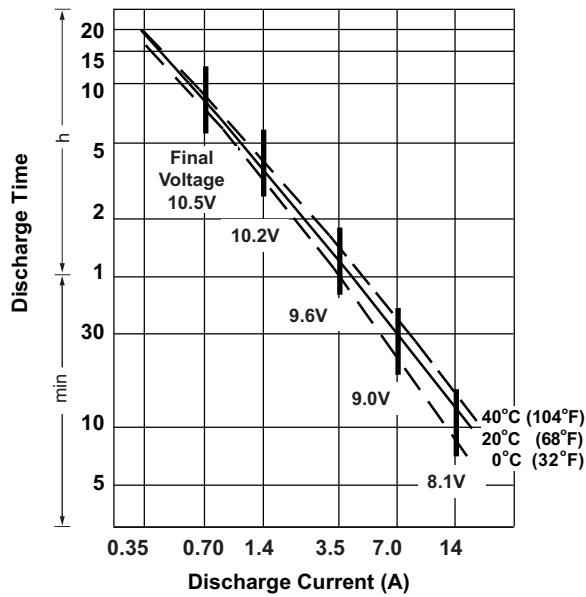
Shelf Life & Storage



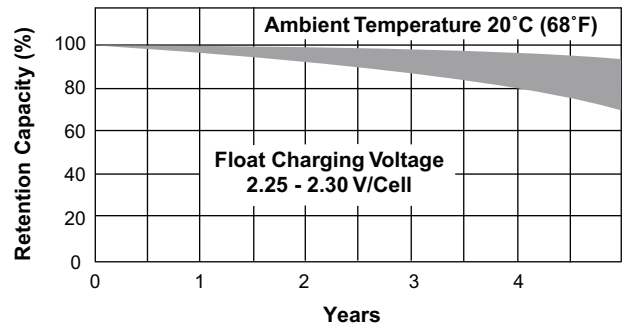
Discharge Characteristics



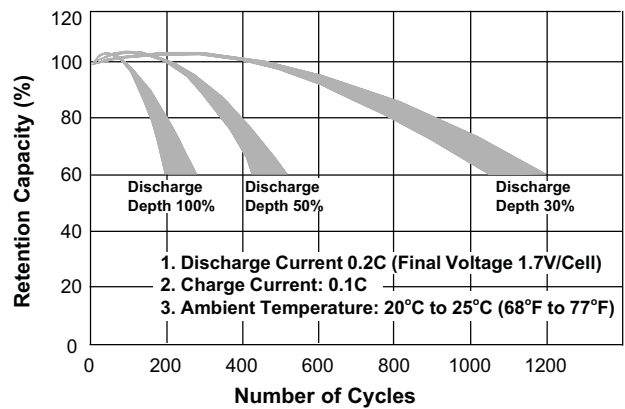
Discharge Time vs. Discharge Current



Life Characteristics in Stand-By Use



Life Characteristics in Cyclic Use



Charging

Cycle Applications: Limit initial current to 2.1A. Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts at 68°F (20°C). Hold at 14.4 to 14.7 volts until current drops to under 70mA. Battery is fully charged under these conditions, and charger should be disconnected or switched to “float” voltage.

“Float” or “Stand-By” Service: Hold battery across constant voltage source of 13.5 to 13.8 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Note: Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for “C-Series Switch Mode Chargers” and “Transformer Type A and F Series”. Please contact our Technical department for advice if you have difficulty in locating suitable models.

Further Information

Please refer to our website www.power-sonic.com for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc..

Contact Information

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 Fax: +1-650-366-3662
international-sales@power-sonic.com



multiCLASS SE[®] Readers



HIGHLY ADAPTABLE AND SECURE HIGH FREQUENCY ACCESS CONTROL SOLUTION

- **Powerfully Secure** – Provides layered security beyond the card media for added protection to identity data using SIOs.
- **Adaptable** – Interoperable with a growing range of technologies and form factors including mobile devices utilizing Seos™.
- **Interoperable** – Open Supervised Device Protocol (OSDP) for secure, bidirectional communication.
- **Streamlined Migration** – Simultaneous support for 125 kHz HID Prox®, AWID and EM4102 for seamless migration; field programmable for secure upgrades and extended lifecycle.

HID Global's iCLASS SE[®] platform goes beyond the traditional smart card model to offer a secure, standards-based and flexible platform that has become the new benchmark for highly adaptable, interoperable and secure access control solutions.

MIFARE DESFire EV1 with custom data models and other leading technologies.

Additionally, multiCLASS SE readers support mobile devices utilizing Seos, enabling a new class of portable identity credentials that can be securely provisioned and safely embedded into both fixed and mobile devices.

multiCLASS SE readers include Open Supervised Device Protocol (OSDP), a new Security Industry Association (SIA) standard that together with Secure Channel Protocol (SCP) provides secure communications and central management.

multiCLASS SE[®] readers simplify migration from legacy technologies with support 125 kHz for HID Prox, Indala, AWID and EM4102, and provide customers the assurance that their existing investments can be leveraged to enhance their system as business requirements change. The technology-independent readers also support iCLASS[®] Seos™ and iCLASS SE credential platforms, as well as standard iCLASS, MIFARE and

As part of HID Global's iCLASS SE platform that is based on the Secure Identity Object™ (SIO[®]) data model and Trusted Identity Platform[®] (TIP™), the powerfully secure multiCLASS SE readers offer advanced features such as layered security beyond the card media and tamper-proof protection of keys/cryptographic operations using EAL5+ secure element hardware.

POWERFULLY SECURE:

- Multi-Layered Security – Ensures data authenticity and privacy through the multi-layered security of HID's SIO.
- EAL5+ Certified Secure Element Hardware – Provides tamper-proof protection of keys/cryptographic operations.
- SIO Data Binding – Inhibits data cloning by binding an object to a specific credential.
- Secured communications using OSDP with Secure Channel Protocol.

HIGHLY ADAPTABLE:

- Mobile device support using card emulation - Enables HID access control.
- SIO Portability – Provides technology independence and portability to other smart card technologies.
- Upgradeable Hardware Connection – Allows all Wiegand-based communication readers to expand communication capabilities to OSDP, Hi-O and other bidirectional protocols.
- Field Programmable Readers – Provides secure upgrades for migration and extended lifecycle.

- Customization and management from a central location – Enables organization to make changes and manage all attached OSDP readers over RS485 wiring.
- Simultaneous support for 125kHz HID Prox, AWID and EM4102.
- Allows for support of future technologies.

SUSTAINABILITY AND MANAGEMENT:

- Intelligent Power Management (IPM) – Reduces reader power consumption by as much as 75% compared to standard operating mode.
- Recycled Content – Contributes toward building LEED credits.

INTEROPERABLE:

- SIO Media Mapping – Simplifies deployment of third-party objects to multiple types of credentials.
- Industry standard communications using OSDP.
- Custom programming support to read custom data models on MIFARE and MIFARE DESFire EV1 credentials.



SPECIFICATIONS

	RP10	RP15	RP40	RPK40
Base Part Number	900P 900L	910P 910L	920P 920L	921P 921L
Typical Read Range¹	13.56 MHz Single Technology ID-1 Cards - SIO Model Data			
	iCLASS Seos: 1.2" (3 cm) iCLASS: 3.1" (8 cm) MIFARE Classic: 2.8" (7 cm) MIFARE DESFire EV1: 1.2" (3 cm)	iCLASS Seos: 1.2" (3 cm) iCLASS: 3.1" (8 cm) MIFARE Classic: 2.8" (7 cm) MIFARE DESFire EV1: 1.2" (3 cm)	iCLASS Seos: 2.0" (5 cm) iCLASS: 4.7" (12 cm) MIFARE Classic: 4.7" (12 cm) MIFARE DESFire EV1: 2.0" (5 cm)	iCLASS Seos: 1.6" (4 cm) iCLASS: 4.7" (12 cm) MIFARE Classic: 4.3" (11 cm) MIFARE DESFire EV1: 1.6" (4 cm)
	13.56 MHz Single Technology Tags/Fobs - SIO Data Model			
	iCLASS: 1.6" (4 cm) MIFARE Classic: 1.2" (3 cm)	iCLASS: 1.6" (4 cm) MIFARE Classic: 1.2" (3 cm)	iCLASS: 2.4" (6 cm) MIFARE Classic: 2.0" (5 cm)	iCLASS: 2.8" (7 cm) MIFARE Classic: 1.6" (4 cm)
	125 kHz Single Technology ID-1 Cards			
	HID Prox: 2.8" (7 cm) Indala Prox: 1.6" (4 cm) EM4102 Prox: 4.3" (11 cm)	HID Prox: 2.8" (7 cm) Indala Prox: 1.6" (4 cm) EM4102 Prox: 4.3" (11 cm)	HID Prox: 2.8" (7 cm) Indala Prox: 2.0" (5 cm) EM4102 Prox: 4.3" (11 cm)	HID Prox: 2.8" (7 cm) Indala Prox: 2.0" (5 cm) EM4102 Prox: 3.1" (8 cm)
125 kHz Single Technology Tags/Fobs				
HID Prox: 1.6" (4 cm) Indala Prox: 0.8" (2 cm) EM4102 Prox: 2.8" (7 cm)	HID Prox: 2.0" (5 cm) Indala Prox: 0.8" (2 cm) EM4102 Prox: 2.8" (7 cm)	HID Prox: 2.0" (5 cm) Indala Prox: 1.2" (3 cm) EM4102 Prox: 2.8" (7 cm)	HID Prox: 1.6" (4 cm) Indala Prox: 1.2" (3 cm) EM4102 Prox: 2.4" (6 cm)	
Mounting	Mini-Mullion Size; physically HID's smallest iCLASS readers and are ideally suited for mullion-mounted door installations; U.S. single-gang J-box (with mud ring) or any flat surface	Mullion Size; physically HID's second smallest iCLASS readers and are ideally suited for mullion-mounted door installations; U.S. single-gang J-box (with mud ring) or any flat surface	Wall Switch Size; designed to mount and cover single gang switch boxes primarily used in the Americas and includes a slotted mounting plate for European and Asian back box spacing	
Color	Black			
Keypad	No			Yes (4x3)
Dimensions	1.9" x 4.1" x 0.9" 4.8 cm x 10.3 cm x 2.3 cm	1.9" x 6.0" x 0.9" 4.8 cm x 15.3 cm x 2.3 cm	3.3" x 4.8" x 1.0" 8.4 cm x 12.2 cm x 2.4 cm	3.3" x 4.8" x 1.1" 8.5 cm x 12.2 cm x 2.8 cm
Product Weight (Pigtail)	4.0oz (114g)	5.2oz (149g)	7.8oz (222g)	9.1oz (258g)
Product Weight (Terminal Strip)	3.0oz (85g)	4.3oz (124g)	7.6oz (216g)	8.0oz (228g)
Operating Voltage Range	5-16 VDC, Linear supply recommended			
Current Draw - Standard Power Mode² (mA)	75	75	85	95
Current Draw - Intelligent Power Management (IPM) Mode² (mA)	40	40	50	70
Peak Current Draw - Standard Power or IPM Mode² (mA)	200	200	200	200
NSC³ Power Consumption - Standard Power Mode (W @ 16VDC)	1.2	1.2	1.4	1.5
NSC³ Power Consumption - w/ IPM (W @ 16VDC)	0.6	0.6	0.8	1.1
Operating Temperature	-31° to 150° F (-35° to 65° C)			
Storage Temperature	-67° to 185° F (-55° to 85° C)			
Operating Humidity	5% to 95% relative humidity non-condensing			
Environmental Rating	Indoor/Outdoor IP55; IP65 if installed with optional gasket (IP65GSKT)			
Transmit Frequency	13.56 MHz & 125 kHz			
13.56 MHz Card Compatibility	Secure Identity Object™ (SIO*) on iCLASS Seos, iCLASS SE/SR, MIFARE DESFire EV1 and MIFARE Classic (On by Default) - standard iCLASS Access Control Application (order with Standard interpreter) - ISO14443A (MIFARE) CSN, ISO14443B CSN, ISO15693 CSN - MIFARE Classic and MIFARE DESFire EV1 custom data models - FeliCa™ CSN, CEPAS ⁴ CSN or CAN			
125 kHz Card Compatibility	HID Prox ⁴ , AWID ⁴ , Indala, EM4102 ⁴			
Communications	Optional OSDP with SCP over RS485 ⁴ Wiegand/Clock-and-Data Interface 500ft (150m) (22AWG) - Use Shielded cable for best results			
Panel Connection	Pigtail or Terminal Strip			
Certifications	UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), C-tick (Australia, New Zealand), SRRC (China), MIC (Korea) ⁴ , NCC (Taiwan) ⁴ , iDA (Singapore) ⁴ , RoHS, FIPS-201 Transparent FASC-N Reader			
Crypto Processor Hardware Common Criteria Rating	EAL5+			
Patents	US7180403, US7439862, US7124943, US5952935, US6058481, US6337619			
Housing Material	UL94 Polycarbonate			
Manufactured with % of recycled content (Pigtail)	10.5%	11.0%	10.5%	10.9%
Manufactured with % of recycled content (Terminal Strip)	10.5%	11.0%	11.0%	12.3%
UL Ref Number	RP10E	RP15E	RP40E	RPK40E
Warranty	Limited Lifetime			

¹ Read range listed is statistical mean rounded to nearest whole centimeter. HID Global testing occurs in open air. Some environmental conditions, including metallic mounting surface, can significantly degrade read range and performance; plastic or ferrite spacers are recommended to improve performance on metallic mounting surfaces.

² Measured in accordance with UL294 standards; See Installation Guide for Details.

³ NSC = Normal Standby Current; See Installation Guide for Details.

⁴ Not available on 9xxL part numbers.

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IS310/IS320

REQUEST-TO-EXIT PIR



Honeywell's Request-to-Exit (RTE) sensors offer basic and full-featured models to suit every access control application. The quick-install sensors are extremely flexible, provide a generous amount of wiring room and contain built-in internal "tamper proof" shutters to enable precise target area detection.

FEATURES

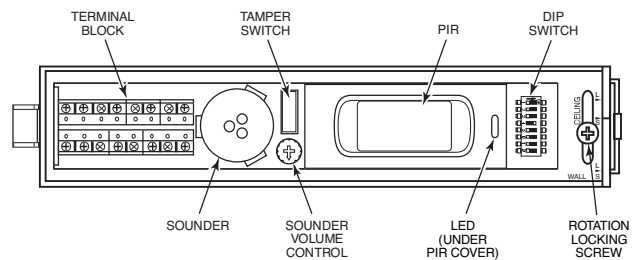
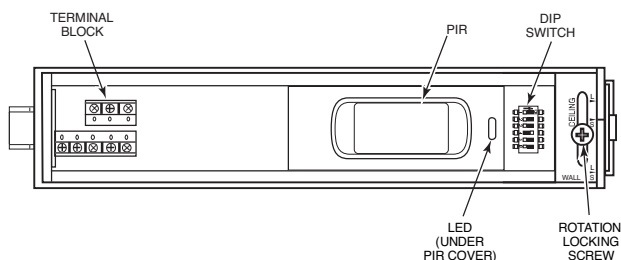
IS310:

- Adjustable relay time (0.5 - 64 seconds)
- Micro-based signal processing
- Adjustable "tamper proof" shutters— to enable precise target area detection
- Two "Form C" outputs
- Swivel optics – allow for offset mounting
- Patented black bug guard
- Available in white or black

IS320:

IS320 includes the same features as IS310, plus:

- Piezo Sounder with volume control
- Door contact input
- Reader/keypad/keyswitch input
- Remote arming and sounder inputs
- Cover tamper



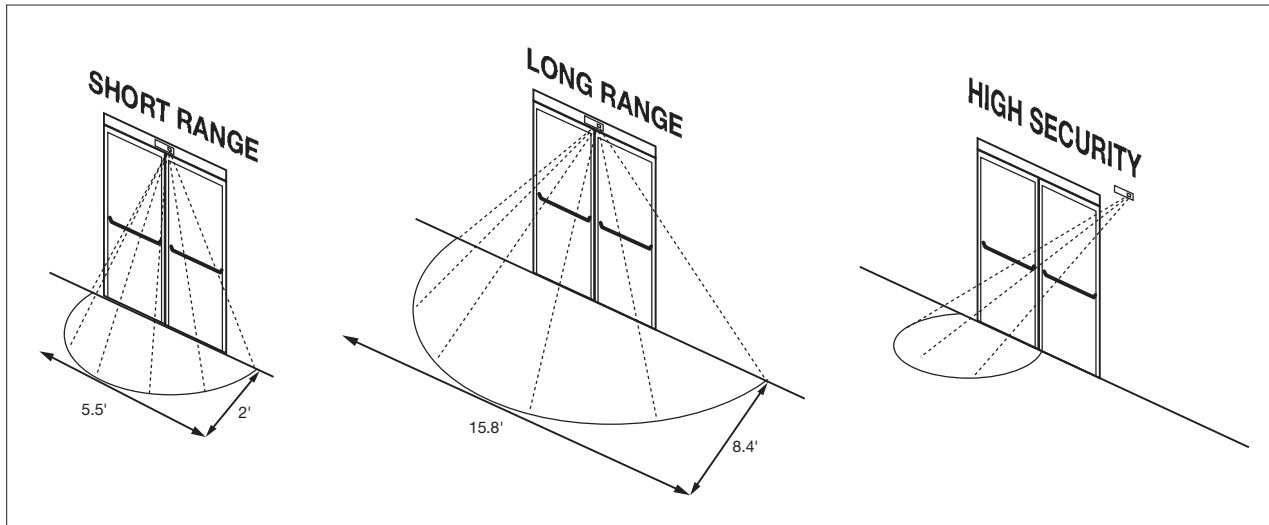
IS310/IS320

REQUEST-TO-EXIT PIR

Honeywell

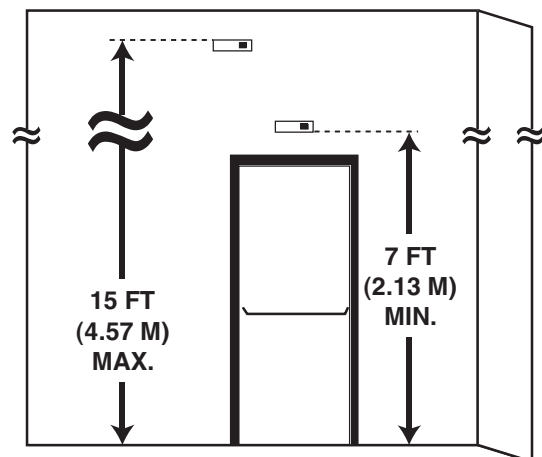
SPECIFICATIONS

RANGE



- **Range:** From 5.5' x 2' (1.67m x 0.6m) up to 15.8' x 8.4' (4.8 x 2.5m) depending on mounting height
- **Mounting Height:** 7' to 15' (2.13m x 4.51m)
- **Detectable Walk Rate:** 0.5'-10'/sec
- **Signal Processing:** RTE and Security modes
- **Temperature Compensation:** Advanced dual-slope
- **Alarm Relay:** Two "Form C" outputs
- **Input Voltage:** 12-24 volts AC or DC
- **Standby Current:** 35mA
- **Indicators:** Green (ready) LED
- **Operating Temperature:** 14° F to 122° F (-10° C to 50° C)
- **Dimensions:** 7" L x 2" H x 2" D (17.7cm x 5cm x 5cm)
- **Sounder:** Adjustable to 60 dB@10' (3.05m)*
- **Cover Tamper Switch:** contact rating 100mA 30VDC*

MOUNTING HEIGHT



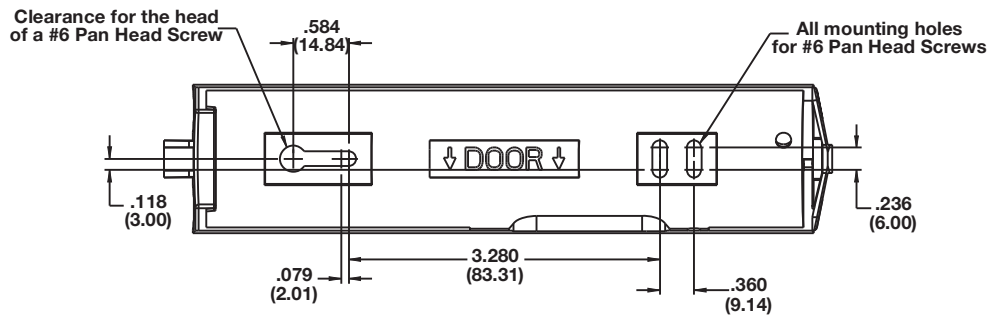
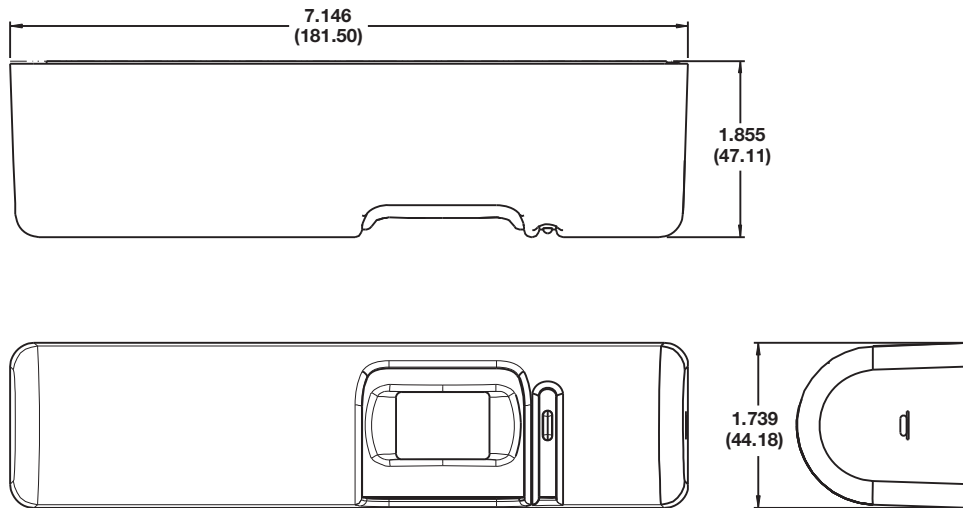
*IS320 model only

IS310/IS320

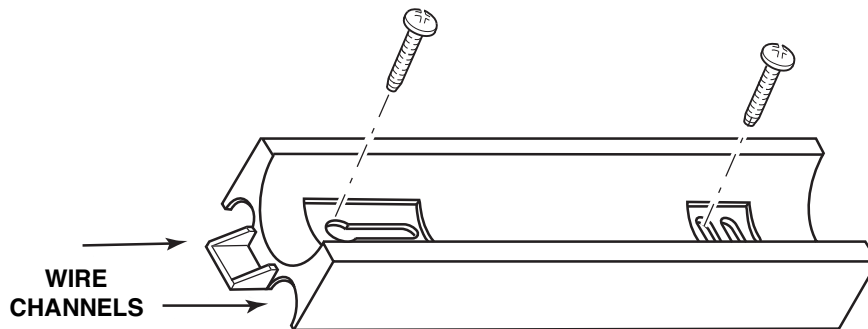
REQUEST-TO-EXIT PIR



SPECIFICATIONS



View showing sensor mounting plate with front cover and PCB removed



IS310/IS320

REQUEST-TO-EXIT PIR

ORDERING

IS310WH (0-000-361-01)	Entry Level RTE - White
IS310BL (0-000-361-02)	Entry Level RTE - Black
IS320WH (0-000-361-03)	Fully Featured RTE - White
IS320BL (0-000-361-04)	Fully Featured RTE - Black
RTE6PKWH	Six pack of IS310WH - White
RTE6PKBK	Six pack of IS310BL - Black

ACCESSORIES

IS310WHTP (5-531-395-01)	Trim Plate for IS310 and IS320 - White
IS310BLTP (5-531-395-02)	Trim Plate for IS310 and IS320 - Black



IS310WHTP



IS310BLTP

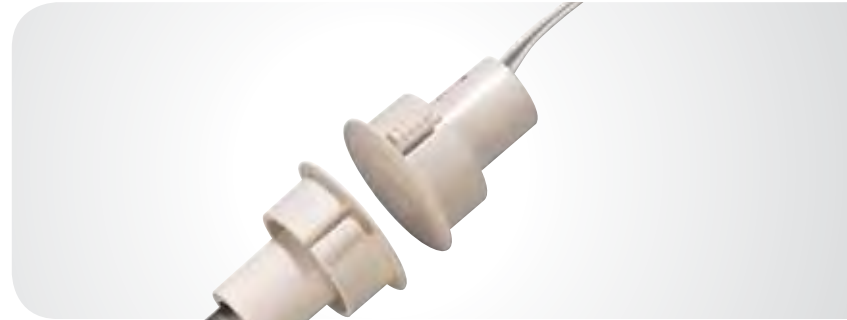
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Honeywell

Steel Door Contacts

1078/1076 Series



OVERVIEW

The Interlogix 1078 Series Steel Door contacts are designed specifically for use in the steel doors commonly found in commercial building applications. The unique housing design features a rugged unibody construction with flexible ribbed sides for quick, secure installation without gluing. The magnet housing isolates the magnet from the surrounding steel for maximum gap distances, both make and break. Over seven models including: Wide Gap, SPDT, DPDT, and Biased for High Security applications make the 1078 Series the most widely used and comprehensive line available.

On available models a terminal connection (T) makes installation easier. Simply strip the wire, insert it into the terminal block and tighten. The terminal accepts any wire size from 14 to 22 gauge, and has a unique one piece design for added strength.

An optional Rare Earth Magnet is available. It is designed for use in metal entry/exit doors with a channel in the top of the door. The magnet eliminates the need to cut a mounting hole in the door channel. The flexible magnet housing can be compressed to accommodate a variety of channel widths for quick, easy installation. Adhesive is recommended.

The contact contains a hermetically sealed magnetic reed switch. The reed shall be potted in the contact housing with a polyurethane based compound. Contact and magnet housing shall snap-lock into a 3/4" or 1" dia. hole. Housings shall be molded of flame retardant ABS plastic. Color of housings shall be off-white, gray or mahogany brown. The magnet shall be made of Alnico V. Rare Earth Magnet shall be made of neodymium iron boron.

Snap-lock insulation bushing for tight fit and maximum gap in steel. Both contact and magnet plastic housings are constructed of one piece of thick-walled ABS plastic for maximum strength and durability.

STANDARD FEATURES

- Fly leads and terminal options available
- Designed specifically for use in steel doors
- Special ribbed sides allow for easy installation
- Rugged unibody construction for maximum durability and reliability
- Terminal models available for easier installation
- Regular, Wide Gap, SPDT, DPDT, and High Security models available
- Rare Earth Magnet designed for steel door with top channel available

Steel Door Contacts

1078/1076 Series

North America
T 855-286-8889

Latin America
T 561-998-6114

Ordering Information

1076CH-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Higher Security, Biased for Higher Security Applications, Single Pole-Double Throw, White
1076C-M	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, SPDT, 3/8" Gap Size, Single Pole-Double Throw, Brown
1076C-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, SPDT, 3/8" Gap Size, Single Pole-Double Throw, White
1076CW-M	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Wide Gap, SPDT, 3/4" Gap Size, Single Pole-Double Throw, Brown
1076CW-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Wide Gap, SPDT, 3/4" Gap Size, Single Pole-Double Throw, White
1076D-G	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, DPDT, 1/2" Gap Size, Double Pole-Double Throw, Gray
1076D-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, DPDT, 1/2" Gap Size, Double Pole-Double Throw, Brown
1076D-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, DPDT, 1/2" Gap Size, Double Pole-Double Throw, White
1076-G	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, 1/2" Gap Size, Single Pole-Double Throw, Gray
1076H-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, High Security, SPDT, Biased for Higher Security, 1/2" Gap, Single Pole-Double Throw, White
1076-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, 1/2" Gap Size, Single Pole-Double Throw, Brown
1076-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, 1/2" Gap Size, Single Pole-Double Throw, White
1076W-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, Wide Gap, 1" Gap Size, Single Pole-Double Throw, Brown
1076W-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, SPDT, Wide Gap, 1" Gap Size, Single Pole-Double Throw, White
1078C1-M	1078C w/1929 Magnet, Brown
1078C-G	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, 3/8" Gap Size, Gray
1078C-M	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, 3/8" Gap Size, Brown
1078C-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, 3/8" Gap Size, White
1078CT-M	Recessed Steel Door Terminal Contact, 3/4" Diameter, 7/8" Gap Size (3/8" in Steel), Brown
1078CT-N	Recessed Steel Door Terminal Contact, 3/4" Diameter, 7/8" Gap Size (3/8" in Steel), White
1078CTW-N	Recessed Steel Door Terminal Contact, 3/4" Diameter, Wide Gap, 2" Gap Size (3/4" in Steel), White
1078CW-G	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, Wide Gap, 3/4" Gap Size, Gray
1078CW-M	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, Wide Gap, 3/4" Gap Size, Brown
1078CW-N	Recessed Steel Door Contact w/Wire Leads, 3/4" Diameter, Closed Loop, Wide Gap, 3/4" Gap Size, White
1078-G	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, Closed Loop, Gray
1078-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, Closed Loop, Brown
1078-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, Closed Loop, White
1078W-G	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, Wide Gap, 1" Gap Size, Closed Loop, Gray
1078W-M	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, Wide Gap, 1" Gap Size, Closed Loop, Brown
1078W-N	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, Wide Gap, 1" Gap Size, Closed Loop, White
1078WN-3.3K	Recessed Steel Door Contact w/Wire Leads, 1" Diameter, Wide Gap, 3.3K Ohm Resistor, 1" Gap Size, Closed Loop, White
R1078-M	Mini-Max Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, Brown
R1078-N	Mini-Max Recessed Steel Door Contact w/Wire Leads, 1" Diameter, 1/2" Gap Size, White

Specifications

Form A: (R)1078, 1078W, 1078C, 1078CT, 1078CTW

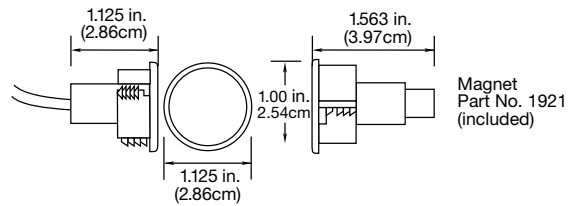
Voltage	100V AC/DC max.
Current	0.5 A max.
Power	7.5 W max.

Form C: 1076, 1076W, 1076D, 1076C(D), 1076CW, 1076CH

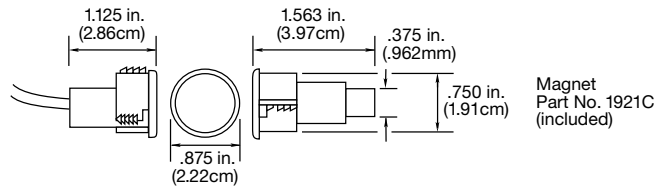
Voltage	30V AC/DC max.
Current	0.25 A max.
Power	3.0 W max.

Dimensional Diagram

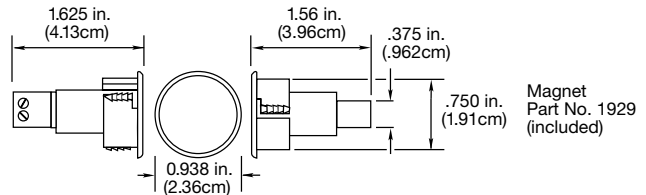
Models: (R)1078, 1078W, 1076, 1076W, 1076D



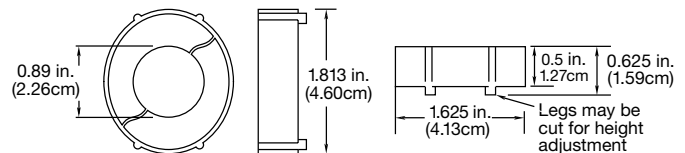
Models: 1078C, 1076C, 1076CW, 1076CH



Models: 1078CT, 1076CTW



Rare Earth Magnet



(R) prefix indicates
Rare Earth Magnet

Protected by
U.S. Patent 5,844,458.



interlogix.com

Specifications subject to change without notice.

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306-3685 2013/11 (75103)



DVM R600 Specification

Scalable: Configurable for systems from tens to thousands of cameras, Honeywell Digital Video Manager™s (DVM) distributed video architecture integrates the video operations of numerous systems onto one virtual platform, allowing security operators to view and control all cameras, whether across a single facility or across the globe.

Flexible: Supporting global standards for open integration of physical security products, DVM can be deployed into a wide range of modern dedicated or existing IT infrastructure, enhancing interoperability, and is generally more adaptable to customer requirements.

Reliable: DVM's advanced High Availability architecture provides optional system Redundancy from the Database and Camera Server all the way to the recording location helping to reduce susceptibility to hardware faults and enhancing both robustness and reliability.

Smart: Reducing the burden on manual detection, DVM's smart video analytics automatically detects, analyses and classifies behaviors of people and vehicles as they move through a scene. Tracking of pre- and post-event data helps to protect against critical footage being missed and significantly enhances investigations, evidence and outcomes.

Integrated: Seamless connectivity with EBI allows the linking of surveillance with other Security systems for extraordinary situational awareness. An enterprise-wide view is achieved from a single workstation promoting operational efficiency.

Intuitive: User-centric design principles ensure that DVM Clients are intuitive and flexible helping to promote operator productivity and effectiveness when responding to events.

More choice: Support for open standards improves customer choice and DVM's advanced Video.Net infrastructure enables integration to a wide range of video devices.

Note: Some features in this specification are based on the use of Honeywell EBI in conjunction with DVM. Honeywell makes no representations or warranties, express or implied, except to the extent expressly set forth in a definitive agreement executed between each customer and Honeywell.



OVERVIEW

Shaped by Honeywell's technology and integration expertise, Honeywell Digital Video Manager™ Release 600 (DVM R600) is a scalable, digital closed-circuit television (CCTV) surveillance solution that helps increase operational efficiencies, reduce lifecycle costs and improve decision-making functionality.

DVM addresses the challenges of today's video surveillance, security and enterprise operations. Its architecture takes advantage of your enterprise's network communications structure – eliminating the need for extensive dedicated video cables and providing enhanced camera portability and flexibility.

DVM's flexible architecture also allows you to maximize the use of your existing network infrastructure investment or re-use existing analogue CCTV infrastructure. This protects your existing CCTV investment while taking advantage of the latest digital video technologies.

Your staff won't have to spend valuable time searching through hours of unnecessary recordings looking for a particular incident; the video images are stored in the system and referenced in the DVM database, from where they can be quickly located and viewed using DVM's advanced search capabilities or directly from the video timeline in the Console Client. In addition, DVM is tightly integrated with Honeywell Enterprise Buildings Integrator™ (EBI), allowing data sharing across your security solution and enabling more intelligent recording to help you only capture the video you need, when you need it most.

Honeywell's DVM and EBI platform delivers more than the simple benefits of digital CCTV. In an environment where you are continuously seeking ways to optimize your resources, our powerful solutions can help enhance the productivity and effectiveness of your security and surveillance operations, reduce equipment and space needs, provide flexibility, and drive down installation and lifecycle costs.

With DVM, your surveillance system is always available and always vigilant, helping to deliver the situational awareness required to more effectively track and manage events at your facility.

SYSTEM ARCHITECTURE

DVM is built upon industry standard open networking, PC hardware, and software applications that take advantage of cost-effective, powerful components.

Using commercial off-the-shelf hardware allows you to use the cameras, PC, storage, and networking hardware of your choice – there is no need to pay premiums for proprietary hardware. Unlike proprietary Digital Video Recorders (DVRs) and Network Video Recorders (NVR's), DVM allows you to obtain system hardware and software upgrades independently which helps lower your support costs. Use of off-the-shelf components also promotes ease of DVM integration into your existing enterprise system support strategy, further simplifying support needs and reducing the cost of ownership.

The basic architecture of DVM consists of a Database Server and a Camera Server that can be installed on the same machine. Additional Camera Servers, Backup Camera Servers and Analytics Servers can be added to the architecture to support larger numbers of cameras. Video Streaming Servers support video distribution to mobile devices, allowing security personnel to be more mobile and more effective in the field.

Larger enterprises that are separated either geographically or administratively can link together multiple DVM systems to create an integrated, enterprise-wide surveillance system using DVM's Distributed Video Architecture (DVA). DVA helps to support a central command and control architecture and provides the ability to share live and recorded video across different DVM systems while also allowing each system to be autonomous and independently managed.

DVM can also integrate your legacy analogue CCTV equipment into a digital solution and take advantage of open TCP/IP network technologies to deliver software-based camera switching and control, as well as digital recording. In this way the enterprise network becomes a "virtual" matrix switcher. This advanced architecture makes it remarkably easy to add or relocate cameras within your building's network without the need for extensive dedicated coaxial cables. New CCTV monitors simply require a network-connected PC with suitable software and new cameras simply require a network connection. In fact, virtually any PC with a network connection and adequate security levels can view and control DVM.

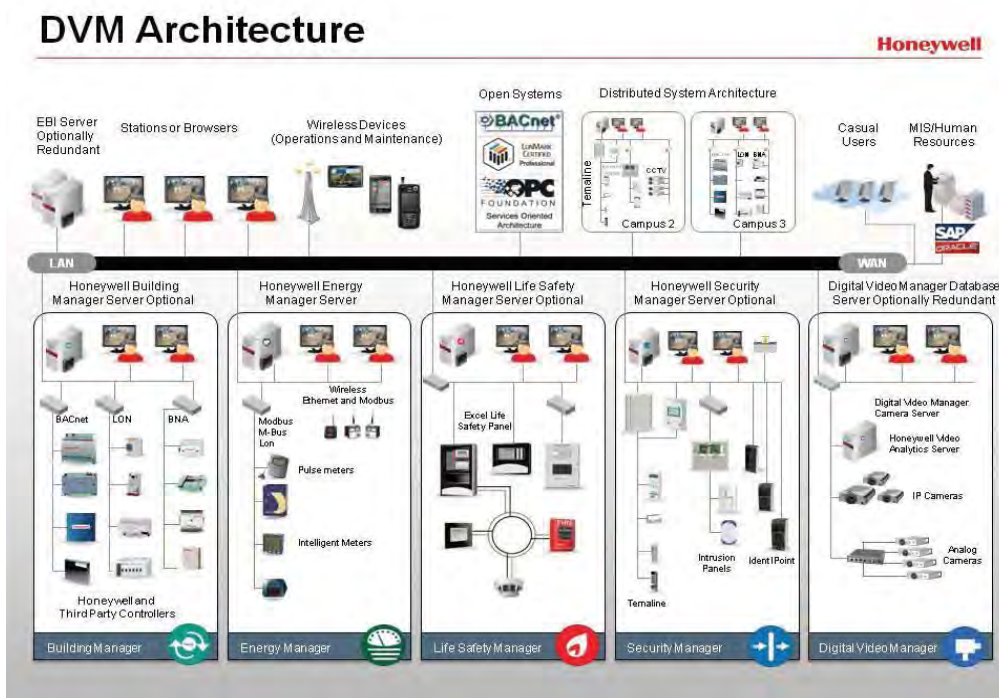


Figure 1: DVM System Architecture

DVM's advanced High Availability architecture makes it one of the most reliable digital surveillance systems on the market today. For most systems the failure of a DVR or NVR requires physical replacement with another unit, which adds hardware and labor lifecycle costs. The loss of the DVR or NVR unit also reduces productivity and increases risk as the cameras attached to the failed device are no longer available for viewing and recording. With Honeywell DVM, Database and Camera Servers are available in redundant configurations; hence a failure in the Preferred Server can be immediately addressed with the system reverting to the Backup Server. Disruption is thus minimized and recordings and live view can be maintained without the need for manual cable swapping or hardware replacement.

