

# Video Solutions (CCTV) Products and Solutions Catalogue

June 2021



# Video Surveillance (CCTV) Catalogue

- Introduction
- Cameras
- Brackets & Housings
- Dome Cameras
- InfraRed & White Light Illuminators
- Lenses
- Matrix Switchers & Controller Systems
- Monitors
- Perimeter Protection
- Digital Video Recording
- Video Transmission
- Network Accessories
- Service Equipment & Repair

Welcome to the latest edition of the Video Surveillance (CCTV) Catalogue of products available from our distribution centre in Letchworth. We aim to make your product range as comprehensive as possible to ensure you never need go anywhere else. To meet this goal, our product specialists, with your help, have selected the most appropriate, cost effective product range available on the market.

In line with our ISO 9000 accreditation, only those products that meet the highest quality criteria have been included.

Our goal is to despatch product on the same day as we receive your order. Our warranty and service returns policy is second to none. We recognise that your business is highly dependent on excellence in customer service and to help achieve this we offer extended warranty from many of our suppliers. Full credit is also available on a "No Question – No Fuss" basis for any new in-warranty product returned to the distribution centre. Our standard duration for warranty is a minimum of 12 months credit.

We are positive that together we can help grow your business and we look forward to working with you in the future.



Our website contains an extensive supply of product related information available in multiple languages - English, French, German, Spanish, Italian, Dutch and Polish. It is regularly updated and features many aids to the selling process including presentation material, independent product test results and detailed technical information.

Our web site can be found at  
[www.tycoemea.com](http://www.tycoemea.com)

**Essentials**  
2MP Varifocal IP Bullet Cameras

The Bluete Essentials varifocal bullet camera is available in 2 megapixel, one for installed indoors or outdoors and has 95 Illumination. The bullet camera can capture video in a variety of lighting situations with features such as True Day/Night and Wide Dynamic Range.

**Low Light Clarity**  
The Bluete Essentials varifocal minidome camera with 81 greater low-light clarity. The sensitivity of the sensor and processor combination is enabled through the latest technology such as True Day/Night, In low light, these cameras deliver clear video surveillance.

**True Day/Night**  
For applications where the glare of direct sunlight may affect surveillance, WDR is a multi-lens feature. Only the best performing camera can manage the contrast created by the background that direct sunlight can create. The Bluete Essentials varifocal bullet camera takes advantage of the latest quality image processing range offered today. Avoid loss of detail in strongly backlit scenes with the power of WDR. Maximize the details in faces with wide scene clarity. WDR provides rendering of a high-contrast HD image that works in a wide range of challenging lighting conditions.

**Features**

- 2 megapixel
- 2.8-12 mm varifocal lens
- H.264 and H.265 dual-stream encoding
- Maximum 30 fps
- Multiple network monitoring
- IP66
- PoE
- 95 Illumination
- True Day/Night
- Wide Dynamic Range of view

**Johnson Controls**

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**Video Solutions (CCTV)**

The video solution of this site provides information for the extensive range of products including cameras, lenses, digital recorders, monitors, multiplexers & a wide range of other equipment.

Hover over the buttons on the right hand side of the page to select the product you are interested in.

**Intellex**

Intellex cameras are the ideal choice for many applications where IP cameras are required. They are available in a range of resolutions from 1MP to 8MP and are designed for easy installation and management.

[MORE INFO](#)

**IP Cameras**

Johnson Controls IP cameras range from 1MP to 8MP and are available in a range of resolutions from 1MP to 8MP and are designed for easy installation and management.

[MORE INFO](#)

**Dome Cameras**

Johnson Controls dome cameras are available in a range of resolutions from 1MP to 8MP and are designed for easy installation and management.

[MORE INFO](#)

**Network Accessories**

Johnson Controls offer a range of network accessories including switches, hubs, routers and firewalls.

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**Matrix Switchers**

A wide range of matrix switchers are available for use with IP cameras and recorders.

[MORE INFO](#)

**Embedded DVRs**

A range of collective digital recording solutions providing high quality recording for long term storage and easy retrieval.

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**Video Product Catalogues & Service Plans**

[UK Product Catalogue \(PDF\)](#) [Service Plans \(PDF\)](#)

**ABOUT US**  
Johnson Controls is a global leader in providing a wide range of products and services for the security, building and infrastructure markets.

**OUR PRODUCTS**  
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Building Management Systems  
CCTV  
Data Management  
Fire Alarm  
IP Access Control  
Intelligent Systems  
Intercom Systems  
Mobile Access  
Product Analysis & Control Systems  
Public Address & Alarm Systems  
Security Solutions

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To enhance customer specifications and quotations we also provide a series of product datasheets which can give our clients an opportunity to read more about the product. We are positive that together we can help grow your business and we look forward to working with you in the future.

# Cameras

This chapter contains information about the following Cameras and Mini Domes:

- **Introduction**
- **Explanation of Terms**
- **Analogue HD Cameras & Mini Domes**
  - Concept Pro Analogue HD Bullet Cameras
  - Concept Pro Analogue HD Mini Domes
  - Concept Pro Analogue HD Turret Domes
  - Concept Pro Analogue HD Eyeball Domes
- **IP Cameras & Mini Domes**
  - Illustra Essentials Gen4 IP Bullet Cameras & Mini Domes
  - Illustra Flex IP Gen3 Cameras & Mini Domes
  - Illustra Flex IP Multi-Directional Camera
  - Illustra Pro IP Bullet Cameras & Mini Domes
  - Illustra Pro IP Thermal Elevated Skin Temperature Camera
  - Concept Pro IP Bullet Cameras, Mini Domes & Turret Domes
- **Accessories**
  - SanDisk Ultra Memory Cards

# Introduction

A range of analogue & IP/Network Box, Bullet and MiniDome cameras, with a choice of internal and external usage and fixed or Vari-focal lenses.

# Explanation of Terms

## Sensitivity (Lux)

Quantifies the camera's low-light performance. Measured in Lux using a lens aperture of f1.2, the value represents the minimum scene illumination required by the camera to produce a useable video output.

## DD (Direct Drive)

Dedicated connector and circuitry for Direct Drive lenses.

## BLC Window (Back Light Comp.)

User selectable areas for BLC control.

## AGC (Automatic Gain Control)

Automatically adjusts the camera's gain to compensate for poor light conditions.

## Flickerless Mode

Feature to prevent the strobing effect under certain lighting conditions/shutter speeds.

## Genlock

Allows multi-camera installations to be synchronised to an externally generated synchronisation signal.

## PWI Threshold

Sets the level at which the Peak White Inversion feature operates for white areas in the scene.

## Resolution (TV Lines)

Describes the ability of the camera to discriminate fine detail in a scene. The higher the number of TV Lines, the better the resolution of the camera.

## DD Level

Allows the lens drive level to be adjusted for DD type lenses.

## EI (Electronic Iris)

Feature to automatically adjust shutter duration to compensate for fluctuations in ambient light.

## White Balance

Feature to preserve accurate white rendition under different light source types.

## LL with Phase Adjust

Allows accurate synchronisation of multi-camera installations by locking the camera to the AC supply. The point on the AC cycle at which the camera locks is adjustable by  $\pm 120^\circ$

## S-Video Out

Provides a separated Y/C video signal.

## AI (Auto Iris)

Dedicated connector and reference signal for Auto Iris lenses.

## BLC (Backlight Compensation)

Automatically compensates for the silhouetting effect of a backlit subject.

## BLC (Backlight Compensation)

Improves grey/black discrimination at low light levels.

## Shutter

Analogous to the shutter in a standard 35mm film camera. Can be used to freeze fast moving subjects.

## Internal Lock

Locks the camera's frame rate to its internal oscillator.

## Peak White Inversion

Feature that allows excessively white areas in a scene to be rendered as black and therefore not adversely affect the camera's exposure system.

\* Note: These features may be slightly different for other manufacturers.

## Did You Know?

Did You Know Lux is the measurement of light and refers to levels of illumination in any given area. The amount of light in specific areas to be viewed should be given careful consideration when choosing the right cameras for installation. It is worth noting that whilst the table (right) gives indications of typical light levels it is recommended that a light meter is used to give accurate figures.

| Description                      | Lux    |
|----------------------------------|--------|
| British Summer Time              | 50,000 |
| Overcast Sky                     | 5,000  |
| Well Lit Office                  | 500    |
| Minimum for Easy Reading         | 300    |
| Passageway/Outside Working Light | 50     |
| Good Main Road Lighting          | 15     |
| Sunset                           | 10     |
| Typical Side                     | 5      |
| Minimum Security Risk Lighting   | 2      |
| Twilight                         | 1      |
| Clear Full Moon                  | 0.3    |
| Typical Moonlight/Cloudy Sky     | 0.01   |
| Typical Starlight                | 0.001  |
| Poor Starlight                   | 0.0001 |

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

# AIR2024-AHD/2.8/6 External AHD4 Weatherproof Bullet Camera



### Features:

- Analogue High Definition
- 2MP
- Advanced Infrared Technology
- 1/2.8" Sony Progressive Scan CMOS
- Four-in-one operation: Switchable between AHD, TVI, CVI and Analogue
- 2.8 / 6 mm Fixed-Lens
- Full HD 1080P
- 20 m IR Range
- IP66

### Other features

- Video Transmission over 300 m
- 2D/3D DNR, dWDR, ICR, BLC, ATW

The Concept Pro AIR2024-AHD/2.8/6 is a 1080p fixed-lens weatherproof AHD bullet camera with 20 m IR range which is suitable for shorter range applications. Taking advantage of Concept Pro's Advanced Infrared Technology, the camera offers exceptional image quality in the darkest of environments, automatically adjusting IR levels dependent on the type of scene being recorded.

### Advanced Infrared Technology

This CCTV camera utilises Concept Pro's Advanced Infrared Technology that adjusts the IR levels dependent on the proximity and movement of objects, delivering smooth and even illumination even in the most challenging of dark environments.

### Four-in-one solution

This CCTV camera offers two alarm inputs and one output allowing it to be integrated with intruder alarm systems.

### 360° Continuous Panning and 90° Tilt

Don't be tied down to any single platform. With Concept Pro 4-in-1 cameras, you have the freedom to install whichever CCTV platform you like. Whether you install AHD, TVI, CVI or traditional analogue systems.

### Order Codes:

**AIR2024AHD-2.8**

Analogue HD 1080P resolution Bullet camera 2.8 mm Fixed lens, min illumination 0 lux IR on, 12 v dc operation, includes wall bracket, IP66 rated, up to 20 metres IR illumination

**AIR2024AHD-6**

Analogue HD 1080P resolution Bullet camera 6 mm Fixed lens, min illumination 0 lux IR on, 12 v dc operation, includes wall bracket, IP66 rated, up to 20 metres IR illumination

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

### Technical Specifications:

| Model                   | AIR2024-AHD/2.8                        | AIR2024-AHD/6   |
|-------------------------|--|-----------------|
| Image Sensor            | 1/2.8" Sony CMOS                       |                 |
| Signal System           | PAL/NTSC                               |                 |
| Minimum Illumination    | 0.001Lux @ (F1.2,AGC ON),0 Lux with IR |                 |
| S/N Ratio               | ≥50dB                                  |                 |
| Day & Night             | ICR                                    |                 |
| Shutter Speed           | PAL:1/50-1/50000, NTSC:1/60-1/60000    |                 |
| Wide Dynamic Range      | dWDR                                   |                 |
| Digital Noise Reduction | 2D/3D                                  |                 |
| Lens                    | 2.8 mm Fixed Lens                      | 6 mm Fixed Lens |
| Field of vision         | 89°                                    | 60°             |
| IR LED                  | 2pcs                                   |                 |
| IR Range                | 20 m                                   |                 |
| IR Wavelength           | 850nm                                  |                 |
| Effective Resolution    | 1920x1080                              |                 |
| Frame                   | PAL:25fps ,NTSC:30fps                  |                 |
| White Balance           | Auto                                   |                 |
| Gain                    | Auto                                   |                 |
| Light Compensation      | Auto                                   |                 |
| Max Distance            | 75-5 300 m                             |                 |
| Output Interface        | AHD (TVI/CVBS optional)                |                 |
| Power Supply            | 12 VDC                                 |                 |
| Power Consumption       | 0.72 W (IR LED off) 3.72 W (IR LED on) |                 |
| Operating Temperature   | -10°C~+55°C                            |                 |
| Operating Humidity      | 0% - 85% RH                            |                 |
| Ingress Protection      | IP66                                   |                 |
| Approvals               | CE / FCC                               |                 |
| Material                | Aluminium Alloy                        |                 |
| Product Dimensions      | ømax 81 mm × 200 mm                    |                 |
| Product Weight          | 470 g                                  |                 |



|       | 1080p       | 720p        |
|-------|-------------|-------------|
| Coax  | Up to 300 m | Up to 500 m |
| CAT5e | Up to 200 m | Up to 350 m |
| CAT6  | Up to 220m  | Up to 385 m |

\*Approximate distances calculated using HD MasterBaluns. Actual transmission range will vary depending on type and quality of cable and baluns.



## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

# AIR3526-AHD External AHD4 Weatherproof Bullet Camera



### Features:

- Analogue High Definition
- 2MP
- Advanced Infrared Technology
- 1/2.8" Sony Progressive Scan CMOS
- Four-in-one operation: Switchable between AHD, TVI, CVI and Analogue
- 2.8 - 12 mm Varifocal Lens
- Full HD 1080P
- 35 m IR Range
- IP66

### Other features

- Video Transmission over 300 m
- 2D/3D DNR, dWDR, ICR, BLC, ATW

### Order Code:

AIR3526-AHD

Analogue HD 1080P resolution Bullet camera  
2.8-12 mm Varifocal lens,  
min illumination 0 lux IR on,  
12 v dc operation., includes  
wall bracket, IP66 rated, up  
to 35 metres IR illumination

The Concept Pro AIR3526-AHD is a 1080p 2.8 - 12 mm varifocal lens weatherproof AHD bullet camera with 35 m IR range which is suitable for short to medium range applications. Taking advantage of Concept Pro's Advanced Infrared Technology, the camera offers exceptional image quality in the darkest of environments, automatically adjusting IR levels dependent on the type of scene being recorded.

### Advanced Infrared Technology

This CCTV camera utilises Concept Pro's Advanced Infrared Technology that adjusts the IR levels dependent on the proximity and movement of objects, delivering smooth and even illumination even in the most challenging of dark environments.

### Four-in-one solution

Don't be tied down to any single platform. With Concept Pro 4-in-1 cameras, you have the freedom to install whichever CCTV platform you like. Whether you install AHD, TVI, CVI or traditional analogue systems.

| Camera | 1080p       | 720p        |
|--------|-------------|-------------|
| Coax   | Up to 300 m | Up to 500 m |
| CAT5e  | Up to 200 m | Up to 350 m |
| CAT6   | Up to 220 m | Up to 385 m |

\*Approximate distances calculated using HD MasterBaluns. Actual transmission range will vary depending on type and quality of cable and baluns.