DVM provides a flexible and cost-effective Redundancy solution for recording servers by providing the ability to configure pools of backup recording servers. In the event that a preferred Camera Server fails, the first available Backup Server in the pool assigned will assume control of the cameras allowing live view and recording to continue. There's no need to have a 1-to-1 relationship between Preferred and Backup Servers and, since multiple concurrent server failures are statistically less likely to occur, a smaller number of Backup Servers is required to reduce the risk of video loss than would be the case when assigning a backup to every Preferred Server.

High availability is further enhanced for mission-critical sites by providing the ability to configure cameras to stream and record video to multiple locations simultaneously, providing a redundant recording solution. This provides a high degree of fault-tolerance and allows continued use of the system even when a physical storage location has been destroyed by continued use of the secondary location.

All video is digitally stored by DVM on standard IT storage media, reducing the space and maintenance often required in the past. Since DVM uses standard commercial server and desktop computing equipment, you can use hardware that meets your IT organization's standards, thus promoting storage, server and client hardware replacement that is quick and cost effective. DVM's cameras are connected directly to the network in most cases, so there is typically only a power cord and network connection to deal with when replacing the server hardware. Devices supporting Power-over-Ethernet further simplify upgrade and replacement.

Improved resilience to network failures is provided by the edge storage, where DVM makes use of storage media inserted in the IP Camera or Video Encoder to store video. This video can be replayed in DVM or exported for evidence as required.

The use of RAID-1 (disk mirroring) provides fault tolerance for the DVM Database Server software and database. Additionally, the use of a redundant pair of Database Servers means that failure of one of the Database Servers does not stop the DVM system. The DVM Camera Servers may also use RAID-5 (disk striping with parity) or RAID 1+0 (mirrored sets in a striped set), providing a fault-tolerant video storage solution whereby a disk drive failure does not result in loss of video data.

INTEGRATION WITH ENTERPRISE BUILDINGS INTEGRATOR (EBI)

DVM functions as the video surveillance application of Honeywell's Enterprise Buildings Integrator. It seamlessly integrates with virtually all other building automation subsystems including fire and life safety, access control, time and attendance, communications, IT sub systems, third party applications and more, enabling a more intuitive and easy to use security solution.

Users of the integrated security platform benefit from a single login with a fully integrated security context. Security operators can perform system configuration, viewing, recording, archiving and retrieval of video recordings from a single EBI workstation, promoting increased operational efficiency, removing operational silos and reducing training costs.

Intelligent automation, intuitive alarming, video sensor technology and advanced video analytics promote a predictive security solution, helping to mitigate risk. Recordings can be activated by platform alarms and accessible directly from the EBI alarm management screen through hotlinks to the recorded video, promoting a more intuitive security management system.

This integration with EBI includes:

- Full control, view and configuration of DVM systems from within EBI Stations.
- Drag and drop cameras from EBI Station custom displays directly into the DVM Console client video workspace for rapid access to video footage.
- Integrated facility segregation, whereby cameras can be assigned to the same areas as points. In this way, operators can only view and control cameras in the areas assigned to them.
- Integrated operator-based security.
- Integrated Station-based security.
- Alarms and events occurring within EBI can be configured to automatically initiate recordings, and automatically switch Stations (as well as alarm monitors) to show a particular camera.
- Enhanced alarm management utilizing EBI's advanced alarm management tools, including multistage alarm handling.
- Direct access is provided from within the EBI Alarm and Event summary displays to display any recordings initiated by an EBI alarm/event or motion detection, dramatically reducing the amount of time operators need to spend searching for recordings related to events.
- View both live and recorded video from within EBI custom displays. HMIWeb Display Builder (the tool used to create custom displays) provides ActiveX controls which can be inserted into custom displays and popup displays to show live and recorded video, as well as pan-tilt-zoom and recording controls.
- All DVM system alarms/events appear within the EBI Alarm and Event summary displays.
- System Reports: DVM provides a host of standard reports which are accessible from the EBI reporting server and cover system status, configuration and use.

Integration with EBI allows DVM to respond to EBI alarms and events with automated recordings and video call-up, making the system less dependent on operator observations and promoting real-time decision making. Operators are less susceptible to information overload caused by monitoring too many cameras for too long; rather they are only presented with information related to an abnormal event or threat situation. There is no need to watch a video monitor wall, manually call up cameras, or search through dozens of tapes or hours of background recordings to find the desired information.

The ability to view video as well as monitoring and controlling the facility promotes increased productivity and greatly improves situational awareness and abnormal event management—providing your operators with an advanced operating environment.

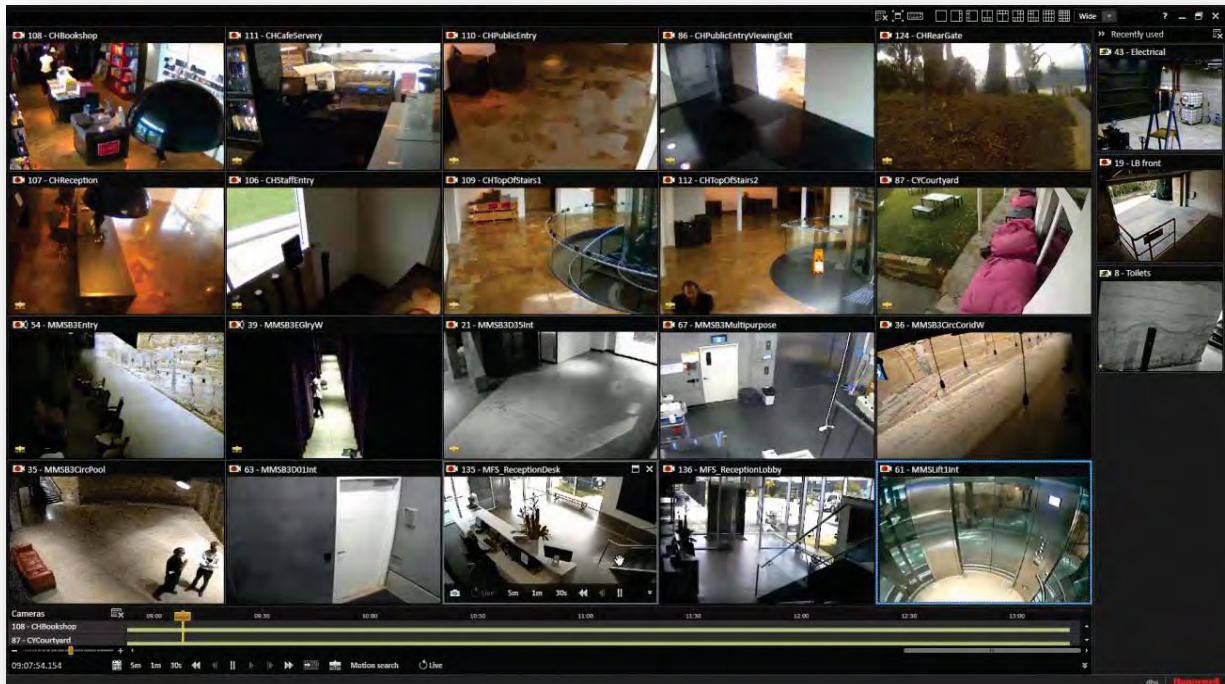
FLEXIBLE USER INTERFACE OPTIONS

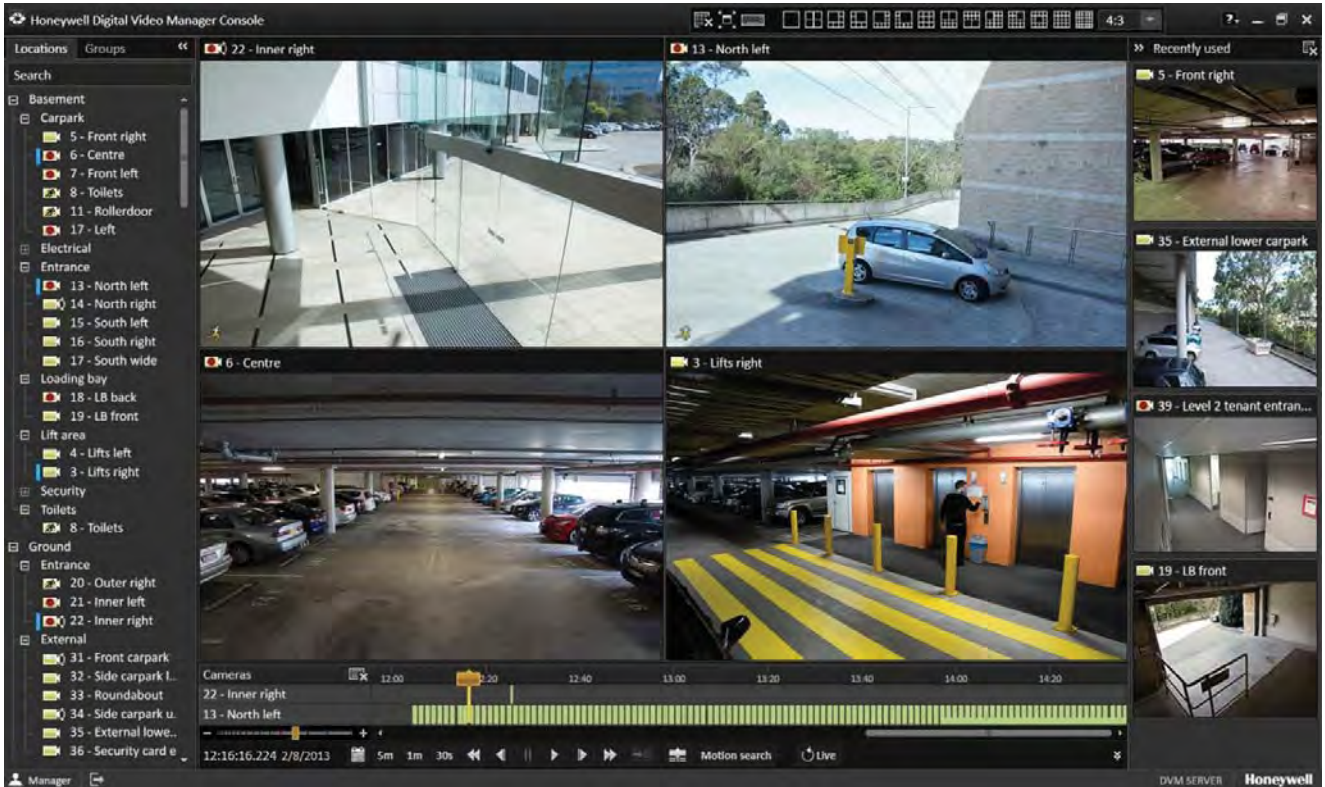
ADVANCED, PROFESSIONAL USER INTERFACE



The DVM Console Client provides a professional surveillance client designed to support the advanced needs of control room operators. DVM Console provides a powerful, yet flexible, user interface based on extensive usability studies focused on increasing operator productivity. The advanced features and intuitive interface provide agile navigation and contribute to improved situational awareness and reduced incident response times.

The DVM Console client includes the following key features:





- **Advanced multi-level tree:** The tree provides a means of logically sorting cameras based on site layout. The tree structure is automatically built from the EBI Facility Model and displays cameras as well as multi-camera views that can be dragged and dropped to the video workspace for viewing. Cameras, Views or whole groups of cameras can be dragged to the workspace for display. The tree includes a built in search filter which dynamically filters the tree contents based on the characters typed into the filter field. Operators can also create their own logical groups of cameras to suit their specific security workflows.
- **Flexible video workspace:** The video workspace is essentially configurable “on-the-fly” to support operator and situational needs. Cameras – or groups of cameras – can be dragged into the workspace displaying views from a single camera to 25 cameras. When there are more cameras than tiles, additional cameras can be cycled in pages. This provides the ability to easily browse through all cameras in the group. Camera controls – including PTZ, telemetry, record controls, pause and jump back options – are displayed as overlaid controls when the mouse pointer is hovered over the video image, thus providing a clean interface with minimal distractions and maximum use of the available space until controls are really needed. The workspace can be resized and supports a range of standard layouts that can be selected to meet operational requirements.
- **Timeline:** The timeline provides operators with the ability to more easily locate recorded video from one or more cameras. Recordings are indicated on the timeline and the video play head can be dragged to desired locations for replay, and dragging the head results in scrubbing of video for fast searching. Multiple cameras can be linked together to allow time-synchronous video replay – often termed synchronized playback – to allow operators more insight into the finer details of security events. The timeline includes multiple controls supporting video manipulation such as fast forward and rewind, pause, play and various options to jump back defined periods of time for faster review of video.

- **Synchronous Video Playback:** DVM Console's timeline enables the video from a selection of cameras to be viewed and controlled as a synchronized group. This allows operators to get a full picture of an incident by viewing multiple angles simultaneously while replaying recordings of an event.
- **Recently Used Camera List:** The recently used camera list provides an easy reference and recall of cameras recently displayed by the operator that are no longer included in the video workspace. The list can be exposed or hidden as required and provides an image of the scene for the camera aiding operator recall. Operators can easily select the camera and redisplay it in the workspace without needing to remember where to find the camera in the tree, thus promoting faster event response and investigation.
- **Efficient Video Export:** The DVM Console Client provides the ability to export video directly from the video timeline. The export range for one or more cameras can be uniquely configured directly from the video timeline and then exported in a single operation. The simple and intuitive export workflow simplifies the operator's task of finding and exporting video evidence and reduces operational overhead. Video export from the Console client also supports the ability to digitally sign the export and optional audit log in order to validate the authenticity of the video evidence.

The DVM Console is fully integrated into Honeywell's DVM and EBI security solution providing an integrated security model, as well as the ability to send video to EBI's Alarm and Surveillance Monitors or drag cameras from EBI custom display pages into the video workspace.

MOBILE CLIENTS

DVM provides a mobile client solution utilizing a dedicated application on Apple's iOS-based devices. The clients maintain the operational security context of the system and allow security personnel – or anybody with a need to view surveillance footage – access to both live and recorded video, control PTZ cameras and start or stop user recordings on the system.

Due to the bandwidth impact of video streamed across wireless network, DVM also provides the ability to actively manage the video supplied by the Streaming Server to the clients by adjusting the stream quality to align with the available wireless network bandwidth and thus improve the user experience when viewing video on the mobile client.



SINGLE, INFORMATION-RICH USER INTERFACE

DVM also provides alternative client options to the DVM Console. This includes both direct access to the system from the EBI Station Client as well as an Internet Explorer client for more casual viewing.

Integration to the EBI Station environment places DVM's advanced functionality into a single, well known user interface for security operators, helping to promote increased personnel productivity and responsiveness. Operators can perform all viewing, recording, archiving and retrieval of DVM video from their EBI Station – they do not need to leave their Station to view a separate CCTV system, replace a tape in the video recorder, activate a recording or search for a video.

Operators can view and move cameras while simultaneously monitoring and controlling doors, hallways and the facility’s air conditioning system. Integrated navigation displays, menus and toolbars are provided to allow operators to quickly navigate to the desired display, which may be EBI-specific, DVM-specific, or an integrated display containing a combination of building management data, security management data and live (or recorded) video.

Operators can control individual camera pan-tilt-zoom functions – via mouse, joystick or CCTV keyboard – enter recording commands, view high-quality live images, and record and play stored video. And for ease of use, the Station uses Web-style navigation buttons, tab views and intuitive, VCR-style recording controls.

When additional detail is required from live or recorded video, operators can also use DVM’s embedded image enhancement capabilities to digitally zoom into scenes or adjust video characteristics to obtain more detail needed for enhanced decision-making.

INTERNET EXPLORER CLIENTS

DVM allows any suitable PC (using the appropriate operating system) to be a DVM client, in a similar way to EBI Stations. In such cases, Microsoft Internet Explorer is used to host the DVM user interface.

This provides the following major benefits:

- Any PC that has a TCP/IP connection to DVM can have full view and control (subject to the user’s security level). Management, quality assurance, safety and other personnel can thus view cameras from their own PCs without the need for expensive CCTV monitors and cabling.
- System administrators can configure and maintain DVM (including exporting, archiving, deleting and restoring recordings) without using an EBI Station.

DVM is configured with login accounts for all users that require access to the system using these clients. Each user account is assigned a security level, a control level and accessible areas. This security ensures that users of these clients can only view and control cameras they are authorized to access (in a similar way to EBI’s operator-based and Station-based security).



The DVM client software is automatically downloaded from the Database Server and installed during the first request to view the DVM system. This means that no software (other than Internet Explorer) needs to be pre-installed on the computer. Any computer connected to the site network can be licensed and used as a DVM client.

ADVANCED, INTEGRATED SECURITY

DVM delivers the type of advanced security features typically expected of high-end video surveillance and security management systems. DVM allows you to specify which operators can view which cameras, and even which operators have access to which recordings. This is achieved with no additional configuration because DVM integrates seamlessly with EBI's security model. An operator, once assigned areas of viewing and control within the building, has immediate access to cameras within those areas. The operator's security level and control level within EBI determines what degree of view and control they have within DVM, with all operator and DVM system actions logged and available as evidence.

INTELLIGENT VIDEO STREAMING AND RECORDING

DVM helps incident investigation by recording not only the video after an event trigger (post-event recording), but also what happened prior to the event (pre-event recording). This provides a complete picture of the entire event, significantly enhancing investigations and the availability of evidence. This feature is provided without the need for the expensive continuous background recording provided by many other systems.

DVM provides multiple options for recording video:

- **Alarm/Event-activated Recordings:** Integration with EBI enables activation of a recording when an alarm or event occurs. Your EBI system determines when recordings should be made on any camera, with video prior to the alarm or event also captured using the pre-record feature.
- **Video Analytics Recordings:** Video is recorded when DVM detects motion or receives notification from the video analytics subsystem – either server-based or embedded in the IP Camera or Video Encoder – of an event of interest. Again, video prior to the event can also be stored with the recording using the pre-record feature.
- **Camera Tamper Recordings:** Video is recorded when DVM detects potential tampering on a camera. Video prior to the event can also be stored with the recording using the pre-record feature – since the tamper event may result in unusable video, the pre-event record feature may be very useful in providing evidence of the actual tampering.
- **Intercom Activated Recordings:** Video and bi-directional audio is recorded (either automatically or manually) when an intercom call is initiated within the DVM system. Video prior to the event can also be stored with the recording using the pre-record feature.
- **Device Input/Output Recordings:** Video is recorded when an input device connected to an IP camera or video encoder is triggered or an output is activated on configured devices. Video prior to the event can also be stored with the recording using the pre-record feature.
- **Operator-initiated Recordings:** These recordings are initiated by an operator during viewing of the camera. An operator, who has noticed an incident, simply clicks the record button to record the video. Video prior to the record button being pressed is also stored in the recording using the pre-record feature. Manual recordings can either run for a pre-determined length of time or can be terminated by the operator.
- **Scheduled Recordings:** Recordings are scheduled on particular cameras at specified times. Each camera has its own schedule, which can be configured for any time in the future. Recurrent (repeated) scheduling is also provided on a daily, weekly and monthly basis.
- **Continuous Background Recordings:** Video – and audio if applicable – can be continuously recorded on any camera at configurable frame rates without the need to enable complex schedules. This type of recording is essentially resilient to network communication errors between the Camera and Database Server.

- **PTZ-Activated Recordings:** Recordings occur as soon as an operator takes control of a PTZ camera. This helps to ensure that recordings occur without the need for an operator to press the Record button in the heat of the moment when responding to a security incident.

A combination of all these types of recordings is available on every camera in the system, with each one individually configured for maximum flexibility and simplicity. All recordings are stored on the hard drives of the Camera Servers or other network storage locations until they are either deleted or archived. The storage of recordings is managed automatically by DVM but can also be manually administered for any camera.

DVM provides a great deal of flexibility in terms of the quality of recorded video. Using supported devices, it is possible to configure video stream profiles that can then be allocated to different recording types, live view for both static and mobile clients and for server-based video analysis. Various parameters can be uniquely configured for the streams including video codec, frame rate, resolution, compression and GOP. Utilizing the video stream profiles allows for the most efficient matching of video requirements to application thus helping to reduce processor loads, network bandwidth and storage requirements.

ADVANCED VIDEO ANALYTICS SOLUTIONS

Historically, video motion detection (VMD) was widely used as a trigger to record surveillance events of interest and help reduce operator workload and unnecessary video storage. As video surveillance technology has advanced, the requirements for intelligent video have moved beyond simple VMD.

Honeywell DVM provides solutions for both VMD as well as integration to the advanced suite of analytics solutions provided by the Honeywell Intelligent Video Analytics product range.

The DVM video content analysis options include:

- **Standard Video Motion Detection:** Pixel rate-of-change algorithm, often ideal for well-lit indoor area use. Each frame is compared with the previous one and the amount of difference determines whether motion has occurred (based on the sensitivity setting). Standard VMD is included as a standard feature in the product.
- **Advanced (Premium) Video Motion Detection:** Adaptive algorithm which can “learn” the scene and adapt to the environment. This allows the algorithm to ignore environmental changes such as rain, hail, wind, dust, trees swaying and gradual light changes. This algorithm is appropriate for both indoor and outdoor use.
- **Honeywell Intelligent Video Analytics:** Provides automatic detection, analysis and classification of the behaviors of people and vehicles as they move through a scene. It significantly reduces false alarms by suppressing environmental triggers such as: rain, snow, shadows, reflections, flying birds and waving trees.

DVM’s video analysis solutions provide the ability to exclude zones where false alarms – unnecessary security operator distractions – may be generated. Regions of interest can be configured to match the detection area and exclude potential sources of false alarms. Shapes can be drawn with up to 10 vertices, thus allowing for regions of interest to be drawn around the actual area where activity needs to be detected (car parks, fence lines, roadways, etc.).

DVM’s video analytics features do not simply replicate the standard functionality available in many of today’s CCTV systems, they also include:

- Continuous (24hrs a day, 7 days a week) or scheduled (run only during certain times) detection.
- Automatically perform any or all of the following actions:
 - Raise an alarm (of configurable priority) in EBI
 - Activate a recording – with or without pre-event recording – to record for a fixed amount of time or until the motion has finished (no motion has been detected for a configurable amount of time)

- Automatically display the camera’s live video in a Station or dedicated alarm monitor
- Individual tuning of each region of interest, to minimize false detections.
- Simultaneous tuning and testing of the “regions of interest” by viewing the live video in tuning mode for some algorithms. Engineers can thus finely tune and test algorithms without any real detections occurring.
- Support for some video streamer or camera-based motion detection algorithms.

HONEYWELL INTELLIGENT VIDEO ANALYTICS

Honeywell Intelligent Video Analytics consists of individual software suites tailored to suit different application and cost requirements. This unique, patented software tracks up to 20 targets in each camera view and reports on more than 35 actionable events and behaviors virtually in real time.

The following solutions are available:

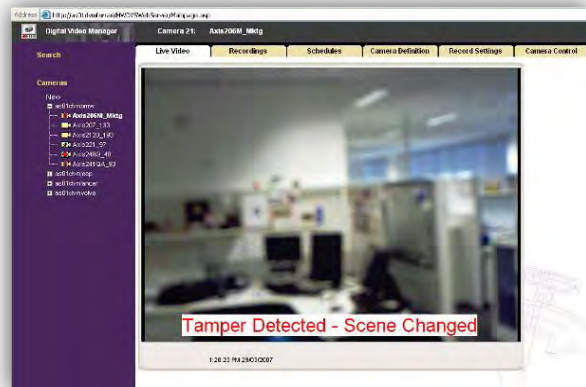
- **Active Alert® Base:** Identifies and classifies the most common user-defined events and behaviors, and provides basic perimeter intrusion detection. All Active Alert® solutions can track up to 20 objects per camera and the Base package identifies 14 different events.
- **Active Alert® Standard:** All the benefits of Active Alert Base, plus automatic alarming on 28 different events, incidents and behaviors.
- **Active Alert® Premium:** All the benefits of Active Alert Standard, plus additional analytics for high risk facilities and locations such as abandoned object, removed object and possible theft functionality covering 36 different events.
- **People Counter:** Powerful traffic flow measurement with real-time or periodic reporting via dedicated application.
- **Smart Impressions®:** Smart video solutions promote optimized operations by analyzing individual customer and vehicular activities and traffic patterns.

CAMERA TAMPER DETECTION

As surveillance systems grow, it can become harder to understand whether cameras are still functioning as initially intended or viewing the scenes for which they were configured. Changes in camera view may arise as a result of natural causes such as dirt build up over time or through malicious interference from people who would prefer that their actions are not recorded.

DVM includes the ability to detect whether a camera has been tampered with under the following conditions:

- **Changed Field of View (FOV):** It can be very hard for an operator monitoring many cameras to realize quickly – if at all – that a camera is no longer observing the scene originally intended. This could be because the camera was bumped or intentionally moved to avoid detection. Either way, the changed FOV algorithm will detect and alarm this change.



- **Camera Blurred:** Camera vision may blur over time due to dust build up or through intentional defocus by someone wishing to avoid detection or hoping to degrade recorded evidence to avoid identification. The algorithm provides a means of detecting when the scene is blurred and thus assists in maintaining the integrity of the system through detection of malicious tampering or alerting to a service requirement.
- **Camera Blinded:** This algorithm detects whether a camera has either been blinded by a bright light source or had the lens covered. Both scenarios may involve an attempt to avoid detection or identification from recorded video. DVM is now able to detect and alarm when this occurs.

Camera Tamper Detection can be applied to cameras individually, as required. Each condition listed above can be enabled or disabled and tuned per camera so that it suits the environment and scene being monitored.

Camera Tamper Detection helps maintain the integrity of the surveillance system and protects your investment in security. If the system is no longer able to monitor or record the correct scene, then its value is greatly reduced.

EFFICIENT VIDEO COLLECTION, STORAGE AND RETRIEVAL

With DVM’s intelligent recording options, only video you need is recorded. This helps to optimize video archiving and storage usage by reducing the collection of redundant and irrelevant video recordings.

Additionally, users can specify the quality of the recorded video. This could simply be the number of frames per second recorded for each camera and for each recording type per camera. For example, a particular camera can be configured as: 25 frames/sec for viewing, 10 frames/sec for operator-activated recordings and 15 frames/sec for video motion detection recordings. Recordings from cameras using MPEG-based encoding can be made using the full frame rate video or I-frames only (or 2nd or 3rd I-frame).

However, for devices supporting multiple connections and high video data rates a dedicated “recording stream” can be initiated where all settings are configurable, including codec, frame rate, resolution and compression. This provides a highly customizable solution allowing you to balance your recording and live view needs with your investment in video storage and bandwidth.

Recordings are displayed either in the dedicated Recordings display for IE and EBI Clients or in a timeline interface in the DVM Console Client. The Recordings display provides “quick search” capabilities by listing all the available recordings for the camera on the chosen day, as well as a wealth of information relating to the recordings. The DVM Console client provides even easier recording search capabilities via a timeline control covering all selected cameras in the video workspace with available recordings represented visually on the variable timeline and video scrubbing, allowing faster searches.

Recordings (or sections of recordings) can be exported as Microsoft Windows Media files and replayed in Microsoft Windows Media Player (or equivalent). These files can then be stored on CD/DVD, emailed or used as evidence of an incident. Video can be exported as in either the uncompressed native format (using the Advanced Systems Format file format or .asf for short), where evidence requirements prohibit video transcoding, or the Windows Media Video (.wmv format) where transcoding is acceptable and smaller export files sizes are required.

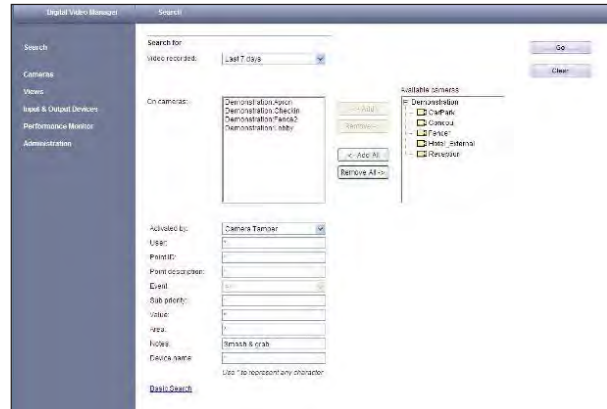


DVM supports Motion JPEG video for high quality video evidence, as well as other leading differential video encoding formats such as MPEG4 and H.264 which help reduce bandwidth and storage requirements while generally maintaining video quality.

ADVANCED SEARCH CAPABILITIES

With Digital Video Manger, users have convenient access to all their important video data, at virtually any time.

DVM provides powerful search and retrieval capabilities that free operators from the frustrating task of fast-forwarding and rewinding video tapes to find a particular incident. Operators can search for recorded incidents based on criteria such as date/time, camera, recording type, the activating EBI point, alarm/event type and operator notes. They can then immediately view the retrieved recordings. These advanced search and retrieval capabilities are powered by a Microsoft SQL Server relational database to optimize speed and flexibility.



Even archived recordings can be included in the search, allowing them to be easily located and replayed. Although an archived recording no longer resides on the Camera Server, its details do, including the name of the archived media. When an archived recording is selected for viewing, the system instructs the operator to load the appropriate archival media.

STATE-OF-THE-ART VIDEO STORAGE

DVM supports virtually any Windows compatible storage device, providing you with the flexibility needed to meet your storage requirements. A DVM system consists of two types of storage: online and offline. Online storage is used for video clips which must be readily available for review. Typically this type of storage uses internal or directly attached hard drives or network storage locations. DVM supports virtually all hard drive configurations supported by Microsoft Windows. For small systems (with low online storage requirements), internal drives with fault tolerant drive controllers may be used. For large systems (with large online storage requirements), high capacity, fault tolerant storage arrays may be used. Irrespective of the storage requirements, DVM is able to makes use of fault tolerant, RAID based storage solutions to provide high levels of system availability.

Where multiple Camera Servers are used, these storage requirements can be split amongst Camera Servers, further reducing storage costs. DVM also provides a flexible means to configure storage behavior. Priority can be given to continue recording even when disk space reaches a pre-configured danger threshold. This is achieved by automatically deleting older clips that are closest to their deletion dates and thus freeing up disk space. Importantly, the system can be configured so that surveillance footage required as evidence for current events is not lost.

Offline storage (archiving) is used for video clips that are not regularly required by operators, but which must be kept for a period of time. All relevant information about the archived recordings remains within the DVM database for use in searches. These recordings also appear in the list of recordings for the camera, shown in a different color to indicate that the recording has been archived and needs to be restored before viewing.

Recordings can also be automatically archived at a pre-defined date/time after the recording has completed. This makes the archiving process less prone to errors.

Because recordings are stored digitally, they do not suffer from the aging and deterioration problems historically associated with VCR tapes. In addition, because hard drives and most digital archiving media have significantly greater data density capabilities, the space required for the storage media has been significantly reduced and is expected to continue to do so as technology improves.

INTEGRATION WITH ANALOG CCTV SYSTEMS

DVM can be installed alongside an existing analog CCTV system. With this approach, DVM is primarily used as a digital video recording management system, providing live and recorded video to EBI Stations and Internet Explorer clients. The existing analog CCTV system is still used for dedicated viewing of cameras using the CCTV system monitors, keyboards and joysticks.

The DVM system provides digital recording capabilities (including video motion detection and alarm/event activation), management of recordings, live and recorded view to EBI Stations and Internet Explorer clients, and integration of video into the EBI custom displays.

The ability to use DVM with an existing CCTV system gives you access to DVM's many benefits, while retaining the familiar components of the analog CCTV system.

DIGITALLY SIGNED RECORDINGS AND AUDIT TRAIL (LOG)

DVM provides for the ability to export recordings (or segments of recordings) into standard Windows Media format files. Every exported recording can be digitally signed to validate the authenticity and integrity of the origin of the recording by providing evidence that the recording has not been tampered with.

The alternative to Digital Signatures is "Watermarking", which is used by some digital video systems. Digital Signatures provide many inherent advantages over watermarking. A visible watermark may obscure part of an image, whilst an invisible watermark can potentially introduce visual artifacts. In either case, the original file is altered, which could reduce the evidentiary weight of the digital image. Digital Signatures, on the other hand, do not alter the original files, thereby offering an advantage over watermarking in some instances.

DVM also provides a complete audit trail (log) of all operator actions and system events. This audit trail provides you with a record of all changes made to the DVM configuration, as well as when and who controlled cameras, viewed cameras, and initiated and viewed recordings. It also documents DVM's condition at the time of the recording. As with the exported recordings, the exported audit logs are also digitally signed to validate their authenticity.

The audit trail can be exported when exporting a recording, and then saved with the recording. When used in conjunction with site chain-of-custody processes and procedures, digital signatures and the audit trail can enhance the evidentiary weight of a recording in a legal proceeding.

Please note: evidentiary rules vary from jurisdiction to jurisdiction and there is no guarantee that evidence derived from DVM will be admissible in any particular jurisdiction. Please ensure that you obtain legal guidance regarding the requirements for video evidence in your location.

PRIVACY

DVM provides the ability to protect the privacy of people whose actions are recorded by the system. Each camera can be set to allow playback and export of video only after authorization is received from a manager, thus preventing operators from reviewing or exporting recorded video without good reason or permission.

SYSTEM DIAGNOSTICS

Honeywell DVM includes a powerful Diagnostic Framework application that provides a unified interface for running tests, recording system activity, collecting diagnostic information, and viewing logs. It contains a set of pre-defined tests that are applicable to the DVM system and the current operating environment. The tests vary depending on whether the Diagnostic Framework is installed on a server or a client computer.

The tests are comprehensive, and typically consist of a number of sub-tests. For example, a system health test includes sub-tests for versions of OS components, status of services, security configuration, and so on. The Diagnostic Framework contains a set of pre-defined recording profiles that define what system activity and parameters to record for particular types of problems.

Diagnostic packages can be created for support purposes and typically include system logs, recordings, and other files that may help diagnose the issues experienced and assist in rapid fault-finding and resolution.

OTHER POWERFUL FEATURES

- Easy system administration via DVM's **integrated administration** user interface.
- **Snapshot**, whereby on the click of a button by the operator, DVM captures the current frame of video and saves it as a bitmap image. This is available when viewing both live video and recorded video.
- **CCTV Keyboard**: DVM supports the UltraKey professional CCTV keyboard from Honeywell Video Systems. The keyboard provides an alternative client to a PC-based client and is often ideal for operators more familiar with traditional CCTV keyboards.
- **Flexible video workspace** allowing the display of up to 25 cameras on a single monitor promoting greater situational awareness of site conditions by providing a broader overview of areas under surveillance. Cameras can also be cycled in individual viewports for more efficient use of video displays.
- **Sequencing in Views**, whereby the presets of PTZ cameras as well as fixed cameras are cycled on a timed basis, within a single view or within the view port of a multiple camera view.
- **Alarm Monitors**. If an alarm/event occurs in the EBI system, or video motion is detected, a camera or group of cameras can be automatically displayed on an alarm monitor.
- **Surveillance Monitors**. An operator may switch cameras, sequence views and multi-camera views on dedicated monitors.
- **Combined Alarm and Surveillance Monitors**. This provides the ability for monitors to be configured to act as both Alarm and Surveillance monitors. In this case, the monitor behaves as a Surveillance monitor until an alarm occurs, in which case it will show the alarm video. Once the alarm is acknowledged, the video previously shown (as a surveillance monitor) is displayed again.
- **Image Blocking**: Prevents unauthorized operators from viewing live or recorded video when a specific class of operator takes control of a camera, thus helping to prevent potential collaboration between operators and suspects.
- **Cycling Alarm Monitors**. The basic functionality of the Multi Monitor alarm queue is extended by providing support for a cycling alarm monitor, placed at the end of the alarm queue. This allows each Multi Monitor alarm queue to display a larger number of activated alarm camera views than there are physical Multi Monitor screens. The newest activated alarm camera view will enter an alarm queue at a position appropriate to its alarm priority and the time of the event. Existing activated alarm camera views reshuffle in the queue to accommodate the new view. In the event that all the available Multi Monitor screens are full, the oldest activated alarm camera views with the lowest priority are added to the cycling alarm monitor.
- **Video Loss Alarming**. The coax connection to a streamer is often a common point of failure in a hybrid solution (system containing some or all analogue CCTV cameras). Loss of video poses a security risk in any surveillance system and may not be discovered until it is too late. DVM utilizes the video loss feature of Axis video servers to provide faster, more reliable user notification when such an event occurs, thus helping to maintain the integrity of the surveillance system.
- **Bi-directional Audio support**: Provides a simple and inexpensive IP Intercom solution utilizing the existing network camera or video encoder infrastructure. Bi-directional Audio support does not obviate the need for professional 3rd party IP Intercom solutions.

- **Device Capability Discovery:** Provides the ability to query connected IP Cameras and Video Encoders from supported device families and determine their capabilities, which can then be loaded into the system to allow immediate configuration and use.