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

### Technical Specifications:

|                         |  |
|-------------------------|--|
| Image Sensor            | 1/2.8" Sony CMOS                       |
| Signal System           | PAL/NTSC                               |
| Minimum Illumination    | 0.001Lux @ (F1.2,AGC ON),0 Lux with IR |
| S/N Ratio               | ≥50dB                                  |
| Day & Night             | ICR                                    |
| Shutter Speed           | PAL:1/50-1/50000, NTSC:1/60-1/60000    |
| Wide Dynamic Range      | dWDR                                   |
| Digital Noise Reduction | 2D/3D                                  |
| Lens                    | 2.8-12 mm Varifocal                    |
| Field of View           | 89° to 35°                             |
| IR LED                  | 4pcs                                   |
| IR Range                | 35 m                                   |
| IR Wavelength           | 850nm                                  |
| Effective Resolution    | 1920x1080                              |
| Frame                   | PAL:25fps ,NTSC:30fps                  |
| White Balance           | Auto                                   |
| Gain                    | Auto                                   |
| Light Compensation      | Auto                                   |
| Max Distance            | 75-5 300 m                             |
| Output Interface        | AHD (TVI/CVBS optional)                |
| Power Supply            | 12 VDC                                 |
| Power Consumption       | 0.84W (IR LED off) 5.64W (IR LED on)   |
| Operating Temperature   | -10°C~+55°C                            |
| Operating Humidity      | 0% - 85% RH                            |
| Ingress Protection      | IP66                                   |
| Approvals               | CE / FCC                               |
| Material                | Aluminium Alloy                        |
| Product Dimensions      | φmax 93 mm x 250 mm                    |
| Product Weight          | 680 g                                  |

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

# AIR4528-AHD2M-Z 2MP 4-in-1 Analogue Motorised External Large Bullet Camera



### Features:

- 4-in-1 (AHD/TVI/CVI/CVBS)
- 25FPS @ 2MP (1920x1080)
- 2.8–12mm Motorised Lens
- Up to 45m IR Illumination
- IP66-rated Housing
- DC12V/AC24V Power Input

### Other features

- Digital Wide Dynamic Range
- True Day & Night with ICR
- 3D-DNR, BLC

### Order Code:

**AIR4528LL-AHD2MZ** 2 MegaPixel 4-in-1 Analogue Motorised zoom lens 2.8-12mm, IP66 rated, Battleship grey, IR illumination up to 45m

The Concept Pro Lite AIR4528-AHD2M-Z is a capable 2-megapixel, external bullet camera with a motorised 2.8–12mm lens and extended infrared illumination range. With a 4-in-1 selectable analogue output, IP66-rated metal housing, DC12V/AC24V dual power inputs, and true day & night ICR, this camera is suitable for a wide variety of installation environments.

### True Day & Night ICR

This camera utilises a physical infrared cut filter to provide true colour images in daylight and automatically switch the high-powered IR LEDs on at night for clear black and white images.

### Four-in-one solution

Don't be tied down to any single platform. With Concept Pro 4-in-1 cameras, you have the freedom to install whichever CCTV platform you like. Whether you install AHD, TVI, CVI or traditional analogue systems.

|             | 5MP         | 2MP         | 720P        |
|-------------|-------------|-------------|-------------|
| Coax (RG59) | Up to 500 m | Up to 500 m | Up to 500 m |
| CAT5e       | Up to 200 m | Up to 305 m | Up to 305 m |
| CAT6        | Up to 220 m | Up to 305 m | Up to 305 m |

\*Approximate distances calculated using HD MasterBaluns. Actual transmission range will vary depending on type and quality of cable and baluns.

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

### Technical Specifications:

| Camera                 |   |
|------------------------|---|
| Image Sensor           | 1/2.8" Sony CMOS  |
| Video Output Type      | AHD/TVI/CVI/CVBS  |
| Signal System          | PAL/NTSC  |
| Minimum Illumination   | Colour: 0.01 lux @ F1.2 & AGC ON 0 lux with IR LED ON   |
| Electronic Shutter     | 1/50 – 1/50,000s  |
| S/N Ratio              | ≥50dB   |
| IR LEDs                | x6  |
| IR Illumination Range  | Max. 45m  |
| IR Control             | Auto  |
| Pivot Axis             | Pan: 0°-360°, Tilt: 0°-90°, Rotation: 0°-360°   |
| Lens                   |   |
| Lens Type              | Motorised   |
| Mount Type             | Built-in, Ø14   |
| Focal Length           | f=2.8-12mm  |
| Aperture               | F1.6  |
| Angle of View          | H: 100° - 35°   |
| Focus                  | Motorised   |
| Iris                   | Fixed   |
| Video                  |   |
| Resolution             | 2MP (1920x1080), 1MP (1280x720), SD (960x576)   |
| Frame Rate             | AHD: 25FPS @ 2MP, 25FPS @ 1MP<br>TVI: 25FPS @ 2MP, 25FPS @ 1MP<br>CVI: 25FPS @ 2MP, 25FPS @ 1MP<br>CVBS: 25FPS @ SD |
| Day/Night              | True Day & Night with ICR (Auto/Colour/B&W/Ext)   |
| Backlight Compensation | BLC/FLC/Globe/Center  |
| Wide Dynamic Range     | D-WDR   |
| White Balance          | Auto/Manual   |
| Gain Control           | Auto  |
| Noise Reduction        | 3D-DNR  |
| Motion Detection       | -   |
| Defog                  | -   |
| Image Setting          | Yes (Brightness, Contrast, Sharpness, Colour Gain)  |
| Image Adjustment       | -   |
| Privacy Masking        | -   |
| Sens-Up                | -   |
| Transmission Distance  | Max. 300m (1Vp-p 75Ω)   |

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

| Interface                       |                           |
|---------------------------------|---------------------------|
| Video Output                    | 4-in-1 BNC x1 (1Vp-p 75Ω) |
| Audio Interface                 | -                         |
| RS-485                          | -                         |
| Control Protocol                | N/A                       |
| Up the Coax (Coaxitron) Support | Yes                       |
| OSD Buttons                     | Yes OSD button            |
| General                         |                           |
| Power Supply                    | DC12V/AC24V               |
| Power Consumption               | Max 4.5W                  |
| Operating Temperature           | -10°C to +55°C            |
| Operating Humidity              | 0% - 85% RH               |
| Ingress Protection              | IP66                      |
| Impact Resistance               | -                         |
| Housing Materials               | Metal                     |
| RAL                             | RAL 7021 Black Grey       |
| Dimensions                      | Ø112mm × 334mm            |
| Net Weight                      | ≈1,650g                   |
| Gross Weight                    | ≈1,780g                   |
| Certifications                  |                           |
| Certifications                  | CE/FCC                    |

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

# AIR5027-AHD External AHD4 Weatherproof Bullet Camera



The Concept Pro AIR5027-AHD is a 1080p 5 - 50 mm varifocal lens weatherproof AHD bullet camera with 50 m IR range which is suitable for longer range applications. Taking advantage of Concept Pro's Advanced Infrared Technology, the camera offers exceptional image quality in the darkest of environments, automatically adjusting IR levels dependent on the type of scene being recorded.

### Advanced Infrared Technology

This CCTV camera utilises Concept Pro's Advanced Infrared Technology that adjusts the IR levels dependent on the proximity and movement of objects, delivering smooth and even illumination even in the most challenging of dark environments.

### Four-in-one solution

Don't be tied down to any single platform. With Concept Pro 4-in-1 cameras, you have the freedom to install whichever CCTV platform you like.

Whether you install AHD, TVI, CVI or traditional analogue systems.

### Features:

- Analogue High Definition
- 2MP
- Advanced Infrared Technology
- 1/2.8" Sony Progressive Scan CMOS
- Four-in-one operation: Switchable between AHD, TVI, CVI and Analogue
- 5 - 50 mm Varifocal Lens
- Full HD 1080P
- 50 m IR Range
- IP66
- Dual Voltage (12 V DC / 24 V AC)

### Other features

- Video Transmission over 300 m
- 2D/3D DNR, dWDR, ICR, BLC, ATW

### Order Code:

AIR5027-AHD

Analogue HD 1080P resolution Bullet camera 5-50 mm Varifocal lens, min illumination 0 lux IR on, 12v dc or 24 v ac operation., includes wall bracket, IP66 rated, up to 55 metres IR illumination

Camera

DVR

|       | 1080p       | 720p        |
|-------|-------------|-------------|
| Coax  | Up to 300 m | Up to 500 m |
| CAT5e | Up to 200 m | Up to 350 m |
| CAT6  | Up to 220 m | Up to 385 m |

\*Approximate distances calculated using HD MasterBaluns. Actual transmission range will vary depending on type and quality of cable and baluns.

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

### Technical Specifications:

|                         |   |
|-------------------------|---|
| Image Sensor            | 1/2.8" Sony CMOS                            |
| Signal System           | PAL/NTSC                                    |
| Minimum Illumination    | 0.001Lux @ (F1.2,AGC ON),0 Lux with IR      |
| S/N Ratio               | ≥50dB                                       |
| Day & Night             | ICR   |
| Shutter Speed           | PAL:1/50-1/50000, NTSC:1/60-1/60000         |
| Wide Dynamic Range      | dWDR  |
| Digital Noise Reduction | 2D/3D                                       |
| Lens                    | 5 - 50 mm Varifocal                         |
| Field of View           | 89° to 35°                                  |
| IR LED                  | 6pcs (can connect optional AIR-IR LED pods) |
| IR Range                | 50 m (80 m with AIR-IR pods)                |
| IR Wavelength           | 850nm                                       |
| Effective Resolution    | 1920 x 1080                                 |
| Frame                   | PAL:25fps ,NTSC:30fps                       |
| White Balance           | Auto  |
| Gain                    | Auto  |
| Light Compensation      | Auto  |
| Max Distance            | 75-5 300 m                                  |
| Output Interface        | AHD (TVI/CVBS optional)                     |
| Power Supply            | 12 VDC/24 VAC                               |
| Power Consumption       | 1.92 W (IR LED off), 6.00 W (IR LED on)     |
| Operating Temperature   | -10°C~+55°C                                 |
| Operating Humidity      | 0% - 85% RH                                 |
| Ingress Protection      | IP66  |
| Approvals               | CE / FCC                                    |
| Material                | Aluminium Alloy                             |
| Product Dimensions      | ømax 112 mm × 334 mm                        |
| Product Weight          | 1650 g                                      |

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

### Aspect 2MP AHD Varifocal Bullet Camera



#### Features:

- Bullet style housing
- 2MP
- 25FPS
- AHD / TVI / CVI / CVBS Output
- 2.8-12mm Varifocal Lens
- 35m Smart IR
- IP66
- Coaxitron "Up the Coax" protocol
- H.265+

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing & Area intrusion analytics available on AHD as standard. Available in 2MP, this Aspect Lite AHD Varifocal Bullet Camera is perfect for capturing HD footage.

Aspect Varifocal Lens Cameras allow configuration of the focal length to adjust the field of view. Starting from a wide field of view and with scope to alter to a much narrower, magnified view, varifocal lenses are suitable for coverage of large areas and viewing detail at a distance.

Aspect AHD allows you to control your camera through the coax and allowing for remote control of the camera through the recorder. With the ability to change AHD Camera Settings and Zoom through the recorder menu, the AHD range is easily configurable.

Complete with AHD, TVI, CVI and Analogue support, the Aspect Lite 2MP AHD Varifocal Bullet Camera is versatile enough to be used in legacy installs and can be used on existing cabling infrastructures.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

#### Order Codes:

L-BC-AHD2M-VF-1

2 MegaPixel bullet camera, AHD, 2.8-12mm Varifocal lens, Smart IR up to 35 metres, IP66 rated housing, 12v dc

S-BASE-AHD

Camera base for AHD Bullet cameras



Camera

DVR

|       | 1080p       | 720p        |
|-------|-------------|-------------|
| Coax  | Up to 300 m | Up to 500 m |
| CAT5e | Up to 200 m | Up to 350 m |
| CAT6  | Up to 220 m | Up to 385 m |

\*Approximate distances calculated using HD MasterBaluns. Actual transmission range will vary depending on type and quality of cable and baluns.



## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

### Technical Specifications:

| Camera                         |   |
|--------------------------------|---|
| Image Sensor                   | 1/2.9" SONY CMOS Sensor   |
| Signal System                  | PAL/NTSC  |
| Effective Pixels               | 1920(H) x 1080(V)   |
| Electronic Shutter             | AUTO / 1/50 (1/60) -1/50,000 sec  |
| Minimum Illumination           | 0.01Lux   |
| Video Frame Rate               | PAL/NTSC:25/30fps   |
| Video Output                   | AHD / TVI / CVI / CVBS  |
| DWDR                           | Yes   |
| Camera Features                |   |
| S/N Ratio                      | >41dB   |
| Noise Reduction                | 2D&3D DNR   |
| Day&Night                      | Colour / B&W / AUTO / EXT   |
| White Balance                  | Auto / Manual / Indoor / Outdoor  |
| OSD                            | English / Chinese / German / French / Italian / Spanish / Polish / Russian / Portuguese / Dutch / Turkish |
| AGC                            | Auto  |
| IR LED                         | 30pcs SMD LED   |
| IR Range                       | up to 35m   |
| Lens                           |   |
| Focal Length                   | 2.8-12mm Varifocal Lens   |
| Angle of View                  | H: 100°~32°<br>H: 55°~20°   |
| Lens Type                      | Fixed Iris  |
| Mount Type                     | Ø14   |
| General                        |   |
| IP Rating                      | IP66  |
| Power Supply                   | DC12V(+/-10%)   |
| Power Consumption              | <5W   |
| Working Temperature / Humidity | -20~+50°C RH95% MAX   |
| Dimensions (WxDxH)             | Ø67 x 210.8mm   |
| Weight                         | 720g  |

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

### Aspect 5MP AHD Zoom Lens Bullet Camera



#### Features:

- Bullet style housing
- 5MP
- 20FPS
- AHD / TVI / CVI / CVBS Output
- 2.8-12mm Motorized Lens
- 35m Smart IR
- IP66
- Coaxitron "Up the Coax" protocol
- H.265+

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing & Area intrusion analytics available on AHD as standard. Available in 5MP, this Aspect Professional AHD Motorised Zoom Lens Bullet Camera is perfect for capturing high-quality HD footage.

Aspect Motorised Lens Zoom Cameras enable users to adjust their level of zoom remotely through modification of the camera's focal length. This eliminates the need for lengthy zoom adjustments and reduces on-site callouts, ensuring motorised zoom minimises disruption for the installer and end user alike.

Aspect AHD allows you to control your camera through the coax and allowing for remote control of the camera through the recorder. With the ability to change AHD Camera Settings and Zoom through the recorder menu, the AHD range is easily configurable.

Complete with AHD, TVI, CVI and Analogue support, the Aspect Lite 5MP AHD Varifocal Bullet Camera is versatile enough to be used in legacy installs and can be used on existing cabling infrastructures.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

#### Order Codes:

**P-BC-AHD5M-Z-1**

5 MegaPixel bullet camera, AHD, 2.8-12mm Motorised lens , Smart IR up to 35 metres, IP66 rated housing, 12v dc

**S-BASE-AHD**

Camera base for AHD Bullet cameras



Camera

DVR

|       | 1080p       | 720p        |
|-------|-------------|-------------|
| Coax  | Up to 300 m | Up to 500 m |
| CAT5e | Up to 200 m | Up to 350 m |
| CAT6  | Up to 220 m | Up to 385 m |

\*Approximate distances calculated using HD MasterBaluns. Actual transmission range will vary depending on type and quality of cable and baluns.