PRODUCT DATA SUMMARY

DVM System Architecture & Capacities	
DVM System Architecture	<ul style="list-style-type: none"> • Client/Server Architecture
	<ul style="list-style-type: none"> • Database Servers with full hot standby Redundancy option
	<ul style="list-style-type: none"> • Camera Servers with N:M Redundancy option
	<ul style="list-style-type: none"> • DVM Operator Console, EBI Stations and Internet Explorer clients
	<ul style="list-style-type: none"> • Microsoft Windows Server 2012 R2 or Windows Server 2008 R2 and Windows 8.1 or Windows 7 (all 64 bit)
	<ul style="list-style-type: none"> • Scalable from single to distributed camera servers
	<ul style="list-style-type: none"> • Microsoft SQL 2014 Server database (64)
Solution Architecture Schemes	<ul style="list-style-type: none"> • Single server (combined Database and Camera Servers)
	<ul style="list-style-type: none"> • Distributed Preferred and Redundant Camera Servers
	<ul style="list-style-type: none"> • Redundant Database Servers
	<ul style="list-style-type: none"> • Distributed Database Servers
	<ul style="list-style-type: none"> • Mobile Video Streaming Servers
	<ul style="list-style-type: none"> • Distributed Video Content Analysis Servers
System Capacities	<ul style="list-style-type: none"> • Up to 4000 cameras managed per Database Server – systems can be expanded by adding additional Database Servers
	<ul style="list-style-type: none"> • Up to 200 cameras per Camera Server (depending on hardware and system configuration, including video streaming parameters)
	<ul style="list-style-type: none"> • Up to 255 concurrent Internet Explorer Clients
	<ul style="list-style-type: none"> • No software limit on number of DVM Console Clients*
	<ul style="list-style-type: none"> • No software limit on number of MultiMonitor Clients*
	<ul style="list-style-type: none"> • No software limit on number of Mobile Clients*
Networking	<ul style="list-style-type: none"> • Uses current industry-standard TCP/IP networking over Ethernet or wireless Ethernet
	<ul style="list-style-type: none"> • Client licensing limited by number of simultaneous connections

* **Note:** Client capacities are not software-limited but hardware and practical limitations will apply. Limitations will be determined during solution design based on customer specification for system operation and hardware utilized.

DVM Clients	
Operator Interface	<ul style="list-style-type: none"> • Microsoft Windows 8.1 and Windows 7
	<ul style="list-style-type: none"> • Internet Explorer 9, 10 and 11
	<ul style="list-style-type: none"> • Advanced Operator Control Room Interface with Timeline, multi-level Camera Tree, flexible Video Workspace and Synchronized Playback
	<ul style="list-style-type: none"> • Pre-configured camera configuration and viewing displays
	<ul style="list-style-type: none"> • ActiveX viewing controls for inclusion into EBI and HTML displays, with VB scripting ability
	<ul style="list-style-type: none"> • Scalable screen viewing resolution
	<ul style="list-style-type: none"> • Intuitive Web-style navigation buttons, tab views, PTZ controls and VCR style recording controls
Operator Security (EBI Station)	<ul style="list-style-type: none"> • Integrated operator security: single security context across Security System
	<ul style="list-style-type: none"> • Integrated control level security
	<ul style="list-style-type: none"> • Integrated area security
	<ul style="list-style-type: none"> • Events logged by operator ID in audit log
Operator Security (Internet Explorer)	<ul style="list-style-type: none"> • Six levels of access for Internet Explorer clients: Level 1, Level 2, Operator, Engineer, Supervisor, Manager
	<ul style="list-style-type: none"> • Up to 255 control levels for operator-initiated actions
	<ul style="list-style-type: none"> • Effective partitioning of facility into different areas
	<ul style="list-style-type: none"> • Events logged by operator ID in audit log
Networking	<ul style="list-style-type: none"> • Uses current industry-standard TCP/IP networking over Ethernet or wireless Ethernet
	<ul style="list-style-type: none"> • Client licensing limited by number of simultaneous connections
Live View of Video	
Navigation Panel (camera menu) for selection of cameras	
Camera Status Indication:	<ul style="list-style-type: none"> • Enabled • Disabled • Recording • Video Motion Detection/Video Analytics Running
Camera Controls:	<ul style="list-style-type: none"> • Start Record button

	<ul style="list-style-type: none"> • Stop record button • Snapshot button • Preset Positions (combo box) • Add/Delete preset positions • Camera focus • Camera iris • Camera zoom • Camera pan • Camera tilt • Enable, disable camera • Mouse controlled pan-tilt-zoom • Joystick controlled pan-tilt-zoom • Initiate Intercom call
Indicators:	<ul style="list-style-type: none"> • Current date and time • Amount of time remaining until recording is complete • Remaining operator reservation period • Operator currently controlling camera • Recording in progress • Video Motion Detection / Video Analytics currently running • Motion / Video Analytics event currently being detected
Image Enhancement:	<ul style="list-style-type: none"> • Digital Zoom, Pan and Tilt • Brightness • Noise • Contrast and Sharpen adjustment
Multi-Camera Views	
Pre-configured layouts supporting up to 25 cameras per screen	Dedicated support for normal aspect ratio (4:3) and wide screen (16:9) monitors
Configurable and saved with View number and name	Cycle preset positions of pan-tilt-zoom cameras within view ports
Cycle cameras within each view port	Configurable cycle time
Virtually unlimited number of cameras per view port	
Viewing Video from EBI Custom Displays	
Live view control	<ul style="list-style-type: none"> • Embedded into displays

	<ul style="list-style-type: none"> • Embedded into popup displays • Display scripting access • Pan-tilt-zoom-focus-iris-preset controls provided • Recording controls and snapshot button provided • Jump to recorded video • Send camera to Surveillance Monitor(s)
Recording viewing control	<ul style="list-style-type: none"> • Embedded into displays • Embedded into popup displays • Display scripting access • Play, stop, pause, rewind, fast forward, step forward, step backward, slider controls provided • Snapshot button
Display scripting for Video Controls	<ul style="list-style-type: none"> • Switch cameras • Switch recordings • Enable/disable PTZ buttons and borders • Control playback of recording
Image Enhancement	<ul style="list-style-type: none"> • Digital Zoom, Pan and Tilt • Brightness • Noise • Contrast and Sharpen adjustment
Dedicated Video Display Monitors	
Surveillance Monitors	<ul style="list-style-type: none"> • Controlled by operators • Numeric keypad shortcuts • Single view, multi-camera view, sequence views Alarm monitors
Alarm Monitors	<ul style="list-style-type: none"> • Automatically controlled by EBI Alarms/Events and Video Motion Detection • Single view • Cycling Alarm Monitors
Combination Surveillance & Alarm Monitors	<ul style="list-style-type: none"> • Acts as a Surveillance monitor until an alarm occurs, whereby alarm video is displayed • Once alarm is acknowledged, surveillance video is re-displayed

Audio and Input/Output Support	
Device Digital Input and Output Ports	
Supported on most devices – please see Compatibility Matrix for specific device support	Recordings can be triggered by changes on monitored inputs or when switching outputs
Input/Output status provided to operator	Outputs can be triggered by video analytics alarms
Required for Intercom application with bi-directional audio	Inputs/Outputs can have multiple associated cameras and thus trigger multiple camera recordings
Audio / Intercom	
Supported on all Axis devices supporting full-duplex bi-directional audio	Calls trigger from field (via IP camera or video encoder input) or from operator station
Calls can be recorded automatically, manually or have recording disabled for privacy reasons	Intercom pop-up remains pinned to screen for duration of call
Operator provided with Intercom call list in the DVM User Interface	

Video Recordings	
Recording profiles assigned to recording types. Each profile allows configuration of resolution, frame rate, GOV/GOP and compression	
Recording Types	
Operator-Activated Recordings	• Start/Stop with pre-configured duration
	• Pre-record based on pre-configured duration
EBI Alarm/Event-Activated	• Pre-configured duration per camera
	• Pre-record based on pre-configured duration
Device Input/Output-Activated	• Record based on trigger from Input or Output from a network camera or encoder
	• Pre-record based on pre-configured duration
	• Recording can be initiated on multiple cameras by the same input or output
Scheduled Recording	• Daily, weekly, monthly, yearly recurrence
Video Motion Detection	• Recordings triggered by Video Content Analysis

or Video Analytics Activated	<ul style="list-style-type: none"> • Pre-record based on pre-configured duration
	<ul style="list-style-type: none"> • Detection may be enabled/disabled automatically via scheduling
Camera Tamper Detection	<ul style="list-style-type: none"> • Record when potential tamper events detected
	<ul style="list-style-type: none"> • Supports Camera Blur, Blind and Changed Field-of-View
	<ul style="list-style-type: none"> • Pre-record based on pre-configured duration
Intercom	<ul style="list-style-type: none"> • Operator or field-activated Intercom calls
	<ul style="list-style-type: none"> • Pre-record based on pre-configured duration
PTZ-Activated Recording	<ul style="list-style-type: none"> • Recording automatically initialized when an operator moves a PTZ camera
	<ul style="list-style-type: none"> • Pre-record based on pre-configured duration
Continuous Background Recording	<ul style="list-style-type: none"> • Record continuously without any trigger
	<ul style="list-style-type: none"> • Configurable per camera
	<ul style="list-style-type: none"> • Supports resilience to network failures between Database and Camera Servers
Recording Metadata	
Date & time recording initiated	Operator/Station ID (Operator Activated)
Duration	EBI Point Name (Alarm/Event Activation)
Frame Rate	Operator or Schedule Notes
Resolution	Automatic Archiving Date (If applicable)
Compression	Automatic Deletion Date (If applicable)
Recording Privacy	
Manager approval required when accessing protected recordings for the purpose of replaying or exporting the recording	
Configurable individually per camera	
Archiving Recordings	
Recordings moved to an archive folder for archiving to long-term storage.	Information about recording remains within the DVM database for searching
Restore recording for viewing	Automatic archiving of recordings based on recording end-time
Archival configurable per camera	Archive details can be manually set/altered
Viewing Recordings	

DVM Operator Console Client	<ul style="list-style-type: none"> • Timeline control displaying recording availability – play directly from Timeline in the Video Workspace
	<ul style="list-style-type: none"> • Instant Playback: jump back 5 minutes, 1 minute or 30 seconds
	<ul style="list-style-type: none"> • Jump to next recording
	<ul style="list-style-type: none"> • Time-synchronized playback of 2 or more cameras via Timeline
	<ul style="list-style-type: none"> • Video replay in Workspace along with live view of other cameras
	<ul style="list-style-type: none"> • Play, stop, pause, fast forward, rewind, step forward, step backward, slider controls
	<ul style="list-style-type: none"> • Motion Search on Recordings
	<ul style="list-style-type: none"> • Video Export from Timeline: 1 or more cameras (up to all cameras in Workspace)
	<ul style="list-style-type: none"> • Video Export from Timeline: Configure identical or unique export duration for each camera
DVM Internet Explorer and EBI Station Client	<ul style="list-style-type: none"> • Table of all recordings for the camera for the chosen day
	<ul style="list-style-type: none"> • Video player with recording controls
	<ul style="list-style-type: none"> • Play, stop, pause, fast forward, rewind, step forward, step backward, slider controls
	<ul style="list-style-type: none"> • Snapshot button
	<ul style="list-style-type: none"> • Variable speed, fast forward and rewind
	<ul style="list-style-type: none"> • Direct view of recordings, initiated by an EBI alarm/event or motion detection, from within the EBI alarm and event summary displays
	<ul style="list-style-type: none"> • Link to popup a display with embedded video control replaying video at full recorded resolution
Managing Storage	
Automatic deletion of recordings – configured per camera	Deletion dates automatically or manually assigned
Image Enhancement	
Digital Zoom, Pan and Tilt	Brightness, Noise, Contrast and Sharpen adjustment

Video Evidence	
Video Export	<ul style="list-style-type: none"> • Full recording or segment of the recording

	<ul style="list-style-type: none"> • Single or multiple camera export • Export selection directly from video timeline • Export in compressed format using Microsoft Windows Media Video (WMV) or native format using Advanced System Format (ASF) • Original recording remains unaltered by Export • Video player provided to select required segment. Play, stop, pause, fast forward, rewind, step forward, step backward, select start, select end, play selected segment controls provided. • Export system audit log with recording to allow correlation of events with video • Both exported recording and audit log can be digitally signed as proof of authentication and integrity* • Exported Honeywell DVM files containing a digital signature can be verified by using the Honeywell DVM Video Export Player application
Security of Evidence	<ul style="list-style-type: none"> • Digital Signatures used to protect exported video and system audit logs • No video evidence is altered when digitally signing video • Default Honeywell DVM Digital Certificate provided • Customer may provide their own Digital Certificate
Audit Trail (System Log)	<p>All operator and system actions are logged including:</p> <ul style="list-style-type: none"> • Start/stop viewing camera or View • Enabling/disabling cameras • Adding/deleting/modifying camera, view • Controlling camera (pan, tilt, zoom, focus, iris, presets) • Adding/deleting/modifying schedules • Start/stop of recordings and snapshots • Export recordings, audit logs • Modify Video Analytics or Video Motion Detection settings, tuning • System alarms

* **Note:** Evidentiary rules vary from jurisdiction to jurisdiction and there is no guarantee that DVM recordings will be admissible in any particular jurisdiction. Please ensure that you obtain legal guidance regarding the requirements for video evidence in your location.

Video Search

Online and Archived recordings are included in searches

Simple Search Parameters	• Search on all cameras for a particular date range
	• Today, yesterday, in the last week, in the last month, a particular date, on or before a particular date, between a range of dates
Advanced Search Parameters	• Camera
	• Recording Type
	• Operator or Station ID
	• Name, value or description of EBI Point
	• EBI Alarm/Event priority
	• EBI Area
	• Operator Notes
Timeline Search	• Search using video playhead directly from timeline control (DVM Console)

System Reporting

Audit Reports	• Honeywell DVM Comprehensive Audit
	• Honeywell DVM System Activity
	• Honeywell DVM User Activity
System configuration reports	• Honeywell DVM Camera Configuration
Activity reports	• Honeywell DVM Video Analytics Events
	• Honeywell DVM Clip Summary
	• Honeywell DVM Storage Usage
Point Status reports	• Honeywell DVM Process Point Status

Internationalization

- Language packs available for Dutch, French, Italian, German, Russian, Spanish, Simplified Chinese
- Translatable into virtually any local language
- Database provides tables to convert each string of text in the User Interface
- Stations and Clients may use different languages within one system

CCTV Keyboard

- Honeywell Video Solutions UltraKey Lite and UltraKey Plus Professional CCTV keyboard
- Ethernet-connected to the system
- Uses Surveillance Monitors as Operator User Interface
- Security provided by Operator sign-on PIN

System Documentation

	Electronic	Printed
Overview & Planning Guide	Yes	Yes
Installation & Upgrade Guide	Yes	Yes
Operator's Guide	Yes	Yes
Configuration & Administration Guide	Yes	No
Troubleshooting Guide	Yes	No
Device Setup Guide	Yes	No
Honeywell DVM Application Development Guide	Yes	No

Supported Network Video Streaming Devices and Standards

The supported camera range is continually being expanded and is shown in the latest DVM Compatibility Matrix – please refer to this document for detailed device qualification information.

Video Standards

Video Encoding Formats	• Motion JPEG
	• MPEG4
	• H.264 (MPEG4 Part 10 / AVC)
Video Resolution and Frame Rate	• Resolution and frame rate support dependent on device functionality. Refer to technical specifications of individual devices.
Video Compression	• 5 Levels, dependent on camera
Open Video Standards Support	• ONVIF

IP/Network Cameras

Axis	• M-Series
	• P-Series
	• Q-Series
	• 2xx-series network cameras (including most legacy devices)
OnCam/GrandEye	• Halocam series network cameras
Honeywell	• equiP Series Network Cameras
	• HDZ IP Dome Series (Network PTZ cameras)
	• ACUIX IP Dome Series (Network PTZ Cameras)
Panasonic	• iPro Series Network Cameras
Pelco	• Sarix series of Network Cameras
	• ExSite series of network cameras (utilizing IP conversion card TXB-N-xxx)
Sony	• IPELA Generation 2 Network Cameras
	• IPELA Generation 3 Network Cameras
	• IPELA Generation 4 Network Cameras
	• IPELA Generation 5 Network Cameras
	• IPELA Generation 6 Network Cameras
Network Video Encoders/Streamers	
Axis	• M-Series
	• P-Series
	• Q-Series
	• 2xxx-series network cameras (including most legacy devices)
Honeywell	• HVE Series network video encoder

Supported Analog Video Streaming Devices and Standards

Analogue Cameras

All fixed and PTZ analogue CCTV cameras supported for video streaming purposes

Analogue PTZ Protocols

Axis • All PTZ cameras (protocols) supported by the AXIS Video Encoders

Honeywell	• Ademco RapidDome
	• Honeywell KD6i Digital Dome camera
	• Honeywell KD6i Special Preset support
	• VCL (Video Controls Limited) Orbiter cameras
Pelco	• Pelco P Protocol
	• Pelco D Protocol
Tyco	• Sensormatic

PRODUCT HARDWARE SPECIFICATIONS

Please see the DVM R600 Compatibility Matrix for more complete system hardware specifications.

Specification data for EBI Server and Client components are detailed in the EBI Spec & Tech document or the EBI Compatibility Matrix.

Database Server	
Processor: Dual-Core Intel Xeon® 5130 2.0GHz or higher	Network: TCP/IP, minimum 1Gbps
Memory: Minimum 8GB RAM	Virtualization: VMware and Microsoft Hyper-V
Display Adapter: 1280 x 1024 or 1680 x 1050 with 24-bit/true color and 32MB Video memory	Hard disk: 73GB SATA 15,000rpm for Operating System, SQL Server and DVM software. Separate 73 GB SATA 15,000rpm hard drive for the DVM database files and nightly backups
Keyboard: 12 function keys	Operating System: Microsoft Windows Server 2012 R2 or Server 2008 R2, Microsoft Windows 7 (64 bit)
DVDROM Drive	Browser: Internet Explorer 9, 10 and 11
Pointing Device: Mouse or touch screen interface	Database: SQL Server 2014 Standard

Notes:

- AMD equivalent of Intel specification processor also supported
- If the Database Server is used as a Client then the same minimum requirements for Video memory apply as shown for the Clients below
- Network interface card: Gigabit Ethernet or higher recommended
- Large and/or complex systems or systems with high recording activity require an additional hard drive for DVM transaction log files
- DVM supports virtualization of Camera Servers using VMware ESX/ESXi 4.0 onwards and Microsoft 2008 Hyper-V

Camera Server and Video Analytics Server

Processor: Dual-Core Intel Xeon® 5130 2.0GHz or higher	Network: TCP/IP, minimum 1Gbps
Memory: Minimum 4GB RAM	Virtualization: VMware and Microsoft Hyper-V
Display Adapter: 1280 x 1024 or 1680 x 1050 with 24-bit/true color and 32MB Video memory	Hard disk: 40GB SATA 7,200rpm for Operating System and DVM software. Separate internal, external or network storage required for video recordings (volume based on system configuration)
Keyboard: 12 function keys	Operating System: Microsoft Windows Server 2012 R2 or Server 2008 R2, Microsoft Windows 7 (64 bit)
DVDROM Drive	Browser: Internet Explorer 9, 10 and 11
Pointing Device: Mouse or touch screen interface	

Notes:

- AMD equivalent of Intel specification processor also supported
- 2 x Dual-Core Intel® Xeon® 5140 (3.0GHz or higher) or AMD equivalent recommended for Analytics Servers running 16 or more camera channels of Honeywell Intelligent Video Analytics
- Additional RAM required for Camera Servers managing cameras configured with pre-record feature
- Network interface card: Gigabit Ethernet or higher recommended
- Archiving storage devices required for archiving recordings
- DVM supports virtualization of Camera Servers using VMware ESX/ESXi 4.0 onwards and Microsoft 2008 Hyper-V

Mobile Video Streaming Server and Devices

Processor: Dual-Core Intel Xeon® 5140 2.33GHz or higher	Network: TCP/IP, minimum 1Gbps
Operating System: Microsoft Windows Server 2012 R2 or Server 2008 R2, Microsoft Windows 7 (64 bit)	Hard disk: Capacity: 40GB, single hard drive Software: Windows operating system, Honeywell DVM mobile Server software
Memory: Minimum 4GB RAM, 8GB Recommended	Video streams supported: from 20 to 90 based on hardware
Mobile Device OS: Apple iOS8	Mobile devices: iPad Air and later iPad Mini Retina and later iPhone 5 and later

DVM Console Clients

Processor: Intel Core i5-3570 3.4GHz or higher	Keyboard: 12 function keys
Memory: Minimum 2GB RAM	DVDROM Drive
Monitor(s): Minimum Super VGA monitor supporting non-interlaced 1280 x 1024 or 1680 x 1050 pixel resolution	Pointing Device: Mouse, USB Joystick or touch screen interface
Monitor Count: up to 4 per Client Workstation	Network: TCP/IP, minimum 1Gbps
Video Graphics Card: Any card able to provide a Windows Experience Index subscore of 7.0 or higher	Operating System: Microsoft Windows 8.1 and Windows 7 (64 bit), Windows Server 2012 R2 and 2008 R2
Hard disk: 40GB SATA 7,200rpm for Operating System and DVM software.	

Notes:

- Workstation level hardware recommended
- AMD equivalent of Intel specification processor also supported
- Network interface card: 100Mbps supported; Gigabit Ethernet or higher recommended

DVM Internet Explorer Clients (Including Multi-Monitor and Station)

Processor: Intel Xeon® E5-2620 2.0GHz or higher	Keyboard: 12 function keys
Memory: Minimum 2GB RAM	DVDROM Drive
Monitor Type: Minimum Super VGA monitor supporting non-interlaced 1280 x 1024 or 1680 x 1050 pixel resolution	Pointing Device: Mouse, USB Joystick or touch screen interface
Monitor Count: up to 4 per Client Workstation	Network: TCP/IP, minimum 1Gb/s
Video Graphics Card: Minimum 1280 x 1024 or 1680 x 1050 pixel resolution support with 128MB video RAM and 24-bit/true color	Operating System: Microsoft Windows 8.1 and Windows 7 (64 bit), Windows Server 2012 R2 and 2008 R2
Hard disk: 40GB SATA 7,200rpm for Operating System and DVM software.	Browser: Internet Explorer 9, 10 and 11

Notes:

- Workstation level hardware recommended
- AMD equivalent of Intel specification processor also supported
- Network interface card: 100Mbps supported; Gigabit Ethernet or higher recommended

Network

802.3 Ethernet, 802.3u Fast Ethernet, 802.3z Gigabit Ethernet LAN using standard cable types:

- Unshielded Twisted Pair (UTP)
- Fiber Optic

802.11a, 802.11b, 802.11g, 802.11n Wireless Ethernet

Note: Some features in this specification are based on the use of Honeywell EBI in conjunction with DVM

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www.honeywell.com

REACT FASTER TO MITIGATE RISKS

Intuitive Intelligence

Digital Video
Manager Console



Honeywell Digital Video Manager Console

Empowering security operators to do more with less

Honeywell Digital Video Manager Console is a feature rich surveillance client that empowers security operators to do more with less. Benefiting from an intuitive security-centric design, the DVM Console employs advanced user-experience design to simplify interactions, increase situational awareness and enable a more efficient approach to incident response and investigations.



Fast Camera Access

The array of fast camera access features promotes faster response, informed decision making and improved incident management.

- Multi-level navigation tree to locate cameras faster
- Built-in filter capability
- Fast access to recently used cameras
- System build facility hierarchy of cameras and DVM views to manage operator scope of responsibility
- Operator-defined logical camera grouping
- Group-camera select

Flexible Layout

Achieve extraordinary situational awareness with a flexible graphical user interface, customizable to suit individual security requirements.

- Simultaneous viewing of live and recorded video
- Display up to 25 cameras at once
- Multiple layouts to suit application
- Flexible workspace with overflow customizable per operator
- Full drag and drop capability

- Locate cameras in the navigation tree from the workspace
- Increase individual tiles and achieve a full screen view
- Call-up multi-monitor keypad, change to full screen mode or clear the workspace
- Direct access to recently used cameras extends contextual awareness and compliments the agile navigation experience

Predictive Security

- DVM's video motion detection and advanced video content analysis automatically detects objects and events in the scene
- Objects triggering events are easily identified in both live and recorded video through the use of onscreen annotations
- Honeywell's Active Alert video analytics package can analyse real time video for multiple behaviours and events, helping to reduce operator load and forensic investigation time
- Seamlessly integrate with third-party video analytics via Video.net

Easier Forensic Investigations

Faster access to surveillance footage with motion-sensitive searches and synchronized playback capability, promoting savings in forensics and investigation time.

- Timeline with multi-camera summary display of recordings, allowing for faster review and navigation of surveillance footage
- Motion searching, on a single or multiple cameras, identifies periods of time where motion has occurred, promoting reduced operator workload and investigation time
- Synchronized view on some or all viewed cameras, enabling operators to monitor events as they unfold across multiple cameras providing deeper contextual insight
- Efficient video export of 1 or more cameras for faster incident review
- Zooming and scrubbing capability, promoting easier and faster review

For more information about DVM R600

visit dvm.honeywell.com

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Intuitive Intelligence

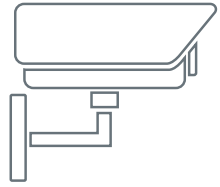
The Power of Smart Surveillance

Digital Video Manager
R600



Smarter, Faster Security and Surveillance

Simplified safety and security incident management, enhanced forensic investigation capability, mobility, and greater insight and control across your facility. Digital Video Manager (DVM) R600 is our most advanced and open video integration platform delivering greater flexibility in operation - on the go, by voice, or by touch.



Multi-Sensory Operating Environment – Saving Time and Increasing Flexibility

Voice command, mobility, touch screen interface, video walls and more, DVM R600 provides more options, and greater flexibility, helping to save critical detection, analysis and reaction time. New DVM mobile promotes productivity and operational efficiency outside the control room with high definition, intelligent streaming and video playback that adapts to network conditions.

Flexibility and power to the operator

- The ability to multi-task during critical situations and collaborate while managing incidents empowers security operators to do more with less
- Voice command directing cameras displayed and engaging in dialogue with your system for near real-time update of system status, enabling a deeper and quicker understanding of your system
- Optimized, easier to use workspace allows users to focus on video without distractions and with greater awareness of system status and recording
- Flexibility of video playback (tile or timeline) for greater operational flexibility

Mitigate Risk, Reduce Response Time With Smarter Surveillance

The intuitive security-centric Honeywell Digital Video Manager Console enables security operators to do more with less. DVM R600 provides a more efficient approach to incident response and investigations with synchronized video export, promoting financial and time savings. Features such as flexible workspace, instant and synchronized playback, motion searching and integrated analytics continue to empower security operators to better manage threats and reduce response time.

Faster configuration, flexible operation and reduced cost

- Easier configuration and flexible operation enables you to channel optimized functionality from virtually any device to the unique use patterns of your facility (tailoring tours, privacy zones, wash-wipe etc)
- Save cost through more efficient use of hardware, supporting greater data throughput and more devices per Camera Server, and promoting reduced initial hardware and future system maintenance costs
- Video sensor technology and latest video analytics promotes a predictive security solution and helps mitigate risk



Via Video Wall, DVM Console, tablet or smartphone...the largest to the smallest... leverage the power of DVM R600





Voice control for live monitoring and control of your facilities? Now you're talking smart surveillance...

Broader Choice with Tighter Connectivity

Helping you to continuously evolve and adapt to changing security threats, DVM R600 allows rapid adoption of the latest industry trends and innovations. Support for open integration of security products (ONVIF) and enhancements to Video.Net integration, promotes freedom of choice and interoperability.

Enhanced interoperability, streamlined engineering

- Accelerated product discovery promotes configuration time savings and reduces operational disruption
- Adopt advanced IP camera innovations with higher resolutions, edge analytics, edge recordings and multi-streaming to help realize higher productivity, better asset utilization and improved security
- Multi-layered, high density and high volume surveillance capability promotes ease of scalability and expandability for a smarter long-term investment
- Promote capital savings through freedom of choice to a wider range of devices
- Realize the benefits of Wide Area and Distributed Surveillance, now possible with architecture innovations and new mobile client support

Operational benefits

- Productivity gains from optimized user experience including voice control of cameras
- Extraordinary situational awareness on-the-go with mobile devices
- More efficient incident response and forensic investigations, promoting financial and time savings
- Integrate future surveillance technologies faster
- Help reduce cost with more devices per camera server

Confidence and Compliance

DVM R600 provides a migration path to a compliant and more secure IT environment, helping to mitigate risks and provided added confidence in investment.

Greater insight and resiliency

- DVM R600 promotes higher availability and reliability with enhanced system-wide server and recording, edge recording and support for multicasting.
- Intelligent back-up of camera servers supports high availability of recordings
- Camera server recording paths can be optimized for a more balanced utilization of video storage and increased resiliency of the system
- The DVM R600 Camera Server also self-monitors broader metrics including memory, power supply, disc failure and more, enabling greater insight into system health
- Integrated alarm management helps to highlight potential issues before they impede performance, promoting increased resiliency and reliability

Smart, Integrated Surveillance

Integrated technologies enable you to do more with less. While traditional, standalone security applications provide clear benefit to end users, the real power lies in managing the different functions – intrusion detection, time and attendance monitoring, access control and surveillance for example – as one integrated security solution and converging this with your building and life safety management systems.

The Honeywell Enterprise Buildings Integrator (EBI) platform enables facility-wide integration into a common operator interface. It helps remove operational silos, enable intelligent automation, intuitive alarming and operational efficiencies through operating as one unified, collaborative environment.

The result? A connected enterprise that helps increase operational efficiency, provide strategic protection and reduce risk to property, people and assets across your entire enterprise.

As an integral part of the EBI suite, DVM's live and recorded video clips can be linked to alarm and events for extraordinary situational awareness, insight and control to assist in effectively mitigating risks to your people, property and assets.

About Honeywell

Honeywell Building Solutions (HBS) is a leading provider of intelligent security, building, energy and life-safety management solutions and services to thousands of facilities around the world. From design to installation, commissioning to maintenance support, HBS taps into both our global portfolio and our local expertise to deliver customized solutions that solve your business challenges – today and tomorrow.

For more information about DVM R600

visit dvm.honeywell.com

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AXIS P3707-PE Network Camera

Flexible, 360° multisensor camera

AXIS P3707-PE Network Camera is an 8-megapixel multisensor fixed camera with four varifocal lenses that enable overview and detailed surveillance. With one IP address, one network cable, PoE support, IP66 and IP67 ratings, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance in large indoor and outdoor areas, and at the intersection of hallways and roads. Each camera head can be moved along a circular track. The tilt angle and the field of view of each lens are adjustable, and each camera head can rotate to support Axis' Corridor Format. The specially designed clear cover, with no sharp edges, ensures undistorted views in all directions.

- > **8 MP, 360° multisensor camera, one IP address**
- > **Flexible positioning of four varifocal camera heads**
- > **1080p videos at 12.5/15 fps; 720p videos at 25/30 fps; quad view stream**
- > **Axis' Zipstream technology**



AXIS P3707-PE Network Camera

Camera	
Image sensor	Progressive scan RGB CMOS 4 x 1/2.8"
Lens	Varifocal, 2.8–6 mm, F2.0 4x1080p capture mode: Horizontal field of view: 108°–54° Vertical field of view: 57°–30° 4xHDTV 720p capture mode: Horizontal field of view: 67°–36° Vertical field of view: 37°–20° Adjustable focus and zoom, fixed iris
Minimum illumination	Color: 0.3 lux, F2.0
Shutter time	720p: 1/28000 s to 2 s 1080p: 1/22500 s to 2 s
Video	
Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles Motion JPEG
Resolutions	4 x 1920x1080 (1080p) to 160x90 Quad view 1920x1440 to 480x270
Frame rate	25/30 fps (50/60 Hz) with 720p capture mode 12.5/15 fps (50/60 Hz) with 1080p capture mode
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Axis' Zipstream technology in H.264 Controllable frame rate and bandwidth VBR/MBR H.264
Image settings	Color, Brightness, Sharpness, Contrast, White balance, Exposure control, Exposure zone, Fine tuning of behavior at low light, Rotation: 0°, 90°, 180°, 270° including Corridor Format, Text and image overlay, Privacy mask, Local contrast
Camera angle adjustment	Pan ±90° Tilt 28°–92° Rotate ±90°
Network	
IP address	One IP address for all channels
Security	Password protection, IP address filtering, HTTPS ^a encryption, IEEE 802.1X ^a network access control, Digest authentication, User access log, Centralized Certificate Management
Supported protocols	IPv4/v6, HTTP, HTTPS ^a , SSL/TLS ^a , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP TM , SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH
System integration	
Application Programming Interface	Open API for software integration, including VAPIX [®] and AXIS Camera Application Platform; specifications at www.axis.com AXIS Video Hosting System (AVHS) with One-Click Connection ONVIF Profile S, specification at www.onvif.org
Analytics	AXIS Video Motion Detection 3, Active tampering alarm Support for AXIS Camera Application Platform enabling installation of third-party applications, see www.axis.com/acap
Event triggers	Analytics, Edge storage events
Event actions	Overlay text, pre- and post-alarm video buffering, video recording to edge storage, SNMP trap File upload: FTP, SFTP, HTTP, HTTPS network share and email
Notification: email, HTTP, HTTPS and TCP	
Data streaming	Event data
Built-in installation aids	Pixel counter
General	
Casing	IP66-, IP67-, NEMA 4X- and IK09-rated Die-casted aluminum, polycarbonate dome
Sustainability	PVC free
Memory	1 GB RAM, 256 MB Flash
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 2 Typical 4.8 W, max 5.5 W
Connectors	RJ45 10BASE-T/100BASE-TX PoE
Storage	Support for microSD/microSDHC/microSDXC card Support for recording to dedicated network-attached storage (NAS) For SD card and NAS recommendations see www.axis.com
Operating conditions	-30 °C to 60 °C (-22 °F to 140 °F) Humidity 10–100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Approvals	EMC EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A+B, ICES-003 Class B, VCCI Class B, RCM AS/NZS CISPR 22 Class B, KCC KN32 Class B, KN35, EN 50121-4, IEC 62236-4 Safety IEC/EN/UL 60950-1, IEC/EN/UL 60950-22 Environment IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC/EN 62262 IK09, IEC/EN 60529 IP66/IP67, NEMA 250 Type 4X
Dimensions	Diameter: ø 270 mm (10 5/8 in), Height: 91.5 mm (3 5/8 in)
Weight	2.2 kg (4.9 lb)
Included accessories	RJ45 mounting tool, Installation Guide, Windows decoder 1-user license
Optional accessories	AXIS T8415 Wireless Installation Tool, AXIS T94M02D Pendant Kit including weather shield, AXIS T91 Mounting Accessories, AXIS T8120 15 W Midspan 1-port For more accessories, see www.axis.com
Video management software	AXIS Camera Companion, AXIS Camera Station, Video management software from Axis' Application Development Partners available on www.axis.com/techsup/software
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Warranty	Axis 3-year warranty and AXIS Extended Warranty option, see www.axis.com/warranty
a. <i>This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org), and cryptographic software written by Eric Young (eay@cryptsoft.com).</i>	
Environmental responsibility: www.axis.com/environmental-responsibility	

AXIS Q3708-PVE Network Camera

180° overview in challenging light conditions

AXIS Q3708-PVE is a fixed dome with multiple sensors, providing an easy, reliable and cost-efficient one-camera installation. With WDR – Forensic Capture and excellent light sensitivity, it covers large areas even in challenging light conditions. Its three sensors together give a 180° panoramic view with smooth capture of movements at up to 30 fps in 3 x Quad HD or 20 fps in 3 x 5 MP resolution. The camera's factory-focused lenses eliminate the need for manual focusing. It is effectively installed indoors or outdoors with a wide operating temperature range powered by standard PoE+. AXIS Q3708-PVE comes with a repaintable weather shield.

- > [180° panoramic overview](#)
- > [Three sensors, one IP address](#)
- > [Enhanced light sensitivity and WDR – Forensic Capture](#)
- > [3 x Quad HD at 30 fps or up to 15 MP at 20 fps](#)
- > [Axis' Zipstream technology](#)



AXIS Q3708-PVE Network Camera

Camera		General	
Image sensor	3 x 1/1.8" progressive scan CMOS	Casing	IP66- and NEMA 4X-rated, IK10 impact-resistant aluminum casing with transparent, polycarbonate cover and dehumidifying membrane Encapsulated electronics Captive screws (T30) Color: White NCS 1002-B For repainting instructions and impact on warranty contact your Axis partner.
Lens	3 x lenses, fixed focus, 5.0 mm, F2.8 Combined horizontal angle of view: 180°	Memory	2.5 GB RAM, 512 MB Flash
Day and night	Automatically removable infrared-cut filter	Power	Power over Ethernet IEEE 802.3at Type 2 Class 4, max. 25.5 W, typical 18.3 W
Minimum illumination	Color: 0.3 lux, F2.8 B/W: 0.06 lux, F2.8	Connectors	RJ45 10BASE-T/100BASE-TX/1000BASE-T
Shutter time	1/71500 s to 1 s	Storage	Support for recording to dedicated network-attached storage (NAS)
Camera angle adjustment	Pan +/- 180° Tilt 18°-75°	Operating conditions	-40 °C to 55 °C (-40 °F to 131 °F) Humidity 10-100% RH (condensing)
Video		Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles Motion JPEG	Approvals	EN 55022 Class A, EN 50121-4, IEC62236-4, EN 61000-3-2, EN 61000-3-3, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 22 Class A, KCC KN32 Class A, KN35, IEC/EN/UL 60950-1, IEC/EN/UL 60950-22, EN 50581, IEC/EN 60529 IP66, NEMA 250 Type 4X, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-30, IEC 60068-2-78, IEC/EN 62262 IK10
Resolutions	3 x (2560x1920 to 480x270)	Dimensions	205 x 205 x 172 mm (8.1 x 8.1 x 6.8 in)
Frame rate	3 x Quad HD (2560x1440): Up to 25/30 fps with power line frequency 50/60 Hz 3 x 5 MP: Up to 16/20 fps with power line frequency 50/60 Hz	Weight	2.5 kg (5.5 lb) including weather shield
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Controllable frame rate and bandwidth VBR/CBR H.264 Axis' Zipstream technology in H.264	Included accessories	RJ45 Push-pull connector (IP66), Torx L-key T30, Weather shield, Installation Guide, Windows decoder 1-user license
Image settings	Compression, Color, Brightness, Sharpness, Contrast, White balance, Exposure control, Exposure zones, Fine tuning of behavior at low light, Text and image overlay, Privacy mask, Capture alignment WDR - forensic capture: Up to 110 dB depending on scene	Optional accessories	Axis Mounts AXIS PoE+ Midspans For more accessories, see www.axis.com
Network		Video management software	AXIS Camera Companion, AXIS Camera Station, Video management software from Axis' Application Development Partners available on www.axis.com/techsup/software
Security	Password protection, IP address filtering, HTTPS ^a encryption, IEEE 802.1X ^a network access control, Digest authentication, User access log, Centralized Certificate Management	Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Supported protocols	IPv4/v6, HTTP, HTTPS ^a , SSL/TLS ^a , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP TM , SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH	Warranty	Axis 3-year warranty and AXIS Extended Warranty option, see www.axis.com/warranty
System integration		<p>a. <i>This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org), and cryptographic software written by Eric Young (ey@cryptsoft.com).</i></p>	
Application Programming Interface	Open API for software integration, including VAPIX [®] and AXIS Camera Application Platform; specifications at www.axis.com ONVIF Profile S, specification at www.onvif.org	Environmental responsibility: www.axis.com/environmental-responsibility	
Analytics	AXIS Video Motion Detection 3, Active tampering alarm Support for AXIS Camera Application Platform enabling installation of third-party applications, see www.axis.com/acap		
Event triggers	Analytics, Edge storage events		
Event actions	File upload: FTP, SFTP, HTTP, HTTPS, network share and email Notification: email, HTTP, HTTPS, TCP and SNMP trap Video recording to edge storage Pre- and post-alarm video buffering Overlay text		
Built-in installation aids	Pixel counter		

AXIS P3224-VE Mk II Network Camera

Streamlined and versatile, outdoor-ready HDTV 720p fixed dome

AXIS P3224-VE Mk II is a streamlined, outdoor-ready fixed dome that provides HDTV 720p video. It features a varifocal lens and remote zoom and focus, which eliminates the need for hands-on fine tuning. Equipped with WDR – Forensic Capture to handle scenes with strong variations in light as well as Lightfinder technology for exceptional light sensitivity, this versatile camera provides outstanding video quality in both strong and poor light conditions. It supports Axis' Zipstream technology that significantly reduces bandwidth and storage requirements. The vandal-resistant AXIS P3224-VE Mk II is IK10 rated.

- > [HDTV 720p video quality](#)
- > [Outdoor ready and IK10 rated](#)
- > [Remote zoom and focus](#)
- > [Lightfinder and WDR – Forensic Capture](#)
- > [Axis' Zipstream technology](#)



AXIS P3224-VE Mk II Network Camera

Camera		Data streaming	Event data
Image sensor	Progressive scan RGB CMOS 1/3"	Built-in installation aids	Remote zoom, Remote focus, Pixel counter
Lens	Varifocal, 2.8–10 mm, F1.6 Horizontal field of view: 90°–34° Vertical field of view: 48°–20° Remote focus and zoom, P-Iris control, IR corrected	General	
Day and night	Automatically removable infrared-cut filter	Casing	IP66- and NEMA 4X-rated, IK10 impact-resistant casing with dehumidifying membrane Encapsulated electronics and captive screws Color: white NCS S 1002-B For repainting instructions of casing and impact on warranty, contact your Axis partner.
Minimum illumination	HDTV 720p 25/30 fps with WDR – forensic capture and Lightfinder: Color: 0.18 lux, F1.6 B/W: 0.04 lux, F1.6 HDTV 720p 50/60 fps: Color: 0.36 lux, F1.6 B/W: 0.08 lux, F1.6	Sustainability	PVC free
Shutter time	1/66500 s to 1 s	Memory	512 MB RAM, 256 MB Flash
Camera angle adjustment	Pan ±180°, tilt -5 to +75°, rotation ±95°	Power	Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3, max 7.1 W, typical 4.6 W
Video		Connectors	RJ45 10BASE-T/100BASE-TX PoE
Video compression	H.264 Baseline, Main and High Profile (MPEG-4 Part 10/AVC) Motion JPEG	Storage	Support for microSD/microSDHC/microSDXC card Support for recording to dedicated network-attached storage (NAS) For SD card and NAS recommendations see www.axis.com
Resolutions	1280x960 to 160x90	Operating conditions	-30 °C to 50 °C (-22 °F to 122 °F) Humidity 10 to 100% RH (condensing)
Frame rate	With WDR: 25/30 fps with power line frequency 50/60 Hz Without WDR: 50/60 fps with power line frequency 50/60 Hz	Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Axis' Zipstream technology in H.264 Controllable frame rate and bandwidth, VBR/MBR H.264	Approvals	EMC EN 55022 Class B, EN 61000-6-1, EN 61000-6-2, EN 55024, EN 50121-4, IEC 62236-4, FCC Part 15 Subpart B Class A and B, ICES-003 Class B, VCCI Class B, RCM AS/NZS CISPR 22 Class B, KCC KN32 Class B, KN35 Safety IEC/EN/UL 60950-1, IEC/EN/UL 60950-2, IEC/EN 62471 Environment IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14 IEC 60068-2-6 (vibration), IEC 60068-2-27 (shock), IEC 60068-2-30, IEC 60068-2-78, IEC/EN 60529 IP66, NEMA 250 Type 4X, IEC/EN 62262 IK10
Multi-view streaming	2 individually cropped out view areas	Dimensions	Height: 104 mm (4 1/16 in) ø 149 mm (5 7/8 in)
Pan/Tilt/Zoom	Digital PTZ	Weight	800 g (1.8 lb)
Image settings	Compression, Color, Brightness, Sharpness, Contrast, Local contrast, White balance, Exposure control (including automatic gain control), Exposure zones, Fine tuning of behavior at low light, WDR – forensic capture: up to 120 dB depending on scene, Text and image overlay, Mirroring of images, Privacy masks Rotation: 0°, 90°, 180°, 270°, including Corridor Format	Included accessories	Installation Guide, Windows decoder 1-user license, Mounting bracket, Cable gasket, Resistorx T20 L-key, Drill template, Connector guard, Weather shield
Network		Optional accessories	AXIS ACI Conduit Bracket A AXIS ACI Conduit Adapters AXIS T94M01L Recessed Mount Kit AXIS T94T01D Pendant Kit including weather shield AXIS Mounts Smoked dome
Security	Password protection, IP address filtering, HTTPS ^a encryption, IEEE 802.1X ^a network access control, Digest authentication, User access log, Centralized Certificate Management	Video management software	AXIS Companion, AXIS Camera Station, Video management software from Axis' Application Development Partners available on www.axis.com/techsup/software
Supported protocols	IPv4/v6, HTTP, HTTPS ^a , SSL/TLS ^a , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP TM , SNMP v1/v2c/v3(MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SFTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, SSH	Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
System integration		Warranty	Axis 3-year warranty and AXIS Extended Warranty option, see www.axis.com/warranty
Application Programming Interface	Open API for software integration, including VAPIX [®] and AXIS Camera Application Platform; specifications at www.axis.com AXIS Video Hosting System (AVHS) with One-Click Connection ONVIF [®] Profiles S and G, specifications at www.onvif.org	a. <i>This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org), and cryptographic software written by Eric Young (eyay@cryptsoft.com).</i>	
Analytics	AXIS Video Motion Detection 3, Active tampering alarm Support for AXIS Camera Application Platform enabling installation of AXIS Cross Line Detection and third-party applications, see www.axis.com/acap	Environmental responsibility: www.axis.com/environmental-responsibility	
Event triggers	Analytics, Edge storage events		
Event actions	File upload: FTP, SFTP, HTTP, HTTPS, network share and email Notification: email, HTTP, HTTPS, TCP and SNMP trap Video recording to edge storage Pre- and post-alarm video buffering Send video clip Overlay text		

AXIS P72 Video Encoder Series

Full-featured, cost-effective video encoders with H.264



- > Full frame rate
- > Simultaneous H.264 and Motion JPEG streams
- > Edge storage
- > High resolution quad-view
- > Two-way audio
- > Power over Ethernet

AXIS P72 Video Encoder Series offers powerful, full-featured and efficient integration of analog cameras into an IP-based video surveillance system and is ideal for locations such as gas stations, convenience stores and small offices.

AXIS P72 Series enables a cost-effective way to gain all the benefits of professional network video without discarding existing analog investments. The video encoders offer advanced network capabilities with great video performance and excellent audio quality.

AXIS P72 Video Encoder Series comprises two 4-channel models: the standalone AXIS P7214 Video Encoder and AXIS P7224 Video Encoder Blade for use with an Axis video encoder chassis.

AXIS P72 video encoders offer one H.264 and one Motion JPEG stream per channel at full frame rate in all resolutions up to D1 (720x576 50 Hz or 720x480 60 Hz).

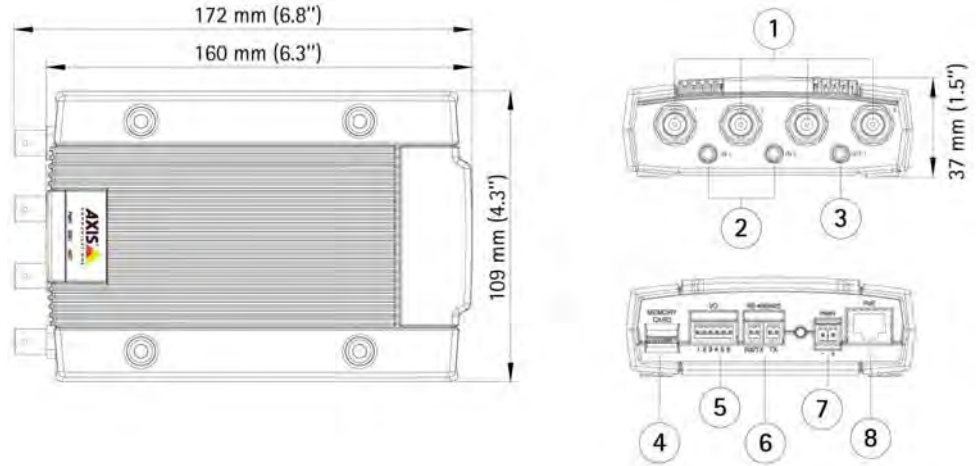
AXIS P72 Series offers two-way audio and intelligent video capabilities such as video motion detection, active tampering alarm and audio detection.

AXIS P72 Series includes support for Power over Ethernet (IEEE 802.3af), which enables the encoders to receive power through the network cable. The encoders also provide pan, tilt and zoom support, enabling control of analog PTZ cameras. AXIS P7214 also has a memory card slot for edge storage.



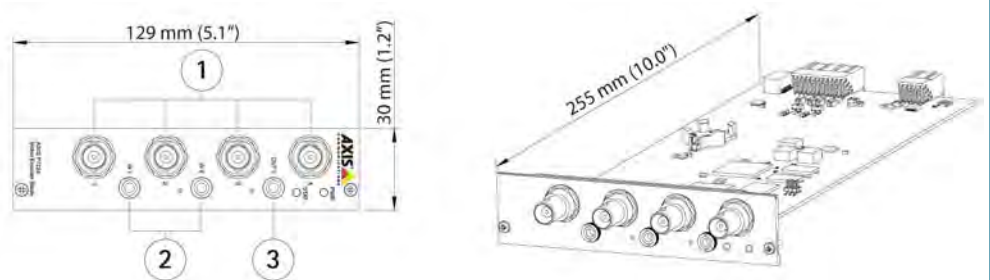
Dimensions – AXIS P7214 Video Encoder

1. Video inputs
2. Audio in
3. Audio out
4. Memory card
5. I/O
6. RS-485/RS-422 serial port
7. Power
8. Network connector



Dimensions – AXIS P7224 Video Encoder Blade

1. Video inputs
2. Audio in
3. Audio out



Accessories

1. AXIS T91A02 Din Rail Clip
86 mm (AXIS P7214 only)
2. AXIS P7701 Video Decoder
3. AXIS P8221 Network I/O Audio Module
4. AXIS T8310 Video Surveillance Control Board



Technical Specifications – AXIS P7214 Video Encoder

Video		System integration	
Video compression	H.264 Baseline and Main Profiles (MPEG-4 Part 10/AVC) Motion JPEG	Application Programming Interface	Open API for software integration, including VAPIX®, specifications at www.axis.com ONVIF Profile S, specifications at www.onvif.org
Resolutions	720x576 to 176x120, 1536x1152 to 176x120 for quad view	Intelligent video	Video motion detection, Active tampering alarm, Audio detection
Frame rate	H.264: 25/30 fps (50/60 Hz) 15 fps in quad view in full resolution Motion JPEG: 25/30 fps (50/60 Hz) 15 fps in quad view in full resolution	Event triggers	Intelligent video, External inputs, Video loss, Edge storage events
Video streaming	One individually configured H.264 and one Motion JPEG stream per channel at full frame rate More streams if identical or limited in frame rate/resolution Controllable frame rate and bandwidth VBR/CBR H.264	Event actions	File upload: FTP, HTTP, network share and email Notification: email, HTTP and TCP Video and audio recording to edge storage Pre- and post-alarm video buffering PTZ preset, Play audio clip, External output activation
Image settings	Compression, Color, Brightness, Contrast, Text and image overlay, Mirroring of images, Privacy mask, Aspect ratio correction, Enhanced deinterlace filter, Video termination, Antialiasing, Temporal noise filtering Rotation: 90°, 180°, 270°	Data streaming	Event data
Pan/Tilt/Zoom	Wide range of analog PTZ cameras supported ^a 100 presets/camera, Guard tour, PTZ control queue Supports Windows compatible joysticks	Built-in installation aids	Pixel counter
Audio		General	
Audio streaming	Two-way, full duplex and half duplex (2 mic/line inputs, 1 line output)	Casing	Standalone, metal casing, wall mount
Audio compression	In: AAC-LC 8 or 16 kHz 8–64 kbit/s G.711 μ -law PCM 8 kHz 64 kbit/s G.726 ADPCM 8 kHz 32 kbit/s or 24 kbit/s Out: G.711 μ -law PCM 8 kHz 64 kbit/s, μ -law PCM 16 kHz 128 kbit/s G.726 ADPCM 8 kHz 32 kbit/s or 24 kbit/s	Memory	512 MB RAM, 128 MB Flash
Audio input/output	External microphone input or line input Line level output Audio streaming, record (AU) and play uploaded (WAV, AU) clips AU (G.711 μ -law 8-bit 8/16 kHz mono), WAV (PCM 16-bit 8/16 kHz mono)	Power	8–20 V DC, max. 8 W; Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3
Connectors			DC input terminal block 4x analog composite video BNC inputs RJ45 10BASE-T/100BASE-TX PoE Terminal block for four configurable external inputs/outputs Terminal block for RS-485/RS-422 (full duplex) 2x 3.5 mm jacks for microphone or line input (mono) 3.5 mm jack for audio output (mono)
Network		Edge storage	MicroSD/microSDHC/microSDXC slot supporting memory card up to 64 GB (card not included) Support for recording to dedicated network-attached storage (NAS)
IP address	One IP address for four channels	Operating conditions	0 °C to 50 °C (32 °F to 122 °F) Humidity 20–80% RH (non-condensing)
Security	Password protection, IP address filtering, HTTPS ^b encryption, IEEE 802.1X ^b network access control, Digest authentication, User access log	Approvals	EN 55022 Class B, EN 55024, IEC/EN/UL 60950-1, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B, C-tick AS/NZS CISPR 22 Class B, KCC KN22 Class B, KN24
Supported protocols	IPv4/v6, HTTP, HTTPS ^b , SSL/TLS ^b , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP™, SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS	Weight	570 g (1.26 lb)
		Included accessories	Installation Guide, Installation and Management Software CD, Windows decoder licenses, Power supply, Mounting and connector kits
		Video management software	AXIS Camera Companion (included), AXIS Camera Station and video management software from Axis' Application Development Partners (not included). For more information, see www.axis.com/products/video/software
		Warranty	Axis 3-year warranty, see www.axis.com/warranty

- a. Drivers available for download at www.axis.com
 b. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>), and cryptographic software written by Eric Young (ey@cryptsoft.com).

Technical Specifications – AXIS P7224 Video Encoder Blade

Video		System integration	
Video compression	H.264 Baseline and Main Profiles (MPEG-4 Part 10/AVC) Motion JPEG	Application Programming Interface	Open API for software integration, including VAPIX®, specifications at www.axis.com ONVIF Profile S, specifications at www.onvif.org
Resolutions	720x576 to 176x120, 1536x1152 to 176x120 for quad view	Intelligent video	Video motion detection, Active tampering alarm, Audio detection
Frame rate	H.264: 25/30 fps (50/60 Hz) 15 fps in quad view in full resolution Motion JPEG: 25/30 fps (50/60 Hz) 15 fps in quad view in full resolution	Event triggers	Intelligent video, External inputs, Video loss, Edge storage events
Video streaming	One individually configured H.264 and one Motion JPEG stream per channel at full frame rate More streams if identical or limited in frame rate/resolution Controllable frame rate and bandwidth VBR/CBR H.264	Event actions	File upload: FTP, HTTP, network share and email Notification: email, HTTP and TCP Video and audio recording to edge storage Pre- and post-alarm video buffering PTZ preset, Play audio clip, External output activation
Image settings	Compression, Color, Brightness, Contrast, Text and image overlay, Mirroring of images, Privacy mask, Aspect ratio correction, Enhanced deinterlace filter, Video termination, Antialiasing, Temporal noise filtering Rotation: 90°, 180°, 270°	Data streaming	Event data
Pan/Tilt/Zoom	Wide range of analog PTZ cameras supported ^a Support for one PTZ driver Multiple camera presets supported, Guard tour, PTZ control queue Supports Windows compatible joysticks	Built-in installation aids	Pixel counter
Audio		General	
Audio streaming	Two-way, full duplex and half duplex (2 mic/line inputs, 1 line output)	Casing	Compatible with AXIS 291 1U Video Server Rack and AXIS Q7920 Video Encoder Chassis
Audio compression	In: AAC-LC 8 or 16 kHz 8–64 kbit/s G.711 μ -law PCM 8 kHz 64 kbit/s G.726 ADPCM 8 kHz 32 kbit/s or 24 kbit/s Out: G.711 μ -law PCM 8 kHz 64 kbit/s, μ -law PCM 16 kHz 128 kbit/s G.726 ADPCM 8 kHz 32 kbit/s or 24 kbit/s	Memory	512 MB RAM, 128 MB Flash
Audio input/output	External microphone input or line input Line level output Audio streaming, record (AU) and play uploaded (WAV, AU) clips AU (G.711 μ -law 8-bit 8/16 kHz mono), WAV (PCM 16-bit 8/16 kHz mono)	Power	12 V DC, max. 6 W
Connectors		Edge storage	4x analog composite video BNC inputs 1x Terminal block for four configurable external inputs/outputs (on back of rack) 1x Terminal block for RS-485/RS-422 (2-wire) 2x 3.5 mm jacks for microphone or line input (mono) 1x 3.5 mm jack for audio output (mono)
Network		Operating conditions	Support for recording to dedicated network-attached storage (NAS) 0 °C to 45 °C (32 °F to 113 °F) Humidity 20–80% RH (non-condensing)
IP address	One IP address for four channels	Approvals	EN 55022 Class B, EN 55024, EN 61000-3-2, IEC/EN/UL 60950-1, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class B, ICES-003 Class B, VCCI Class B, C-tick AS/NZS CISPR 22 Class B, KCC KN22 Class A, KN24 EN 55022 Class B for AXIS 291 1U Video Server Rack and AXIS Q7920 Video Encoder Chassis
Security	Password protection, IP address filtering, HTTPS ^b encryption, IEEE 802.1X ^b network access control, Digest authentication, User access log	Weight	210 g (0.46 lb)
Supported protocols	IPv4/v6, HTTP, HTTPS ^b , SSL/TLS ^b , QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP™, SNMPv1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS	Included accessories	Installation Guide, Installation and Management Software CD, Windows decoder licenses
		Video management software	AXIS Camera Companion (included), AXIS Camera Station and video management software from Axis' Application Development Partners (not included). For more information, see www.axis.com/products/video/software
		Required hardware	AXIS 291 1U Video Server Rack or AXIS Q7920 Video Encoder Chassis
		Warranty	Axis 3-year warranty, see www.axis.com/warranty

- a. Drivers available for download at www.axis.com
b. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>), and cryptographic software written by Eric Young (ey@cryptsoft.com).

More information is available at www.axis.com

AXIS 291 1U Video Server Rack

Full frame rate, high-density video encoder rack solution.



- > High density
- > 1U 19" industry standard rack
- > 3 expansion slots for video encoder blades
- > Built-in universal power supply
- > Compatible with all Axis Blades

AXIS 291 1U Video Server Rack is a high-density solution for seamless and professional installation of video encoders. AXIS 291 1U is designed for expanding applications and is ideal for airports, hotels and train stations – premises where analog cameras are already installed.

AXIS 291 1U Video Server Rack combines high reliability and functionality with quick, flexible and professional installation. The rack is designed to migrate from 4 to 18 analog cameras into high performance, IP-based, digital solutions, using only one Ethernet port.

AXIS 291 1U is designed for applications that need to be able to expand, not only by adding more channels, but also by using different types of cameras.

AXIS 291 1U is a 19" video encoder rack that holds up to 3 interchangeable and hot-swappable blades. Together with the video encoder blades, this rack provides MPEG-4 and Motion JPEG video at 25/30 frames per second at up to 4CIF resolution on all channels simultaneously. AXIS 291 1U can also provide H.264, dependent on the blade version.

The video encoder enables pan/tilt/zoom control over the network of all leading brands of analog video cameras on the market.



Technical specifications – AXIS 291 1U Video Server Rack

291 1U Video encoder rack		Operating conditions
Expansion slots	3 slots for Axis video encoder blades	0 °C – 45 °C (32 °F – 113 °F) Humidity 20 – 80% RH (non-condensing)
Casing	Metal casing for standalone or rack mounting	Approvals
Power	100 – 240 V AC, 1.9 A max 80 W (with 3x243Q)	EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class B, VCCI Class B, AS/NZ CISPR 22, ICES-003, ITE, UL, cUL, EN 60950-1, CB-certificate, KTL
Connectors	Ethernet 10BASE-T/100BASE-TX/1000BASE-T, RJ-45 (Gigabit Ethernet) 3 terminal blocks: 4 alarm inputs 4 outputs RS-485/422 half-duplex	Weight
		3.7 kg (8.2 lbs) excluding blades
		Included accessories
		Installation Guide, mounting kit, AC power cable

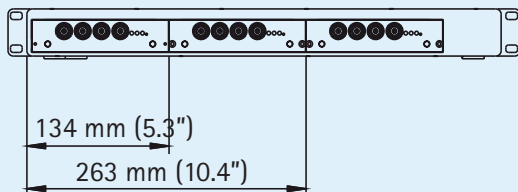
More information is available at www.axis.com

Compatible video encoder blades					
Blade	No. of channels	Video compression*	Frames per second in max. resolution	External inputs/outputs	PTZ support
AXIS Q7406	6	H.264	Multiple streams at 30/25 in D1 per channel	8 configurable	●
		Motion JPEG			
AXIS Q7414	4	H.264	Multiple streams at 30/25 in D1 per channel	8 configurable	●
		Motion JPEG			
AXIS P7224	4	H.264	Multiple streams at 30/25 in D1 (8 streams total)	4 configurable	●
		Motion JPEG			
AXIS 243Q	4	MPEG-4	30/25 in 4CIF per channel	4/4	●
		Motion JPEG			
AXIS 241Q	4	MPEG-4	21/17 in 4CIF using 1 channel, 20/17 in CIF per channel using 4 channels	4/4	●
		Motion JPEG	30/25 in 4CIF using 1 channel, 30/25 in CIF per channel using 4 channels		
AXIS 240Q	4	Motion JPEG	6/5 in 4CIF per channel	4/4	●
AXIS 241S	1	MPEG-4	21/17 in 4CIF, 30/25 in 2CIF	4/4	●
		Motion JPEG	30/25 in 4CIF		

*H.264 is also known as MPEG-4 Part 10/AVC. In the table, MPEG-4 refers to MPEG-4 Part 2.

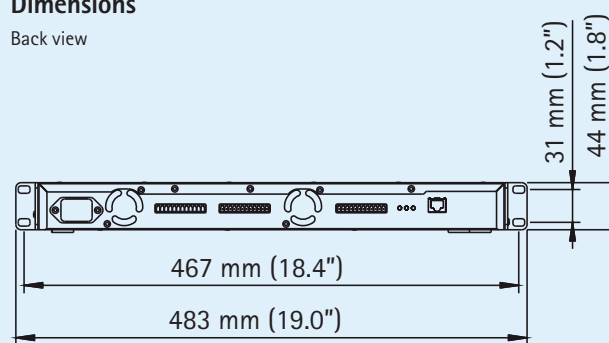
Dimensions

Front view



Dimensions

Back view





Mechanical & Electrical Services
A Division of NAC

1001 Labore Industrial Court, Suite B Vadnais Heights, Minnesota 55110

tel: 651-490-9868 fax: 651-490-1636

RFP RESPONSE

CLIENT: MCLEOD COUNTY

PROJECT: COUNTYWIDE SECURITY/SURVEILLANCE
SYSTEM

SUBMITTED: OCTOBER 5, 2016

PREPARED BY: PHILIP HAATAJA, ACCT MGR

www.nac-hvac.com, 24 Hour Service

An Affirmative Action, Equal Employment Opportunity Employer

HVAC Mechanical - Building Automation - Electrical - Plumbing - Sheet Metal - Preventative Maintenance - Service Repairs - Combustion Services

Tab 1

October 5, 2016

McLeod County
830 11th Street East, Suite 110
Glencoe, MN 55336
Attn: Mr. Scott Grivna
Purchasing/Bldg. Maint. Supervisor

Re: Countywide Security/Surveillance System

Mr. Grivna

Please see the attached response to your RFP for a new security/surveillance system. In the document you will find pricing, product information, design information, and other related details for a complete install using Avigilon access control and CCTV products. NAC chose to use this product because it was the best fit for how the RFP was written, and its ability to comply with the requirements of the project.

Though our design may be more expensive than others, NAC included everything required to have a fully functional system that will meet the needs of the county for years to come. If you would like a value-engineered solution we can consider some of the ideas I point out later in this letter.

As you know, NAC is a privately owned Minnesota business, headquartered in Vadnais Heights, MN. We have been in business for over 30 years and have over 400 employees. We have almost 100 field personnel dedicated to service, and are available 24/7 based on our customer's needs. In our technology department we have dozens of professionals who are dedicated to service, engineering, design, and management. With this depth of talent, NAC is uniquely positioned to provide comprehensive design advice at the beginning of a project, expert installation during the project itself, and long term service after completion.

The total project proposal is \$399,500.00 and includes software, hardware, equipment, labor, startup/commissioning, training, documentation, etc. The warranty included with the base proposal covers parts and labor for a period of one year. The warranty on all Avigilon equipment is three years, but can be extended to five (5) years for an additional charge.

The Enterprise system included in the base proposal meets and exceeds the requirements of the RFP. Should it be too expensive a project for the county to do right now, NAC can offer some value-engineered options. Here are some ideas:

1. Omit supply of access control cards (RFP does not call for any)
2. Omit installation of request to exit motion detectors (RFP does not call for them)
3. Omit installation of door position switches (RFP does not call for them)
4. Omit installation of badging software in access control system (RFP does not call for it)
5. Omit new readers in locations where existing readers are located (RFP does not call for new equipment throughout the system)
6. Omit redundant power supplies on VMS servers (RFP does not call for them)
7. Omit hot-swappable RAID drives in the two NVR/VMS servers
8. Reuse the existing WinPak/NetAXS/NX-1000 access control system as-installed
9. Expanding storage capacity on NVR's to accommodate future IP camera installations
10. Change from Enterprise to Standard version software for Avigilon VMS system

Once the installation is complete the County will be in the maintenance/operations phase of the project and will ultimately have to deal with maintaining the system in good working order. This can be done by your own staff, or by NAC, or by a combination of both. Some ideas to consider for ongoing maintenance are:

1. Add 4th and 5th year manufacturer supported warranty coverage on Avigilon CCTV equipment
2. Add 4th and 5th year manufacturer supported warranty coverage on Avigilon access control equipment
3. Add annual service plan for maintaining both security systems:
 - a. Operational testing & service
 - b. Software maintenance and service
4. Etc.

We are eager to take the next step in being your partner of choice on this project. Thanks again for giving NAC an opportunity to continue being a service provider within the county. If you need further clarification of any of the design details please call me.



Philip Haataja
Service Account Manager

Tab 2

BID BOND

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA Hartford, Connecticut 06183

CONTRACTOR:

(Name, legal status and address)

Northern Air Corporation d/b/a
NAC Mechanical and Electrical Services
1001 Labore Industrial Court, Suite B
Vadnais Heights, MN 55110

SURETY:

(Name, legal status and principal place of business)

Travelers Casualty and Surety Company of America
One Tower Square - 2SHS
Hartford, CT 06183-6014

OWNER:

(Name, legal status and address)

McLeod County
2391 Hennepin Avenue N
Glencoe, MN 55336

BOND AMOUNT: Five Percent of Amount Bid ----- (5% of Amount Bid)

PROJECT:

(Name, location or address, and Project number, if any)

Security/Surveillance System

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 28th day of September, 2016.



(Witness)

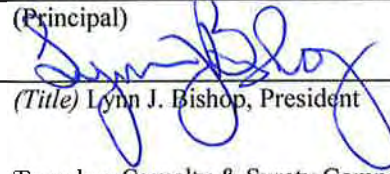


(Witness)

Northern Air Corporation d/b/a NAC
Mechanical and Electrical Services

(Principal)

(Seal)



(Title) Lynn J. Bishop, President

Travelers Casualty & Surety Company of America

(Surety)

(Seal)



(Title) John C. Klein, Attorney-in-Fact

KLEIN AGENCY, INC.
3570 No. Lexington Ave. Ste. 206
St. Paul, MN 55126
(651) 484-6461

INDIVIDUAL OR PARTNERSHIP ACKNOWLEDGMENT

STATE OF
COUNTY OF

On this _____ day of _____, _____, before me personally appeared _____ to me known to be the person _____ described in and who executed the forgoing bond, and acknowledged that _____ he _____ executed the same as _____ free act and deed.

Notary Public

CORPORATION ACKNOWLEDGMENT

STATE OF MINNESOTA
COUNTY OF Ramsey

On this 29th day of Sept, 2016, before me personally came Lynn Bishop to me known, who being by me duly sworn, did depose and say; that he is the President of Northern Air Corporation d/b/a NAC Mechanical and Electrical Services,

the corporation described in and which executed the above instrument; that he knows the seal of said corporation; affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.



Jean M Sluss Notary Public

SURETY ACKNOWLEDGMENT

STATE OF MINNESOTA
COUNTY OF RAMSEY

On this 28th day of September, 2016, before me appeared John C. Klein to me personally known, who, being duly sworn, did say that he is the Attorney-in-Fact of Travelers Casualty and Surety Company of America of Hartford, CT

that the seal affixed to the foregoing instrument is the corporation seal of said corporation; that the said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors; and he did also acknowledge that he executed the said instrument as the free act and deed of said Company.



Rita M Carlson Notary Public

TRAVELERS

POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 230679

Certificate No. 006847257

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

John C. Klein, Stephen M. Klein, Kristin M. Bakos, and Clint Rodningen, Jr.

of the City of St. Paul, State of Minnesota, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 28th day of June, 2016.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: *Robert L. Rancy*
Robert L. Rancy, Senior Vice President

On this the 28th day of June, 2016, before me personally appeared Robert L. Rancy, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2021.



Marie C. Tetreault
Marie C. Tetreault, Notary Public

29 September 2016

To whom it may concern,

Avigilon High Definition Video Management Solutions are distributed and installed exclusively by Avigilon Authorized Enterprise Solution Partners. These Authorized partners are required to be extremely well versed in video surveillance system design, data network infrastructure installation and support. In addition, Avigilon requires each Authorized Partner to maintain a service center to support each and every Customer site. These service centers MUST have a minimum of two (2) Avigilon Certified Technicians per location that have successfully completed & attained the minimum certification requirements of Avigilon University. They also must complete ongoing training to ensure competency on all new products. Avigilon Staff works exclusively with our Solution Partners to ensure that systems are properly designed to ensure end user satisfaction.

NAC Mechanical and Electrical Services is an Avigilon Authorized Enterprise Certified Solution Partner. Avigilon chose NAC Mechanical and Electrical Services because of their knowledge base in networking and security management applications. NAC Mechanical and Electrical offers their customers unsurpassed knowledge & support for High Definition Video Management and access control solutions that work seamlessly with the security force management teams that monitor and secure customer facilities. They have successfully completed the certification requirements of Avigilon University and continue to exceed our expectations of support and knowledge. I am confident you will find their talent and competency to be unsurpassed by any other vendor.

If there are any further questions, please do not hesitate to contact me directly at 612.723.9412

Respectfully,



Jeff Halbert
Regional Sales Manager, MN

McLeod County

Security/Surveillance System

Addendum A

September 23rd, 2016

Adjustments to sections in the original RFP below are in red.

- 3.02 Upon completion of this project, the County shall have a security/surveillance system capable of providing the following:

K. The Physical Access solution should entail gateways that can support 250,000 cached credentials and 150,000 cached events. All communication should be 128-bit Advanced Encryption Standard (AES) encrypted.

- 3.03 Existing Infrastructure

B. Wide Area Network

1. Glencoe

- a. All buildings are fiber connected at 10Gb:
- i. Courthouse & Law Enforcement Center (main data center)
 - ii. Health & Human Services
 - iii. North Complex
 - iv. Annex

2. Hutchinson

- a. All buildings are fiber connected at 10Gb:
- i. HATS (secondary data center)
 - ◆ 10Gb Fiber connection and 100Mb failover connection to Courthouse
 - ii. Extension Office
 - iii. Solid Waste

5 BASE SYSTEM REQUIREMENTS (UPDATED COUNTS AND ADDRESSES FROM MEETING)

5.01 The COUNTY reserves the right to accept or reject in any combination which buildings are selected for final approval based on budgetary constraints.

5.02 McLeod County Court House (830 11th St. E. Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	32 new doors with access readers
Add Cameras	10 new IP cameras
Management Software for Access	1 Software program
Management Software for Cameras	1 Software program

5.03 McLeod County Court Administration (830 11th St. E. Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	4 current doors with access readers
---	-------------------------------------

5.04 McLeod County Law Enforcement (801 10th St. E Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	6 current doors with access readers. 7 new doors with access readers
No cameras in the Law Enforcement building are a part of this project	

5.05 McLeod County North Complex (2391 Hennepin Ave N Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	6 current doors with access readers and 6 new doors with access readers
Incorporate Current Analog Cameras and add	6 current analog cameras and 3 new IP cameras

5.06 McLeod County Annex (2397 Hennepin Ave N Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add New Camera	1 360 degree camera in main hallway

5.07 McLeod County Glencoe HWY/LEC Shed (2397 Hennepin Ave N Glencoe, MN 55336)

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add Cameras	2 camera outside covering both buildings

*We would prefer conduit for cables run in the shops to protect them, it's negotiable based on cost.

5.08 McLeod County Health and Human Services (1805 Ford Ave N Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	14 current doors with access readers and 1 new door with access reader
Incorporate Current Analog Cameras and add new	2 current analog cameras and 5 new IP cameras

5.09 McLeod County Solid Waste (1065 5th Ave SE Hutchinson, MN 55350)

Door Access Readers and Applicable Hardware	18 current doors with access readers on Keri System. 4 Current Honeywell readers. Add 2 doors with access readers.
Incorporate Current Analog and IP Cameras	29 current cameras to integrate into new system

5.10 McLeod County Fairgrounds (840 Century Ave SW Hutchinson, MN 55350)

Door Access Readers and Applicable Hardware	3 current doors with access readers on a Keri System. Add 6 doors with access readers.
Add Cameras	Add 3 cameras in Commercial Building and 1 in Dairy Building

5.11 McLeod County Brownton HWY Shop (208 1st Ave S Brownton, MN 55312)

Door Access Readers and Applicable Hardware	1 access readers for walk in door
---	-----------------------------------

*We would prefer conduit for cables run in the shops to protect them, but it's negotiable based on cost.

5.12 McLeod County Silver Lake/Lester Prairie HWY Shop (19955 Falcon Ave Glencoe, MN 55336)

Door Access Readers and Applicable Hardware	2 access readers for walk in doors on each end of building
---	--

*We would prefer conduit for cables run in the shops to protect them, but it's negotiable based on cost.

McLeod County

Security/Surveillance System

Addendum B

September 29th, 2016

Adjustments are highlighted below in Red:

IMPORTANT DATES:

RFP Advertised	Thursday, September 1st
Mandatory Pre-Proposal Conference	Friday, September 16th
Last Day for Questions	Wednesday, September 21st
Last Addendum Issued:	Friday, September 29th
Proposal Due Date	Wednesday, October 5th
Present at Board	Tuesday, October 18th
Project Completion:	Friday, January 27 th , 2017

SEALED SUBMITTAL REQUIREMENTS: Please include one (1) original and one (1) paper copy, as well as, one (1) electronic copy in PDF format for a total of three (3) complete sets of the Proposal for a Security/Surveillance. Submittal shall be **SEALED** and submitted by **Friday, September 30th, 2016 at 2:00 pm**. Send proposals to the following address:

One original for time/date stamp, one (1) paper copy, and one electronic copy with original.	
McLeod County Attn: Scott Grivna 830 11th Street East Suite 10 Glencoe, MN 55336-2200	

Proposal is to be signed only by persons authorized to enter into a contract with McLeod County.


RESPONDENT'S SIGNATURE

OVAC MECHANICAL & ELEC SERVICES
COMPANY NAME

Tab 3

Scope of Work:

NAC is proposing to install an integrated Avigilon access control and video surveillance system throughout the county to meet the needs of the RFP. Installation includes:

1. New Avigilon CCTV/VMS servers with Avigilon Enterprise VMS software installed in two locations for recording video footage from the existing analog cameras and new IP/POE cameras, includes licensing for all views
2. New Avigilon analog to digital encoders, mounting hardware, and cabling for integrating existing CCTV views into new Avigilon VMS server
3. New Avigilon IP/POE cameras per requirements
4. Avigilon access control server software provided for customer provided VM application
5. Integration/convergence programming with detailed floorplan maps showing position and status of all access control locations & cameras
6. New card readers, Request-to-Exit (REX) motion detectors, door position switches, and wiring for existing access control doors that are being converted to the new system
7. New card readers, Request-to-Exit (REX) motion detectors, door position switches, electric locking devices, and wiring for existing access control doors that are being converted to the new system
8. Demolition of existing access control wiring and devices
9. Project management, mobilization, equipment, labor, materials, etc.