## Analogue HD Cameras - Concept Pro AHD Bullet Cameras

### Technical Specifications:

| Camera                         |                                |
|--------------------------------|--------------------------------|
| Image Sensor                   | 1/2.7" CMOS Sensor             |
| Signal System                  | PAL/NTSC                       |
| Effective Pixels               | 2592(H) x 1944(V)              |
| Electronic Shutter             | AUTO/ 1/50 (1/60) -1/50,000sec |
| Minimum Illumination           | 0.01Lux                        |
| Video Frame Rate               | PAL/NTSC:25/30fps              |
| Video Output                   | AHD, TVI: 5MP/4MP CVI: 4MP     |
| Camera Features                |                                |
| S/N Ratio                      | >41dB                          |
| Noise Reduction                | 2D&3D DNR                      |
| Day&Night                      | Colour / B&W / AUTO / EXT      |
| White Balance                  | Auto / Manual                  |
| AGC                            | Auto                           |
| IR LED                         | 30pcs SMD LED                  |
| IR Range                       | up to 35m                      |
| Lens                           |                                |
| Focal Length                   | 2.8-12mm Motorised Lens        |
| Angle of View                  | H: 100°<br>V: 32°              |
| Lens Type                      | Fixed Iris                     |
| Mount Type                     | M14                            |
| General                        |                                |
| IP Rating                      | IP66                           |
| Power Supply                   | DC12V(+/-10%)                  |
| Housing Material               | Metal                          |
| Power Supply                   | DC12V (+/-10%)                 |
| Power Consumption              | <5W                            |
| Working Temperature / Humidity | -20~+50°C RH95% MAX            |
| Dimensions (WxDxH)             | Ø67 X 210.8mm                  |
| Weight                         | 720g                           |

## Analogue HD Cameras - Concept Pro AHD Mini Domes

# CVP9324DNIR-AHD External AHD Dome Camera



The CVP9324DNIR-AHD is an external true day-night fixed dome camera with Infra Red. It has 1080p resolution, a 2.8-12 mm Varifocal lens.

### What is AHD?

AHD is an analogue video standard used in CCTV that can transmit 1080p high definition video using a traditional coax cable. It is the nearest HD equivalent to traditional analogue systems, meaning there is almost no additional knowledge needed for installation.

### Technical Specifications:

|                             |                                   |
|-----------------------------|-----------------------------------|
| Sensor                      | 1/3 Inch Sony CMOS                |
| Sensor Resolution           | 2MP                               |
| Signal System               | PAL                               |
| Scanning System             | Progressive                       |
| SYNC. Mode                  | Internal                          |
| Frame Rate                  | 25FPS                             |
| LED Count/Type              | 12 PCS IR 850nm                   |
| IR Effective Distance       | 15 m                              |
| Effective Resolution        | 1920 (H) x1080 (V)                |
| Min. Illumination (Led Off) | 0.001Lux @ (F1.2,AGC ON)          |
| Min. Illumination (Led On)  | 0 Lux                             |
| Lens                        | Manual 2.8-12 mm Varifocal        |
| Day & Night                 | True Colour / Mono ICR            |
| Digital WDR                 | Off/On(Level 0-8)/ Auto           |
| S/N Ratio                   | ≥50dB                             |
| Electronic Shutter          | 1/50- -1/50,000s                  |
| White Balance               | ATW/AWC-SET/Indoor/Outdoor/Manual |

### Features:

- Analogue High Definition
- 1/3" Sony Progressive Scan CMOS
- 2.8-12 mm Varifocal lens
- Full HD 1080P
- True Day/Night ICR
- IR LED for Night Vision
- IR Range 15 m

### Other features

- Standard 12 VDC Operation
- Video Transmission over 300 m
- BNC Video Output
- 3D DNR, dWDR, ICR, BLC, HLC, ATW
- IP66

### Order Code:

|                        |  |
|------------------------|--|
| <b>CVP9324DNIR-AHD</b> | Mini Dome, Varifocal lens 2.8-12 mm, 1080P resolution, True Day/night, IP66 rated, min. illumination 0.0 lux (IR on), IR coverage 15 metres, 12 v dc |
|------------------------|--|

|                         |                               |
|-------------------------|-------------------------------|
| Gain Level              | 0- -15                        |
| AE MODES                | BLC/HLC/Off                   |
| Digital Noise Reduction | 2D/3D                         |
| Privacy Masking         | No                            |
| Motion Detection        | No                            |
| Video Output            | 1.0Vpp, 75 OHM BNC            |
| Transmission Range      | >300 m via 75-5 coaxial cable |
| Supply Voltage          | 12 VDC±10%                    |
| Power consumption (max) | 4.5 W                         |
| Operating Temperature   | -10°C-+55°C                   |
| Operating Humidity      | 0% - 85% RH)                  |
| Dimensions              | 149 mm (DIA.) X 105 mm (H)    |
| Weight                  | 950 g                         |
| Certifications          | IP66 / CE / FCC               |

## Analogue HD Cameras - Concept Pro AHD Mini Domes

# Aspect Lite 2MP AHD Vandal Resistant Mini Dome



### Features:

- 2MP
- 25FPS
- AHD /TVI / CVI / CVBS Output
- 2.8-12mm Motorized Lens
- 30m Smart IR
- IP66
- IK10
- Coaxitron
- H.265+

### Order Codes:

L-VD-AHD2M-VF-2

22 MegaPixel Bullet camera, AHD, 2.8-12mm Varifocal lens, Smart IR up to 35 metres, IP66 rated housing, 12v dc

WM-BASE-1

Wall mount for AHD and IP Vandal resistant mini domes

CVP-POLE-1

Pole mount for AHD and IP Vandal resistant mini domes (Must be used in conjunction with Wall mount)



The Aspect range offers the best in video analytics at an affordable price. With Line Crossing & Area intrusion analytics available on AHD as standard. Available in 2MP, this Aspect Lite AHD Motorised Zoom Lens Dome Camera is perfect for capturing HD footage.

Aspect Motorised Lens Zoom Cameras enable users to adjust their level of zoom remotely through modification of the camera's focal length. This eliminates the need for lengthy zoom adjustments and reduces on-site callouts, ensuring motorised zoom minimises disruption for the installer and end user alike.

Aspect AHD allows you to control your camera through the coax and allowing for remote control of the camera through the recorder. With the ability to change AHD Camera Settings and Zoom through the recorder menu, the AHD range is easily configurable.

Complete with AHD, TVI, CVI and Analogue support, the Aspect Lite 2MP AHD Vandal Resistant Mini Dome is versatile enough to be used in legacy installs and can be used on existing cabling infrastructures.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

## Analogue HD Cameras - Concept Pro AHD Mini Domes

### Technical Specifications:

| Camera                         |   |
|--------------------------------|---|
| Image Sensor                   | 1/2.9" SONY CMOS Sensor   |
| Signal System                  | PAL/NTSC  |
| Effective Pixels               | 1920(H) x 1080(V)   |
| Electronic Shutter             | AUTO / 1/50 (1/60) - 1/50,000sec  |
| Minimum Illumination           | 0.01Lux   |
| Video Frame Rate               | PAL/NTSC:25/30fps   |
| Video Output                   | AHD / TVI / CVI / CVBS  |
| DWDR                           | Yes   |
| Camera Features                |   |
| S/N Ratio                      | >41dB   |
| Noise Reduction                | 2D&3D DNR   |
| Day&Night                      | Colour / B&W / AUTO / EXT   |
| White Balance                  | Auto / Manual / Indoor / Outdoor  |
| OSD                            | English / Chinese / German / French / Italian / Spanish / Polish / Russian / Portuguese / Dutch / Turkish |
| AGC                            | Auto  |
| IR LED                         | 30pcs SMD LED   |
| IR Range                       | up to 30m   |
| Lens                           |   |
| Focal Length                   | 2.8-12mm Motorised Lens   |
| Angle of View                  | H: 100°~32°<br>V: 55°~20°   |
| Lens Type                      | Fixed Iris  |
| Mount Type                     | Ø14   |
| General                        |   |
| IP Rating                      | IP66  |
| IK Rating                      | IK10  |
| Power Supply                   | DC12V (+/-10%)  |
| Power Consumption              | <5W   |
| Working Temperature / Humidity | -20~+50°C RH95% MAX   |
| Dimensions (WxDxH)             | Ø141 x 120mm  |
| Weight                         | 1070g   |

## Analogue HD Cameras - Concept Pro AHD Mini Domes

### Aspect Lite 5MP AHD Vandal Resistant Mini Dome



#### Features:

- Vandal Resistant Mini dome housing
- 5MP
- 25FPS
- AHD /TVI / CVI / CVBS Output
- 2.8-12mm Motorized Lens
- 30m Smart IR
- IP66
- Coaxitron "Up the Coax" protocol
- H.265+

#### Order Codes:

P-VD-AHD5M-Z-1

5 MegaPixel Vandal Resistant mini dome camera, AHD, 2.8-12mm Motorised lens, Smart IR up to 30 metres, IP66 rated housing, 12v dc

WM-BASE-1

Wall mount for AHD and IP Vandal resistant mini domes

CVP-POLE-1

Pole mount for AHD and IP Vandal resistant mini domes (Must be used in conjunction with Wall mount)

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing & Area intrusion analytics available on AHD as standard. Available in 5MP, this Aspect Professional AHD Motorised Dome Camera is perfect for capturing high-quality HD footage.

Motorised Zoom on the Aspect Professional 5MP AHD Dome Camera enabled users to adjust their level of zoom remote eliminating the need for lengthy zoom adjustments and on-site callouts, motorised zoom makes life easier for the installer and end user alike.

Aspect AHD allows you to control your camera through the coax and allowing for remote control of the camera through the recorder. With the ability to change AHD Camera Settings and Zoom through the recorder menu, the AHD range is easily configurable.

Complete with AHD, TVI, CVI and Analogue support, the Aspect Professional 5MP AHD Motorised Zoom Lens Dome Camera is versatile enough to be used in legacy installs and can be used on existing cabling infrastructures.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.



## Analogue HD Cameras - Concept Pro AHD Mini Domes

### Technical Specifications:

| Camera                         |                                  |
|--------------------------------|----------------------------------|
| Image Sensor                   | 1/2.7" CMOS Sensor               |
| Signal System                  | PAL/NTSC                         |
| Effective Pixels               | 2592(H) x 1944(V)                |
| Electronic Shutter             | AUTO / 1/50 (1/60)-1/50,000sec   |
| Minimum Illumination           | 0.01Lux                          |
| Video Frame Rate               | PAL/NTSC:25/30fps                |
| Video Output                   | AHD / TVI / CVI / CVBS           |
| DWDR                           | Yes                              |
| Camera Features                |                                  |
| S/N Ratio                      | >41dB                            |
| Noise Reduction                | 2D&3D DNR                        |
| Day&Night                      | Colour / B&W / AUTO / EXT        |
| White Balance                  | Auto / Manual / Indoor / Outdoor |
| OSD                            | English default                  |
| AGC                            | Auto                             |
| IR LED                         | 30pcs SMD LED                    |
| IR Range                       | up to 30m                        |
| Lens                           |                                  |
| Focal Length                   | 2.8-12mm Motorised Lens          |
| Angle of View                  | H: 100°<br>V: 32°                |
| Lens Type                      | Fixed Iris                       |
| Mount Type                     | Ø14                              |
| General                        |                                  |
| IP Rating                      | IP66                             |
| Power Supply                   | DC12V (+/-10%)                   |
| Power Consumption              | <5W                              |
| Working Temperature / Humidity | -20~+50°C RH95% MAX              |
| Dimensions (W×D×H)             | Ø141 x 120mm                     |
| Weight                         | 1070g                            |



## Analogue HD Cameras - Concept Pro AHD Turret Mini Domes

### Aspect Lite 2MP AHD Varifocal Turret Dome



#### Features:

- Turret style housing
- 2MP
- 25FPS
- AHD / TVI / CVI / CVBS Output
- 2.8-12mm Varifocal Lens
- 30m Smart IR
- IP66
- Coaxitron "Up the Coax" protocol
- H.265+

#### Order Codes:

L-TU-AHD2M-VF-1

2 MegaPixel Turret camera, AHD, 2.8-12mm Varifocal lens, Smart IR up to 30 metres, IP66 rated housing, 12v dc

WM-BASE-1

Wall mount for AHD and IP Vandal resistant mini domes

CVP-POLE-1

Pole mount for AHD and IP Vandal resistant mini domes (Must be used in conjunction with Wall mount)

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing & Area intrusion analytics available on AHD as standard. Available in 2MP, this Aspect Lite AHD Varifocal Turret Camera is perfect for capturing HD footage.

Aspect Varifocal Lens Cameras allow configuration of the focal length to adjust the field of view. Starting from a wide field of view and with scope to alter to a much narrower, magnified view, varifocal lenses are suitable for coverage of large areas and viewing detail at a distance.

Aspect AHD allows you to control your camera through the coax and allowing for remote control of the camera through the recorder. With the ability to change AHD Camera Settings and Zoom through the recorder menu, the AHD range is easily configurable.

Complete with AHD, TVI, CVI and Analogue support, the Aspect Lite 2MP AHD Varifocal Turret Dome is versatile enough to be used in legacy installs and can be used on existing cabling infrastructures.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.



## Analogue HD Cameras - Concept Pro AHD Turret Mini Domes

### Technical Specifications:

| Camera                         |   |
|--------------------------------|---|
| Image Sensor                   | 1/2.9" SONY CMOS Sensor   |
| Signal System                  | PAL/NTSC  |
| Effective Pixels               | 1920(H) x 1080(V)   |
| Electronic Shutter             | AUTO / 1/50 (1/60) - 1/50,000sec  |
| Minimum Illumination           | 0.01Lux   |
| Video Frame Rate               | PAL/NTSC:25/30fps   |
| Video Output                   | AHD, TVI: 5MP/4MP CVI: 4MP  |
| DWDR                           | Yes   |
| Camera Features                |   |
| S/N Ratio                      | >41dB   |
| Noise Reduction                | 2D&3D DNR   |
| Day&Night                      | Colour / B&W / AUTO / EXT   |
| White Balance                  | Auto / Manual / Indoor / Outdoor  |
| OSD                            | English / Chinese / German / French / Italian / Spanish / Polish / Russian / Portuguese / Dutch / Turkish / Korean / Japanese / Hebrew / Arabic |
| AGC                            | 14 ( 0~15 )   |
| IR LED                         | 24pcs SMD LED   |
| IR Range                       | up to 30m   |
| Lens                           |   |
| Focal Length                   | 2.8-12mm Motorised Lens   |
| Angle of View                  | H: 100°~32°<br>V: 55°~20°   |
| Lens Type                      | Fixed Iris  |
| Mount Type                     | Ø14   |
| General                        |   |
| IP Rating                      | IP66  |
| Power Supply                   | DC12V (+/-10%)  |
| Power Consumption              | IR OFF:72mA / IR ON:390mA   |
| Working Temperature / Humidity | -20~+50°C RH95% MAX   |
| Dimensions (WxDxH)             | Ø140 x 105(H)mm   |
| Weight                         | 690g  |

## Analogue HD Cameras - Concept Pro AHD Turret Mini Domes

### Aspect Lite 5MP AHD Varifocal Turret Dome



#### Features:

- Turret style housing
- 5MP
- 20FPS
- AHD /TVI / CVI / CVBS Output
- 2.8-12mm Varifocal Lens
- 30m Smart IR
- IP66
- Coaxitron "Up the Coax" protocol
- H.265+

#### Order Codes:

P-TU-AHD5M-VF-1

5 MegaPixel Turret camera, AHD, 2.8-12mm Varifocal lens, Smart IR up to 30 metres, IP66 rated housing, 12v dcWall mount for AHD and IP Vandal resistant mini domes

WM-BASE-1

CVP-POLE-1

Pole mount for AHD and IP Vandal resistant mini domes (Must be used in conjunction with Wall mount)



The Aspect range offers the best in video analytics at an affordable price. With Line Crossing & Area intrusion analytics available on AHD as standard. Available in 2MP, this Aspect Lite AHD Varifocal Turret Camera is perfect for capturing HD footage.

Aspect Varifocal Lens Cameras allow configuration of the focal length to adjust the field of view. Starting from a wide field of view and with scope to alter to a much narrower, magnified view, varifocal lenses are suitable for coverage of large areas and viewing detail at a distance.

Aspect AHD allows you to control your camera through the coax and allowing for remote control of the camera through the recorder. With the ability to change AHD Camera Settings and Zoom through the recorder menu, the AHD range is easily configurable.

Complete with AHD, TVI, CVI and Analogue support, the Aspect Lite 5MP AHD Varifocal Turret Dome is versatile enough to be used in legacy installs and can be used on existing cabling infrastructures.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

## Analogue HD Cameras - Concept Pro AHD Turret Mini Domes

### Technical Specifications:

| Camera                         |                            |
|--------------------------------|----------------------------|
| Image Sensor                   | 1/2.5" CMOS Sensor         |
| Signal System                  | PAL/NTSC                   |
| Effective Pixels               | 2592(H) x 1944(V)          |
| Electronic Shutter             | AUTO                       |
| Minimum Illumination           | 0.2Lux                     |
| Video Output                   | AHD, TVI: 5MP/4MP CVI: 4MP |
| Camera Features                |                            |
| S/N Ratio                      | >50dB                      |
| Noise Reduction                | 2D DNR                     |
| Day&Night                      | Colour / B&W / AUTO / EXT  |
| White Balance                  | Auto / Manual              |
| AGC                            | Auto                       |
| IR LED                         | 24pcs SMD LED              |
| IR Range                       | up to 30m                  |
| Lens                           |                            |
| Focal Length                   | 2.8-12mm Motorised Lens    |
| Angle of View                  | H: 103°~32°<br>H: 74°~25°  |
| Lens Type                      | Fixed Iris                 |
| Mount Type                     | Ø12                        |
| General                        |                            |
| IP Rating                      | IP66                       |
| Housing Material               | Metal                      |
| Power Supply                   | DC12V (+/-10%)             |
| Power Consumption              | <5W                        |
| Working Temperature / Humidity | -40~+60°C RH95% MAX        |
| Dimensions (WxDxH)             | Ø140 x 105(H)mm            |
| Weight                         | 690g                       |

## Analogue HD Cameras - Concept Pro AHD Eyeball Mini Domes

### DSIRHRV-AHD Varifocal Eyeball Style Camera



#### Features:

- All in One analogue HD Solution
- 1/2.8" Sony Progressive Scan CMOS sensor
- Up to 30m IR range
- 2.8-12mm Varifocal Lens
- suitable for external use
- IP66
- Standard 12 VDC Operation

This True Day/night eyeball style camera features a 2.8 - 12 mm varifocal lens which covers a horizontal field of view from 25 degrees to 86 degrees.

It has built in Infra Red illumination up to 30 metres allowing operation in low or zero light conditions, (monochrome only). It has a 2 MegaPixel CMOS Sensor which can provide a Full HD (1920H x 1080V pixels) resolution image.

It can operate as an Analogue Hd, TVI / CVI or CVBS format camera.

The power requirement is 12 v dc , with a supply current of 550 mA. It can operate at temperatures from -10°C to +50°C.

It features a 3 axis gimble for precise adjustment of the viewing angles. It is rated IP66 suitable for external use.

#### Order Code:

**DSIRHRV-AHD** 2.8 -12mm Varifocal Eyeball Style Camera

**DSIR-BASE** Mounting base for DSIRHRV-AHD camera

**DSIRHRV-AHD-G** 2.8 -12mm Varifocal Eyeball Style Camera in Battleship Grey housing.

**DSIR-BASE-G** Mounting base for DSIRHRV-AHD-G camera (Battleship Grey).

#### Technical Specifications:

|        |                       |   |
|--------|-----------------------|---|
| Camera | Lens                  | 2.8-12 mm Varifocal Lens  |
|        | Angle of View         | 86°Hx70°V (2.8 mm) to 25°Hx19°V (12 mm)                               |
|        | Angle Adjustment      | Rotation 0 ~ 360°, Azimuth 0 ~ 360°, Alt. 0 ~ -90° (Horizontal Mount) |
|        | Sensor                | 1/2.8" Progressive Scan CMOS  |
|        | Sensor Resolution     | 2MP   |
| Video  | Effective Resolution  | 1920H x 1080V   |
|        | Horizontal Resolution | 1080P / 960H  |
|        | Sync                  | Internal  |
|        | Video Systems         | AHD/TVI/CVI/CVBS  |
|        | Video Output          | 1.0Vpp, 75 OHM BNC  |

## Analogue HD Cameras - Concept Pro AHD Eyeball Mini Domes

|         |                          |   |
|---------|--------------------------|---|
| Image   | S/N Ratio                | ≥50dB (AGC off)                           |
|         | AE Mode                  | Globe/BLC                                 |
|         | Image Enhancements       | Contrast, Sharpness, Colour Gain          |
|         | WB                       | ATW/MWB                                   |
|         | 2D-DNR                   | 10 Levels                                 |
|         | WDR                      | OFF/ON                                    |
|         | AGC                      | YES                                       |
|         | Gamma                    | 0.45                                      |
| IR      | Min Illumination (no IR) | 0.05 Lux/F1.2                             |
|         | Min Illumination (IR on) | 0 Lux                                     |
|         | Day/Night                | True D/N with ICR (Colour / Mono / Smart) |
|         | IR Status                | CDS Auto Control                          |
|         | IR Range                 | up to 30 m                                |
|         | LED Count                | 36 IR                                     |
| Feature | OSD Menu                 | YES, with Inline Joystick Controller      |
|         | Language                 | English, Chinese                          |
|         | Dimensions               | Ø119 mm x H100 mm                         |
|         | Weight                   | 750 g                                     |
|         | Water Resistance         | IP66                                      |
|         | Impact Resistance        | N/A                                       |
|         | Supply Voltage           | 12 VDC +/-10%                             |
|         | Supply Current (max)     | 550 mA                                    |
|         | Storage Temperature      | -30°C to +60°C                            |
|         | Operating Temperature    | -10°C to +50°C                            |
|         | Coaxitron                | Yes                                       |

## Analogue HD Cameras - Concept Pro AHD Eyeball Mini Domes

# CVP9328IR-AHD-G/CVP9328IR-AHD-W

## External AHD Eyeball Camera



### Features:

- Analogue High Definition
- External - Vandal Resistant
- 2MP
- Advanced Infrared Technology
- 1/3" Sony Progressive Scan CMOS
- 2.8-12 mm Varifocal lens
- Full HD 1080P
- True Day/Night ICR
- IR LED for Night Vision
- 15 m IR Range
- IP66
- Dual Voltage

The Concept Pro TYCO:CVP9328IR-AHD is a 1080P 2.8-12 mm varifocal vandal-resistant eyeball camera with 15 m IR range. The camera includes an analogue service video output for ease of installation and utilises Advanced Infrared Technology to deliver exceptional night time footage, automatically adjusting IR levels dependent on the type of scene being recorded.

### Vandal Resistant

Built in a robust IP66 rated metal casing, the camera is designed to withstand physical attacks.

### Advanced Infrared Technology

This CCTV camera utilises Concept Pro's Advanced Infrared Technology that adjusts the IR levels dependent on the proximity and movement of objects, delivering smooth and even illumination even in the most challenging of dark environments.

### Technical Specifications:

|                             |                                   |                         |                                  |
|-----------------------------|-----------------------------------|-------------------------|----------------------------------|
| Sensor                      | 1/3 Inch Sony Cmos                | Digital Noise Reduction | 2D/3D                            |
| Sensor Resolution           | 2Mp                               | Privacy Masking         | No                               |
| Signal System               | Pal                               | Motion Detection        | No                               |
| Scanning System             | Progressive                       | Video Output            | 1.0Vpp, 75 ohms BNC              |
| Sync. Mode                  | Internal                          | Transmission Range      | >300 m via 75 ohms coaxial cable |
| Frame Rate                  | 25Fps                             | Supply Voltage          | 12 VDC / 24 VAC                  |
| Led Count/Type              | 15 Pcs Ir 850 Nm                  | Power Consumption       | 4.5 W (Max)                      |
| IR Effective Distance       | 15 m                              | Operating Temperature   | Min -10° Max +55°                |
| Effective Resolution        | 1920 (H) X 1080 (V)               | Operating Humidity      | 0% - 85% RH                      |
| Min. Illumination (Led Off) | 0.001Lux @ (F1.2,Agc On)          | Dimensions              | Ø1 20 mm x H 106 mm              |
| Min. Illumination (Led On)  | 0 Lux                             | Weight                  | 750 g                            |
| Lens                        | Manual 2.8-12 Mm Varifocal        | Ingress Protection      | IP66                             |
| Day & Night                 | True Colour/Mono Icr              | Certifications          | CE / FCC                         |
| Digital WDR                 | Off/On(Level 0-8)/Auto            |                         |                                  |
| S/N Ratio                   | ≥50dB                             |                         |                                  |
| electronic Shutter          | 1/50-1/50,000s                    |                         |                                  |
| White Balance               | ATW/AWC-SET/Indoor/Outdoor/MANUAL |                         |                                  |
| Gain                        | Level 0-15                        |                         |                                  |
| AE Modes                    | BLC/HLC/OFF                       |                         |                                  |

## Analogue HD Cameras - Concept Pro AHD Eyeball Mini Domes

### Order Code:

|                        |   |                   |  |
|------------------------|---|-------------------|--|
| <b>CVP9328IR-AHD-G</b> | Analogue HD eyeball mindome, IP66 rated, 2.8-12 mm varifocal lens, Vandal resistant, 2 MegaPixel 1080p, True Day/night, IR illumination up to 15 metres, Dual voltage 12 v dc /24 v ac, Battleship grey housing | <b>CVP-BASE-G</b> | Base for CVP9328IR-AHD-G eyeball mindome battleship grey |
| <b>CVP9328IR-AHD-W</b> | Analogue HD eyeball mindome, IP66 rated, 2.8-12 mm varifocal lens, Vandal resistant, 2 MegaPixel 1080p, True Day/night, IR illumination up to 15 metres, Dual voltage 12 v dc / 24 v ac, white housing          | <b>CVP-BASE-W</b> | Base for CVP9328IR-AHD-W eyeball mindome white           |

## CVP-BASE-R Round Deep Stand-Off Bases



### Order Codes:

|                   |  |
|-------------------|--|
| <b>CVP-BASE-G</b> | Base for CVP9328IR-AHD-G eyeball mindome battleship grey |
| <b>CVP-BASE-W</b> | Base for CVP9328IR-AHD-W eyeball mindome white           |

### Compatible Cameras

|   |                             |
|---|-----------------------------|
| <b>CVP9328IR-AHD-G</b>  | Analogue HD eyeball mindome |
| <b>CVP9328IR-AHD-W</b>  | Analogue HD eyeball mindome |
| <b>CVP9314DNIR-AHD</b>  | Concept Pro VR IR Dome AHD  |
| <b>CVP9328DNIR-IP</b><br>(n.b. there is a colour variation between the base and this mindome) | Concept Pro VR Dome IR ARC  |



## IP Cameras - Illustra Essentials Bullet Cameras

### Essentials 2MP Fixed Focus IP Bullet Camera



#### Features:

- 2MP (1080p) resolution for HD quality images
- Manage bandwidth resources with H.264 and H.265 dualstream encoding
- Up to 30 frames per second for seamless video streaming
- 2.8mm fixed focus lens
- IR Illuminators deliver clear video when viewing dark scenes
- IP67 environmental rating
- True Day/Night functionality for low light conditions
- WDR to simultaneously view high-contrasting areas

The Illustra Essentials Gen4 Varifocal Bullet camera offers resolutions up to 1080p with IR illumination to manage low light scenes. The affordable cameras capture video in a variety of lighting conditions with features such as True Day/Night and Wide Dynamic Range to fulfill security operators' expectations, all while maintaining a lower price point.

The camera includes the latest compression technologies by supporting both H.265 and H.264 codecs resulting in reduced bandwidth and storage requirements. To aid ease of setup all Essentials Gen4 models support one-touch auto-focus.

Rated IP67 for an additional degree of environmental protection, this camera exceeds previous generations of Illustra Essentials cameras.

#### Record Video with Low Light Clarity

Poor low-light performance by megapixel cameras hampers some of the most important tasks security professionals need to perform. Cameras that fail in low light clarity negatively impact both the necessary functions of security and cost of ownership.

#### Balance Images with Wide Dynamic Range

The difference in extreme lighting within a scene is known as dynamic range. Cameras with the Wide Dynamic Range functionality have special software that allows them to balance foreground and background lighting for one clear image. This makes them ideal for recording areas like store entrances where the contrast between the sunshine outside and the dim lighting inside can be extremely difficult to record.