Locations involved in this project are:

1. Law Enforcement, Court Admin, Courthouse
2. North Complex
3. Annex
4. Glencoe HWY/LEC Shed
5. Health and Human Services
6. Solid Waste
7. Fairgrounds
8. Brownton HWY Shop
9. Silver Lake/Lester Prairie HWY Shop

Technical advantages of proposed system:

1. The product compatibility list for the Avigilon Video Management System (VMS) has thousands of cameras on it from many manufacturers. This makes the VMS very versatile for future expansion
2. The Avigilon Enterprise VMS supports unlimited users and can be accessed via a deployed software client, webpage, and remote apps
3. The VMS server configuration is automatically backed up to other Enterprise servers within the system, two of which are included in this design
4. The access control system includes all of the software required to manage a huge population of users and includes issuance of photo ID's
5. The VMS's High Definition Stream Management system intelligently manages network bandwidth
6. The VMS supports camera resolutions up to and including 30 megapixel
7. The VMS supports low cost video analytics solutions for detecting traffic patterns, objects left behind, loitering, etc.
8. The VMS and access control software suites have free updates available directly from the manufacturer's website without recurring fees or expenses.
9. All Avigilon products include a three year manufacturer's warranty covering the product itself. In the case of the VMS servers the warranty is covered by Dell, and includes onsite Dell service for the three year term
10. The product warranty on all Avigilon products (not including labor) can be extended to five years for an additional fee
11. See the attached product datasheets for other market leading features

Tab 4

McLeod County

Security/Surveillance System

Request for Proposal

August 30th, 2016

McLeod County
REQUEST FOR PROPOSAL

FOR: County Security/Surveillance System

Scope and Specifications of the Proposal

SCOPE: McLeod County (referenced to as the COUNTY throughout this proposal) would like to implement a County-wide, pure TCP/IP-based surveillance camera system that is fully compatible with any existing analog cameras at all county sites. All solutions must address the needs of both new IP cameras and existing analog cameras to operate within the same system and consider IP replacements as analog cameras fail. Further, the proposed system must fully comply and integrate with the existing Cisco based network infrastructure and systems throughout the COUNTY. We currently have multiple sites with individual recording devices and would like to create a more centralized solution to only two locations; The Glencoe Court House and the Highway building in Hutchinson. The solution will need to address future growth for additional cameras.

Additionally, the COUNTY would like to implement the management application software and hardware for an IP-based Access Control solution that provides integration and convergence with the above mentioned camera surveillance system. The Access Control System should have two primary component areas, door control hardware and the management application software that can run in a virtual environment. We would also like to implement a system that can scale as we combine the four separate systems we currently have into one. It would be a big advantage if the system could utilize Active Directory groups to manage access. Utilizing components of the current systems can be taken into consideration.

McLeod County reserves the right to modify the Scope and Specifications as circumstances require, including but not limited to adding, changing, or deleting proposed locations.

PROPOSAL SUBMITTED BY: NAC Mechanical & Electrical Services

(Company Name)

1001 Labore Industrial Ct, Suite B

(Address)

Vadnais Heights, MN 55110

(State/Zip Code)

Philip Haataja

(Typed Name of Person Submitting the Proposal)

320-828-4609

(Phone #)

651-490-1636

(Fax #)

September 30, 2016

(Date of Proposal Submission)

IMPORTANT DATES:

RFP Advertised	Thursday, September 1st
Mandatory Pre-Proposal Conference	Friday, September 16th
Last Day for Questions	Wednesday, September 21st
Last Addendum Issued:	Friday, September 23rd
Proposal Due Date	Friday, September 30th
Present at Board	Tuesday, October 18th
Project Completion:	Friday, January 27 th , 2017

SEALED SUBMITTAL REQUIREMENTS: Please include one (1) original and one (1) paper copy, as well as, one (1) electronic copy in PDF format for a total of three (3) complete sets of the Proposal for a Security/Surveillance. Submittal shall be **SEALED** and submitted by **Friday, September 30th, 2016 at 2:00 pm**. Send proposals to the following address:

One original for time/date stamp, one (1) paper copy, and one electronic copy with original.	
McLeod County Attn: Scott Grivna 830 11th Street East Suite 10 Glencoe, MN 55336-2200	

Proposal is to be signed only by persons authorized to enter into a contract with McLeod County.



RESPONDENT'S SIGNATURE

NAC Mechanical & Electrical
Services

COMPANY NAME

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1 SUBMITTAL REQUIREMENTS AND PROPOSAL FORMAT

- 1.01 Respondent agrees not to hold the Owner of the project responsible for simple typos, minor omissions, misspelling of words, or other specification inconsistencies, where reasonable persons, familiar with the type of work specified herein, would understand the scope as though such conditions did not exist.
- 1.02 **Proposal Clarification Questions:** After reviewing all proposals received in response to this RFP, the County may develop a list of clarification questions to be addressed by the Respondent. The County or its agent shall send these questions to the Respondent for clarification. The Respondent shall provide a response within three (3) working days following the inquiry.
- 1.03 **Submittal Requirements:** Proposals shall be submitted by tab number as instructed below. The Respondent agrees and shall comply with all provisions and specifications as stated in this RFP unless otherwise stated in the Exceptions section of this RFP. Any additional cost or factors to meet a specification or requirement must be noted in the Exceptions section. Failure to respond to these requirements may result in the proposal being considered non-responsive.

A. Tab 1 – Minimum Criteria

1. Cover letter – with overall price, any special conditions, and signature
2. A brief profile of the firm, including the following:
 - a. A brief history of the business
 - b. Organizational structure of business
3. The overall qualifications of the business to provide the services requested

B. Tab 2 – Required Documents

1. Proposal Bond (original – with seal – in original Proposal)
2. Proof of required insurance
3. Certifications and/or letter from manufacturer(s) that the firm is an authorized installer and maintenance provider
4. Five-year maintenance support guarantee from manufacturer and Respondent
5. Addenda – Any addenda issued subsequent to the release of this solicitation must be signed and returned with the firm's proposal. Failure to return signed addenda may be cause for the proposal to be considered non-responsive.

C. Tab 3 – Executive Summary/Overview

1. Written summary of the understanding of the scope of work to be performed
2. Technical summary of the system proposed, including details about any “improvements” over and above the base request (for example, resiliency/redundancy, system management, database consolidation, or larger number of ports)

D. Tab 4 – Main Body of Response (Sections 1-8) **(With original only)**

E. Tab 5 – Cost

F. Tab 6 – Bill of Material, Equipment Specifications, and Drawings

G. Tab 7 – Respondent Assumptions

H. Tab 8 – Installation Methodology and Drawings

I. Tab 9 – Acceptance Testing

J. Tab 10 – Software Upgrades and Active Directory Interface

K. Tab 11 – Respondent and Subcontractor Qualifications, Support Capabilities, and References

L. Tab 12 – Project Team and Maintenance Team Resumes/Certifications

M. Tab 13 – Exceptions and Clarifications

N. Tab 14 – Exhibits

O. Tab 15 – Sales Documents and Brochures

1.04 **Exceptions to the RFP:** Respondents may find instances where they must take exception with certain requirements or specifications of the RFP. All exceptions shall be clearly identified in the Exceptions section, and written explanations shall include the scope of the exceptions, the ramifications of the exceptions for the COUNTY, and a description of the advantage to be gained or disadvantages to be incurred by the COUNTY as a result of these exceptions.

1.05 **Alternate Proposals:** Respondents who wish to submit an alternate premise-based proposal may do so. If more than one proposal is submitted, all must be complete and comply with the instructions set forth in this RFP.

1.06 Respondent Contact/Questions about the RFP:

- A. Respondent communications shall be limited to contacts defined herein. Failure to comply with this provision may result in disqualification or evaluation penalty.
- B. It shall be the Respondent's responsibility to learn all aspects of the RFP requirements. Should any details necessary for a clear and comprehensive understanding be omitted or any error appear in the RFP documents, or should the Respondent note facts or conditions that in any way conflict with the letter or spirit of the RFP documents, it shall be the responsibility of the Respondent to obtain clarifications before submitting a proposal.
- C. Questions may be submitted up to **Wednesday, September 21st**. After that time, no further questions shall be accepted. Submit questions to: Scott Grivna at Scott.Grivna@co.mcleod.mn.us

- 1.07 **Addenda:** It is incumbent upon each Respondent to carefully examine all specifications, terms, and conditions contained herein. Any inquiries, suggestions, or requests concerning interpretation, clarification, or additional information shall be made in writing, through the recipient named above. The County shall not be responsible for any oral representation(s) given by any employee, representative, or others. The issuance of a written addendum is the only official method by which interpretation, clarification, or additional information can be given. No addenda shall be issued later than five (5) business days prior to the date for receipt of proposals, except an addendum postponing or withdrawing the request for proposals. Respondents must acknowledge receipt of addenda in their proposals.
- 1.08 **Request for Proposal:** It is the sole responsibility of the Respondent to ensure that they have received the entire Request for Proposal.
- 1.09 **Proposal Bond:** A Proposal Bond in the amount of 5% of the proposal price, payable to McLeod County, is required for this RFP. The Proposal Bond can be in the form of a bond or cashier's check. The bond shall be issued by an agency authorized to do business in the State of Minnesota and with a rating of "A" or higher as listed in the A.M. Best & Company latest published rating guide. The bond or cashier's check shall not expire until the Contract is awarded and shall guarantee that (1) a Respondent shall not withdraw its proposal after the closing time and date of this RFP, or (2) the awarded Respondent shall promptly execute a Contract and deliver any specifications required by the County prior to start-up of the Contract. The bond or cashier's check shall be invoked by the County to ensure payment of the Respondent of damages incurred by withdrawal of a proposal, or failure to enter into a Contract after award. Proposal bonds, without interest, shall be returned upon

receipt of appropriate insurance documents and/or a Performance Bond, where/if applicable. No proposal shall be considered without a proper form of security.

- 1.10 **Performance Bond:** The successful Respondent shall furnish within ten (10) days of notification of award a Performance Bond in the amount of 100% of the proposed price, payable to McLeod County as security for the faithful performance of the Contract. The bond shall be issued by an agency authorized to do business in the State of Minnesota with a rating of "A" or higher, as listed in the A.M. Best & Company latest published rating. An attorney in fact who signs a Performance Bond must file with the bond a certified copy of his/her power of attorney to assign said bond. The awarded Respondent, upon failure or refusal to furnish within ten (10) days of notification the required Performance Bond, shall pay to the County, as liquidated damages for such failure or refusal, an amount in cash equal to the Proposal Bond.
- 1.11 **Payment Bond:** The successful Respondent shall furnish within ten (10) days of notification of award a Payment Bond in the amount of 100% of the proposed price, payable to McLeod County as security for payment as required by statute of all persons supplying labor and material. The bond shall be issued by an agency authorized to do business in the State of Minnesota with a rating of "A" or higher, as listed in the A.M. Best & Company latest published rating. An attorney in fact who signs a Payment Bond must file with the bond a certified copy of his/her power of attorney to assign said bond. The awarded Respondent, upon failure or refusal to furnish within ten (10) days of notification the required Payment Bond, shall pay to the County, as liquidated damages for such failure or refusal, an amount in cash equal to the Proposal Bond.
- 1.12 **Descriptive Material:** The County is not responsible for locating or securing any information that is not identified in the Respondent's proposal and reasonably available to the County. To ensure that sufficient information is available, Respondent must furnish as a part of the proposal all descriptive material necessary for the County to (1) determine whether the product offered meets the requirements of the RFP and (2) establish exactly what the Respondent proposes to furnish in terms of supplies, materials, and services.
- 1.13 **Diagrams:** Diagrams shall be submitted with the RFP. The diagrams shall include the proposed system, any construction work needed, connections to the network, location of equipment, etc.
- 1.14 **Subcontractors:** If Respondent's organization will use subcontractors, they must be identified under the References tab of your response.

- 1.15 **Request for Additional Information:** Prior to the final selection, Respondents may be required to submit additional information regarding the Respondent's qualifications and experience that the County may deem necessary to further evaluate the proposal's qualifications.
- 1.16 **Proposal Award:** The RFP consists of a base proposal configuration that shall be accepted or rejected in its entirety and proposal options that the County may accept or reject individually without regard to the listing order of the option, but only as the County determines is in its best interest.
- 1.17 **Right to Accept/Reject:** The County reserves the right to reject any or all proposals and waive any irregularities. The County also reserves the right to choose the proposal that is deemed in the best interest of the County based on any or all criteria, etc. In addition, the County reserves the right to negotiate any or all items and terms of proposal.
- 1.18 **After Hours Cost:** Some work may have to be done after hours depending on the intrusion of that work to McLeod County Employees or Constituents. These costs shall be included in the total price presented in the RFP response.
- 1.19 **Denial of Reimbursement:** The County shall not reimburse Respondents for any costs associated with the preparation and submittal of any proposal, or for any travel and/or per diem costs that are incurred.
- 1.20 **Gratuity Prohibition:** Respondents shall not offer any gratuities, favors, or anything of monetary value to any official, employee, or agent of McLeod County for the purpose of influencing consideration of this proposal.
- 1.21 **Right of Withdrawal:** A proposal may not be withdrawn before the expiration ninety (90) days from the proposal due date.
- 1.22 **Rights to Submitted Material:**
- A. All proposals, responses, inquiries, or correspondence relating to or in reference to this RFP, and all reports, charts, and other documentation submitted by Respondents shall become the property of McLeod County when received.
 - B. The County reserves the right to retain all proposals submitted and to use any ideas in a proposal regardless of whether that proposal is selected. Submission of a proposal indicates acceptance by the Respondent of the conditions contained in this Request for Proposal.
- 1.23 **Selection Criteria:** Proposals shall be evaluated based on, but not limited to, the following criteria:

- A. Cost – The price included in the RFP response shall be the price evaluated. There SHALL NOT be an opportunity for a BEST AND FINAL OFFER. Respondent is encouraged to include their best prices in their initial response. Evaluation shall include up-front costs as well as long-term maintenance protection.
 - B. Technology – Ability to meet the County's security configuration goals, hardware/door/network configuration, feature functionality, and system management.
 - C. Respondent/Manufacturer – Financial stability, references, installation methodology, project and maintenance teams experience and certifications, and long-term product support.
 - D. Support – Number of trained technicians, remote and on-site response time guarantee, dispatch distance, remote monitoring maintenance capabilities, and adherence to maintenance requirements.
- 1.24 **Selection Committee:** Proposals may be evaluated by a Selection Committee. The Selection Committee may, at its option, request any or all Respondents to provide on-site demonstrations of the proposed system.
- 1.25 **Submittal of Qualifications:** Respondents should submit experience and qualifications as described in the RFP. Additional information may be submitted as appropriate to further describe vendor and provide product capabilities.

2 TERMS AND CONDITIONS

- 2.01 **Contract:** Any award of a contract resulting from this RFP will be made only by written authorization from McLeod County upon approval by the McLeod County Board of Commissioners. The Sample Contract is included in the Exhibits section as 18.01. The contract between McLeod County and the Contractor shall consist of (1) the Request for Proposal (RFP) and any amendments thereto and (2) the proposal submitted by the Contractor in response to the RFP. In the event of a conflict in language between these two documents, the provisions and requirements set forth and/or referenced in the RFP shall govern. The County also reserves the right to clarify any contractual relationship in writing with the concurrence of the Contractor, and such written clarification shall govern in case of conflict with the applicable requirements stated in the RFP or the Contractor's proposal. In all other matters not affected by the written clarifications, if any, the RFP shall govern...
- 2.02 **Termination/Cancellation of Contract:** McLeod County may cancel the contract at any time for breach of contractual obligation, convenience, or non-appropriation of funds by providing the Contractor with a written notice of such cancellation. Should the County exercise its right to cancel the contract for such reasons, the cancellation shall become effective on the date as specified in the notice of cancellation sent to the Contractor.
- 2.03 **Compliance with Laws:** In connection with the furnishing of supplies or performance of work under the contract, the Contractor agrees to comply with the Fair Labor Standard Act, Equal Opportunity Employment Act, and all other applicable Federal and State laws, regulations, and executive orders to the extent that the same may be applicable, and further agrees to insert the foregoing provision in all subcontracts awarded hereunder.
- 2.04 **Incurred Expenses:** This RFP does not commit the County to award a contract, nor shall the County be responsible for any cost or expense that may be incurred by the Respondent in preparing and submitting the proposal called for in this RFP, or any cost or expense incurred by the Respondent prior to the execution of a contract agreement.
- 2.05 **Indemnification:** The Contractor agrees it shall defend, indemnify, and hold harmless the County, its officers, and its employees against any and all liability, loss, costs, damages, and expenses, including attorneys fees that the County, its officers, or its employees may hereafter sustain, incur, or be required to pay arising out of the negligent or intentional acts or omissions of the Contractor's officers or employees

2.06 Insurance

- A. The Contractor agrees, in order to protect itself and the County under the indemnity provision set forth above, to at all times during the term of this contract have and keep in force insurance policies that meet the following minimum requirements:

\$1,500,000 Each Occurrence

\$3,000,000 General Aggregate

\$3,000,000 Products and Completed Operations Aggregate

The policy should be written on an occurrence basis, not a claims-made basis

The Member will be included as Additional Insured

An Excess or Umbrella Liability policy may be used in conjunction with primary coverage limits to meet the minimum limit requirements

The Contractor agrees to name the County as an additional insured on said policy.

- B. An automobile liability insurance policy that meets the following minimum requirements:

\$1,500,000 on a Combined Single Limit Basis

Auto coverage should include: Any Auto, including Hired and Non-owned

The member will be included as Additional Insured

Note: Auto coverage should be waived only when the contractor's work under the contract clearly does not involve the use of a vehicle on the Member's behalf.

- C. Workers Compensation insurance in the statutory amounts.

1. Bodily injury by Accident: \$500,000 each accident
2. Bodily injury by Disease: \$500,000 each employee
3. Bodily injury by Disease: \$500,000 policy limit

- D. Professional liability should be required for individuals who perform professional or semi-professional services. Some examples of professionals who should obtain this type of coverage include, but are not limited to individuals who are medical service providers, architects, engineers, attorneys, and consultants. Minimum limits of liability should be:

1. \$2,000,000 per Wrongful Act or Occurrence
2. \$4,000,000 Annual Aggregate Level 1

E. Certificates of insurance showing the coverage listed above shall be provided to the County prior to the effective date of this contract, and the County shall be named as an additional insured under the liability policy required above.

- 2.07 **Safety:** Respondent shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work. The Respondent shall at all times comply with the regulations set forth by federal, state, and local laws, rules, and regulations concerning OSHA and all applicable state labor laws, regulations, and standards. The Respondent shall indemnify and hold harmless the County from and against all liabilities, suits, damages, costs, and expenses (including attorney's fees and court costs) that may be imposed on the County because of the Respondent's, Subcontractor's, or supplier's failure to comply with the regulations.
- 2.08 **Ownership of Work Product(s):** Any work product, including but not limited to software programs, documentation, memoranda, correspondence, and/or files generated by the Contractor in the course of this work for the County is the sole property of the County. All work products must be surrendered to the County at the completion of the Contract. The Contractor shall prepare and maintain all records required by the County to substantiate the amount and types of services rendered and for other purposes. The County shall inform the Contractor of the need for and nature of all such records.
- 2.09 **Warranty of Integrated Security System:** In a contract resulting from this RFP, Contractor shall warrant that during the warranty period, all hardware, equipment, and licensed software (including third-party software installed or recommended by Contractor or its subcontractors) of the integrated security system solution shall perform at a minimum in all material aspects within the specifications and functional requirements defined by the Scope of Service/Work of the RFP. The foregoing representations and warranties shall be in force as to each version or release of software, system, components, networks, and equipment.
- 2.10 **Independent Contractor:** Nothing contained in this agreement is intended or should be construed as creating the relationship of co-partners or joint ventures within the County. The Contractor shall remain an independent contractor, and all employees of the Contractor or its subcontractors shall remain the employees of the Contractor or subcontractor and shall not become the employees of the County. No tenure or any rights or benefits, including worker's compensation, unemployment insurance, medical care, sick leave,

vacation leave, severance pay, or other benefits available to County employees shall accrue to the Contractor or employees of the Contractor performing services under this agreement.

- 2.11 **Nondiscrimination:** All Contractors agree that during the life of the contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, marital status, disability, sexual orientation, age, religion, or status with regard to public assistance, and shall intend a similar provision in all subcontracts entered into for the performance thereof. All proposals shall be accompanied by a signed statement of this fact, with failure to sign reason for proposal rejection.
- 2.12 **Default and Cancellation:**
- A. If the Contractor fails to perform any of the provisions of this Request for Proposal or so fails to administer the work as to endanger the performance of the contract, this shall constitute default. Unless the Contractor's default is excused, the County may, upon written notice, immediately cancel this agreement in its entirety.
 - B. Back orders, failure to meet delivery requirements, or failures to meet specifications in the contract authorizes the ordering entity to cancel the contract, or any portion of it, purchase elsewhere, and charge the full increase in cost and administrative handling to the defaulting Contractor. In the event of default, the County reserves the right to pursue any other remedy available by law. A Contractor may be removed from the Contractors list, suspended, or debarred from receiving a contract for failure to comply with terms and conditions of the contract or for failure to pay the County for the cost incurred on the defaulted contract.
- 2.13 **Severability:** Every section, provision, or part of this agreement is declared severable from every other section, provision, or part thereof, to the extent that if any section, provision, or part of this agreement shall be held invalid by a court of competent jurisdiction, it shall not invalidate any other section, provision, or part thereof.
- 2.14 **Third-Party Products:** Contractor agrees to assign or pass through to the County or otherwise make available for the benefit of County, any manufacturer's or supplier's warranties applicable to any third-party software, hardware, or equipment provided by Contractor or its subcontractors under a contract resulting from this RFP.
- 2.15 **Title to Software:** By submitting a proposal, the Respondent represents and warrants that it is the sole owner of the software or, if not the owner, that it has received all legally required authorizations from the owner to license the software, has the full

power to grant the rights required by this solicitation, and that neither the software nor its use in accordance with the contract shall violate or infringe upon any patent, copyright, trade secret, or any other property rights of another person or organization.

- 2.16 **New Material:** Unless otherwise provided for in this specification, the Respondent represents and warrants that the goods, materials, supplies, or components offered to the County under this RFP solicitation are new, not used or reconditioned. It represents that they are not of such age or so deteriorated as to impair their usefulness or safety and that the goods, materials, supplies, or components offered are current production models of the respective manufacturer.
- 2.17 **Ownership of Intellectual Property:** All copyright and patent rights to all papers, reports, forms, materials, creations, or inventions created or developed in the performance of this contract shall become the sole property of the County. Upon request, the Contractor shall promptly provide an acknowledgment or assignment in a tangible form satisfactory to the County to evidence the County's sole ownership of specifically identified intellectual property created or developed in the performance of the contract. This excludes ownership of proprietary software belonging to the vendor, except software developed specifically for the County for which the County pays.
- 2.18 **Term of Software License:** Unless otherwise stated in the solicitation, the software license(s) identified in the pricing schedule shall be purchased on a perpetual basis and shall continue in perpetuity. The County reserves the right to terminate the license at any time, although the mere expiration or termination of this contract shall not be construed as intent to terminate the license. All acquired license(s) shall be for use at any computing facilities, on any equipment, by any number of users, and for any purposes for which it is procured. The County further reserves the right to transfer all rights under the license to another state agency to which some or all of its functions are transferred.
- 2.19 **Return of Assets:** Except as otherwise provided in the Contract, or upon termination of the Contract, the Contractor shall return all County-owned assets, including but not limited to stored data and information.
- 2.20 **Excessive Downtime:** Equipment or software furnished under the contract shall be capable of continuous operation. Should any part of the equipment or software become inoperable for a period of more than four (4) hours, the Contractor agrees to pro-rate maintenance charges to account for each full hour of inoperability beyond four (4) hours. The period of inoperability shall commence upon initial notification. In the event the equipment or software remains inoperable for more than three (3) consecutive calendar

days, the Contractor shall promptly replace the equipment or software at no charge upon request of the County. Such replacement shall be with new, or refurbished product(s) of comparable quality, and must be installed and operational within three (3) consecutive calendar days following the request for replacement.

2.21 **Proposal Acceptance/Rejection:** The County reserves the right to accept or reject any or all proposals received as a result of this RFP, or to negotiate separately with competing respondents, and to waive any informalities, defects, or irregularities in any proposal, or to accept the proposal or proposals that, in the judgment of the proper officials, are in the best interest of the County.

2.22 **Firearms:** No provider of services pursuant to this Contract, including but not limited to employees, agents, or subcontractors of the Contractor, shall carry or possess a firearm on County premises or while acting on behalf of McLeod County pursuant to the terms of this agreement. Violation of this provision shall be considered a substantial breach of the Agreement and is grounds for immediate suspension or termination of this contract.

2.23 Other Contract Terms:

1. Compliance with Laws/Standards

2. General: The Contractor shall abide by all Federal, State, and local laws, statutes, ordinances, rules, and regulations now in effect or hereinafter adopted pertaining to this Contract or to the facilities, programs, and staff for which the Contractor is responsible.

3. Licenses and Permits: The Contractor shall procure all licenses, permits, or other rights necessary for the fulfillment of its obligation under this Contract. The Contractor indemnifies, saves, and holds harmless the County and any agents, commissioners, officers, employees, or volunteer workers thereof from any and all claims, demands, actions, or causes of action of whatsoever nature or character arising out of, allegedly arising from, or related to the execution or performance of the services of the successful Respondent provided for herein.

4. Force Majeure: Neither party shall be held responsible for delay or failure to perform when such delay or failure is due to any of the following, unless the act or occurrence could have been foreseen and reasonable action could have been taken to prevent the delay or failure: fire, flood, epidemic, strikes, wars, acts of God, unusually severe weather, acts of public authorities, or delays or defaults caused by public carriers, provided the defaulting party gives notice as soon as possible to the other party of the inability to perform.

5. **Inability to Perform**: Contractor shall make every reasonable effort to maintain staff, facilities, and equipment to deliver the services to be purchased by the County. The Contractor shall immediately notify the County in writing whenever it is unable to provide the agreed upon quality and quantity of services or reasonably believes it is going to be unable to provide this level of service. Upon such notification, the County shall determine whether such inability requires a modification or cancellation of this Contract.
- B. In the event the County terminates the Contract for cause in whole or in part as provided above, the County may procure, upon such terms and in such manner as the County may deem appropriate, services similar to those so terminated, and the Contractor shall be liable to the County for any excess costs for such similar goods or services. The Contractor shall continue the performance of the Contract to the extent not terminated under the provisions for this section.
- C. The rights and remedies of the County provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.
- D. **Payment Terms**: Payment terms shall be event based and negotiated with the successful vendor prior to contract signing. The County shall issue no payment until they have verified the invoice. The County shall retain at least 10% of all authorized payments until acceptance of the work is authorized.
- E. **Software Licensing Agreements**: Within the RFP response, Contractor agrees to provide copies of software licensing agreements for all proposed software applications and operating systems.

3 SCOPE OF SERVICES

- 3.01 The COUNTY plans to procure a premise-based County-wide security system to replace the current four separate door access systems, as well as a surveillance system to replace a number of separate systems and anticipates that the entire system shall be completed by to January, 2017.
- 3.02 Upon completion of this project, the County shall have a security/surveillance system capable of providing the following:
- A. All cameras and door hardware must be fully compatible with the COUNTY's existing Cisco based network infrastructure. Purposed equipment must be new from the manufacturer and qualify for warranty and maintenance services.
 - B. All new cameras shall be TCP/IP cameras that utilize PoE. (No Analog Cameras or converting to I/P) Cameras and overall system must integrate fully with COUNTY's existing Cisco VLAN technology and Quality of Service requirements. Further, video streams between camera and the agreed upon network video storage solution must be able to be configured for both uni-cast and multi-cast transmission modes.
 - C. All cameras shall be full-featured, vandal resistant, fixed dome, and wall mount TCP/IP cameras designed for indoor and outdoor applications. Outdoor cameras shall be sealed for outdoor use and provide IP66 protection against water, wind or dust.
 - D. All new cameras shall be high resolution, high sensitivity integral color cameras and should accommodate monitoring visibility day and night under parking light illumination conditions. IP cameras must offer Wide Dynamic Range and provide a mechanical cut filter for IR Sensitivity. Administrative user(s) must have the ability to adjust the color and brightness of each camera. Cameras must support 4CIF D1 resolution at 30fps.
 - E. All new cameras shall be immune to shock and vibration and be vandal-resistant by being able to withstand the equivalent of 120lbs of force.
 - F. Proposed video surveillance system shall be network video storage agnostic, and scalable to accommodate our requirements for retention and performance.
 - G. Proposed video surveillance system must allow recorded video to be played back in the forward or reverse direction, frame by frame, and from beginning or end of the clip using standard VCR-like buttons. Solution must be able to record from 1–30

FPS on a per camera basis. System must have the capability to record when motion occurs and suppress video recording at other times at the camera end, not the video storage. Must also have the ability to define zones where a recording trigger would not be enabled. System must also have the ability to define recording schedules through Internet browser only.

- H. Proposed video surveillance system must provide video authentication, checksums, and reporting to ensure videos are not altered in any way to ensure the chain of evidence.
- I. Proposed video surveillance system must provide simultaneous viewing of both live and recorded video through a web browser interface exclusively. Complete system must be able to be administered through a web browser including full control of any PTZ cameras.
- J. Proposed video surveillance system must be able to view up to 16 images on a single display with at least a resolution of 1024x768. Internet browser display must allow for viewing of different cameras from the network video storage simultaneously.
- K. Proposed video surveillance system must provide a comprehensive authentication system that allows user authentication against Microsoft Active Directory for simultaneous access to all the network video storage for County-wide cameras. Further, the system must also provide comprehensive role-based authorization for each user. Administrative user(s) must have the capability to create new users and define granular control over all system and camera functions.
- L. Proposed system must be expandable for future camera installations without forklift upgrades or visible topology changes to the end-user through the web interface. The system shall not require individual client licenses and the system shall not require any reoccurring license fees.
- M. Contractor shall provide property notices at each county site of installed video surveillance systems.
- N. The successful Contractor shall warrant all materials and equipment furnished under the contract are in good working order, free from defects and in conformance with system specifications. All installed equipment must conform to the manufacturer's official published specifications.
- O. Contractor must provide pricing for three years warranty and support on the proposed project. Vendor technical support shall

be available for business hours support and Next Business Day Replacement.

- P. Contractor must detail what is included and define if provided by manufacturer or by Contractor in the standard warranty for each item proposed.
- Q. Contractor must provide warranty service availability beyond the initial three years for each item proposed. Specify annual cost and period of extension.
- R. Solution must support Motion based recording that can be configured to save disk space, change operators views and send alerts.
- S. Central Operations Manager must be able to access video from the network video storage, instantly.
- T. The video management solution must have the ability for the operator to trigger any camera that is not actively archiving video. This trigger shall be initiated from an http call to the system.
- U. Solution must provide the ability for multiple cameras to be updated at once using the Batch administration feature from the Operations Manager leveraging an Excel template.
- V. Video surveillance solution must entail internal Digital zoom capabilities that can focus in on any object instantly using the inbuilt zoom feature on non PTZ cameras. This feature must be able to be turned off if deemed necessary.
- W. Video Surveillance Operations Manager must provide full converged integration with Physical Access Control Manager
- X. Vendor must provide an IP-based Access Control Management solution that can provide door access and monitoring of any dry contact point.
- Y. The IP-based Physical Access Control System should have two primary components, door control hardware (gateways and modules) and an appliance based web management application.
- Z. The access control solution should support a thin client model. Clients from computers running a Windows operating system can contact the Physical Access Manager and download and install an application that allows interaction with the Physical Access Manager for administrative purposes.
- A. All users on the Physical Access Manager can be configured to use Microsoft Active Directory groups for authentication and door access.

- B. The physical access manager should enable the creation of badge templates, badge printing, taking user photographs, and enrolling users into Physical Access Manager User database.
- C. No additional licensing or fees should be charged for the integration with the Video Surveillance Management Solution and the Physical Access Control System.
- D. HTTP/S URLs can be invoked as a result of any event or alarm by way of the Physical Access Manager. Event data can be inserted in the URL to integrate with any external application that accepts URL invocations, such as Cisco Digital Media Signage solution.
- E. Access Manager Appliance and Video Management Solution should be qualified to run in a virtual environment.
- F. The Physical Access Control System must allow Physical Access Gateway images to be upgraded using the Physical Access Manager.
- G. The Physical Access Manager client should support a 1click client application which gives the administrator access to live and archive video from the Video Surveillance System.
- H. Motion Detection events in Video Surveillance System can also be recorded in the Physical Access Manager Events window. System also should allow the Physical Access Manager to trigger local door alarms or other annunciation devices attached to the Physical Access Control System when motion detection events occur in Video Surveillance System.
- I. The Physical Access Manager must have the ability to plot cameras and any controlled access point on a graphical map or floor plan. Physical Access Manager should integrate with Video Surveillance System and enable video to be pushed to the administrators and users of the Physical Access Control Solution based on Events.
- J. Administrators of the Physical Access Solution should have the ability to access live camera views from the system.
- K. The Physical Access solution should entail gateways that can support 250,000 cached credentials and 150,000 cached events. All communication should be 256-bit Advanced Encryption Standard (AES) FIPS 140-2 certified encrypted.

3.03 Existing Infrastructure

- A. The County's primary network infrastructure consists of a mix of cisco network switches.

1. We have 6 buildings in Glencoe
2. We have 3 buildings in Hutchinson

B. Wide Area Network

1. Glencoe
 - a. Single mode fiber between the Courthouse and the following three locations:
 - i. Health & Human Services
 - ii. North Complex
 - iii. Annex
 - b. State of Minnesota MN.IT Connection: The County shares a 1 gigabit fiber connection to MN.IT with Courts and the City of Glencoe PD, and State Department of Corrections.
2. Hutchinson
 - a. The County has a 10 gigabit point to point connection between their HATS facility in Hutchinson:
 - i. Extension Office
 - ii. Solid Waste
 - b. State of Minnesota MN.IT Connection: The County HATS facility has a backup 100 megabit connection to MN.IT in case of a fiber down issue between Glencoe and Hutchinson

C. Cable

1. CAT 6 cable will be required for any new cable runs.

D. UPS

1. Courthouse and LEC
 - a. The County Courthouse and LEC MER locations are equipped with UPS system and backup generator power.
 - b. All TER locations have existing APC UPS systems and utilize APC Network Manager Management system.
2. All other County facilities MER and TER are equipped with APC UPS systems and utilize APC Network Manager Management system.

4 GENERAL ROLES AND RESPONSIBILITIES

4.01 Permission to Proceed

- A. The Contractor's first task shall be to submit a Statement of Work with an estimate of schedules and benchmarks. The document should identify in detail the exact tasks that the

County and Contractor must perform and/or be responsible for in order to accomplish the delivery and installation of the system. The Contractor shall project delivery date and installation period by function (cable, under-carpet wiring, switch, stations, etc.), which shall allow the Contractor to meet the required completion date.

- B. The Contractor shall provide the County with shop drawings of the proposed equipment placement for each location prior to the procurement of equipment or commencement of work. The Contractor shall make corrections and additions as necessary to the design documents. Equipment lists, data sheets, etc., shall be provided in MS Word, MS Excel, and MS Visio.
- C. The submittals must be received and approved by the County prior to the procurement of material or the commencement of work. Any procurement or work performed prior to this approval is at the Contractor's own risk.
- D. The project timeline shall not be altered due to lateness of submittals. The Contractor shall remain bound to deliver a timely, complete, and finished project as stipulated in their contract.
- E. The failure of the Contractor to provide submittals as required herein may result in the cancellation of the contract.
- F. Contractor must obtain the County's permission before proceeding with any work necessitating cutting into or through any part of a building structure.

4.02 Damage and Cleanup

- A. Existing floors, walls, ceilings, or any structural piece shall not be drilled or cut without prior approval of the County. The Contractor shall be held responsible for and make payment on any damage caused from the delivery and/or installation of its work.
- B. The Contractor shall keep the premises clean from debris and rubbish. After each workday, the Contractor shall remove any rubbish or waste from the working area. If the County is required to clean up, the cost shall be charged back to the Contractor.

4.03 Project Manager

- A. The Contractor shall appoint a Project Manager who shall be the main point of contact regarding the project for the County. The Project Manager is responsible for the following:
 - 1. Ensuring the contract is completed successfully in a timely manner.

2. Guaranteeing the work and performance of all employees and subcontractors that have been hired by the Contractor.
 3. Completing and submitting all required submittals and documentation.
 4. Attending all project coordination and/or construction meetings as required by the County, plus chairing a weekly project status meeting throughout the duration of the project.
 5. Maintaining the project status meeting minutes and distributing them to all participants within two days following the meeting.
 6. Providing written status reports to the County Project Manager on a regular interval.
 7. Informing the County of all unexpected conditions and problems that may result in delay or expense. The Contractor must report issues immediately upon discovery and must provide the County with the option(s) for resolving them.
- B. If the Contractor seeks to change the Project Manager during the course of the project, such change is subject to prior written approval from the County.
- C. The County reserves the right to request a new Project Manager during the course of the project if the Project Manager does not perform to the County's satisfaction.
- D. The Contractor shall re-verify closet locations with the County's Project Manager prior to installation.
- E. Prior to ordering, furnishing, or installing any equipment, the Contractor shall obtain the County's written approval of equipment, locations, layout, and installation.
- F. If other Contractors' work delays the Contractor, that information must immediately be communicated to the County's Project Manager and appropriate extra time may be allowed. Shipping delays are the sole responsibility of the Contractor.

4.04 Cable Management System

- A. The Contractor shall use the County's cable management system where equipped to provide a neat and efficient means for routing and protecting fiber and copper cables and patch cords on telecommunication racks and enclosures.