#### Use cases

- Good for general video monitoring at an entry level price point for small businesses.
- With features such as 120dB true WDR and 3D noise reduction, contrasting lighting conditions are not a challenge for these cameras; for instance, monitoring receptions, shop windows, external entrance doors etc.
- All models are suitable for indoor or outdoor usage and conform to JCI's strict cyber protection standards and are NDAA compliant

#### Compatibility

These cameras are supported on ExacqVision and Victor/VideoEdge using the Illustra API. They also provide fully compliant Onvif support through the Profiles S/G/Q

#### Order Codes:

IES02-B10-BI04

Illustra Essentials 2MP Bullet, 2.8mm, Factory Focused, Outdoor, Vandal, White, TDN w/IR

## IP Cameras - Illustra Essentials Bullet Cameras

|  | <b>2MP</b>   |
|--|--|
| Resolution & Aspect Ratio                        | 1920 x 1080 (1080p) 16:9   |
| Max Frame Rate                                   | 30fps  |
| Video Compression                                | H.264, H.265, MJPEG  |
| Video Streams                                    | Dual Stream with both streams at a maximum of 1080p @ 30ips  |
| Imager   | 1/2.8" Sony CMOS   |
| S/N Ratio  | More than 50dB   |
| Image Orientation Settings                       | Off, flip, mirror, both  |
| Lens Type  | Fixed 2.8mm focal length   |
| Focus Control                                    | Factory Focused  |
| Aperture   | F/1.8  |
| Focal Length                                     | 2.8mm  |
| Shutter Speed                                    | 1/2~1/10,000s (Manual:default NTSC=1/30s, PAL=1/25s) / (Shutter-priority:default NTSC=1/60s, PAL=1/50s)  |
| Minimum Illumination<br>Colour<br>B/W<br>With IR | 0.08 Lux (50IRE)   0.03 Lux (30IRE)<br>0.05 Lux (50IRE)   0.02 Lux (30IRE)<br>0.0 Lux  |
| Day/Night  | True Day/Night with ICR  |
| IR LEDS  | Yes  |
| IR Distance                                      | 30m  |
| Noise Reduction                                  | 3D   |
| Wide Dynamic Range                               | True WDR 120dB   |
| ONVIF-Compliant                                  | Profile S/G/Q  |
| Motion Detection Zones                           | 3  |
| Blur Detection Zones                             | Yes  |
| Privacy Zones                                    | 8  |
| Image Rotation                                   | Corridor   |
| Analog Video Output                              | No   |
| Audio  | No   |
| No. Simultaneous Users                           | 5  |
| <b>Network</b>                                   |  |
| Ethernet Interface                               | IEEE 802.3, 10/100 Base-T/TX, auto sensing, 1 x RJ45   |
| Supported Protocols                              | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, Unicast, NTP, SMTP, WSSecurity, IEEE 802.1x, PEAP, SSH, HTTPS, SSL, SOAP, WSAddressing, SNMP, UPnP, RTSP, LLDP |
| <b>Configuration Management</b>                  |  |
| Web Browser                                      | IE 11 or above, Firefox, Chrome, Safari, Microsoft Edge  |
| Security   | Enhanced Security  |

## IP Cameras - Illustra Essentials Bullet Cameras

| Onboard Storage       |   |
|-----------------------|---|
| Card Support          | SDXC up to 256GB  |
| Pre-Alarm Recording   | 1-10 sec  |
| Recording Format      | AVI   |
| Recording Trigger     | Blur Detection, Motion Detection  |
| VideoEdge TrickleStor | No  |
| Electrical            |   |
| Power Input           | DC12V; PoE IEEE 802.3af Class 3   |
| Maximum Power Draw    | 9.9W  |
| General               |   |
| Dimensions (HxWxH)    | 77mm x 84mm x 176mm   |
| Weight                | 0.58kg  |
| Housing Colour        | White RAL 9003  |
| Operating Temperature | Cold Start Temperature: -20°C to 60°C<br>Operating Temperature: -30°C to 60°C |
| Storage Temperature   | -40°C to 60°C   |
| Relative Humidity     | 10% to 90% (non-condensing)   |
| Vandal Resistant      | N/A   |
| Outdoor Rating        | IP67  |
| Regulatory            |   |
| Safety                | UL 62368-1, IEC 62368-1, EN 62338-1, IEC 62471                                |
| Emissions             | FCC CFR 47, Part 15 Class A, EN 55032   |
| Immunity              | EN 50130-4, EN 61000-3-2, EN 61000-3-3  |
| Environment           | RoHS, Reach, WEEE   |

## IP Cameras - Illustra Essentials Bullet Cameras

### Essentials 2MP Varifocal IP Bullet Camera



#### Features:

- 2MP (1080p) resolution for HD quality images
- H.264 and H.265 dualstream encoding
- Up to 30 frames per second for seamless video streaming
- 2.7-13.5mm varifocal lens with motorised zoom
- One-touch auto-focus
- IR Illuminators deliver clear video when viewing dark scenes
- IP67 environmental rating
- True Day/Night functionality for low light conditions
- WDR to simultaneously view high-contrasting areas

The Illustra Essentials Gen4 Varifocal Bullet camera offers resolutions up to 1080p with IR illumination to manage low light scenes. The affordable cameras capture video in a variety of lighting conditions with features such as True Day/Night and Wide Dynamic Range to fulfill security operators' expectations, all while maintaining a lower price point.

The camera includes the latest compression technologies by supporting both H.265 and H.264 codecs resulting in reduced bandwidth and storage requirements. To aid ease of setup all Essentials Gen4 models support one-touch auto-focus, and the varifocal models provide motorised zoom.

Rated IP67, this camera exceeds previous generations of Illustra Essentials cameras.

The Essential Gen4 Varifocal Bullet also features corridor mode which is ideal for hallways, retail aisles and tunnels providing high quality, vertical video.

#### Record Video with Low Light Clarity

Poor low-light performance by megapixel cameras hampers some of the most important tasks security professionals need to perform. Cameras that fail in low light clarity negatively impact both their functionality and cost of ownership.

#### Balance Images with Wide Dynamic Range

This camera features special software called Wide Dynamic Range that allows it to balance foreground and background lighting for one clear image. This makes it ideal for recording areas like store entrances where the contrast between the sunshine outside and the dim lighting inside can be extremely difficult to record.

#### Use cases

- Good for general video monitoring at an entry level price point for small businesses.
- With features such as 120dB true WDR and 3D noise reduction, contrasting lighting conditions are not a challenge for these cameras; for instance, monitoring receptions, shop windows, external entrance doors etc.
- All models are suitable for indoor or outdoor usage and conform to JCI's strict cyber protection standards and are NDAA compliant

#### Compatibility

These cameras are supported on ExacqVision and Victor/VideoEdge using the Illustra API. They also provide fully compliant Onvif support through the Profiles S/G/Q

#### Order Codes:

IES02-B12-BI04

Illustra Essentials 2MP Bullet, Motorised 2.7-13.5mm, AutoFocus, Outdoor, Vandal, White, TDN w/IR

## IP Cameras - Illustra Essentials Bullet Cameras

|                            | <b>2MP</b>   |
|----------------------------|--|
| Resolution & Aspect Ratio  | 1920 x 1080 (1080p) 16:9   |
| Max Frame Rate             | 30fps  |
| Video Compression          | H.264, H.265, MJPEG  |
| Video Streams              | Dual Stream with both streams at a maximum of 1080p @ 30ips  |
| Imager                     | 1/2.8" Sony CMOS   |
| S/N Ratio                  | More than 50dB   |
| Image Orientation Settings | Off, flip, mirror, both  |
| Lens Type                  | f2.7mm~13.5mm  |
| Focus Control              | Remote On-Push Focus and Remote Manual Adjustment  |
| Aperture                   | F1.4~2.8   |
| Focal Length               | 2.7 - 13.5mm   |
| Field of View (H/V)        |  |
| Wide Angle                 | 100°/53°   |
| Telephoto                  | 34°/20°  |
| Shutter Speed              | 1/2~1/10,000s (Manual:default NTSC=1/30s, PAL=1/25s) / (Shutter-priority:default NTSC=1/60s, PAL=1/50s)  |
| Minimum Illumination       |  |
| Colour                     | 0.08 Lux (50IRE)   0.03 Lux (30IRE)  |
| B/W                        | 0.05 Lux (50IRE)   0.02 Lux (30IRE)  |
| With IR                    | 0.0 Lux  |
| Day/Night                  | True Day/Night with ICR  |
| IR LEDS                    | Yes  |
| IR Distance                | 30m  |
| Noise Reduction            | 3D   |
| Wide Dynamic Range         | True WDR 120dB   |
| ONVIF-Compliant            | Profile S/G/Q  |
| Motion Detection Zones     | 3  |
| Blur Detection Zones       | Yes  |
| Privacy Zones              | 8  |
| Image Rotation             | Corridor   |
| Analog Video Output        | No   |
| Audio                      | No   |
| No. Simultaneous Users     | 5  |
| <b>Network</b>             |  |
| Ethernet Interface         | IEEE 802.3, 10/100 Base-T/TX, auto sensing, 1 x RJ45   |
| Supported Protocols        | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, Unicast, NTP, SMTP, WS-Security, IEEE 802.1x, PEAP, SSH, HTTPS, SSL, SOAP, WS-Addressing, SNMP, UPnP, RTSP, LLDP |

## IP Cameras - Illustra Essentials Bullet Cameras

| Configuration Management |   |
|--------------------------|---|
| Web Browser              | IE 11 or above, Firefox, Chrome, Safari, Microsoft Edge                       |
| Security                 | Enhanced Security   |
| Onboard Storage          |   |
| Card Support             | SDXC up to 256GB  |
| Pre-Alarm Recording      | 1-10 sec  |
| Recording Format         | AVI   |
| Recording Trigger        | Blur Detection, Motion Detection  |
| VideoEdge TrickleStor    | No  |
| Electrical               |   |
| Power Input              | DC12V; PoE IEEE 802.3af Class 3   |
| Maximum Power Draw       | 9.9W  |
| General                  |   |
| Dimensions (HxWxH)       | 77mm x 84mm x 176mm   |
| Weight                   | 0.58kg  |
| Housing Colour           | White RAL 9003  |
| Operating Temperature    | Cold Start Temperature: -20°C to 60°C<br>Operating Temperature: -30°C to 60°C |
| Storage Temperature      | -40°C to 60°C   |
| Relative Humidity        | 10% to 90% (non-condensing)   |
| Vandal Resistant         | N/A   |
| Outdoor Rating           | IP67  |
| Regulatory               |   |
| Safety                   | UL 62368-1, IEC 62368-1, EN 62338-1, IEC 62471                                |
| Emissions                | FCC CFR 47, Part 15 Class A, EN 55032   |
| Immunity                 | EN 50130-4, EN 61000-3-2, EN 61000-3-3  |
| Environment              | RoHS, Reach, WEEE   |

## IP Cameras - Illustra Essentials Mini Domes

# Essentials IP 2MP Fixed Focus Mini Dome Camera



The Illustra Essentials Gen4 Mini-Dome camera provides up to 1080p resolution with IR illumination to manage low light scenes. The affordable cameras capture video in a variety of lighting conditions with features such as True Day/ Night and Wide Dynamic Range to fulfill security operators' expectations, all while maintaining a lower price point.

The camera includes the latest compression technologies by supporting both H.265 and H.264 codecs resulting in reduced bandwidth and storage requirements. To aid ease of setup all Essentials Gen4 models support one-touch auto-focus.

Rated IP67 for an additional degree of environmental protection, the Mini-Dome exceeds previous generations of Illustra Essentials cameras.

The Essential Mini-Dome also features corridor mode which allows cameras to maximise video surveillance in narrow vertical situations. Ideal for hallways, retail aisles, and tunnels this mode creates a unique high quality, vertical video.

### Record Video with Low Light Clarity

Poor low-light performance by megapixel cameras hampers some of the most important tasks security professionals need to perform. Cameras that fail in low light clarity negatively impact both the necessary functions of security and cost of ownership.

The sensitive processor and sensor combination on the Essentials 2MP Mini-Dome switches the camera automatically between colour and black and white mode in a feature known as True Day/Night. Regardless of the ambient illumination level, the camera is able to maintain crystal clear images in low light scenarios.

### Features:

- 2MP (1080p) resolution for HD quality images
- Manage bandwidth resources with H.264 and H.265 dualstream encoding
- Dual stream recording, 1080P at 30ips to capture as much detail as possible
- 2.8mm fixed lens
- IR Illuminators deliver clear video when viewing dark scenes
- Factory focused lens for a quick installation
- IP67 environmental rating to protect against dust and water
- IK10 vandal resistant
- True Day/Night functionality for low light conditions
- WDR to simultaneously view high-contrasting areas
- Supports corridor mode

### Balance Images with Wide Dynamic Range

The difference in extreme lighting within a scene is known as dynamic range. Cameras with the Wide Dynamic Range functionality have special software that allows them to balance foreground and background lighting for one clear image. This makes them ideal for recording areas like store entrances where the contrast between the sunshine outside and the dim lighting inside can be extremely difficult to record.

The Illustra Essentials 2MP Mini-Dome camera takes advantage of the latest pixel-by-pixel dynamic range offered today. Maintain facial details with whole scene clarity by working within the megapixel lens to enhance the precision of the images for a high-resolution HD solution that excels in an array of challenging lighting conditions.

### Compatibility

These cameras are supported on ExacqVision and Victor/VideoEdge using the Illustra API. They also provide fully compliant Onvif support through the Profiles S/G/Q.

### Order Codes:

IES02-D10-OI04

Illustra Essentials 2MP Dome, 2.8mm, Factory Focused, Outdoor, Vandal, Clear, White, TDN w/IR

## IP Cameras - Illustra Essentials Mini Domes

|                                 | <b>2MP</b>   |
|---------------------------------|--|
| Resolution & Aspect Ratio       | 1920 x 1080 (1080p) 16:9   |
| Max Frame Rate                  | 30fps  |
| Video Compression               | H.264, H.265, MJPEG  |
| Video Streams                   | Dual Stream with both streams at a maximum of 1080p @ 30ips  |
| Imager                          | 1/2.8" Sony CMOS   |
| S/N Ratio                       | More than 50dB   |
| Image Orientation Settings      | Off, flip, mirror, both  |
| Lens Type                       | Fixed 2.8mm focal length   |
| Focus Control                   | Factory Focused  |
| Aperture                        | F/1.8  |
| Focus Control                   | Remote On-Push Focus and Remote Manual Adjustment  |
| Aperture                        | F1.4~2.8   |
| Focal Length                    | 2.7 - 13.5mm   |
| Shutter Speed                   | 1/2~1/10,000s (Manual:default NTSC=1/30s, PAL=1/25s) /<br>(Shutter-priority:default NTSC=1/60s, PAL=1/50s)   |
| Minimum Illumination            |  |
| Colour                          | 0.08 Lux (50IRE)   0.03 Lux (30IRE)  |
| B/W                             | 0.05 Lux (50IRE)   0.02 Lux (30IRE)  |
| With IR                         | 0.0 Lux  |
| Day/Night                       | True Day/Night with ICR  |
| IR LEDS                         | Yes  |
| IR Distance                     | 25m  |
| Noise Reduction                 | 3D   |
| Wide Dynamic Range              | True WDR 120dB   |
| ONVIF-Compliant                 | Profile S/G/Q  |
| Motion Detection Zones          | 3  |
| Blur Detection Zones            | Yes  |
| Privacy Zones                   | 8  |
| Image Rotation                  | Corridor   |
| Analog Video Output             | No   |
| Audio                           | No   |
| No. Simultaneous Users          | 5  |
| <b>Network</b>                  |  |
| Ethernet Interface              | IEEE 802.3, 10/100 Base-T/TX, auto sensing, 1 x RJ45   |
| Supported Protocols             | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, Unicast, NTP, SMTP, WS-Security, IEEE 802.1x, PEAP, SSH, HTTPS, SSL, SOAP, WS-Addressing, SNMP, UPnP, RTSP, LLDP |
| <b>Configuration Management</b> |  |
| Web Browser                     | IE 11 or above, Firefox, Chrome, Safari, Microsoft Edge  |
| Security                        | IEEE 802.1X<br>HTTPS<br>Digest authentication, IP address filtering  |



## IP Cameras - Illustra Essentials Mini Domes

| Onboard Storage       |   |
|-----------------------|---|
| Card Support          | SDXC up to 256GB  |
| Pre-Alarm Recording   | 1-10 sec  |
| Recording Format      | AVI   |
| Playback              | Via Web Browser   |
| Recording Trigger     | Blur Detection, Motion Detection  |
| VideoEdge TrickleStor | No  |
| Electrical            |   |
| Power Input           | DC12V; PoE IEEE 802.3af Class 3   |
| Maximum Power Draw    | 7.3W  |
| General               |   |
| Dimensions            | Ø110mm x 82mm   |
| Weight                | 0.53kg  |
| Housing Colour        | White RAL 9003  |
| Operating Temperature | Cold Start Temperature: -20°C to 60°C<br>Operating Temperature: -30°C to 60°C |
| Storage Temperature   | -40°C to 60°C   |
| Relative Humidity     | 10% to 90% (non-condensing)   |
| Vandal Resistant      | IK10  |
| Outdoor Rating        | IP67  |
| Regulatory            |   |
| Safety                | UL 62368-1, IEC 62368-1, EN 62338-1, IEC 62471                                |
| Emissions             | FCC CFR 47, Part 15 Class A, EN 55032   |
| Immunity              | EN 50130-4, EN 61000-3-2, EN 61000-3-3  |
| Environment           | RoHS, Reach, WEEE   |
| NDA Compliant         | Yes   |

## IP Cameras - Illustra Essentials Mini Domes

# Essentials 2MP Varifocal IP Mini-Dome Cameras



### Features:

- 2MP (1080p) resolution for
- HD quality images
- H.264 and H.265 dualstream encoding
- Up to 30 frames per second
- 2.7-13.5mm varifocal lens with motorised zoom
- One-touch auto-focus
- IR Illuminators deliver clear video in dark scenes
- IP67 environmental rating
- IK10 vandal resistant
- True Day/Night functionality
- WDR to simultaneously view high-contrasting areas
- Supports corridor mode

The Illustra Essentials Gen4 Varifocal Mini-Dome camera offers resolutions up to 1080p with IR illumination to manage low light scenes. The affordable cameras capture video in a variety of lighting conditions with features such as True Day/Night and Wide Dynamic Range to fulfill security operators' expectations, all while maintaining a lower price point.

The camera includes the latest compression technologies by supporting both H.265 and H.264 codecs resulting in reduced bandwidth and storage requirements. To aid ease of setup all Essentials Gen4 models support one-touch auto-focus, and the varifocal models provide motorised zoom.

Rated IP67 for an additional degree of environmental protection, the Varifocal Mini-Dome exceeds previous generations of Illustra Essentials cameras.

The Essential Gen4 Varifocal Mini-Dome also features corridor mode which allows cameras to maximize video surveillance in narrow vertical situations. Ideal for hallways, retail aisles, and tunnels this mode creates a unique high quality, vertical video.

### Record Video with Low Light Clarity

Poor low-light performance by megapixel cameras hampers some of the most important tasks security professionals need to perform. Cameras that fail in low light clarity negatively impact both the necessary functions of security and cost of ownership.

The sensitive processor and sensor combination on the Essentials 2MP Mini-Dome switches the camera automatically between colour and black and white mode in a feature known as True Day/Night. Regardless of the ambient illumination level, the camera is able to maintain crystal clear images in low light scenarios.

### Balance Images with Wide Dynamic Range

This camera features Wide Dynamic Range that allows it to balance foreground and background lighting for one clear image. This makes it ideal for recording areas like store entrances where the contrast between the sunshine outside and the dim lighting inside can be extremely difficult to record.

The Illustra Essentials 2MP Varifocal Mini-Dome camera takes advantage of the latest pixel-by-pixel dynamic range offered today. Maintain facial details with whole scene clarity by working within the megapixel lens to enhance the precision of the images for a highresolution HD solution that excels in an array of challenging lighting conditions.

### Compatibility

These cameras are supported on ExacqVision and Victor/VideoEdge using the Illustra API. They also provide fully compliant Onvif support through the Profiles S/G/Q.

### Order Code:

IES02-D12-OI04

Illustra Essentials 2MP Dome, Motorised 2.7-13.5mm, AutoFocus Outdoor, Vandal, Clear, White, TDN w/IR

## IP Cameras - Illustra Essentials Mini Domes

|                            | <b>2MP</b>   |
|----------------------------|--|
| Resolution & Aspect Ratio  | 1920 x 1080 (1080p) 16:9   |
| Max Frame Rate             | 30fps  |
| Video Compression          | H.264, H.265, MJPEG  |
| Video Streams              | Dual Stream with both streams at a maximum of 1080p @ 30ips  |
| Imager                     | 1/2.8" Sony CMOS   |
| S/N Ratio                  | More than 50dB   |
| Image Orientation Settings | Off, flip, mirror, both  |
| Lens Type                  | f2.7mm~13.5mm, Motorised Varifocal   |
| Focus Control              | Remote On-Push Focus and Remote Manual Adjustment  |
| Aperture                   | F/1.8  |
| Focus Control              | Remote On-Push Focus and Remote Manual Adjustment  |
| Aperture                   | F/1.7 (Wide) ~ F/2.8 (Telephoto)   |
| Field of View (H/V)        |  |
| Wide Angle                 | 100°/53°   |
| Telephoto                  | 34°/20°  |
| Shutter Speed              | 1/2~1/10,000s (Manual:default NTSC=1/30s, PAL=1/25s) / (Shutter-priority:default NTSC=1/60s, PAL=1/50s)  |
| Minimum Illumination       |  |
| Colour                     | 0.08 Lux (50IRE)   0.03 Lux (30IRE)  |
| B/W                        | 0.05 Lux (50IRE)   0.02 Lux (30IRE)  |
| With IR                    | 0.0 Lux  |
| Day/Night                  | True Day/Night with ICR  |
| IR LEDS                    | Yes  |
| IR Distance                | 30m  |
| Noise Reduction            | 3D   |
| Wide Dynamic Range         | True WDR 120dB   |
| ONVIF-Compliant            | Profile S/G/Q  |
| Motion Detection Zones     | 3  |
| Blur Detection Zones       | Yes  |
| Privacy Zones              | 8  |
| Image Rotation             | Corridor   |
| Analog Video Output        | No   |
| Audio                      | No   |
| No. Simultaneous Users     | 5  |
| <b>Network</b>             |  |
| Ethernet Interface         | IEEE 802.3, 10/100 Base-T/TX, auto sensing, 1 x RJ45   |
| Supported Protocols        | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, Unicast, NTP, SMTP, WS-Security, IEEE 802.1x, PEAP, SSH, HTTPS, SSL, SOAP, WS-Addressing, SNMP, UPnP, RTSP, LLDP |

## IP Cameras - Illustra Essentials Mini Domes

| Configuration Management |   |
|--------------------------|---|
| Web Browser              | IE 11 or above, Firefox, Chrome, Safari, Microsoft Edge                       |
| Security                 | IEEE 802.1X<br>HTTPS<br>Digest authentication, IP address filtering           |
| Onboard Storage          |   |
| Card Support             | SDXC up to 256GB  |
| Pre-Alarm Recording      | 1-10 sec  |
| Recording Format         | AVI   |
| Playback                 | Via Web Browser   |
| Recording Trigger        | Blur Detection, Motion Detection  |
| VideoEdge TrickleStor    | No  |
| Electrical               |   |
| Power Input              | DC12V; PoE IEEE 802.3af Class 3   |
| Maximum Power Draw       | 9.9W  |
| General                  |   |
| Dimensions               | Ø124mm x 113mm  |
| Weight                   | 0.65kg  |
| Housing Colour           | White RAL 9003  |
| Operating Temperature    | Cold Start Temperature: -20°C to 60°C<br>Operating Temperature: -30°C to 60°C |
| Storage Temperature      | -40°C to 60°C   |
| Relative Humidity        | 10% to 90% (non-condensing)   |
| Vandal Resistant         | IK10  |
| Outdoor Rating           | IP67  |
| Regulatory               |   |
| Safety                   | UL 62368-1, IEC 62368-1, EN 62338-1, IEC 62471                                |
| Emissions                | FCC CFR 47, Part 15 Class A, EN 55032   |
| Immunity                 | EN 50130-4, EN 61000-3-2, EN 61000-3-3  |
| Environment              | RoHS, Reach, WEEE   |
| NDAA Compliant           | Yes   |

## IP Cameras - Illustra Flex Box Cameras

### Illustra Flex 3MP Internal IP Box Camera



The affordable Illustra Flex Box Camera is a True Day/Night network camera that provides 3MP of resolution for high-quality images. Because of its compact design and affordable price, this camera is best suited for small to medium size offices, retail boutiques, schools, and bank branches looking for a cost-effective camera.

Strategically placed, these inconspicuous cameras offer high security without attracting unwanted attention.

The True Day/Night functionality switches the camera automatically between color, and black and white mode depending on the ambient illumination level allowing the camera to maintain crystal clear images day or night.

The Illustra Flex Box Camera is easy to set up and install into any environment. This camera accommodates a variety of P-Iris lenses and mounts. Making the Box camera a flexible solution adaptable for any installation or application requirements. For example, choose a telephoto lens for a long, dim hallway or anywhere a longer focal length is required.

Typical customers for these cameras are:

- Medium to Enterprise organisations
- Education
- Transport
- Local and National Government
- National and International retail
- Hotels & Hospitality

#### Features:

- Well featured, mid-tier offering
- 3MP resolution at 30ips, or 60ips at 1080p
- Illustra IntelliZip enhanced bandwidth management
- Saving Bandwidth, storage and related costs
- Motorised focus and zoom with P-Iris lens
- Crisp pictures, wide depth of field, quick install
- Motorised back focus facility.
- True WDR 120dB
- True D/N & IR illumination to 25m
- TrickleStor redundancy and failover solution
- Compatible with VideoEdge V5.0
- Cyber Protection Program member
- No dependencies on 3rd party plug-ins - Easier set-up
- VideoEdge and exacqVision integration
- ONVIF Profile S

#### Order Codes:

IFS03XNANWTT

illustra Flex 3MP Box Camera, with IntelliZip technology and TrickleStor. Lens Type: CS Mount and P-Iris compatible, motorised back focus, 0.03Lux Colour, 0.001Lux B/W. True Day / Night, 120dB True WDR. PoE / 24VAC, White.

LIRC3105PCS

Lens, 3-10.5 mm varifocal, P Iris, IR corrected, 1/2.7", CS 3MP

## IP Cameras - Illustra Flex Box Cameras

### Technical Specifications:

| Operational                           |  |
|---------------------------------------|--|
| Video Compression                     | H.264 / H.265 / IntelliZip / MJPEG   |
| Max Frame Rate                        | 30ips @ 3MP, 60ips @ 1080p   |
| ONVIF-Compliant                       | Profile S  |
| Analogue Video Output                 | Yes  |
| Resolution                            | (2048x1536) QXGA 4:3 (1024x576) PAL+ 16:9<br>(1920x1080) 1080p 16:9 (640x360) nHD 16:9<br>(1664x936) 16:9 (480x360) 480 4:3<br>(1280x720) 720p 16:9 (384x288) 4:3  |
| Imager                                | 1/2.8" CMOS  |
| Day/Night                             | True D/N with ICR  |
| TrickleStor                           | Yes  |
| Motion Detection                      | 3 zones  |
| Blur Detection                        | Yes  |
| Privacy Zones                         | 9 zones  |
| Alarm Input/Output                    | 1/1  |
| Audio Input/Output                    | 1/1  |
| Video Streams                         | Triple   |
| Minimum Illumination<br>Colour<br>B/W | 0.03 Lux<br>0.001 Lux  |
| True Wide Dynamic Range               | 120dB  |
| Lens Mount                            | CS Mount   |
| Lens Type                             | P-Iris   |
| Supported Languages                   | Arabic, Czech, Chinese (Simplified), Chinese (Traditional), Danish, Dutch, English (US), French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese (Brazilian), Russian, Spanish, Swedish, Turkish  |
| Network                               |  |
| Ethernet Interface                    | 10/100Base-T, RJ-45  |
| Supported Protocols                   | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Directory, DNS, DDNS, RTP, RTCP, TLS, Unicast, Multicast, NTP, SMTP, WS-Security, IEEE 802.1x, PEAP, SSH, HTTPS, SOAP, WSAddressing CIFS, SNMP, UPNP, RTSP, LLDP |
| Configuration Management              |  |
| Web Browser                           | Internet Explorer 8.0 or above, Firefox, Safari, Chrome  |
| Security                              | Multiple user access levels, IP address filtering, user access log, IEEE 802.1x  |
| Onboard Storage                       |  |
| Card Support                          | Micro SDXC Slot Up TO 128GB  |

## IP Cameras - Illustra Flex Box Cameras

| Simultaneous Users         |  |
|----------------------------|--|
|                            | 5 Simultaneous Users   |
| Electrical                 |  |
| Power Input                | PoE IEEE 802.2af class 3, 24VAC                                |
| Power Draw<br>POE<br>24VAC | 9W<br>7W   |
| Physical                   |  |
| Dimensions (HxWxL)         | 72x100x62 mm   |
| Weight                     | 0.6kg  |
| Housing Colour             | White  |
| Operator Temperature       | -20°C to 50°C  |
| Regulatory                 |  |
| Emissions                  | FCC Part 15 Class A; AS/NZA CISPR 22 Class A; ICES-003 Class A |
| Immunity                   | EN55024, EN50130-4   |
| Safety                     | EN60950-1; UL60950-1; IEC60950-1; CSA 22.2 No. 60950           |
| Environment                | RoHS/WEEE  |

## IP Cameras - Illustra Flex Bullet Cameras

# Illustra Flex Gen3 Outdoor 3MP & 8MP(4K) Bullet



### Optimal Image Clarity with a Tough Exterior

Solid yet affordable, the Illustra Flex Bullet camera is ideal for both interior and exterior applications that require a vandal and weather-resistant option. The Illustra Flex Bullet comes complete with built-in IR illuminators for clear video images in extreme low light or zero illumination conditions providing crisp, clear video quality both day and night.

### Powerful Technology to Increase Confidence and Savings

The Flex product family cameras feature built-in technology that ensure efficient recording and smart bandwidth management. When paired with a VideoEdge or exacqVision NVR, edge-based failover redundancy allows video recording to continue on the camera when a network disruption occurs or the NVR is offline, then when connection is restored transfers video back to the media database for seamless viewing later. Illustra® IntelliZip continuously monitors and optimizes system streaming parameters to match the level of activity within the camera's field of view.