4.05 Installation Requirements

- A. The Contractor shall perform the upgrades, installation, configuration, training for the County's personnel, and support of the proposed systems.
- B. Contractor and/or its subcontractors are fully authorized/certified to supply, upgrade, install, configure, provide warranty service, and troubleshoot/support the proposed equipment.
- C. All installing personnel have completed certified manufacturer training, or the Contractor shall contract with manufacturer for installation of all proposed components.
- D. For any equipment items/systems accepted by the County and made part of the contract, the delivery, installation, configuration, testing, user training, and documentation must be included in the project schedule.
- E. The Contractor shall take responsibility for proper ordering, shipping charges and delivery of all component parts. This includes any components to be ordered from any third-party companies. The Contractor shall be responsible for proper storage of delivered equipment.
- F. The personnel listed in the Respondent's proposal shall be the personnel assigned to this project. If changes are required, the Contractor shall gain written approval from the County's Project Manager prior to assignment of substitutes.
- G. Manufacturer(s) or a certified training agency thereof must be offered to the County employees on products supplied.
- H. The Contractor has, with staff employees, previously configured and operated a system with components as quoted.
- I. Any technician(s) dispatched to install or fix a failed component shall have been factory trained and certified by the manufacturer of the proposed equipment. The Contractor is responsible for following industry standards and all manufacturer installation and maintenance practices.
- J. The Contractor is responsible for working with the County to understand its IP addressing scheme and for implementing this scheme in the furnished devices. Currently, the County uses a mixture of static addressing and DHCP. The County shall work with the vendor to enable DHCP addressing for all new devices.
- K. The Contractor must install hardware in a secure manner. Screws shall be tightened to a torque just sufficient to secure equipment without deforming washers beyond their original diameter.

- L. All rack-mount equipment shall be secured as recommended by the manufacturer with consideration to airflow, power, and patch cable connections.
- M. The Contractor shall be responsible for labeling all cables and equipment components installed as part of this project. In doing so, make the labeling of each component...
 - 1. Unique, to prevent it from being confused with other similar components.
 - 2. Legible and permanent enough to last the life of the component. Handwritten labels shall not be permitted.
- N. Velcro straps shall be installed snugly without deforming cable insulation. Straps shall be spaced at uneven intervals not to exceed 4-foot. No sharp burrs should remain where excess length of the cable tie has been cut.
- O. The Contractor shall make the system properly operational and physically secure by mounting equipment and related accessories into walls, consoles, and racks as required. Manufacturer's guidelines for installation shall be followed. Discrepancies in installation procedure or inability to complete a given task due to a shortage of materials or malfunctioning equipment shall be reported to the County immediately upon discovery.
- P. Systems described in this document, once configured by the Contractor, shall be delivered to the customer installation location and installed by the Contractor without any additional cost or expense to the County, and the County shall not be deemed to have accepted any equipment until the date of acceptance.
- Q. The Contractor shall unpack equipment from shipping material and organize equipment into the kits from which it shall be used. This includes checking to ensure that all equipment is complete and fully functional. Empty boxes and packaging shall be neatly organized per the County's instructions and removed if requested.
- R. The Contractor shall be responsible for the removal of existing equipment not incorporated. That equipment shall be inventoried, boxed, and removed by Contractor and placed in a specified location as designated by the County. The boxes shall clearly show the inventoried contents. The County shall be responsible for disposal of equipment.
- S. The Contractor shall provide a weekly update to the County Project Manager on the project status.

- T. Client quantities included in this RFP are estimates. The Contractor shall be required to perform station surveys to verify quantities. Any increases in components prior to acceptance shall be at pre-cutover costs, and deletions shall not be charged restocking fees.
- U. The Contractor shall supply one complete set of hardware and software documentation/manuals for all provided items at no additional cost.

4.06 Security

- A. When deploying any product, software, or application associated with this RFP, the Contractor shall harden the resulting system(s). Hardening includes the following actions:
 1. Determining the purpose of the system and minimum software and hardware requirements
 2. Documenting the minimum hardware, software, and services to be included on the system
 3. Installing the minimum hardware, software, and services necessary to meet the requirements using a documented installation procedure
 4. Installing necessary patches
 5. Installing the most secure and up-to-date versions of applications
 6. Configuring privilege and access controls by first denying all, then granting back the minimum necessary to each user
 7. Configuring security settings as appropriate, enabling allowed activity and disallowing other activity
 8. Enabling logging sufficient for the County staff to determine equipment faults or configuration problems in the equipment
 9. Archiving the configuration and checksums in secure storage prior to system deployment
 10. Testing the system to ensure a secure configuration
 11. Using secure replication procedures for additional, identically configured systems, making configuration changes on a case-by-case basis
 12. Changing all default passwords
 13. Testing the resulting systems

4.07 Project Closeout and Acceptance

- A. Punch List – Work or materials found to be incomplete, of unsatisfactory quality, failing to meet the specifications in the RFP package and resulting contract, and/or unacceptable to the

County shall be documented in a punch list by the County and provided to the Contractor to rectify.

- B. Punch List Approval – The punch list shall be considered complete only after having been signed by the County.
- C. Acceptance – Acceptance shall occur after all of the following conditions have been met:
 - 1. All items/systems have been delivered, installed, configured, tested, and transitioned into service.
 - 2. The system, including all ancillary devices, applications, and options made part of the contract, has had 30 consecutive days with 100 percent availability.
 - 3. All of the work has been completed in accordance with the contract and RFP specifications (including testing procedures as outlined in the accepted response).
 - 4. Training as specified is complete.
 - 5. The system operates in conformance with manufacturer's published specifications.
 - 6. The system is transitioned to service.
 - 7. All of the documentation requirements have been met.
 - 8. All outstanding punch list items have been completed.
 - 9. The system post-cutover requirements have been completed.
 - 10. The Contractor has supplied test results needed to verify compliance with the specifications found in this RFP package.
 - 11. The Contractor has certified in writing to the County that the system is installed and operational in accordance with these specifications and is ready for use.
 - 12. The County or the County's designated representative has inspected the installation and provided written approval.
 - 13. Software refresh has been completed (to ensure all systems operate on the latest software).
- D. At this time, upon the County's written acceptance, operational control becomes the responsibility of the County. This constitutes Date of Acceptance. The warranty for the entire system and all components begins as of this date.

4.08 Service and Support

- A. Server and Software Maintenance – The Contractor shall provide all necessary server and software maintenance on a turnkey

basis during the first year warranty period and any subsequent maintenance term. The Respondent shall be responsible for operating system and database tuning, patches, hardware, and software diagnosis, recovery, and version upgrades as needed. Contractor shall work directly with the County on application modifications, diagnosis, recovery, customization, configuration, and how-to questions. Contractor shall manage backups of data, application, operating system, and database management system as required to provide for full recovery in the event of a disaster or hardware failure. The Contractor shall coordinate and work with the server hardware maintenance provider in the diagnosis and repair of the server hardware. Contractor shall perform restores and recovery without the County's assistance.

- B. Warranty Period and Maintenance – The Contractor, by entering into a contract with the County, warrants and represents that all materials, equipment, and services delivered to the County pursuant to the contract conforms to all of the specifications contained or referred herein. The Contractor further guarantees to replace all materials, equipment, software, or services that may be rejected by the County due to defective materials or workmanship for a minimum of one year following final acceptance of all systems. Failure or neglect of the County to require compliance with any term or condition of the contract specifications shall not be deemed a waiver of such term or condition.
- C. The following must be included in the warranty period and under maintenance contract:
 - 1. Monday-Friday, 8:00 a.m. - 5:00 p.m. call-out on minor alarms
 - 2. Seven day per week 24-hour call-out coverage shall be provided for the items listed below.
 - a. Critical alarms
 - b. System outages
 - 3. Three-hour on-site response time for critical alarms and system outages
 - 4. Software upgrades
 - 5. Patches
 - 6. Corrective maintenance
 - 7. All labor except for upgrades to major software releases
 - 8. Materials
 - 9. Next business day for non-critical components
 - 10. Remote support

11. Telephone support to assist County Building personnel with technical and system management issues and questions
 12. Database backups for business continuity
 13. Off-site software storage
 14. Work to completion
 15. 24 hour x 7 days a week service center
 16. 24 hour x 7 days a week alarm monitoring and remote trouble resolution (Respondent must include all hardware and software required to support this application in base surveillance system cost.)
- D. Maintenance Guarantee – A signed letter from both the Respondent and manufacturer is required guaranteeing maintenance of the proposed system over its five (5) year life. Should the manufacturer discontinue this product or cease to do business, the Respondent guarantees to stock an adequate supply of components to maintain the system over its five (5) year life. Further, should the Respondent cease to do business, the manufacturer guarantees to provide components and services for this installation over its five (5) year life.

5 BASE SYSTEM REQUIREMENTS

5.01 The COUNTY reserves the right to accept or reject in any combination which buildings are selected for final approval based on budgetary constraints.

5.02 McLeod County Court House

Add Door Access Readers and Applicable Hardware	18 access readers.
Add Cameras	8 new cameras
Management Software for Access	1 Software program
Management Software for Cameras	1 Software program

5.03 McLeod County Court Administration

Door Access Readers and Applicable Hardware	Replace 6 current access readers from Old Keri System
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5.03 McLeod County Law Enforcement

Door Access Readers and Applicable Hardware	6 current doors with access readers. 8 new doors with access readers
Incorporate Current Analog Cameras not part of the Jail Video System	6 current analog cameras

5.04 McLeod County North Complex

Door Access Readers and Applicable Hardware	6 current access readers and need 1 new
Incorporate Current Analog Cameras and add	5 current analog cameras and 3 new cameras

5.05 McLeod County Annex

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add New Camera	1 360 degree camera in main hallway

5.06 McLeod County Glencoe HWY/LEC Shed

Add Door Access Readers and Applicable Hardware	Add 2 access readers
Add Cameras	2 camera outside covering both buildings

5.07 McLeod County Health and Human Services

Door Access Readers and Applicable Hardware	14 current badge readers and 2 new doors
Incorporate Current Analog Cameras and add new	4 current cameras and 1 new outside and 360 camera upstairs

5.08 McLeod County Solid Waste

Door Access Readers and Applicable Hardware	20 current access readers on Keri System. Add 2 readers. 4 Current Honeywell readers
Incorporate Current Analog and IP Cameras	29 current cameras to integrate into new system

5.09 McLeod County Fairgrounds

Door Access Readers and Applicable Hardware	Add 8 access readers
Add Cameras	Add 3 cameras in Commercial Building and 1 in Dairy Building

5.10 McLeod County Brownton HWY Shop

Door Access Readers and Applicable Hardware	1 access readers for walk in door
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5.11 McLeod County Silver Lake/Lester Prairie HWY Shop

Door Access Readers and Applicable Hardware	2 access readers for walk in doors on each end of building
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6 OPTIONAL SECURITY SYSTEM REQUIREMENTS

6.01 McLeod County Court House

Scalable Video Storage Solution	Current requirements to hold video for 30 days and over right
Included in base proposal	Scalable to incorporate the contents of the LEC DVR, HHS DVR, and NC DVR

6.02 McLeod County HATS

Secondary Scalable Video Storage Solution	Current requirements to hold video for 30 days and over right
Included in base proposal	Scalable to incorporate SW DVRs and New Fairground's cameras.

7 DATA NETWORK REQUIREMENTS

- 7.01 The Contractor shall have as a part of its implementation team someone completely capable of analyzing and implementing proper Quality of Service configurations necessary to support this surveillance system utilizing current and new customer provided Cisco network devices. This person shall be available throughout the implementation phase of the project to assist the project team with each building assessment, engineering and configuration recommendations for implementing the surveillance system across the County's existing LAN.
- 7.02 The Contractor must provide a complete network assessment and make recommendations on any configuration changes needed to support the proposed system.
- 7.03 The Contractor shall provide a report that identifies any errors, including any latency and jitter issues, and shall provide recommended resolutions.
- 7.04 The Contractor shall provide detailed LAN configuration specification and best practices required to support all installed surveillance components.
- 7.05 Implementation
 - A. The Contractor is responsible for working with the County to understand its IP addressing scheme and for implementing this scheme to support all applications provided under the RFP.
 - B. The Contractor is responsible for working with the County to ensure the proper VLAN and QoS configurations are implemented to support all applications provided under this RFP.
 - C. The Contractor shall be responsible for understanding the County's network device naming convention and shall implement device names on all new devices and all relocated devices.
- 7.06 When installation is complete, the Contractor shall furnish the County with two complete sets (in three-ring binders) and on soft copy in MS Office format of data network project documentation. Contractor shall provide documentation as follows:
 - A. Logical diagrams showing all installed equipment.
 - B. IP addresses assigned to all equipment shall be noted both on diagrams and on a separate table/spreadsheet.

8 COUNTY RESPONSIBILITIES

- 8.01 Patch Cord Connections – The County shall provide and complete all patch cord connections required in all (MER) and (TER) locations.
- 8.02 VMware environment to create servers on which to load the required management applications.

Tab 5

9 SUMMARY RFP COSTS

9.01 Base

McLeod County Court House	
McLeod County Court Administration	
McLeod Law Enforcement, Court Admin, Courthouse	\$ 212,430.00
McLeod County North Complex	\$ 35,230.00
McLeod County Annex	\$ 8,330.00
McLeod County Glencoe HWY/LEC Shed	\$ 9,510.00
McLeod County Health and Human Services	\$ 34,360.00
McLeod County Solid Waste	\$ 49,200.00
McLeod County Fairgrounds	\$ 38,580.00
McLeod County Brownton HWY Shop	\$ 4,700.00
McLeod County Silver Lake/Lester Prairie HWY Shop	\$ 7,160.00
Total Project: \$ 399,500.00	

9.02 Option 1

McLeod County Court House Option 1	Included in proposal
McLeod County HATS Option 1	Included in proposal
Option Total	

Tab 6

Bill of Materials:

This project includes the following hardware and software items:

11	Avigilon intelligent controllers with hardware chassis
49	Avigilon two-door controller boards for access control
4	Avigilon two-door access control hardware panels with integrated power supplies
1	Avigilon four-door access control hardware panels with integrated power supplies
1	Avigilon eight-door access control hardware panels with integrated power supplies
7	Avigilon sixteen-door access control hardware panels with integrated power supplies
116	Avigilon access badge/card readers (mix of mullion mounting styles)
167	Single pole door contacts, surface mount
116	Request-to-exit motion detectors, surface mount
13	Custom-built interface/control for existing ADA power door openers
11	Avigilon 4-channel encoders with mounting hardware
25	Avigilon IP/POE cameras with integrated IR illuminators and mounting hardware
2	Avigilon NVR's with 10TB storage drives
40	Avigilon Enterprise camera licenses (one IP camera per license, one encoder per license)
1	Avigilon LDAP integration license
128	Avigilon VM software for access control system
1	Avigilon access control badging license
300	HID access control credentials
As needed	Installation of electric lock hardware for above

NOTE: This project will require the following IP addresses (quantities):

1. NVR's/VMS servers: two required
2. Access control VM: one required
3. Access control headends: 11 required

Tab 7

The following assumptions were made regarding the project:

1. Most of the work can be done during normal business hours
2. Wiring installed in open warehouse areas will not be inside of conduit/raceway
3. Any asbestos in the work areas will be addressed/abated by the County
4. A quantity of three hundred (300) access control cards is sufficient for the County's needs
5. Cable run inside of drop ceilings does not need to be in conduit/raceway
6. County does not have a preference on cable or cable management manufacturer
7. County will provide adequate POE network ports as needed for the design
8. County does not require this project to be managed as a prevailing wage job where payroll reporting and documentation is required
9. The system design doesn't require more than five partition/functional building groups
10. The County will provide remote access to servers (at least for installation and testing)
11. County will provide suitable network rack space and cable management as needed for application

Tab 8

Installation methodology and drawings

This system will be installed using industry accepted standards and in accordance with the manufacturer's recommendations. Installation approval drawings will be provided by NAC once we are awarded the project and updated with as-built information once the project is complete.

Tab 9

Acceptance Testing

Documentation supporting the manufacturer's recommended acceptance testing procedure will be provided with product submittals

Tab 10

Software updates for the Avigilon ACC5 VMS and ACM access control software can be accessed for free directly from the manufacturer's website: <http://avigilon.com/support-and-downloads/for-software/software-updates-and-downloads/>. The updates are typically applied by the end user, but NAC can provide this for an additional recurring annual fee. Updates made available by Avigilon are frequent, and typically done to address things that come the to the manufacturer's attention. Applying the update is not usually required to keep a system operational, but doing them at least twice per year is usually recommended.

When a software update is applied to the server it will be automatically pushed out to the client locations so part of the process ends up being automated.

LDAP Integration is included with the Avigilon Enterprise VM5. LDAP is included as an additional feature on the Avigilon access control solution.

Tab 11

15 RESPONDENT AND SUBCONTRACTOR QUALIFICATIONS, SUPPORT CAPABILITIES, AND REFERENCES

15.01 Information about the Respondent

- A. Company name
- B. Legal name (if different)
- C. Years in business
- D. Number of years selling systems similar to this Proposal
- E. Contact person
- F. Full mailing address
- G. Telephone number
- H. Fax number
- I. E-mail address
- J. Name and phone number of bonding company
- K. Number of full-time employees
- L. Number of technical/installation personnel (minimum of four dedicated to this project)
- M. Names and titles of personnel who would be providing the training for the equipment in this project (attach listing of experience with similar projects)
- N. Name of person who would be project manager for this project (attach listing of experience with similar projects)
- O. Dunn and Bradstreet Number
 - 1. Respondent - 130729189
 - 2. Equipment Manufacturer - 079421420

15.02 Qualification and Requirements

- A. If more than one (1) company is involved in the installation, training, and/or support after installation, there must be a Prime Contractor. This Prime Contractor assumes responsibility for all other entities involved.

1. List Prime Contractor here:
NAC Mechanical & Electrical Services

B. The response shall include a statement from all involved Respondents agreeing that the configuration shall work as specified and that all Respondents shall work under the Prime Contractor to resolve any configuration or interoperability problems during the installation process at no additional cost to the County. Write statement below.

The system will work as specified and all work
will be done under the prime contractor to resolve
any issues at no added cost to County..signed

15.03 Experience and Existing Customers – How many similar systems has the Respondent sold/installed?

A. In the area: 6

B. Statewide: 10

C. Nationwide: N/A

15.04 Surveillance System – All prospective Respondents must provide a minimum of three installation and three maintenance references using the reference format provided below. The references must be in the State of Minnesota, similar in scope and size to the County's project and must demonstrate the following:

A. At minimum, two of the three references must have the exact system you are proposing.

B. References must demonstrate that the Respondent has extensive knowledge of all equipment proposed and has at least one (1) year of experience with the same system(s) in the same environment.

C. References will be contacted – please verify information before submitting. Use the format below for all references. All references will be called. Please inform your contacts that a 10 to 15 minute call may be anticipated.

Reference Format: (#1 of three)

Organization Name Roseville School District

Address Roseville, MN

Type of Business K12 Education

Contact Person Sean Thao

Telephone Number 651-635-1660

Contact Email Address SEAN.THAO@isd623.org

Dates of Installation 2015-2016

Description of System Districtwide CCTV system

Number of Networked Locations >12

C. References will be contacted – please verify information before submitting. Use the format below for all references. All references will be called. Please inform your contacts that a 10 to 15 minute call may be anticipated.

Reference Format: (#2 of three)

Organization Name Eden Prairie Center

Address Eden Prairie, MN

Type of Business Shopping Center

Contact Person Kim Barritt

Telephone Number 952-525-2100

Contact Email Address kim.barritt@edenprairiecenter.com

Dates of Installation 2015-2016

Description of System Enterprise CCTV

Number of Networked Locations 1

C. References will be contacted – please verify information before submitting. Use the format below for all references. All references will be called. Please inform your contacts that a 10 to 15 minute call may be anticipated.

Reference Format: (#3 of three)

Organization Name Brunswick Corporation

Address Lebanon, MO

Type of Business Manufacturing

Contact Person Jeremy Lee

Telephone Number 218-385-6406

Contact Email Address Jeremy.Lee@brunswick.com

Dates of Installation 2014-2016

Description of System CCTV, Access, network, etc.

Number of Networked Locations Dozens

D. Subcontractors/Partners

1. The applicable terms and provisions of the contract documents shall bind every subcontractor. Further information about subcontractors may be requested prior to award.
2. Identify all subcontractors or partners used for any purposes. Failure to disclose subcontractors/partners may lead to disqualification. Include separate sheet(s) labeled "Subcontractors/Partners," if necessary.

Business Name Years Experience Type of Work Percent of Project

Midwest Lock & Safe , >20 years in business

Lockwork & electrified door locking hardware

20-25% of project is lockwork

E. References for Subcontractors/Partners – Include below three (3) references for EACH subcontractor. (Duplicate this page if needed for multiple subcontractors.) Again, preference shall be given to Respondents with references for implementations at organizations most similar to the client.

Subcontractor References will be contacted – please verify information before submitting. Utilize the format below for all subcontractor references. All references will be called. Please inform your contacts that a 10 to 15 minute call may be anticipated.

Subcontractor Reference Format (#1 of three)

Organization Name 1) St. Johns University

Address Collegeville, MN

Type of Business Higher Education

Contact Person Gary Jorgenson

Telephone Number 320-363-3303

Contact Email Address _____

Dates of Installation _____

Description of System _____

Number of Networked Locations _____

Subcontractor Reference Format (#2 of three)

Organization Name General Mills

Address Minneapolis, MN

Type of Business Manufacturing/Food

Contact Person Matt O'Sullivan

Telephone Number (763) 293-2418

Contact Email Address _____

Dates of Installation _____

Description of System _____

Number of Networked Locations _____

Subcontractor Reference Format (#3 of three)

Organization Name Sherburne County

Address Elk River, MN

Type of Business County Government

Contact Person Bill Marks

Telephone Number 763-265-3128

Contact Email Address _____

Dates of Installation _____

Description of System _____

Number of Networked Locations _____

15.05 Surveillance System Service after Installation

A. How many service personnel trained in maintaining the proposed systems does Respondent employ in the County's area? Please indicate location closest to the County.

1. Trained Service Personnel: _____

2. Location: _____

B. Provide the address of Respondent's service center(s) closest to the County:

1. Company _____

2. Address _____

3. Telephone Number _____

C. Who shall maintain parts inventory? At what location?

1. Company _____

2. Address _____
3. Telephone Number _____
4. What critical component parts are kept in stock at this location?

15.06 Financial statements – Upon request, financial statements from the Respondent, Manufacturer, and subcontractor(s) inclusive of cash flow sheet, income sheet, balance sheet, and asset liability statement for the last three (3) years shall be provided.

Tab 12

Service Operations: Service Operations Manager Email: mfarson@nac-hvac.com
Service Operations Manager
Phone: 651-255-3549
Fax: 651-490-1636

Service Technical Manager: Charlie Kistler Email: ckistler@nac-hvac.com
VP Service Division
Cell: 651-230-7729
Phone: 651-490-9868
Fax: 651-490-1636

Invoicing: Geri Galbrecht Email: ggalbrecht@nac-hvac.com
Phone: 651-255-3540
Fax: 651-490-1636

Accounting: Brenda Sjerven Email: bsjerven@nac-hvac.com
Phone: 651-255-3555
Fax: 651-490-1636

Service Contacts

Account Manager: Philip Haataja Email: phaataja@nac-hvac.com
Cell: 320-828-4609
Office: 651-490-9868
Fax: 651-490-1636

Service Dispatch: Service Coordinators Email: service@nac-hvac.com
Direct: 651-255-3528
Phone: 651-490-9868
Fax: 651-490-1636

Emergency: Phone: 651-490-9868
24 Hours Follow prompts for either
same day or next business
day service

Project Team:

1. NAC Organization
 - a. NAC is an industrial technology business working in the low voltage industry under the Union Limited Energy Agreement. All NAC install technicians and apprentices have already, or are undertaking ongoing union trade education program at the local JATC
2. Account Manager
 - a. Phil Haataja has worked in the security industry in Minnesota for over 10 years and is a degreed engineer
3. Project Manager
 - a. Joe Demuth has worked in the security industry in Minnesota for over 15 years and is a union employee, general foreman classification. He is certified for many security management systems, is a licensed Power Limited Technician (PLT)
4. Project Engineer
 - a. Dan Van Ampting has worked in the security industry in Minnesota for over 10 years and is a licensed PLT and is also CompTia A+ Certified
5. Field Technicians
 - a. Brian Newcomb – Licensed Power Limited Technician, union employee journeyman classification
 - b. Jon Emmerich – Licensed Power Limited Technician, union employee foreman classification

This certificate acknowledges that

Dan Van Ampting

has successfully completed the

Online: ACC Video Analytics

Course Completed:

Jan 15, 2016



John Haspel - Director, Global Product Training

AVIGILON™

This certificate acknowledges that

Dan Van Ampting

has successfully completed the

Access Control Manager (ACM)

Course Completed:

May 02, 2016



John Haspel - Director, Global Product Training

AVIGILON™

This certificate acknowledges that

Dan Van Ampting

has successfully completed the

Avigilon Control Center™ Administrator

Course Completed:

Jan 07, 2016



John Haspel - Director, Global Product Training

AVIGILON™

This certificate acknowledges that

Dan Van Ampting

has successfully completed the
Access Control Manager™ Basics Certification

Jun 21, 2016

This designation is valid for one year



John Haspel - Director, Global Product Training

AVIGILON™

Tab 15A

Avigilon™ Access Control Manager Virtual

AVIGILON

Avigilon™ Access Control Manager Virtual is a physical access control system (PACS) that is VMware® Ready for deployment in a virtual server environment, eliminating the need to maintain a separate, stand-alone server or dedicated network appliance. Access Control Manager Virtual is purpose-built for organizations that have migrated their IT infrastructure to a secure, private cloud environment, allowing them to maintain enterprise-grade physical security without the risk of storing sensitive information on a shared server hosted in a public cloud.



INTEGRATED ACCESS CONTROL VIRTUAL APPLIANCE

Avigilon™ Access Control Manager Virtual is a web-based, access control virtual appliance that leverages open architecture, integrates identity management and video surveillance to achieve the highest level of scalability with the lowest cost of ownership.

PHYSICAL AND LOGICAL SECURITY CONVERGENCE

Avigilon™ Access Control Manager Virtual allows organizations to seamlessly integrate IT and physical security systems, such as Identity and Access Governance (IAG), Security Information and Event Management (SIEM), Physical Security Information Management (PSIM) and HR systems to correlate physical and logical security event information, monitor alarms and rapidly respond to unauthorized activities.

BENEFITS

- Video and alarm integration with Avigilon™ Control Center (ACC)
- Eliminate the cost of stand-alone servers and software
- Increase the efficiency and use of computer room resources
- Highly scalable design with decreased deployment time
- Reduce both capital and operational expenditures

Specifications

SYSTEM RECOMMENDATIONS	VM System	VMware™ vSphere ESX 4.x, 5.x VMware™ vSphere ESXi 4.x, 5.x
	Processor	2, with 2 cores per processor
	Storage	500 GB minimum
	Memory	4 GB
	Network	1 GB Ethernet Port
	Card Readers	16 - 2,048
	Max. Simultaneous Operators	50
	Max. Identities	500,000
	Max. Stored Events	150,000,000

SUPPORTED IT PLATFORMS	
	Linux®
	OpenLDAP®
	VMware™ Ready
	SQL Server
	Oracle RDBMS
	Firefox™
	Google Chrome™
	Apple Safari®
	Internet Explorer®

SUPPORTED ACCESS CONTROL SOLUTIONS	
	HID VertX EVO®
	HID Global
	Mercury Security
	ASSA ABLOY
	Allegion
	Farpointe Data®
	EasyLobby® by HID
	LifeSafety Power

SUPPORTED VIDEO INTEGRATION SOLUTIONS	
	Avigilon™ Control Center
	Exacq Technologies by Tyco Security
	Dedicated Micros

ORDERING INFORMATION		
AC-APP-16R-VM		Access Control Virtual Appliance with 16 Readers
AC-APP-32R-VM		Access Control Virtual Appliance with 32 Readers
AC-APP-64R-VM		Access Control Virtual Appliance with 64 Readers
AC-APP-128R-VM		Access Control Virtual Appliance with 128 Readers
AC-APP-256R-VM		Access Control Virtual Appliance with 256 Readers
AC-APP-512R-VM		Access Control Virtual Appliance with 512 Readers
AC-APP-1024R-VM		Access Control Virtual Appliance with 1024 Readers
AC-APP-2048R-VM		Access Control Virtual Appliance with 2048 Readers

Mercury Security Corporation is the global leader in the supply of OEM access control hardware. Built on an open platform, with over 2 million panels sold, Mercury has the largest installed base and greatest accumulated run time of any access hardware provider in the world. Headquartered in Long Beach, California, Mercury has been providing enhanced access control technology since 1992.

DOOR CONTROLLERS



Avigilon™ Access Control Manager distributes the policies and schedules for all identities and hardware configurations to the following, Mercury Security controllers to ensure security is enforced at the door - even if upstream network communications are interrupted.

AC-MER-CONT-1DR (Mercury EP1501)

Single door, Power-over-Ethernet controller that includes the door/reader interface module all in one unit. The policies and schedules for all identities, and for all hardware configurations, from the databases in a Access Control Manager appliance are distributed into the controller so security is enforced at the door, even if the upstream network communications are interrupted. Supports all standard reader technologies, including Wiegand, clock and data, magnetic stripe, keypads, LCD and biometrics. Can be expanded to run 16 additional doors.



AC-MER-CONT-2DR (Mercury EP1502)

Two door controller that includes the two door/reader interface module all in one unit. The policies and schedules for all identities, and for all hardware configurations, from the database in a Access Control Manager appliance are distributed into the controller so security is enforced at the door, even if the upstream communications are interrupted. Supports all standard reader technologies, including Wiegand, clock and data, magnetic stripe, keypads, LCD and biometrics. Can be expanded to run 62 additional doors.



AC-MER-CONT-64DR (Mercury EP2500)

64 door controller. Enhanced capabilities to retain large database configurations from any Access Control Manager appliance. The policies and schedules for all identities, and for all hardware configurations, from the database in a Access Control Manager appliance are distributed into the controller so security is enforced at the door, even if the upstream network communications are interrupted. Supports all standard (Wiegand interface) reader technologies. Requires AC-MER-CON-MR51E (single door, PoE interface) or AC-MER-CON-MR50 (single door, RS-485 interface) or AC-MER-CON-MR52 (dual door, RS-485 interface) door/reader interface modules at each door that runs from the AC-MER-CONT-64DR controller.

Mercury Security Model	AC-MER-CONT-1DR	AC-MER-CONT-2DR	AC-MER-CONT-64DR
On-board reader support	1	2	0
Can be expanded	Yes	Yes	Yes
Number of doors that can be added	16	62	64
Includes card reader	No	No	No
Includes door interface	Yes	Yes	No
Supports wide range of readers	Yes	Yes	Yes
Power over Ethernet (PoE)	Yes	No	No
Maximum identities (cardholders)	145,000	145,000	370,000
Event Buffer	50,000	50,000	50,000

Tab 15B

Avigilon Control Center™ Software with HDSM™ Technology

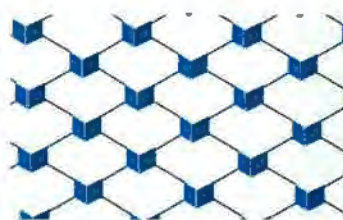
AVIGILON

Avigilon Control Center (ACC) is an easy to use video management software, and has optimized how security professionals manage and interact with high definition video. As a distributed network platform with enterprise-class reliability, Avigilon Control Center is able to efficiently capture, manage and store high definition surveillance video while intelligently managing bandwidth and storage. Avigilon Control Center can be pre-installed and configured on an Avigilon High Definition Video Appliance, Network Video Recorder (NVR) with the industry's highest NVR network throughput or work as stand-alone software, to meet the needs of a wide variety of installations.

Avigilon Control Center records and manages both video and audio from the Avigilon™ line of megapixel cameras (from 1 – 5 MP and 4 – 7K based on horizontal resolution). ACC can seamlessly integrate with conventional analog cameras, along with a broad range of third-party IP cameras and encoders, giving you the ability to build a hybrid system – providing you with a budget-conscious migration from analog to digital. ACC software's easy-to-use interface allows personnel to evaluate and respond to events with minimal training.



COLLABORATIVE INVESTIGATIONS



ENTERPRISE SERVER MANAGEMENT



INTELLIGENT VIRTUAL MATRIX

Avigilon Control Center uses our patented HDSM™ software technology to efficiently compress and preserve image quality while intelligently managing HD image transmission throughout the Avigilon system – sending only the requested portions of captured images to operator workstations. This technology delivers exceptional image quality while providing immediate savings in transmission bandwidth allowing operators to use less powerful workstations and thereby reducing costs. Our HDSM technology leverages leading imaging, hardware, data compression and information technologies to maximize performance of the Avigilon system.

KEY FEATURES

- Easiest-to-use interface on the market
- Collaborative investigations
- Resilient enterprise server management
- Centralized system administration
- intelligent virtual matrix
- Multi-megapixel high dynamic range image display
- Data protection and storage management
- Integrated graphic mapping for system layout
- HD recording and playback timeline
- Bandwidth management and remote viewing
- Bookmark and export HD surveillance footage
- Advanced video search

Advanced Control Center Features

Alarm Escalation

- Allows the creation of complete end-to-end workflows for the monitoring, assignment, and acknowledgement of alarms.

ICC Mobile

- Provides push alarm notifications, access to live and recorded video, and integrated audio talkdown from Android and iOS mobile devices.

POS Transaction Engine

- Link HD surveillance footage (viewed instantly) with transaction data to address compliance requirements and reduce shrinkage and theft

License Plate Recognition

- Detects specific regional license plates as they appear in the camera field of view to monitor vehicle traffic.

Self-Learning Video Analytics

- Configure custom video analytics based events as alarm and rule triggers.

Acquisition Manager

- Ensures that all Avigilon cameras, regardless of resolution, are configured to collect exceptional HD and Ultra HD image quality over a wide range of lighting conditions.

Simple Camera and Server Installation

- Plug-and-play capabilities for NVRs and cameras that automatically identify themselves on the network, without manual configuration or searching — eliminating complex network configuration.

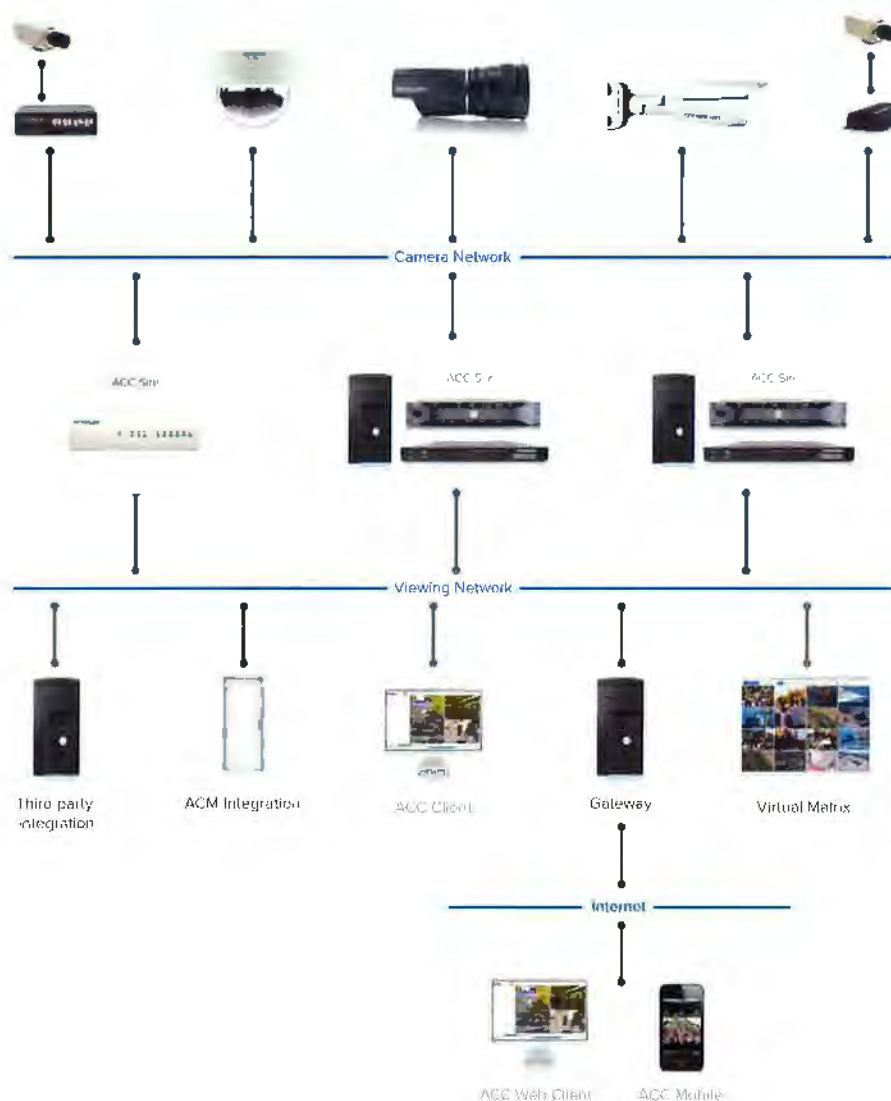
Detailed Management, Monitoring, and Reporting of System Status and Security

- Detailed logs of storage, network, and overall system status to ensure the highest possible system uptime for critical applications.

Scalable Integration with Legacy Systems

- Distributed architecture features a .NET-based API that can easily be integrated with other systems, such as access control and building management

System Architecture



CORE, STANDARD & ENTERPRISE

To create a system most suited for your surveillance needs, the Avigilon Control Center software is offered in three editions: Core, Standard and Enterprise. The Enterprise edition includes more advanced features for a sophisticated solution, whereas the Standard edition is used for more focused needs or for those looking to transition to HD surveillance in a cost-effective way. ACC Core is an entry-level version of our award-winning software that delivers advanced high definition surveillance capabilities, ease of use, and superior image quality to smaller implementations. No matter what the size of your installation, you can customize a solution that is right for you.