### Safeguard Against Cyber Attacks Across Devices

Illustra Flex Cameras have been designed to be resilient against cyber-threats. Our products are gated, analyzed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

### Features:

- Easy to install with engineer friendly accessories and WiFi configuration
- Built-in tamper detection for scene change, lens obscuration or blinding light.
- Increased IR Distance
- High speed detection with 60FPS in 2MP resolution
- 3MP & 8MP(4K) resolution provides true HD quality images with video analytics along with improved WDR
- VideoEdge® TrickleStor technology for edge-based failover redundancy
- Advanced analytics (4K models only)

### Order Codes:

|                |   |
|----------------|---|
| IFS03-B21-OI03 | Illustra Flex 3MP Gen3 Bullet, 3.2-10mm, Outdoor, IP66/67 IK10, TDN w/IR, WDR   |
| IFS08-B22-OI03 | Illustra Flex 4K Gen3 Bullet, 4.17-9.48mm, Outdoor, IP66/67 IK10, TDN w/IR, WDR |
| ADCDMPOLE      | White Pole Mount Adapter  |





## IP Cameras - Illustra Flex Bullet Cameras

### Technical Specifications:

| Operational                 | 3MP  | 8MP(4K)   |
|-----------------------------|--|---|
| Video Compression           | MJPEG, H.264, H.264 IntelliZip, H.265 and H.265 IntelliZip                                     |   |
| Resolution                  | 2048x1536/ 1920x1080/ 1664x936/<br>1280x720/ 1024x576/ 640x480/<br>640x360/ 480x360/ 384x288   | 3840x2160/ 3264x1840/ 2688x1520/<br>1920x1080/ 1664x936/ 1280x720/<br>1024x576/ 960x544/ 816x464/<br>640x360/ 480x272 |
| Max. Frame Rate             | H.265/H.264: Max. 60fps<br>MJPEG: Max. 20fps   |   |
| Smart Codec                 | IntelliZip   |   |
| Imaging Device              | 1/2.8" 3.21MP CMOS   | 1/1.8" 8.3MP CMOS   |
| Effective Pixels            | 2065(H) x 1553(V)  | 2065(H) x 1553(V)   |
| Min. Illumination           | Colour: min 0.05 lux (1/30sec, 30IRE)<br>BW: 0.005Lux  | Colour: min 0.27 lux (1/30sec, 30IRE)<br>BW: 0.027Lux   |
| Focal Length                | 3.2 ~ 10mm   | 4.17 ~ 9.48mm   |
| Max. Aperture Ratio         | F1.6(W) ~F2.9(T)   | F1.9(W) ~F2.8(T)  |
| Angular Field of View       | H: 94.7°(W)~29.34°(T)<br>V: 68.7°(W)~22°(T)<br>D: 125.21°(W)~36.45°(T)                         | H: 111.66°(W)~ 46.69°(T)<br>V: 62.53°(W)~26.36°(T)<br>D: 131.91°(W)~53.21°(T)   |
| Focus Control               | Simple focus, (software controls: one-touch AF and manual control)                             |   |
| Lens Type                   | Motorised varifocal, P-Iris  |   |
| IR Viewable Length          | 40m Adaptive IR  |   |
| Day & Night                 | Auto Low/ Auto Mid(Default)/ Auto High/ Manual/ Forced Color/ Force B&W                        |   |
| Backlight Compensation      | Exposure Weighting: Top, Bottom, Left, Right, Full, Centre, Spot                               |   |
| Wide Dynamic Range          | True WDR 140db Technologies  | True WDR 120db Technologies   |
| Digital Noise Reduction     | 2D&3DNR  |   |
| Signal to Noise Ratio (SNR) | 50db   |   |
| Digital Image Stabilisation | No   |   |
| Motion Detection            | 3ea, polygonal zones   |   |
| Privacy Masking             | 9ea, rectangular zones   |   |
| Gain Control                | Automatic & Manual (3dB increments)  |   |
| White Balance               | Automatic Wide, Automatic Normal (Default), Manual   |   |
| Lens Distortion Correction  | Support  |   |
| Electronic Shutter Speed    | Minimum 1/4s, Maximum 1/10,000s  |   |
| Video Rotation              | Corridor Mode, Mirror & Flip   |   |
| Alarm I/O                   | Input 1ea (digit) / Output 1ea, IO Cable (IA-CBL-IO-F30 ) required                             |   |
| Alarm Triggers              | Motion detection, Tampering detection, Alarm input, Defocus detection                          |   |
| Alarm Events                | Alarm output, Onboard recording, Snapshot, Notification via e-mail,<br>FTP upload, CIFS upload |   |
| Audio In                    | Line in, IO Cable (IA-CBL-IO-F30 ) required  |   |
| Audio Out                   | Line out, IO Cable (IA-CBL-IO-F30 ) required   |   |
| Micro USB                   | WiFi Installation Support via Illustra Mobile Toolkit  |   |

## IP Cameras - Illustra Flex Bullet Cameras

| Video Intelligence Analytics      | 3MP   | 8MP(4K)   |
|-----------------------------------|---|---|
| Standard                          | Tampering, Defocus / Motion Detection   |   |
| Advanced <sup>1</sup>             | -   | Linger, Exit, Direction, Abandoned/Removed Objects, Dwell, Enter, Object Detection, Perimeter, Queue, Crowd |
| Face Detection <sup>1</sup>       | -   | Yes   |
| Tamper Detection                  | Scene Change  |   |
| Blur Detection                    | Yes   |   |
| <b>Network</b>                    |   |   |
| Ethernet                          | RJ-45(10/100BASE-T)   | RJ-45(10/100/1000BASE-T)  |
| Bitrate Control                   | H.264/H.265: CBR or VBR or CVBR   |   |
| Streaming                         | Multiple streaming (Up to 3 profiles)   |   |
| Audio Compression                 | G.711 alaw and ulaw selectable G.711 8KHz   |   |
| Protocol                          | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, RTCP, RTSP, TLS, Unicast, Multicast, NTP, ICMP, IGMP, SMTP, WS-Security, IEEE 802.1x, PEAP, EAP-TLS, EAPoL, SSH, HTTPS, SOAP, WSAddressing, CIFS, SNMP, UPNP, RTSP, LLDP   |   |
| Security                          | TLS - RFC5246 v1.2, HTTPS (HTTP over TLS) - RFC2818, WS-Security, Certificate Management, Multi-Level Password Protection, IP Address/Filtering, HTTPS Encryption, One-Click Security Hardening, User Access Log, Validate Complex Credentials, Disabling Unused Protocols, IEEE / 802.1x Including: PEAP, EAP-TLS, EAPoL |   |
| Storage                           | Micro SD/SDHC/SDXC 1slot 512GB  |   |
| Application Programming Interface | iAPI-3  |   |
| ONVIF-Compliant                   | Profile S   |   |
| Memory                            | 512MB RAM, 512MB Flash  | 1GB RAM, 512MB Flash  |
| <b>Environmental</b>              |   |   |
| Operating Temperature             | -40°C ~ +50°C Up to 5 concurrent hours at 60°C  |   |
| Operating Humidity                | Less than 90% RH  |   |
| Storage Temperature               | -40°C ~ +55°C   |   |
| Storage Humidity                  | Less than 90% RH  |   |
| Environmental                     | IP66 / IP67   |   |
| Vandal Resistance                 | IK10  |   |
| <b>Electrical</b>                 |   |   |
| Input Voltage                     | 24 VAC (-20% ~ +30%, 47 ~ 63 Hz), PoE 802.3af (802.3at Type 1)  |   |
| Power Consumption                 | 24 VAC: Max 14.0W<br>PoE: Max 12.95W  | 24 VAC: Max 15.0W<br>PoE: Max 12.95W  |

## IP Cameras - Illustra Flex Bullet Cameras

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| Mechanical        | 3MP   | 8MP(4K) |
|-------------------|---|---------|
| Colour / Material | White / Aluminum  |         |
| RAL Code          | RAL9003   |         |
| Dimensions        | (Ø) 91 x (L) 352.5 mm with back box   |         |
| Weight            | 1.75kg  |         |
| Regulatory        |   |         |
| Safety            | UL62368-1; CAN/CSA-C22.2 No. 62368-1, BIS IS13252 Part 1:2010                           |         |
| Emissions         | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/NMB-003 Class A |         |
| Immunity          | EN50130-4   |         |
| Environment       | RoHS/WEEE, REACH  |         |

## IP Cameras - Illustra Flex Mini Domes

### Illustra Flex 8MP Mini Domes



The powerful Illustra Flex 4K Mini-Dome cameras are designed to offer a high-image quality, feature rich surveillance option for a wide range of applications both indoors and outdoors. The increased amount of pixels per foot in these models improve image detail in wide areas such as loading docks and airport terminals. Also, the outdoor Flex Mini-Dome features built-in IR illuminators to produce clear images at an effective distance in a variety of low light conditions. Installations that strive for a combination of high-resolution and high-performance at a competitive price point, all while simplifying installation and configuration stand to benefit the most from the Flex 4K Mini-Dome.

Complete with both True Day/Night, Wide Dynamic Range, and a P-Iris lens, these cameras are able to balance challenging lighting to produce crystal clear images.

IntelliZip provides powerful bandwidth management beyond H.264 and H.265, offsetting video storage requirements despite 4K video streaming. This embedded technology continuously monitors and optimizes system streaming parameters to match the level of activity within the camera's field of view. When the camera detects motion, IntelliZip automatically adjusts the video quality up to 8MP resolution to ensure every detail within the region of interest is captured clearly.

The TrickleStor feature on the Illustra Flex product line allows video recording to continue on the edge when an outage occurs. If communications between the NVR and cameras are interrupted or stop, the camera automatically detects the anomaly and begins recording video to its SD card.

#### Features:

- 8MP (4K) high-resolution model options for true HD quality images
- P-Iris for image clarity in changing light conditions
- VideoEdge® TrickleStor technology for edge-based failover redundancy
- Illustra® IntelliZip offers powerful video compression technology for bandwidth management
- True Day/Night functionality for quality video recording in low light conditions
- True Wide Dynamic Range balances challenging lighting conditions
- IR illumination for clear images in low light conditions on outdoor model
- Extended temperature available on outdoor model up to 140°F (60°C) for 5 hours a day in indirect sunlight with IR illuminators off
- Motion detection for instant intruder alerts
- IP66- and IP67-rated environmental enclosure to protect against dust and water damage
- IK10 vandal-resistant rating
- ONVIF Profile S conformant for simplified video streaming integrations
- Included in the Cyber Protection Program

#### Order Codes:

|              |   |
|--------------|---|
| IFS08D2OCWIT | illustra Flex 8MP Indoor / Outdoor with IR Mini Dome Camera |
| IFS08D2ICWTT | illustra Flex 8MP Indoor / Outdoor no IR Mini Dome Camera   |
| IFDRECMNT    | Recessed Mount for Flex Mini-Domes (IFXX Series)            |

The Flex Mini-Domes adhere to the rigorous security standards of the Tyco Cyber Protection Product Security Program. The holistic cyber approach begins at initial design concept, continues through product development, and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Flex Mini Domes

### Technical Specifications:

| Operational                              |  |
|--|--|
| Video Compression                        | H.264 / H.265 / IntelliZip / MJPEG   |
| Max Frame Rate                           | 8MP @ 15 fps   |
| ONVIF-Compliant                          | Profile S  |
| Analogue Video Output                    | Yes  |
| Resolution                               | 3840x2160 (4K) 16:9      1280x960 (SXGA-) 4:3<br>3264x1840 16:9      1280x720 (720p) 16:9<br>2592x1944 4:3      800x600 (SVGA) 4:3<br>2688x1520 16:9      640x480 (640VGA) 4:3<br>2048x1536 (QXGA) 4:3      640x360 (nHD) 16:9<br>1920x1080 (1080p) 16:9 |
| Imager                                   | 1/2.5"   |
| Day/Night                                | True D/N with ICR  |
| TrickleStor                              | Yes  |
| IR Distance<br>Internal<br>External      | N/A<br>25m   |
| Motion Detection                         | 3 zones  |
| Blur Detection                           | Yes  |
| Privacy Zones                            | 9 zones  |
| Alarm Input/Output                       | 1/1  |
| Audio Input/Output                       | 1/1  |
| Video Streams                            | Triple Streaming with a Maximum of 5 Concurrent Shared Streams   |
| Minimum Illumination<br>Colour<br>B/W    | 0.03 Lux<br>0.0003 Lux   |
| True Wide Dynamic Range                  | 100dB  |
| Field of View<br>Wide Angle<br>Telephoto | 104°/56°<br>42°/24°  |
| Aperture                                 | F/1.5(W)~F/2.9(T)  |
| Lens Type                                | Motorised Varifocal and Focus, P-iris control, IR corrective   |
| Focal length                             | 3.4-9mm  |
| Supported Languages                      | Arabic, Czech, Chinese (Simplified), Chinese (Traditional), Danish, Dutch, English (US), French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese (Brazilian), Russian, Spanish, Swedish, Turkish  |
| Network                                  |  |
| Ethernet Interface                       | IEEE 802.3, 10/100Base-T Ethernet, Female RJ45, Auto-Negotiation   |
| Supported Protocols                      | TCP/IP, IPv4, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, RTCP, TLS, Unicast, Multicast, NTP, SMTP, WS-Security, IEEE 802.1x, PEAP, SSH, HTTPS, SOAP, WSAddressing, CIFS, SNMP, UPNP, RTSP, LLDP  |

## IP Cameras - Illustra Flex Mini Domes

|  |   |
|--|---|
| Onboard Storage                              |   |
| Card Support                                 | Micro SD & SDXC slot up to 128GB; Class 10 or higher; Card not included   |
| Configuration Management                     |   |
| Web Browser                                  | Internet Explorer 8.0 or above, Firefox, Safari, Chrome   |
| Security                                     | TLS - RFC5246 v1.2, HTTPS (HTTP over TLS) - RFC2818, WS-Security, Certificate Management, Multi-Level Password Protection, IP Address, Filtering, HTTPS Encryption, One-Click Security Hardening, User Access Log, Validate Complex Credentials, Disabling Unused Protocols, IEEE, 802.1x Including: PEAP, EAP-TLS, EAPoL |
| Electrical                                   |   |
| Power Input<br>Internal<br>External          | 24VAC, PoE IEEE 802.3af class 2<br>24VAC, PoE IEEE 802.3af class 3  |
| Power Draw<br>Internal<br>External;          | 6W<br>12W   |
| Physical                                     |   |
| Dimensions (HxDiameter)                      | Ø123 x 107 mm   |
| Weight<br>Internal<br>External               | 0.93kg<br>0.97kg  |
| Housing Colour                               | White   |
| Operator Temperature<br>Internal<br>External | -20°C to 50°C<br>-50°C to 50°C  |
| Vandal Resistant                             | IK10  |
| Outdoor Rating<br>Internal<br>External       | N/A<br>IP66/IP67  |
| Regulatory                                   |   |
| Emissions                                    | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/NMB-003 Class A   |
| Immunity                                     | EN55024, EN50130-4  |
| Safety                                       | EN60950-1; UL60950-1; CAN/CSA-C22.2 No. 60950-1   |
| Environment                                  | RoHS/WEEE   |

## IP Cameras - Illustra Flex Mini Domes

# Illustra Flex Gen3 3MP/8MP Compact Mini Domes



The powerful Illustra Flex Compact Mini-Domes are designed to offer a high-image quality, feature rich surveillance option for a wide range of applications. The increased amount of pixels per foot on the 8MP(4K) model improves image detail in wide areas such as loading docks and airport terminals. Also, the Compact Mini-Domes feature built-in IR illuminators to produce clear images at an effective distance in a variety of low light conditions.

Deployments that strive for a combination of high-resolution and high-performance at a competitive price point, all while simplifying installation and configuration stand to benefit the most from the these Illustra Compact Mini-Domes.

### Powerful Technology to Increase Confidence and Savings

The Flex product family cameras feature built-in technology that ensure efficient recording and smart bandwidth management. When paired with a VideoEdge or exacqVision NVR, edge-based failover redundancy allows video recording to continue on the camera when a network disruption occurs or the NVR is offline, then when connection is restored transfers video back to the media database for seamless viewing later. Illustra® IntelliZip continuously monitors and optimizes system streaming parameters to match the level of activity within the camera's field of view.