System	Core	Standard	Enterprise
Number of cameras per server	24	48	300
Number of cameras per site	24	48	10 000
Number of servers per site	1	1	100
Number of client licenses per server	2	5	Unlimited
High Definition Stream Management (HDSM)	Yes	Yes	Yes
Device Support	Core	Standard	Enterprise
Automatic device discovery	Yes	Yes	Yes
Third-party IP cameras & encoders	Yes	Yes	Yes
Rialto™ analytics appliances	Yes	Yes	Yes
HD Pro cameras	No	No	Yes
H4 HD cameras with self-learning video analytics	Yes	Yes	Yes
HD cameras with self-learning video analytics	Yes	Yes	Yes
HD Micro Dome, HD Multisensor, HD Panoramic, HD PTZ cameras	Yes	Yes	Yes
ONVIF cameras & encoders	Yes	Yes	Yes
Avigilon encoders	Yes	Yes	Yes
H.264 support	Yes	Yes	Yes
MPEG4 support	Yes	Yes	Yes
MJPEG support	Yes	Yes	Yes
JPEG2000 support	Yes	Yes	Yes
Client	Core	Standard	Enterprise
Powerful, easy-to-use client interface	Yes	Yes	Yes
Self-learning video analytics overlay	Yes	Yes	Yes
Web browser client interface	Yes	Yes	Yes
Joystick support	Yes	Yes	Yes
ACC Mobile / Gateway	Yes	Yes	Yes
Saved views	No	Yes	Yes
Maps	No	Yes	Yes
Web pages	No	Yes	Yes
Windows user authentication	No	No	Yes
Editable Site View	Yes	Yes	Yes
Intelligent Virtual Matrix	No	No	Yes
Collaborative investigations	No	No	Yes
Recording, Searching and Playback	Core	Standard	Enterprise
Hourly configurable recording schedule	Yes	Yes	Yes
Intelligent motion search	Yes	Yes	Yes
Thumbnail search	Yes	Yes	Yes
Event search	Yes	Yes	Yes
Multi-camera export	Yes	Yes	Yes
Live export	Yes	Yes	Yes
POS transaction search	No	Yes	Yes
Alarm search	No	No	Yes
License plate event search	No	No	Yes

For the most current list of integrations and add-ons supported by Avigilon Control Center software, please visit avigilon.com

Add-On Modules and Integrations	Core	Standard	Enterprise
Point of Sale Transaction Engine	No	Yes	Yes
Avigilon developed and supported integrations	No	Yes*	Yes
3rd party system integrations	No	Yes	Yes

*CommScope iPatch, RS2 Accessit, DDS Amadeus 5 and DSX only

Additional Features	Core	Standard	Enterprise
E-Mail event notification (motion & system event)	Yes	Yes	Yes
Central station notifications	No	Yes	Yes
Digital input email trigger	No	Yes	Yes
Manual digital output trigger	No	Yes	Yes
Audio recording	No	Yes	Yes
Audio output	No	Yes	Yes
Rule triggers	No	3	Unlimited
Self-learning video analytics event configuration	No	Yes	Yes
Redundant recording	No	No	Yes
Failover connections	No	No	Yes
Alarm escalation	No	No	Yes
Scheduled and one-time video archive	No	No	Yes
License Plate Recognition	No	No	Yes

Detailed Product Features

Integration Options

- Records and manages video from the full range of Avigilon high definition cameras.
- Monitor video and alarms remotely via a mobile device.
- Provides access to system video from a wide range of web browsers.
- Supports the recording and management of a wide range of third-party video and audio sources.
- Supports the control of digital input triggers and triggering digital outputs through an I/O board.
- The Avigilon Application Programming Interface (API) enables the simple integration of Avigilon video surveillance with third-party applications.
- The Alarms tab provides the ability to monitor live alarm events received by access systems integrated with the Avigilon software. Users are given the ability to assign, acknowledge and investigate alarm video.
- The Armed Image Panels display live alarms as they are triggered within the video monitoring workspace, and provide the ability to acknowledge and investigate the live video.
- Integration alarms only need to be acknowledged in one system to be marked as acknowledged and processed in both.
- Avigilon develops and maintains integrations to a variety of 3rd party applications. The current list of available integrations is provided here: <http://avigilon.com/support-and-downloads/for-software/access-integration-and-plug-in-downloads/>
- Avigilon offers an SDK for 3rd parties to create system integrations with the Avigilon Control Center software. Some of the available integrations are listed here: <http://avigilon.com/support-and-downloads/for-software/system-integration-features/>

- Receives and translates transaction information from point-of-sale sources in multiple encoding formats.
- Provides the ability to link point-of-sale sources with video for the ability to monitor and review sales transactions.
- Rules can be used to generate events based on point-of-sale transaction exceptions.
- Rules can be used to generate license plate notifications.
- Live license plate recognition is available through an image panel overlay.

Recording

- Streams live and recorded video up to 60 frames per second.
- Support prioritizing streaming at 30 frames per second on 4K (8MP) cameras.
- Streams live and recorded video from cameras up to a resolution of 7K (30 MP) — 6720 x 4488.
- Decompresses H.264 video through the client graphics card to help leverage the client's total processing power.
- No proprietary recording hardware, hardware multiplexer or time-division technology is required for running the Avigilon system.
- Scalable to support up to 100 servers and/or 10,000 cameras per site.
- All recorded video and audio is digitally signed using 256-bit encryption so video can be authenticated for evidentiary purposes.
- Secure, command and control communication using SSL to protect against eavesdropping or tampering.
- External system alarms can be pre-selected and configured to be monitored and trigger event driven video operations.
- Video and audio recording can be defined by a recording schedule assigned to each video source.
- Recording schedules are based on event types that trigger video recording over a time period each day per week.

- Video recording can also occur manually by user triggered recording.
- Alarms and rules can be triggered by self-learning video analytics based events.
- Each recorded event includes a pre-event and post-event recording option to provide context for a given situation.
- Reference frame recording is an option when no events are detected.
- Motion detection is provided for each individual video source with adjustable sensitivity, threshold and detection zones.
- Primary and secondary video streams from each H.264 video source are recorded and maintained for a set amount of time before the primary stream is discarded as a means of increasing record time.
- The maximum recorded video retention time can be set for each video source.

Security

- Each system user can be granted specific live monitoring, investigative, system administration, and device access.
- Child sites can be connected to a parent site to create site families.
- All user, group, and permission settings for a child site can be synchronized with and controlled by a parent site.
- A corporate ranking hierarchy can be set up to accurately reflect a company's administrative structure.
- Each system user can only access features that are subordinate to their rank within the system hierarchy.
- Device access can be specific to cameras, encoders, maps, web pages and saved views.
- Windows Active Directory users can be imported and added to Avigilon Control Center Client groups.
- Imported Windows users can use their Windows credentials to access the Avigilon system.
- Permission groups can be copied to different sites and automatically applied to users imported from the same Active Directory.
- Ability to securely encrypt camera control traffic (if supported by the camera).
- Change camera authentication without disconnecting from a server.

System Administration

- Recorded video can be automatically archived on a schedule.
- Automatic archive can be configured to span a specific time period, cameras, or age of video.
- The system can be set to delete the oldest archived video when the disk is full to make room for new video recordings.
- Archived video can be saved to a local folder, mapped network drive, network storage area, USB or direct attached storage.
- Email notifications are available to tell users and system administrators when an event or system health error occurs. Emails can be set to occur on a schedule, and can include camera snapshots related to an event.
- Notifications can be sent to a central monitoring station whenever a configured event occurs.
- The system maintains an information log which can be used to trigger rules or external notifications.
- When a rule is triggered, the system can be set to execute actions in response.
- Users can be set to receive customized on screen messages related

to a rule event.

- On-screen messages are displayed in one location and the importance of each message is color coded.
- A maintenance log and audit trail of all system errors and events is accessible through the client software and the Admin Tool.
- Monitor system health from one location. The status of connected Sites, servers and devices can be exported in PDF format.
- System wide software updates can be performed from any client with access to the Site.
- System configuration data, including device connection details, can be backed up and restored to new servers in the Site.

Video and Audio Controls

- License plate recognition is performed within a specific region of a camera's field of view. Detected license plate data is stored with the video data.
- A Watch List event can be created and used to monitor for the appearance of specific license plates.
- Pan, tilt, zoom (PTZ) controls through the RS-485 interface of a video source can be used and configured by the Avigilon system.
- The network settings for a video and audio source can be changed through the Avigilon software.
- Each camera's image quality and image rate can be changed without affecting the settings of other cameras.
- The system automatically displays an H.264 camera's secondary stream for live viewing when there is insufficient bandwidth to display the primary stream.
- A camera's exposure, iris, IR filter, backlight compensation, gain, priority, sharpening, saturation, focus, and white balance can be set through the Avigilon system.
- The image dimensions of JPEG2000 camera video can be changed.
- Camera image can be rotated 90°, 180° or 270°.
- Privacy zones can be added to a camera's field of view to block private areas in live and recorded video.
- Manually triggered video recording can be set to stop after a maximum recording duration.
- Audio Input, output, gain and volume can be changed.
- Optional full-duplex two-way audio communication.
- Audio sources can be linked to any video source that is connected to the system.

System Display and Control

- Joysticks to control video display and specific system functions.
- Customizable keyboard commands.
- 1 to 64 video streams can be displayed simultaneously on a single monitor.
- Live and recorded video can be displayed in non-standard, customizable layouts.
- Save views for reuse.
- The system can be set to bias video display to a lower frame rate or to a lower image resolution if the client network bandwidth or client processing power is insufficient to display the full frame rate and image resolution.
- Information about the camera and scene can be displayed over live or recorded streaming video.

- The Video Analytics Activity overlay displays a color-coded bounding box around moving objects categorized as humans or vehicles.
- Configure the ability to display analytics activity for individual cameras or for the system.

The ability to stream video and audio is limited only by the system hardware capabilities.

- The application window display can be shared with other users for collaborative investigations while viewing both live and recorded video.
- Live and recorded video and audio can be streamed simultaneously on the same monitor.
- Avigilon Virtual Matrix software can be used to provide remote control of multiple monitor displays, including video walls, that can be controlled by remote users with the appropriate rights and permissions.
- Avigilon Virtual Matrix software can display video, maps, and web pages from multiple Sites simultaneously.
- The same live or recorded video stream can be viewed at different zoom levels and areas of interest.
- Switch from live to recorded video on demand for an instant replay of recently recorded video.
- Cycle through a series of opened views (guard tour) based on a specified interval.
- All video sources connected to the system are displayed.
- Drag and drop a video source from a tree of video sources into a window for live or recorded video and audio monitoring.
- Drag and drop a saved view from a tree of views into a window for live or recorded video and audio monitoring.
- Configure how the tree of video sources, maps, web pages and views is displayed.
- Armed image panel is one or more regions in a window for displaying video directly linked to triggered alarms and rules.
- Alarms can be acknowledged directly from an armed image panel.
- Digital outputs can be manually triggered from the video monitoring area.

Maps

- Create a map to represent the physical location of cameras and other devices throughout the surveillance system.
- Maps are created from images stored in JPEG, BMP, PNG, or GIF image formats.
- Maps can contain links to other maps and reference a subsection of a camera's field of view.
- Drag and drop a video source from a map into a window for live or recorded video and audio monitoring.
- Cameras on a map are highlighted if the camera is linked to an alarm that has been triggered.
- A map within a map is highlighted if it contains a camera that is linked to an alarm that has been triggered.

Available Languages

- Arabic
- Chinese (Traditional)
- Danish
- English
- French
- Hebrew
- Japanese
- Norwegian
- Portuguese (Brazil)
- Russian
- Spanish
- Turkish
- Chinese (Simplified)
- Czech
- Dutch
- Finnish
- German
- Italian
- Korean
- Polish
- Portuguese (Portugal)
- Slovak
- Swedish

Avigilon™ Self-Learning Video Analytics

AVIGILON

Avigilon Self-Learning Analytics extend the effectiveness of your security personnel by providing effective monitoring and enabling proactive, real-time response from your team. Built from the ground up to manage high-definition video, Avigilon offers analytics embedded in Avigilon cameras up to 5K (16 MP) resolution.

Through the use of advance pattern-based analytics and teach-by-example technology, Avigilon video analytics are designed to increase the productivity of security personnel while making monitoring more affordable and efficient.



Advanced pattern-based analytics

Avigilon advanced video pattern detection technology is able to accurately recognize the movements of people and vehicles while ignoring motion not relevant to a scene. Embedded into cameras up to 5K (16 MP), the system's ability to constantly learn reduces false positives and helps ensure alerts are meaningful, which avoids wasted time and improves efficiencies.

Teach-by-example technology

Our teach-by-example object classifier technology enables users to provide feedback about the accuracy of alarm events generated by Avigilon devices. Rather than decreasing analytics sensitivity to reduce false alarms, the feedback trains the device, increasing the accuracy of the analytics used to determine which alarms are real and which are false to further improve a low false-positive alarm rate.

Over time, the system learns the scene and is able to prioritize important events based on user feedback. This increases sensitivity to conditions that are of concern while reducing false alarms to keep the focus on what matters.

KEY FEATURES

- Pattern-based object classification and tracking technology.
- Continuously self-learning analytics with no manual calibration required.
- Efficient installation and setup.
- Operator input teach-by-example technology.
- Embedded in cameras for resolutions 1-16 MP.
- Analytics appliances for any IP cameras or analog system.
- Real time analytic rule-based alarm notifications.
- Fully integrated with Avigilon Control Center™ for an end-to-end analytics solution.
- Powerful forensic video analytics accelerates forensic search times using a fully unified ACC™ client.
- Cost effective. No additional servers required.
- No additional licensing required for analytics and rules-based events.

Key Features and Benefits

Ease of installation and ongoing accuracy

Point-and-shoot setup. Self-learning video analytics works out of the box with no manual calibration required.

Self-learning analytics and teach-by-example technologies

Teach-by-example technology lowers false-alarm rates and increases detection and confidence levels.

Broad variety of devices

Avigilon devices embedded with self-learning video analytics include appliances and cameras with resolutions from 1 MP to 5K (16 MP).

Pattern-based object classification and tracking technology

Object classification and tracking using pattern-based analytics algorithms are tuned to recognize people and vehicles, while ignoring nuisance motion.

Operator input teach-by-example technology

Teach-by-example technology enables users to provide feedback to the system about accuracy, which further enhances the pattern-based analytics database.

Integrated with Avigilon Control Center (ACC)

Fully integrated with ACC client and ACC mobile so that users can respond in real time even from mobile devices. Analytic alarm notifications can be automatically sent to any authorized client based on configured rules.

Analytics appliances for IP cameras or analog system

Add self-learning video analytics to IP or analog surveillance camera with Avigilon analytics appliances.

Idle scene mode

Idle scene mode reduces bandwidth and storage, and is triggered by analytics specific objects rather than motion detection.

Powerful forensics

Forensic search capabilities of analytics events accelerate search times using a fully unified ACC client.

Cost effective

No additional servers required.

No licensing required

Fully embedded edge analytics with no additional rules-based licensing on cameras.

The Avigilon Video Management Solution

Avigilon Control Center (ACC) video management software provides the ability for analytics events and alarms to be viewed and searched through an intuitive user interface. Real time events and forensic capabilities detect and notify scene changes, missing objects and rules violations — all through an easy-to-use interface. Avigilon Control Center software gives you full control over event playback, enabling you to quickly retrieve evidence to speed up response times and investigations.

RULES AND ALARMS

The Avigilon Control Center rules engine enables you to selectively apply analytics-based events as alarms and rule triggers, providing local or mobile users with immediate notifications for suspicious activities.

INTELLIGENT SEARCH OF CLASSIFIED OBJECTS

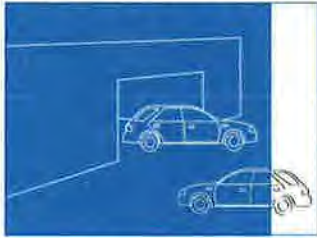
Avigilon Control Center software uses powerful analytics technology to intelligently search for specified events of classified objects to help you find the video you need quickly.

Avigilon Analytics Rules

The following is a complete list of Avigilon self-learning video analytics features for object detection and classification for live or forensic events.

The following images are for illustration purposes only.

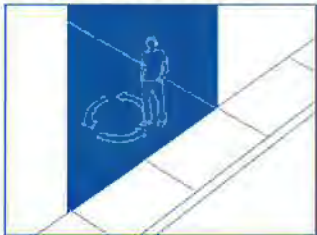
OBJECTS IN AREA



The event is triggered when the specified number of persons or vehicles in the region of interest (ROI) is exceeded.

Detects objects in the whole scene or manually drawn ROI.

OBJECT LOITERING



The event is triggered when a person or vehicle stays within a specified ROI for the specified duration.

Detects objects in the whole scene or manually drawn ROI.

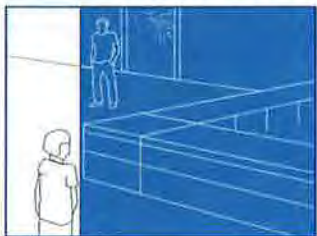
OBJECTS CROSSING BEAM



The event is triggered when the specified number of persons or vehicles cross the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.

Directional arrows and line must be manually drawn.

OBJECT APPEARS OR ENTERS AREA



The event is triggered by each person or vehicle that enters the ROI.

Detects objects in the whole scene or manually drawn ROI.

OBJECT NOT PRESENT IN AREA



The event is triggered when there is no person or vehicle present in the ROI.

Detects objects in the whole scene or manually drawn ROI.

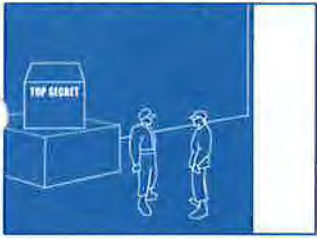
OBJECTS ENTER AREA



The event is triggered when the specified number of persons or vehicles have entered the ROI.

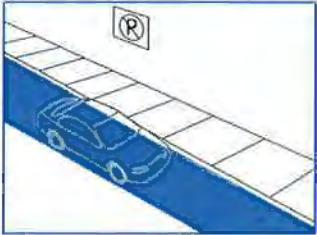
Detects objects in the whole scene or manually drawn ROI.

OBJECTS LEAVE AREA



The event is triggered when the specified number of persons or vehicles have left the ROI.
Detects objects in the whole scene or manually drawn ROI.

OBJECT STOPS IN AREA



The event is triggered when a person or vehicle in a ROI stops moving for the specified threshold time.
Detects objects in the whole scene or manually drawn ROI.

DIRECTION VIOLATED



The event is triggered when a person or vehicle moves in the prohibited direction of travel.
Directional arrows and line must be manually drawn.

CAMERA TAMPERING



The event is triggered when the scene unexpectedly changes.
Affects whole scene.

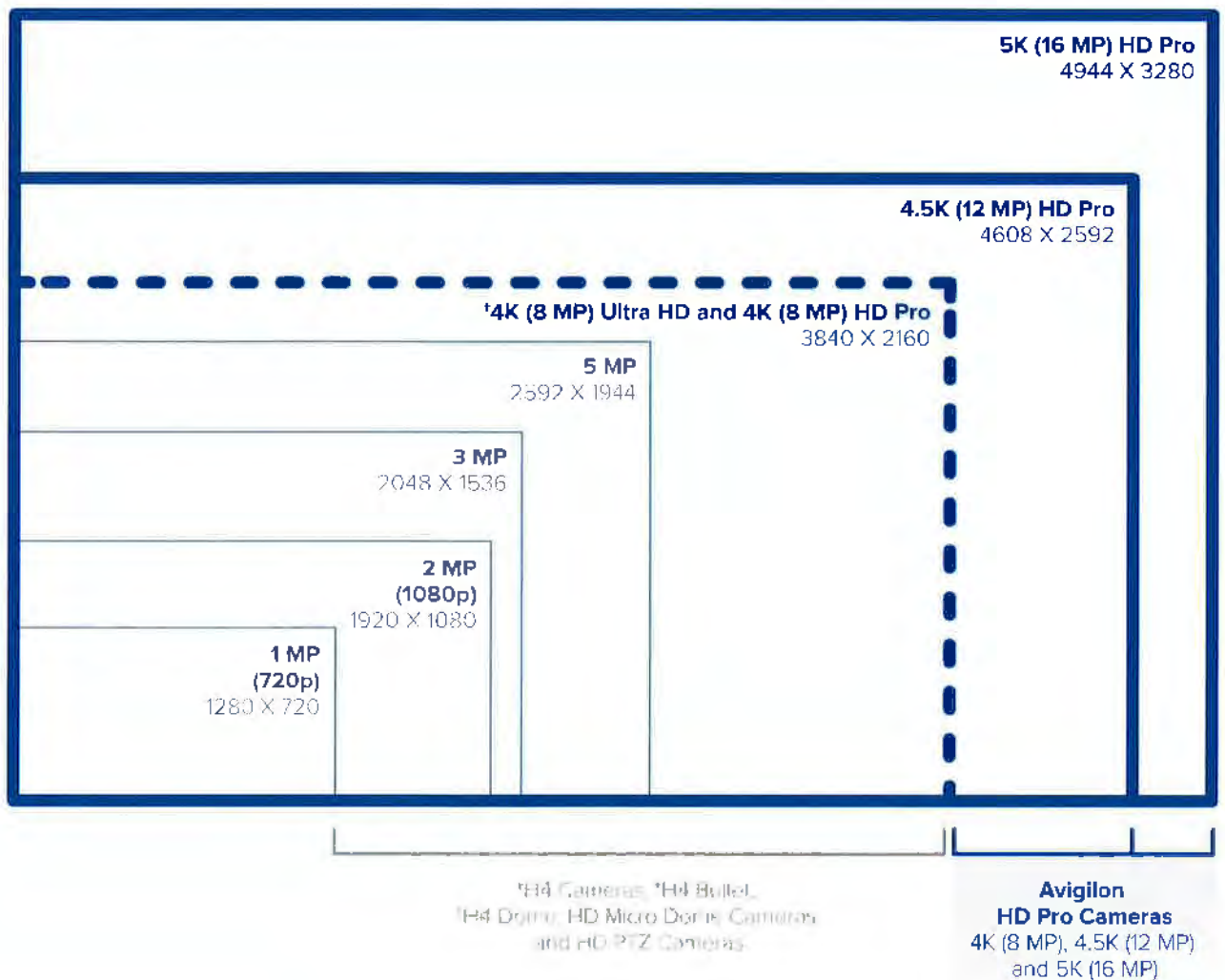
Specifications

ANALYTICS SOFTWARE REQUIREMENTS & CAPABILITIES

Setup with Avigilon Control Center	ACC version 5.4 or higher
Setup with Avigilon Rialto* Devices for Third-Party Cameras	Avigilon View
Real-Time Alerts and Events Configuration	Set up in ACC 5.4 or later
Real-Time Alerts and Events Notification	ACC 5 client, other multiple notifications possible based on rules engine configuration
Forensic Search Capabilities	Set up in ACC 5.4 or later
Display of Video ACC Client for Forensic Searches	ACC 5 client

SUPPORTED VIDEO ANALYTICS DEVICES

Avigilon H3A series	1-3MP; bullet, dome and camera form factors
Avigilon HD Pro series	4K (8 MP), 4.5K (12 MP) and 5K (16 MP)
Avigilon H4 series	1-5 MP and 4K (8 MP); bullet, dome and camera form factors
Avigilon Rialto series	<ul style="list-style-type: none"> Rialto i4, A4 and R-Series Avigilon View software is required Supported resolutions: <ul style="list-style-type: none"> D1 720 and 1080p (1920 x 1080) resolutions at 30fps using RTSP H.264 video streaming Analog 3rd party camera connection supports D1 resolution of 30fps



4-Port H.264 Analog Video Encoder with Audio Support

AVIGILON

Avigilon offers a broad range of high definition cameras – from 1 – 5 MP and 4 – 7K (based on horizontal resolution) – and are available in a variety of formats, including dome, panoramic and fixed. Whether it's a small storefront that requires a few cameras or a large complex system requiring complete coverage of numerous areas, you can trust that you're getting an exceptional solution for your security needs.

The innovative H.264 analog video encoder is just one way Avigilon can help provide the very best monitoring and protection.



Avigilon analog video encoders minimize bandwidth and storage requirements while capturing high-quality surveillance footage (in full resolution of up to 30 images per second per analog camera) for greater coverage and enhanced overall protection.

Using standard network equipment, the analog video encoder seamlessly integrates with Avigilon Control Center and NVRs to create a network-based surveillance solution with unmatched performance, ease of use, and ease of installation. Plus they also feature 3D motion-adaptive de-interlacing for sharper, more accurate video.

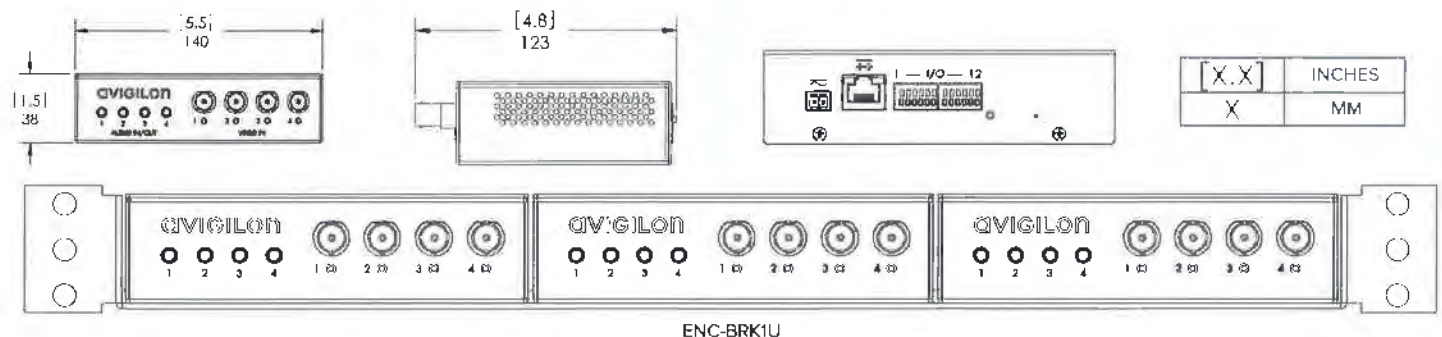
KEY FEATURES

- 4 video channels
- Max resolution 720 x 480 (NTSC) or 720 x 576 (PAL)
- 30 images per second from each port
- H.264 and Motion JPEG compression
- ONVIF compliant API
- Motion adaptive 3D deinterlacing
- Support for PTZ and dome cameras via RS-485 interface
- Up to 4 privacy zones available per channel
- 4 audio input channels
- 4 audio output channels
- External I/O terminals
- Power over Ethernet, 24 VAC or 12 VDC power input
- Automatically connects to Avigilon Control Center NVMS
- Rack mount kit allows 3 encoders in 1U of rack space

Specifications

ENCODER	Video Channels	4								
	Video Standard	NTSC; PAL								
	Video Format	Composite Video 1.0 Vpp with 75 Ohm selectable termination								
	Video Input	BNC connection								
	Max Resolution (per channel)	720 (H) x 480 (V) NTSC; 720 (H) x 576 (V) PAL								
	Image Rate (per channel)	30 NTSC at max. resolution; 25 PAL								
	Image Compression Method	H.264 (MPEG-4 Part 10/AVC), Motion JPEG								
	Motion Detection	Selectable sensitivity and threshold								
	Privacy Zones (per channel)	Up to 4 zones								
	Audio Input Channels	4								
	Audio Output Channels	4								
	Audio Compression Method	G.711 PCM 8kHz								
	Audio Input/Output	Line input/output, I/O mini-jack (3.5 mm)								
	PTZ Control	RS-485 interface								
PTZ Protocols	American Dynamics Sensormatic, AXSYS, AXSYS DCU, Ernitec ERNA, Honeywell Diamond, Kalatel ASCII, Pelco D, Pelco P, TEB Ligne, Vicon extended, Vicon normal, Videotec Legacy, Videotec MACRO									
External I/O Terminals	4 Alarm In, 4 Alarm Out									
NETWORK	Network	100BASE-TX								
	Cabling Type	CAT5								
	Connector	RJ-45								
	API	ONVIF compliance version 1.02, 2.00, Profile S (www.onvif.org)								
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication								
	Protocol	IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP								
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP								
MECHANICAL	Dimensions (LxWxH)	140 mm x 123 mm x 38 mm (5.5" x 4.8" x 1.5")								
	Weight	0.62 kg (1.4 lbs)								
ELECTRICAL	Power Source	VDC: 12 V VAC: 24 V PoE: IEEE802.3af Class 3 compliant								
	Power Consumption	8 W								
	Power Connector	2-pin terminal block								
ENVIRONMENTAL	Operating Temperature	12 VDC: -10°C to 48°C (14°F to 118°F); 24 VAC or POE: -10°C to 50°C (14°F to 122°F)								
	Storage Temperature	-10 °C to 70 °C (14 °F to 158 °F)								
	Humidity	20 - 80% Relative humidity (non-condensing)								
CERTIFICATIONS	Certifications/Directives	UL	cUL	CF	ROHS	WFFF	RCM	KC	EAC	
	Safety	UL 60950-1		CSA 60950-1		IEC/EN 60950-1				
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B		IC ICES-003 Class B		EN 55022 Class B	EN 61000-6-3	EN 61000-3-2	EN 61000-3-3	KN 22
	Electromagnetic Immunity	EN 55024				EN 61000-6-1		KN 24		

Outline Dimensions



Ordering Information

ENC-4PH264	4-Port H.264 Video Encoder with 4 Audio Inputs and 4 Audio Outputs
ENC-BRK1U	1U EIA (19") Rack Mountable Bracket for 3 ENC-4PH264

H4 Fisheye Camera Line

The new Avigilon™ H4 Fisheye camera line is designed to provide a complete high resolution 360-degree panoramic view of a scene with no blind spots. The H4 Fisheye camera line is a cost-effective, easy-to-install solution designed to provide clear image detail and broad coverage with fewer cameras.

By providing quality imaging and situational awareness, the H4 Fisheye camera is an essential component of the complete Avigilon solution and a valuable addition to any existing surveillance solution.



The H4 Fisheye has a sleek, low-profile design making it suitable for installations where aesthetics are important and allowing it to fit in with architectural features without detracting from the surroundings. Its IK10-rated, vandal-proof and IP66 weather protected housing is ideal for indoor and outdoor environments such as retail stores, theatres, gas stations, manufacturing, healthcare, commercial and educational facilities.

Built on the H4 platform, the H4 Fisheye is available in 6 and 12 megapixel (MP) camera resolutions. It delivers exceptional image quality even in harsh environments and lighting conditions, and keeps bandwidth and storage to a minimum. Its content adaptive IR technology provides effective brightness while maintaining excellent scene illumination in dark environments. The H4 Fisheye also allows users to zoom in, focus and investigate a region of interest (ROI) in live or recorded video while preserving full situational awareness.

Harnessing the strength of Avigilon Control Center (ACC)™ software, High Definition Stream Management (HDSM)™ technology and idle scene mode technology, the H4 Fisheye camera intelligently and efficiently manages video data, lowering bandwidth and storage. The powerful client-side de-warping coupled with virtual PTZ technology allows easy navigation through live or recorded video, enabling security operators to view and track an object of interest from point A to B.

KEY FEATURES

6.0 and 12.0 megapixel resolution models

360 degree field of view fisheye lens

Patented High Definition Stream Management (HDSM)™ Technology

Content adaptive IR technology provides effective illumination through the field of view, while maintaining excellent scene illumination

Integrated IR (Infrared) LEDs provide uniform illumination in the dark, even at 0 lux, up to a maximum of 10 m (32.8 ft) away

Idle Scene Mode lowers bandwidth and storage usage if there are no motion events detected in the scene

IP66 certification offers total dust ingress protection and protection against high-pressure water jets

Avigilon LightCatcher technology provides exceptional image quality in low light environments

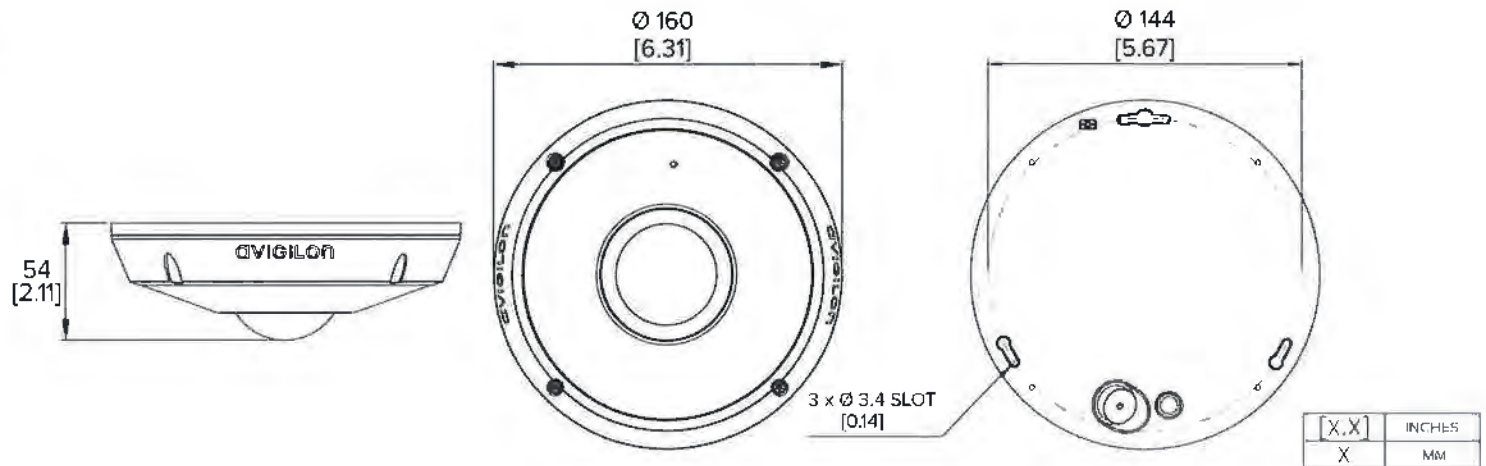
Vandal resistant with IK10 impact rating

ONVIF Profile S Compliant

Specifications

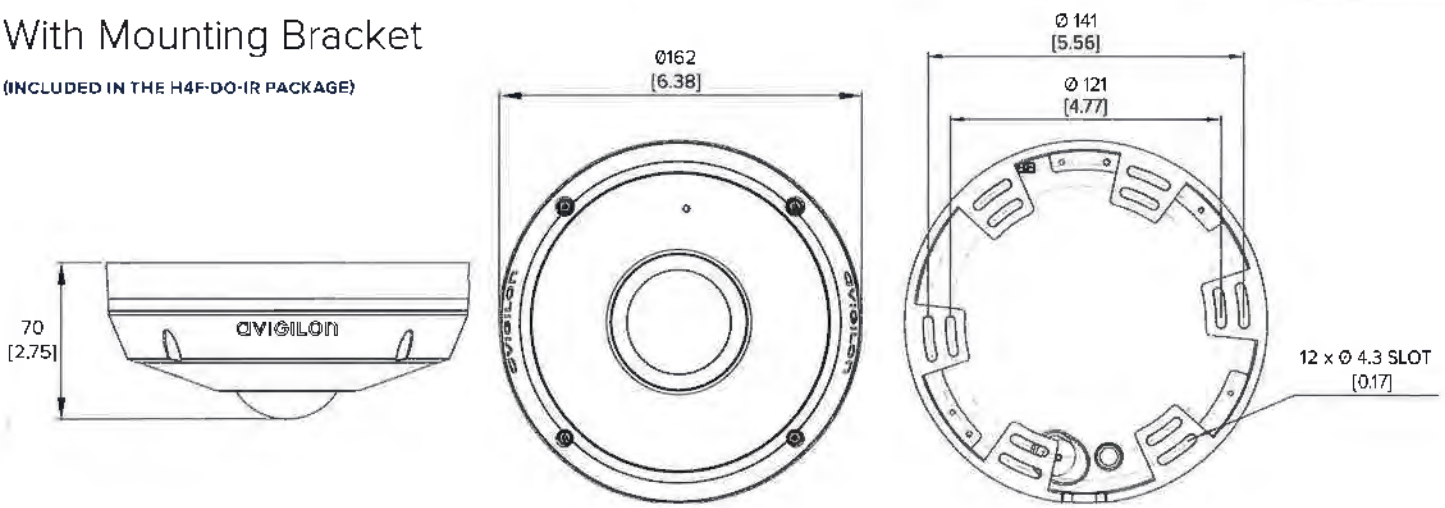
		6.0 MP	12.0 MP						
IMAGE PERFORMANCE	Image Sensor	1/1.8" progressive scan CMOS	1/2.3" progressive scan CMOS						
	Active Pixels (H x V)	2000 x 2000	2992 x 2992						
	Imaging Area (H x V)	4.8mm x 4.8mm (0.189" x 0.189")	4.6mm x 4.6mm (0.180" x 0.180")						
	IR Illumination	up to 10 m (32.8 ft)							
	Minimum Illumination	0.13 lux (F2.2) in color mode; 0 lux (F2.2) in monochrome mode with IR	0.49 lux (F2.2) in color mode; 0 lux (F2.2) in monochrome mode with IR						
	Image Rate	H.264 30 fps	20 fps						
		MJPEG 15 fps	10 fps						
	Dynamic Range	93 dB	81 dB						
LENS	Lens	1.45 mm, F/2.2							
	Horizontal Angle of View	180° hemisphere							
	Field of View	360°							
IMAGE CONTROL	Image Compression Method	H.264 (MPEG-4 Part 10/AVC), Motion JPEG							
	Streaming	Multi-stream H.264 and Motion JPEG							
	Bandwidth Management	HDSM: Idle Scene Mode							
	Motion Detection	Pixel motion							
	Electronic Shutter Control	Automatic, Manual (1/7 to 1/8000 sec)							
	Iris Control	Fixed							
	Day/Night Control	Automatic, Manual							
	Flicker Control	50 Hz, 60 Hz							
	White Balance	Automatic, Manual							
	Backlight Compensation	Adjustable							
NETWORK	Privacy Zones	Up to 64 zones							
	Network	100BASE-TX							
	Cabling Type	CATS							
	Connector	RJ-45							
	ONVIF	ONVIF Profile S compliant							
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication							
	Protocol	IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP/UDP, IGMP, ICMP, DHCP, Zeroconf, ARP							
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP							
	Device Management Protocols	SNMP v2c, SNMP v3							
	PERIPHERALS	Audio Input/Output	Line level I/O and internal microphone						
Audio Compression Method		G.711 8kHz							
External I/O Terminals		Alarm In, Alarm Out							
Onboard Storage		microSDHC/microSDXC/UHS-1 – minimum class 10 or better recommended							
MECHANICAL	Dimensions (ØxH)	Camera 160 mm x 51 mm; 6.2" x 2.0"							
		With bracket 162mm x 70mm; 6.38" x 2.75"							
		With NPT 160mm x 124mm; 6.31" x 4.89"							
	Weight	Camera 0.826 kg; 1.77 lbs							
		With bracket 0.94 kg; 2.07 lbs							
		With NPT 1.138 kg; 2.5 lbs							
	Body	Aluminum							
Housing	Vandal resistant. Surface mount; or pendant mount with NPT adapter.								
Finish	Powder coat, RAL 9003								
ELECTRICAL	Power Consumption	25.5 W max							
	Power Source	VDC: 12 V +/- 10%, 2.125 W min., L.P.S. per IEC 60950-1 PoE: IEEE 802.3af Class 3 PoE+: IEEE 802.3at Class 4							
	Power Connector	DC power input adapter							
ENVIRONMENTAL	Operating Temperature	-40 °C to +55 °C (-40 °F to 131 °F) with 12 V DC or PoE power -20 °C to +55 °C (-4 °F to 131 °F) with PoE power							
	IR Illuminator Behavior	IR Illuminator power is reduced to 8 m (26.2 ft) when PoE is used. IR Illuminator will not turn on if temperature is 45 °C (113 °F) or higher.							
	Storage Temperature	-25°C to +50 °C (-13 °F to 122 °F)							
	Humidity	0 - 95% non-condensing							
CERTIFICATIONS	Certifications/Directives	UL	cUL	CE	ROHS	WEEE	RCM		
	Safety	UL 60950-1		CSA 60950-1		IEC/EN 60950-1		IEC 62471	
	Environmental	IK10 Impact Rating (camera housing only)				UL/CSA/IEC 60950-22		IEC 60529 IP66 Rating	
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B		IC ICES-003 Class B		EN 55032	EN 61000-6-3	EN 61000-3-2	EN 61000-3-3
	Electromagnetic Immunity	EN 55024				EN 61000-6-1			

Outline Dimensions



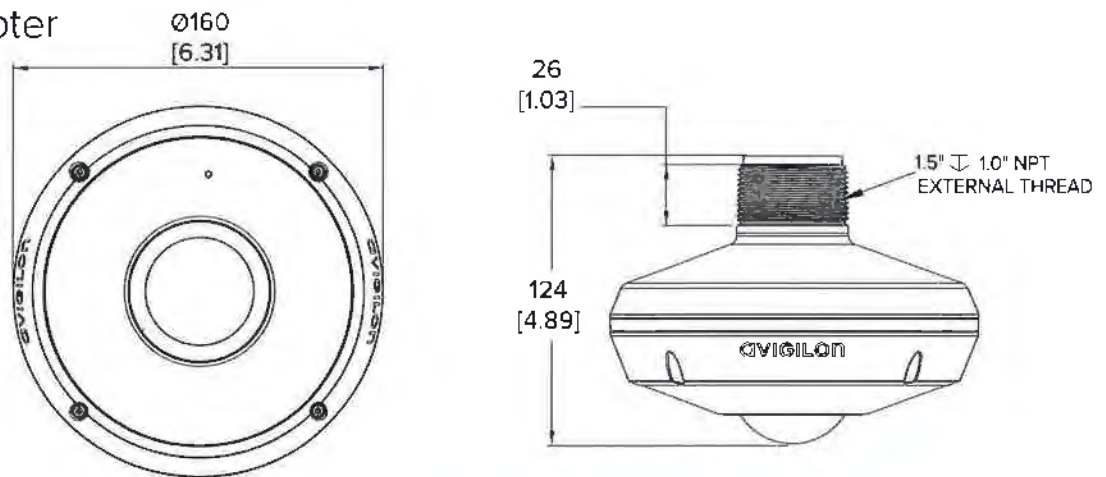
With Mounting Bracket

(INCLUDED IN THE H4F-DO-IR PACKAGE)



With NPT Adapter

(H4F-DO-IR + H4F-MT-NPTA1)



Ordering Information

	MP	LIGHTCATCHER TECHNOLOGY	LENS	IR
6.0L-H4F-DO1-IR	6.0	✓	Fisheye	✓
12.0-H4F-DO1-IR	12.0		Fisheye	✓
H4F-MT-NPTA1	NPT adapter for the Fisheye Dome Camera			
CM-MT-WALL1	Pendant wall mount compatible with H4F-MT-NPTA1			

H4 SL Dome Camera with LightCatcher™ Technology

Built on the Avigilon™ H4 platform, the H4 SL camera line combines exceptional image quality with an innovative and modular design that is easy to install at a cost-effective price. It harnesses our High Definition Stream Management (HDSM)™ technology to efficiently manage video data and uses idle scene mode technology to lower bandwidth and storage usage when there is no motion detected in the scene. The H4 SL camera line integrates with Avigilon Control Center (ACC)™ video management software and is ONVIF compliant for integration with a third-party VMS.



Straight out of the box, the H4 SL camera is designed and packaged for simple ordering and quick and flexible installation. This camera line's discreet and modular design allows it to seamlessly fit in to its surroundings. Dome models come with surface and in-ceiling mounts that can quickly and easily be alternated. The H4 SL camera's IK10-rated, vandal-resistant and IP66 dust and water-resistant housing make it ideal for monitoring a variety of indoor and outdoor environments, such as hallways, public entrances and lobbies of banks, schools, retail outlets and hotels.

KEY FEATURES

- 1.3 and 2.0 megapixel resolution models
- Patented High Definition Stream Management (HDSM) Technology
- 3-9 mm F/1.4 lens with remote zoom and focus
- Content adaptive IR technology provides effective illumination through the field of view, while maintaining exceptional scene illumination
- Wi-Fi camera configuration support
- Avigilon LightCatcher™ technology provides exceptional image quality in low light environments
- Dual Exposure Wide Dynamic Range
- Integrated IR (Infrared) LEDs provide uniform illumination in the dark, even at 0 lux, up to maximum of 15 m (~50 ft) away
- Idle Scene Mode lowers bandwidth and storage usage if there are no motion events detected in the scene
- IK10 vandal resistant construction and IP66 compliant

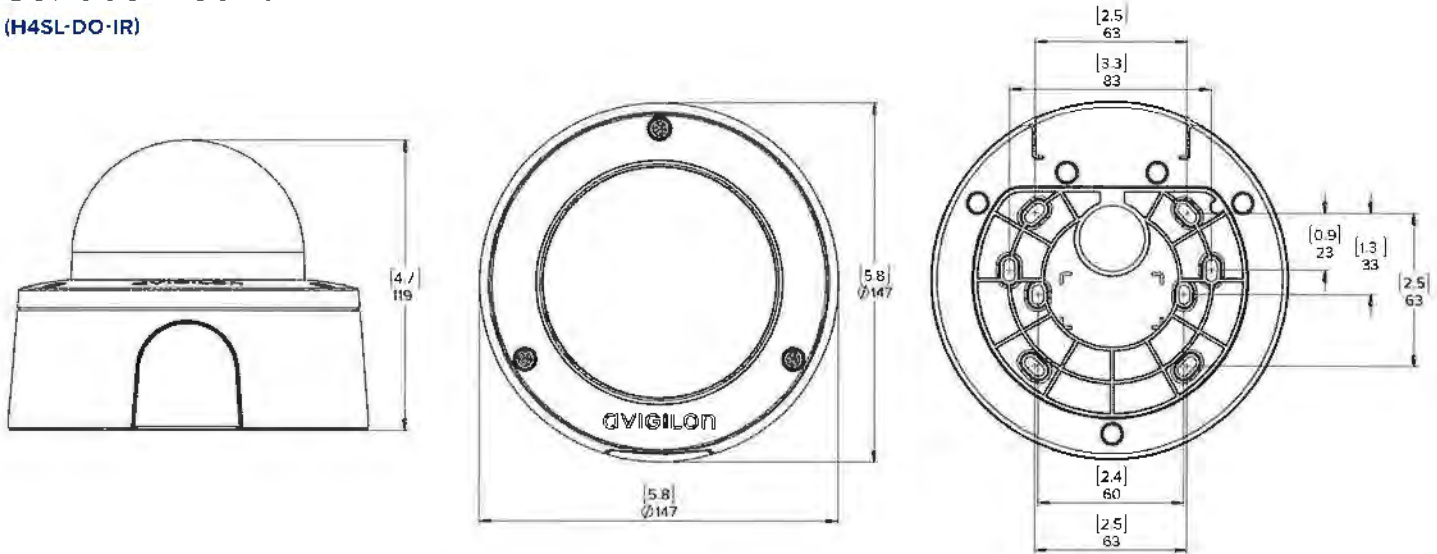
Specifications

		1.3 MP	2.0 MP							
IMAGE PERFORMANCE	Image Sensor	1/2.8" progressive scan CMOS								
	Aspect Ratio	5:4	16:9							
	Active Pixels (H x V)	1280 x 1024	1920 x 1080							
	Imaging Area (H x V)	3.7 mm x 3.0mm; 0.145" x 0.118"	5.6 mm x 3.1 mm; 0.22" x 0.122"							
	IR Illumination (high power 850 nm LEDs)	15 m (50 ft) max. distance at 0 lux								
	Minimum Illumination	0.01 lux (F/1.4) in color mode; 0 lux (F/1.4) in monochrome mode with IR								
	Image Rate	30 fps								
	Dynamic Range	100 dB								
	Resolution Scaling	Down to 384 x 216								
	LENS	Lens	F/1.4, 3.9 mm, motorized, varifocal							
(Aspect ratio) HFoV		(5:4) 26° - 60°; (16:9) 39° - 90°								
IMAGE CONTROL	Image Compression Method	H.264 (MPEG-4 Part 10/AVC), Motion JPEG								
	Streaming	Multi-stream H.264 and Motion JPEG								
	Bandwidth Management	HD5M; Idle Scene Mode								
	Motion Detection	Pixel								
	Electronic Shutter Control	Automatic, Manual (1/6 to 1/8000 sec)								
	Iris Control	Automatic, Manual								
	Day/Night Control	Automatic, Manual								
	Flicker Control	50 Hz, 60 Hz								
	White Balance	Automatic, Manual								
	Backlight Compensation	Adjustable								
Privacy Zones	Up to 64 zones									
NETWORK	Network	100BASE-TX								
	Cabling Type	CAT5								
	Connector	RJ-45								
	ONVIF	ONVIF compliant with version 1.02, 2.00, Profile S								
	Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication								
	Protocols	IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP								
	Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTP/TCP, HTTP								
	Device Management Protocols	SNMP v2c, SNMP v3								
	USB Port	USB 2.0								
	Onboard Storage	microSD/microSDHC/microSDXC slot – minimum class 6; class 10/UHS-1 or better recommended								
MECHANICAL		SURFACE MOUNT	IN-CEILING MOUNT	PENDANT MOUNT						
				NPT ADAPTER	NPT + WALL MOUNT					
	Dimensions (LxWxH)	147 mm x 147 mm x 119 mm; 5.8" x 5.8" x 4.7"	174 mm x 174 mm x 162 mm; 6.9" x 6.9" x 6.4"	153 mm x 153 mm x 166 mm; 6.0" x 6.0" x 6.5"	269 mm x 153 mm x 214 mm; 10.6" x 6.0" x 8.4"					
	Max. Ceiling Thickness	n/a	32 mm (1.25")	n/a	n/a					
	Weight	0.78 kg; 1.72 lbs	0.77 kg; 1.69 lbs	0.77 kg; 1.69 lbs	2.04 kg; 4.49 lbs					
	Dome Bubble	Polycarbonate, clear			Polycarbonate/aluminum					
	Body	Polycarbonate			Polycarbonate/aluminum					
	Housing	Vandal resistant			Polycarbonate/aluminum					
	Finish	Fog coat, cool grey			Powder coat, cool grey					
	Adjustment Range	360° pan, 30° - 95° tilt, ±180° azimuth			Powder coat, cool grey					
ELECTRICAL	Power Consumption	7 W max								
	Power Source	PoE: IEEE802.3af Class 3 compliant								
	RTC Backup Battery	3V manganese lithium								
ENVIRONMENTAL	Operating Temperature	-30 °C to +60 °C (-22 °F to 140 °F)								
	Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)								
	Humidity	0 - 95% non-condensing								
CERTIFICATIONS	Certifications/Directives	UL	cUL	CE	KC	WEEE	RCM	EAC	ROHS	
	Safety	UL 60950-1		CSA 60950-1		IEC/EN 60950-1		IEC 62471		
	Environmental	IK10 Impact Rating		UL/CSA/IEC 60950-22		IEC 60529 IP66 Rating				
	Electromagnetic Emissions	FCC Part 15 Subpart B Class B		IC ICES-003 Class B	KN 32	EN 55022 Class B	EN 61000-6-3	EN 61000-3-2	EN 61000-3-3	EN 55037
	Electromagnetic Immunity	EN 55024			KN 35		EN 61000-6-1		EN 50130-4	

Outline Dimensions

Surface Mount

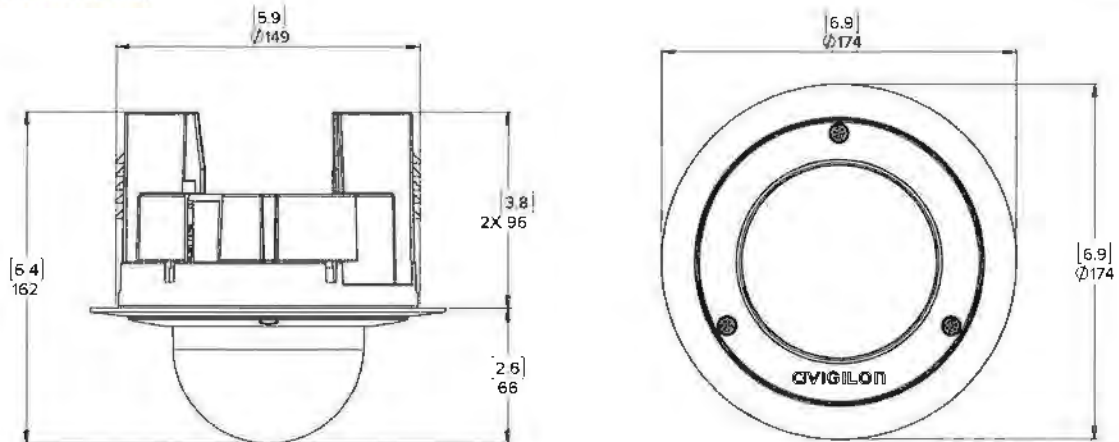
(H4SL-DO-IR)



In-Ceiling Mount

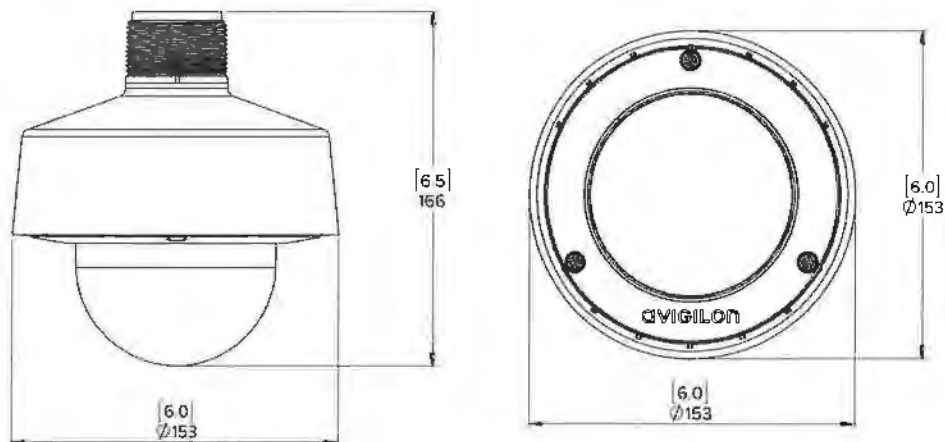
(H4SL-DO-IR + H4SL-MT-DCIL)

[X.X]	INCHES
X	MM



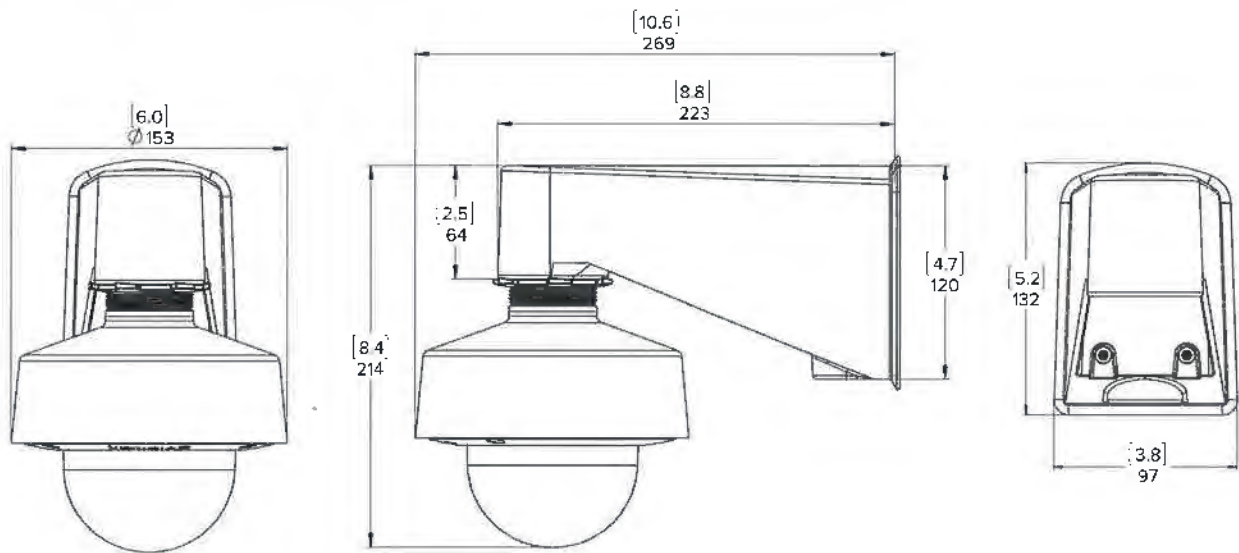
NPT Adapter

(H4SL-DO-IR + H4SL-MT-NPTA)



NPT Adapter and Pendant Wall Mount

(H4SL-DO-IR + H4SL-MT-NPTA + CM-MT-WALL1)



Ordering Information

	MP	WDR	LIGHTCATCHER TECHNOLOGY	LENS	IR	IP66
1.3C-H4SL-DO1-IR	1.3	✓	✓	3 - 9 mm	✓	✓
2.0C-H4SL-DO1-IR	2.0	✓	✓	3 - 9 mm	✓	✓
H4SL-MT-DCIL1	In-ceiling mounting adapter for the H4 SL dome camera					
H4SL-MT-NPTA1	NPT adapter for the H4 SL dome camera					
CM-MT-WALL1	Pendant wall mount					
H4-AC-WIFI1-NA	USB Wi-Fi Adapter for North America, Latin America (except Brazil), Taiwan					
H4-AC-WIFI2-EU	USB Wi-Fi Adapter for European Union					

HD Network Video Recorder Server

AVIGILON

Avigilon's end-to-end surveillance solutions deliver image detail no other system can match. Avigilon™ Control Center software, featuring High Definition Stream Management (HDSM)™ technology combined with our broad range of megapixel cameras (from 1 MP to 29 MP) provide unprecedented clarity—while effectively managing storage and bandwidth requirements. Our components are scalable and can work together in an end-to-end system, or can be customized to create your own powerful and cost-effective solution.

The innovative HD network video recorder is just one way Avigilon can help provide the very best monitoring and protection.



Our Network Video Recorders (NVRs) have Avigilon Control Center preloaded and configured for maximum performance and reliability, making them easy to integrate into any Avigilon surveillance system. NVR servers can record up to 32 MB/s of image data from up to 128 cameras.

KEY FEATURES

- Preloaded and configured with Avigilon Control Center High Definition Network Video Management Software
- Records up to 32 MB/s of image data
- Supports up to 128 camera channels
- Supports up to 30 images per second per camera channel
- RAID 5 hard drive configuration
- Up to 21 TB effective recording capacity (after RAID 5 applied) that is expandable using HD-NVR-EXP2
- Hot-swappable hard drives and power supplies
- 2 gigabit Ethernet ports
- 2U rack mount chassis

Specifications

SYSTEM	Control Center Edition	Enterprise, Standard and Core compatible	
	Recording Rate	Up to 32 MB/s	
	Camera Channels	Up to 128	
	Recording Image Rate	Up to 30 images per second per channel, total of 3840 for 128 channels	
	Local Viewing	No	
	Operating System	Microsoft® Windows Embedded Standard 7	
	Hard Disk Drive Configuration	Hot-swappable, RAID 5	
	Recording Storage Capacity	Up to 21 TB effective (after RAID 5), expandable using HD-NVR-EXP2	
	Processor	Intel® Xeon® Processor E5-2407	
	Memory	12 GB RAM (3 x 4GB)	
	Network Interface	2 Gigabit Ethernet RJ-45 ports (1000Base-T)	
	Video Outputs	1 VGA	
	Optical Drive	1 DVD-RW	
MECHANICAL	Form Factor	2U rack mount chassis	
	Dimensions (LxWxH)	611.1 mm x 434 mm x 86.8 mm; 24.06" x 17.09" x 3.42"	
	Weight	28.2 kg (62.17 lbs)	
ELECTRICAL	Power Input	100 to 240 VAC, 50/60 Hz, auto-switching	
	Power Supply	Single hot-swappable, dual-redundant optional with HD-NVR2-2ND-PS	
	Power Consumption	495 W	
ENVIRONMENTAL	Operating Temperature	10° C to 35° C (50° F to 95° F)	
	Storage Temperature	-40° C to 65° C (-40° F to 149° F)	
	Humidity	20 - 80% Relative humidity (non condensing)	
	Operating Vibration	0.26G at 5 Hz to 350 Hz for 2 minutes	
	Storage Vibration	1.87Grms at 10 Hz to 500 Hz for 15 minutes	
	Operating Shock	1 shock pulse of 31G for up to 2.6 ms	
	Storage Shock	6 shock pulses of 71G for up to 2 ms	
	Operating Altitude	-15.2 m to 3048 m (-50 ft to 10,000 ft)	
Storage Altitude	-15.2 m to 10,668 m (-50 ft to 35,000 ft)		
REMOTE PC CLIENT REQUIREMENTS	Operating System	Window Vista, Windows 7 (32-bit or 64-bit) or Windows 8	
	Processor	Intel Dual Core 2.0 GHz (minimum); Quad Core 2.0 GHz (recommended)	
	Memory	2 GB RAM	
	Video Card	PCI Express, DirectX 10.0 compliant with 256 MB RAM	
	Network Interface	1 Gbps	
	Hard Disk Space	500 MB	
SUPPLIED ACCESSORIES		Rack mount kit (brackets, rails, and hardware)	
		Cable management arm	
		Rack bezel	
		USB keyboard	
		USB mouse	
		Power cord	
CERTIFICATIONS	Safety	EN 60950-1:2006 + A1:2009 IEC 60950-1:2005 Ed2	EN 62311:2008
	Electromagnetic Emissions	EN 55022:2006 + A1:2007 CISPR 22:2005 + A1:2005 EN 61000-3-2:2006	IEC 61000-3-2:2005 (Class D) EN 61000-3-3:1995 + A1:2001 + A2:2005 IEC 61000-3-3:1994 + A1:2001 + A2:2005
	Electromagnetic Immunity	EN 55024:1998 + A1:2001 + A2:2003	CISPR 24:1997 (modified)+A1:2001 + A2:2002
ORDERING INFORMATION	3.0TB-HD-NVR2	3.0 TB storage, Network Video Recorder Server	
	5.0TB-HD-NVR2	5.0 TB storage, Network Video Recorder Server	
	10.0TB-HD-NVR2	10.0 TB storage, Network Video Recorder Server	
	15.0TB-HD-NVR2	15.0 TB storage, Network Video Recorder Server	
	21.0TB-HD-NVR2	21.0 TB storage, Network Video Recorder Server	
	HD-NVR2-2ND-PS	Secondary redundant power supply	
	HD-NVR2-LPRPROC-24	LPR processor kit	
	HD-NVR2-EXP2-CARD	Expansion card for connecting storage expansion to an HD-NVR2	
	HD-NVR-EXP2-10TB	10 TB RAID 6 expansion, 2U rack mount	
HD-NVR-EXP2-20TB	20 TB RAID 6 expansion, 2U rack mount		
HD-NVR-EXP2-30TB	30 TB RAID 6 expansion, 2U rack mount		
	* Control Center licenses must be purchased separately		

HD-NVR

RICOH MP C4504

RICOH MP C4504 (NEW COLOR COPIER/PRINTER/SCANNER)

- 45 BLACK AND WHITE AND 45 COLOR PAGES PER MINUTE
- 2.0 GB RAM AND 320 GB HARD DRIVE, CPU: 1.75 GHZ INTEL ATOM PROCESSOR
- 10.1" SUPER VGA TOUCHSCREEN STANDARD
- ENVELOPE, HIGH-GLOSS COATED, AND LABEL PRINTING CAPABILITIES
- UP TO 300 G/M² PAPER WEIGHT (160 LB. INDEX)
- 220 SHEET SINGLE-PASS DOCUMENT FEEDER STANDARD
- POSTSCRIPT OPTION INCLUDED
- 1,000 SHEET STAPLING/SORTING FINISHER INCLUDED
- 24 SECOND WARM UP TIME AND 4.0 SECOND FIRST COPY OUTPUT TIME
- COLOR NETWORK PRINTING, COLOR NETWORK SCANNING STANDARD
- 4 X 550 SHEET PAPER TRAYS STANDARD, PLUS 100 SHEET BYPASS TRAY
- DELIVERY & INSTALLATION INCLUDED. RETURN OF UP TO TWO MACHINES INCLUDED



STATE OF MINNESOTA CONTRACT #84340, VENDOR # 203973

STATE OF MN CONTRACT # 84340 PURCHASE PRICE:

\$9,201.00

STATE OF MINNESOTA CONTRACT # 84340 SERVICE PLAN

- All Service, Preventive Maintenance Calls, Parts, Labor, & Unlimited Toner
- 0-4 Hour Service GUARANTEE
- No Shipping Charges, No Handling Charges, No Fuel Surcharges

RICOH MP C4504 SERVICE & SUPPLY COSTS

BLACK AND WHITE PAGES BILLED AT \$0.0105 PER PAGE

(NO BASE AMOUNT, BILLED PER PAGE ONLY)

COLOR PAGES BILLED AT \$0.0625 PER PAGE

(NO BASE AMOUNT, BILLED PER PAGE ONLY)

*NO SHIPPING CHARGES ON SUPPLIES (TONER)

*NO CHARGE FOR REFURBISHING MACHINE

*PREVENTATIVE MAINTENANCE INCLUDED

*NO FILING CHARGES

*0-4 HOUR ON-SITE RESPONSE TIME GUARANTEE

*NO CHARGE FOR EXTRA TONER USAGE

*MORE LOCAL PARTS AND CERTIFIED TECHNICIANS THAN ANY VENDOR IN THE AREA

Andrew Larson
Senior Account Executive
612-798-1268
alarson@metrosales.com

City of Stewart

RESOLUTION NO. 2016-122

**RESOLUTION APPROVING A CONTRACT WITH THE
MCLEOD COUNTY SHERIFF'S DEPARTMENT FOR POLICE COVERAGE**

WHEREAS; the McLeod County Sheriff's Department Contract is estimated for the following amounts:

1. 2017 \$ 107,174.10

WHEREAS; this is a one year contract beginning on January 1, 2017 and ending on December 31, 2017

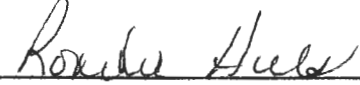
BE IT RESOLVED by the City Council of the City of Stewart, County of McLeod, Minnesota, approves a contract with the McLeod County Sheriff's Department for police coverage for the year of 2017

Adopted by the City Council of Stewart on 14th day of November, 2016



Jason Peirce, Mayor

ATTEST:



Ronda Huls, City Clerk - Treasurer

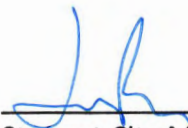
\$51.53 per hour for a yearly cost of \$107,174.10. The City of Stewart will also provide through its Mayor, continuing input as to performance review of the deputy.

V. INSURANCE: The County shall maintain municipal liability insurance in an amount equal to or greater than the maximum liability applicable to municipalities as set forth in Minnesota Statutes, Section 466.04, subd.1, as revised. The county agrees to add the City as an additional insured to the County's liability coverage.

VI. INDEMNIFICATION: The County agrees to defend, indemnify and hold the City, and its officers, employees, and agents, harmless from and against all claims, damages, losses, and expenses, including attorney fees, arising out of or resulting from the County's performance or failure to perform its obligations under this Agreement; but only to the extent caused in whole or in part by the negligent acts, errors, or omissions of the County or anyone for whose acts the County may be liable.

VII. This agreement is entered into and approved by the County of McLeod and the City of Stewart this _____ day of _____, 2016.

Dated: 11/14/16



Stewart City Mayor

Dated: 11/14/16



Stewart City Clerk

Dated: _____

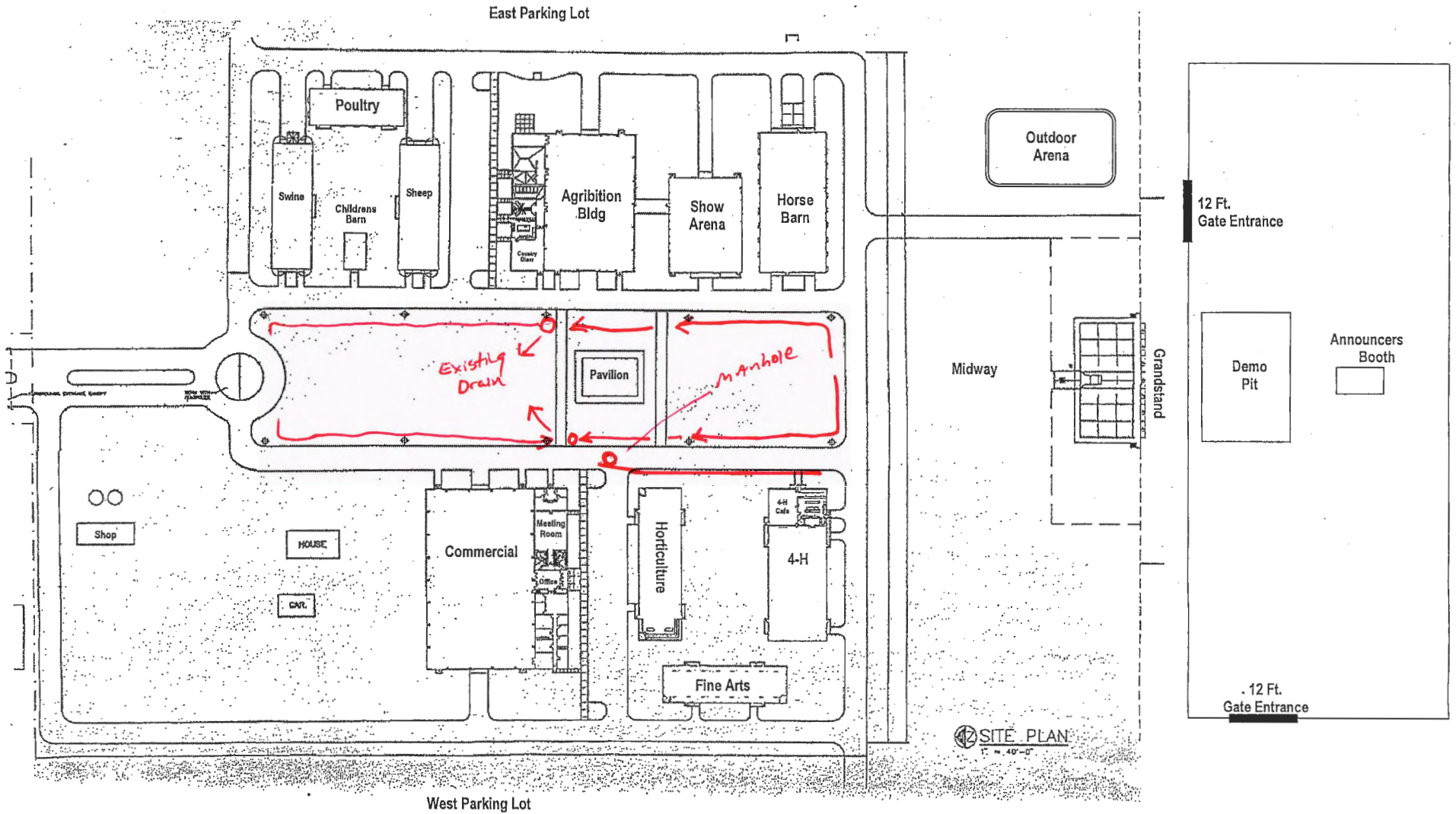
McLeod County Board Chair

Dated: _____

McLeod County Administrator

AGREEMENT TO PROVIDE LAW ENFORCEMENT SERVICES

- I. **PARTIES:** The parties to this agreement are the County of McLeod, a municipal corporation formed under the laws of the State of Minnesota, hereinafter referred to as "County" and the City of Stewart, a municipal corporation formed under the laws of the State of Minnesota, hereinafter referred to as "City".
- II. **TERMS OF THE AGREEMENT:** The terms of this agreement shall commence January 1, 2017 and shall end December 31, 2017. This agreement may be terminated by either party upon 60 days written notice addressed to the McLeod County Sheriff or the Mayor of Stewart.
- III. **DUTIES OF THE MCLEOD COUNTY SHERIFF:** The McLeod County Sheriff shall provide a deputy to work each week for a total of 40 hours doing police duties within the City of Stewart. The supervision of the deputy shall remain with the McLeod County Sheriff, subject to consultation and review with the Mayor for the City of Stewart. The deputy may leave the city limits if his duties within the City of Stewart require him to do so, and the deputy shall be available on an as needed basis similar to the mutual aid agreements by which the City Police assist the McLeod County Sheriff's Office or other law enforcement agencies. McLeod County shall be responsible for hiring, training, insuring and providing pay and benefits for the deputy. The Sheriff shall bill the City of Stewart on a monthly basis indicating days and hours the deputy worked. The County shall be responsible for providing all equipment for the deputy. Clerical duties for the deputy will be provided by the Sheriff's record staff and reports will be provided to the City of Stewart.
- IV. **DUTIES OF THE CITY OF STEWART:** The City of Stewart will pay within 30 days of receipt any charge for services by the McLeod County Sheriff's Office. The 2017 hourly rate shall be



East Parking Lot

West Parking Lot

SITE PLAN
1" = 40'-0"

4 or 5" Tile

Luedtke Contracting LLC
22418 200th St
Hutchinson MN 55350
320-587-7664
320-583-3732

10-30-16

Estimate for

McLeod County Parks
Tile

Trench tile line project A \$ 2,246.00
 Backfill with washed sand and
 place intakes by sidewalk

Trench tile line project B \$ 11,727.00
 Backfill with washed sand and
 place intakes by sidewalk

Estimated Price: \$ 13,973.00

Estimate is good for 30 days. This estimate is for completing the job/project as described above. It is based on our evaluation and does not include material price increases or additional labor and materials which may be required should unforeseen problems or adverse weather conditions arise after the work has started.

You will be invoiced when the job is complete. Payment is due upon receipt of invoice unless otherwise specified. A finance charge of 1 ½% per month (18% annual) will be charged on any balance not paid by the due date.

AFTER BOTH PARTIES (the customer and Luedtke Contracting) SIGN BELOW, THIS ESTIMATE BECOMES A WRITTEN AGREEMENT BETWEEN MCLEOD COUNTY PARKS AND LUEDTKE CONTRACTING FOR PROVIDING THE SERVICES FOR THE JOB/PROJECT STATED ABOVE.

McLeod County Parks

David Luedtke
Owner

Hjerpe Contracting, Inc.
 Hutchinson, MN 55350-0517
 PO BOX 517
 16246 Hwy 15 S.

Bid Proposal & Contract	
Date	Proposal #
10/18/2016	2222

Mcleod County Fairgrounds. Attn: Randy 840 Century Ave. SW Hutchinson, MN 55350	Phone #	Fax #	E-mail
	320-234-8305	320-234-7305	kurt@hjerpecontracting.com
			Terms

Description	Qty	Rate	Total
Tile courtyard on a unit price basis			
Furnish and install 4" SDR35 PVC Sewer pipe, half Perf with sock and rock bedding per LF.	1	9.00	9.00
Furnish and install 4" drop inlet per each	1	75.00	75.00
Saw cut concrete per LF.	1	6.00	6.00
Concrete patch per each	1	700.00	700.00

Thank you for the opportunity to bid your work.

Total Bid Price	\$790.00
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Upon signing below, both parties agree to this bid proposal.

Date: _____

Date: _____

Accepted By: _____

Accepted By: _____

Hjerpe Contracting, Inc.
 Hutchinson, MN 55350-0517
 PO BOX 517
 16246 Hwy 15 S.

Bid Proposal & Contract	
Date	Proposal #
10/18/2016	2224

Mcleod County Fairgrounds. Attn: Randy 840 Century Ave. SW Hutchinson, MN 55350	Phone #	Fax #	E-mail
	320-234-8305	320-234-7305	kurt@hjerpecontracting.com
			Terms

Description	Qty	Rate	Total
Option #2: Furnish and install tile line coming from the west catch basin by the pavilion. Average depth no more than 3'.			
Connect to existing catch basin per each	1	500.00	500.00
Furnish and install 6" HDPE Perf tile bedded in rock	245	17.00	4,165.00
Furnish and install 6" drop inlets per each	5	85.00	425.00
Bit Saw Cutting/LF	60	3.00	180.00
Bituminous Patch 3" per Sy	16	55.00	880.00
Concrete Saw Cutting/ LF	60	6.00	360.00
Concrete Patch	1	700.00	700.00

Thank you for the opportunity to bid your work.

Total Bid Price	\$7,210.00
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Upon signing below, both parties agree to this bid proposal.

Date: _____

Date: _____

Accepted By: _____

Accepted By: _____

Hjerpe Contracting, Inc.
 Hutchinson, MN 55350-0517
 PO BOX 517
 16246 Hwy 15 S.

Bid Proposal & Contract	
Date	Proposal #
10/18/2016	2223

Meleod County Fairgrounds. Attn: Randy 840 Century Ave. SW Hutchinson, MN 55350	Phone #	Fax #	E-mail
	320-234-8305	320-234-7305	kurt@hjerpecontracting.com
			Terms

Description	Qty	Rate	Total
Option #1: Furnish and install tile line coming from the east side of the horse barn and ending by the cafe. Average depth of 4.5'.			
Connect to existing catch basin per each	1	500.00	500.00
Furnish and install 6" HDPE Perf tile bedded in rock	485	17.00	8,245.00
Furnish and install 6" drop inlets per each	5	85.00	425.00
Bit Saw Cutting/LF	104	3.00	312.00
Bituminous Patch 3" per Sy	29	55.00	1,595.00
Concrete Saw Cutting/ LF	30	6.00	180.00
Concrete Patch	1	700.00	700.00

Thank you for the opportunity to bid your work.

Total Bid Price	\$11,957.00
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Upon signing below, both parties agree to this bid proposal.

Date: _____

Date: _____

Accepted By: _____

Accepted By: _____