### Features:

- Easy to install with engineer friendly accessories and WiFi configuration
- Built-in tamper detection for scene change, lens obscuration or blinding light.
- Increased IR Distance
- High speed detection with 60FPS in 2MP resolution
- 3MP & 8MP(4K) resolution provides true HD quality images with video analytics along with improved WDR
- VideoEdge® TrickleStor technology for edge-based failover redundancy
- Advanced analytics (8MP(4K) models only)

### Order Codes:

|                |  |
|----------------|--|
| IFS03-C10-OI03 | Illustra Flex 3MP Gen3 Compact, 2.8mm Fixed, IP66/67 IK10, TDN w/IR, WDR |
| IFS08-C10-OI03 | Illustra Flex 4K Gen3 Compact, 4.27mm Fixed, IP66/67 IK10, TDN w/IR, WDR |
| IBJB-F-3CWB-0  | Compact Junction Box   |
| ADCi6MPCAPIW   | Pendant Cap, White   |
| ADLOMARM       | Gooseneck Mounting Arm   |
| ADCDMCRNRO     | Corner Mount Adapter   |
| ADCDMPOLE      | Pole Mount Adapter   |

### Safeguard Against Cyber Attacks Across Devices

Illustra Flex Cameras have been designed to be resilient against cyber-threats. Our products are gated, analyzed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Flex Mini Domes

### Technical Specifications:

| Operational                 | 3MP   | 8MP(4K)  |
|-----------------------------|---|--|
| Video Compression           | MJPEG, H.264, H.264 IntelliZip, H.265 and H.265 IntelliZip                                      |  |
| Resolution                  | 2048x1536/ 1920x1080/ 1664x936/<br>1280x720/ 1024x576/ 640x480/<br>640x360/<br>480x360/ 384x288 | 3840x2160/ 3264x1840/ 2688x1520/<br>1920x1080/ 1664x936/ 1280x720/<br>1024x576/ 960x544/ 816x464/<br>640x360/<br>480x272 |
| Max. Framerate              | H.265/H.264: Max. 60fps<br>MJPEG: Max. 20fps  |  |
| Smart Codec                 | IntelliZip  |  |
| Imaging Device              | 1/2.8" 3.21MP CMOS  | 1/1.8" 8.3MP CMOS  |
| Effective Pixels            | 2065(H) x 1553(V)   | 3840(H) x 2160(V)  |
| Min. Illumination           | Colour: min 0.05 lux (1/30sec, 30IRE)<br>BW: 0.005Lux   | Colour: min 0.27 lux (1/30sec, 30IRE)<br>BW: 0.027Lux  |
| Focal Length                | 2.8mm fixed focal   | 4.27mm fixed focal   |
| Max. Aperture Ratio         | F2.0  | F1.6   |
| Angular Field of View       | H: 100.13° V: 73.79° D: 128°  | H: 107.97° V: 58.02° D: 126.87°  |
| Focus Control               | Fixed (peak focus at 5m)  |  |
| Lens Type                   | Fixed   |  |
| IR Viewable Length          | 15m (49.21ft) including smart IR control  |  |
| Day & Night                 | Auto Low/ Auto Mid(Default)/ Auto High/ Manual/ Forced Color/ Force B&W                         |  |
| Backlight Compensation      | Exposure Weighting: Top, Bottom, Left, Right, Full, Centre, Spot                                |  |
| Wide Dynamic Range          | True WDR 140db Technologies   | True WDR 120db Technologies  |
| Digital Noise Reduction     | 2D&3DNR   |  |
| Signal to Noise Ratio (SNR) | 50db  |  |
| Digital Image Stabilisation | No  |  |
| Motion Detection            | 3ea, polygonal zones  |  |
| Privacy Masking             | 9ea, rectangular zones  |  |
| Gain Contro                 | Automatic & Manual (3dB increments)   |  |
| White Balance               | Automatic Wide, Automatic Normal, Manual  |  |
| Lens Distortion Correction  | Support   |  |
| Electronic Shutter Speed    | Minimum 1/4s, Maximum 1/10,000s   |  |
| Video Rotation              | Corridor Mode, Mirror & Flip  |  |
| Alarm I/O                   | No  |  |
| Alarm Triggers              | Motion detection, Tampering detection, Defocus detection  |  |
| Alarm Events                | Onboard recording, snapshot, Notification via e-mail, FTP upload, CIFS upload                   |  |
| Micro USB                   | WiFi Installation Support via Illustra Mobile Toolkit   |  |
| Regulatory                  |   |  |
| Safety                      | UL62368-1; CAN/CSA-C22.2 No. 62368-1, BIS IS13252 Part 1:2010                                   |  |
| Emissions                   | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/<br>NMB-003 Class A     |  |
| Immunity                    | EN50130-4   |  |
| Environment                 | RoHS/WEEE, REACH  |  |



## IP Cameras - Illustra Flex Mini Domes

| Pan /Tilt / Rotate                | 3MP  | 8MP(4K)   |
|-----------------------------------|--|---|
| Pan /Tilt / Rotate Range          | 0°~350°/ 0°~67° / 0°~355°  |   |
| Video Intelligence Analytics      |  |   |
| Standard                          | Tampering, Defocus / Motion Detection  |   |
| Advanced <sup>1</sup>             | -  | Linger, Exit, Direction, Abandoned/<br>Removed Objects, Dwell, Enter,<br>Object Detection, Perimeter, Queue,<br>Crowd |
| Face Detection <sup>1</sup>       | -  | Yes   |
| Tamper Detection                  | Scene Change   |   |
| Blur Detection                    | Yes  |   |
| Network                           |  |   |
| Ethernet                          | RJ-45(10/100BASE-T)  | RJ-45(10/100/1000BASE-T)  |
| Bitrate Control                   | H.264/H.265: CBR or VBR or CVBR  |   |
| Streaming                         | Multiple streaming (Up to 3 profiles)  |   |
| Audio Compression                 | G.711 alaw and ulaw selectable G.711 8KHz  |   |
| Protocol                          | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, RTCP, RTSP, TLS, Unicast, Multicast, NTP, ICMP, IGMP, SMTP, WS-Security, IEEE 802.1x, PEAP, EAP-TLS, EAPoL, SSH, HTTPS, SOAP, WSAddressing, CIFS, SNMP, UPNP, RTSP, LLDP  |   |
| Security                          | TLS - RFC5246 v1.2, HTTPS (HTTP over TLS) - RFC2818, WS-Security, Certificate Management, Multi-Level Password Protection, IP Address/<br>Filtering, HTTPS Encryption, One-Click Security Hardening, User Access Log, Validate Complex Credentials, Disabling Unused Protocols, IEEE / 802.1x<br>Including: PEAP, EAP-TLS, EAPoL |   |
| Edge Storage                      | Micro SD/SDHC/SDXC 1slot 512GB   |   |
| Application Programming Interface | iAPI-3   |   |
| ONVIF-Compliant                   | Profile S  |   |
| Memory                            | 512MB RAM, 512MB Flash   | 1GB RAM, 512MB Flash  |
| Environmental                     |  |   |
| Operating Temp / Humidity         | -40°C ~ +50°C / Less than 90% RH   |   |
| Storage Temp / Humidity           | -40°C ~ +55°C / Less than 90% RH   |   |
| Environmental                     | IP66/ IP67   |   |
| Vandal Resistance                 | IK10   |   |
| Electrical                        |  |   |
| Input Voltage                     | PoE 802.3af (802.3at Type 1)   |   |
| Power Consumption                 | PoE: Max 8.1W  | PoE: Max 10.1W  |
| Mechanical                        |  |   |
| Colour / Material                 | White / Aluminum   |   |
| RAL Code                          | RAL9003  |   |
| Dimensions / Weight               | (Ø) 112mm x (H) 72mm Height / 1.2kgs   |   |

## IP Cameras - Illustra Flex Mini Domes

### Illustra Flex Gen3 3MP/8MP(4K) Indoor Dome



#### Features:

- Easy to install with engineer friendly accessories and WiFi configuration
- Built-in tamper detection for scene change, lens obscuration or blinding light.
- High speed detection with 60FPS in 2MP resolution
- 3MP & 8MP(4K) resolution provides true HD quality images with video analytics along with improved WDR
- VideoEdge® TrickleStor technology for edge-based failover redundancy
- Advanced analytics (8MP(4K) models only)

The powerful Illustra Flex Compact Mini-Domes are designed to offer a high-image quality, feature rich surveillance option for a wide range of applications. The increased amount of pixels per foot on the 8MP(4K) model improves image detail in wide areas such as loading docks and airport terminals. Also, the Compact Mini-Domes feature built-in IR illuminators to produce clear images at an effective distance in a variety of low light conditions.

Deployments that strive for a combination of high-resolution and high-performance at a competitive price point, all while simplifying installation and configuration stand to benefit the most from the these Illustra Compact Mini-Domes.

#### Powerful Technology to Increase Confidence and Savings

The Flex product family cameras feature built-in technology that ensure efficient recording and smart bandwidth management. When paired with a VideoEdge or exacqVision NVR, edge-based failover redundancy allows video recording to continue on the camera when a network disruption occurs or the NVR is offline, then when connection is restored transfers video back to the media database for seamless viewing later. Illustra® IntelliZip continuously monitors and optimizes system streaming parameters to match the level of activity within the camera's field of view.

#### Order Codes:

IFS03-D21-AT03

IFS08-D22-AT03

IA-CBL-IO-F30

IBJB-F-3OWB-0

IBCR-F-IS-WT-0

IFID-WCLRBBL-03

IFID-WSMKBBL-03

IFID-BSMKBBL-03

ADCi6MPCAPIW

ADLOMARM

ADCDMCRNRO

ADCDMPOLE

ADCiM6WALLWK

IFS03-D21-AT03 Illustra Flex 3MP Gen3 Dome, 3.2-10mm, Indoor, IK08, TDN, WDR

IFS08-D22-AT03 Illustra Flex 4K Gen3 Dome, 4.17-9.48mm, Indoor, IK08, TDN, WDR

I/O Cable

Junction Box

Indoor Recessed Ceiling Mount

Clear Bubble, White Trim  
Smoked Bubble, White Trim  
Smoked Bubble, Black Trim  
White Pendant Cap

Gooseneck Mounting Arm

Corner Mount Adapter

Pole Mount Adapter

Wall Mount

#### Safeguard Against Cyber Attacks Across Devices

Illustra Flex Cameras have been designed to be resilient against cyber-threats. Our products are gated, analyzed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Flex Mini Domes

### Technical Specifications:

| Operational                 | 3MP   | 8MP(4K)  |
|-----------------------------|---|--|
| Video Compression           | MJPEG, H.264, H.264 IntelliZip, H.265 and H.265 IntelliZip                                      |  |
| Resolution                  | 2048x1536/ 1920x1080/ 1664x936/<br>1280x720/ 1024x576/ 640x480/<br>640x360/<br>480x360/ 384x288 | 3840x2160/ 3264x1840/ 2688x1520/<br>1920x1080/ 1664x936/ 1280x720/<br>1024x576/ 960x544/ 816x464/<br>640x360/<br>480x272 |
| Max. Framerate              | H.265/H.264: Max. 60fps<br>MJPEG: Max. 20fps  |  |
| Smart Codec                 | IntelliZip  |  |
| Imaging Device              | 1/2.8" 3.21MP CMOS  | 1/1.8" 8.42MP CMOS   |
| Effective Pixels            | 2065(H) x 1553(V)   | 3840(H) x 2160(V)  |
| Min. Illumination           | Colour: min 0.05 lux (1/30sec, 30IRE)<br>BW: 0.005Lux   | Colour: min 0.27 lux (1/30sec, 30IRE)<br>BW: 0.027Lux  |
| Focal Length                | 3.2 ~ 10mm  | 4.17 ~ 9.48mm  |
| Max. Aperture Ratio         | F1.6(W) ~F2.9(T)  | F1.9(W) ~F2.8(T)   |
| Angular Field of View       | H: 94.7°(W)~29.34°(T)<br>V: 68.7°(W)~22°(T)<br>D: 125.21°(W)~36.45°(T)                          | H: 111.66°(W)~ 46.69°(T)<br>V: 62.53°(W)~26.36°(T)<br>D: 131.91°(W)~53.21°(T)  |
| Focus Control               | Simple focus, (software controls: one-touch AF and manual control)                              |  |
| Lens Type                   | Motorised varifocal, P-Iris   |  |
| Day & Night                 | Auto Low/ Auto Mid(Default)/ Auto High/ Manual/ Forced Color/ Force B&W                         |  |
| Backlight Compensation      | Exposure Weighting: Top, Bottom, Left, Right, Full, Centre, Spot                                |  |
| Wide Dynamic Range          | True WDR 140db Technologies   | True WDR 120db Technologies  |
| Digital Noise Reduction     | 2D&3DNR   |  |
| Signal to Noise Ratio (SNR) | 50db  |  |
| Digital Image Stabilisation | No  |  |
| Motion Detection            | 3ea, polygonal zones  |  |
| Privacy Masking             | 9ea, rectangular zones  |  |
| Gain Contro                 | Automatic & Manual (3dB increments)   |  |
| White Balance               | Automatic Wide, Automatic Normal (Default), Manual  |  |
| Lens Distortion Correction  | Support   |  |
| Electronic Shutter Speed    | Minimum 1/4s, Maximum 1/10,000s   |  |
| Video Rotation              | Corridor Mode, Mirror & Flip  |  |
| Alarm I/O                   | Input 1ea (digit) / Output 1ea, IO Cable (IA-CBL-IO-F30 ) required                              |  |
| Alarm Triggers              | Motion detection, Tampering detection, Alarm Input, Defocus detection                           |  |
| Alarm Events                | Onboard recording, snapshot, Notification via e-mail, FTP upload, CIFS upload                   |  |
| Audio In                    | Line in, IO Cable (IA-CBL-IO-F30 ) required   |  |
| Audio Out                   | Line out, IO Cable (IA-CBL-IO-F30 ) required  |  |
| Micro USB                   | WiFi Installation Support via Illustra Mobile Toolkit   |  |
| Pan /Tilt / Rotate          |   |  |
| Pan /Tilt / Rotate Range    | 0°~350°/ 0°~67° / 0°~355°   |  |

## IP Cameras - Illustra Flex Mini Domes

| Video Intelligence Analytics      | 3MP  | 8MP(4K)   |
|-----------------------------------|--|---|
| Standard                          | Tampering, Defocus / Motion Detection  |   |
| Advanced <sup>1</sup>             | -  | Linger, Exit, Direction, Abandoned/<br>Removed Objects, Dwell, Enter,<br>Object Detection, Perimeter, Queue,<br>Crowd |
| Face Detection <sup>1</sup>       | -  | Yes   |
| Tamper Detection                  | Scene Change   |   |
| Blur Detection                    | Yes  |   |
| Network                           |  |   |
| Ethernet                          | RJ-45(10/100BASE-T)  | RJ-45(10/100/1000BASE-T)  |
| Bitrate Control                   | H.264/H.265: CBR or VBR or CVBR  |   |
| Streaming                         | Multiple streaming (Up to 3 profiles)  |   |
| Audio Compression                 | G.711 alaw and ulaw selectable G.711 8KHz  |   |
| Protocol                          | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, RTCP, RTSP, TLS, Unicast, Multicast, NTP, ICMP, IGMP, SMTP, WS-Security, IEEE 802.1x, PEAP, EAP-TLS, EAPoL, SSH, HTTPS, SOAP, WSAddressing, CIFS, SNMP, UPNP, RTSP, LLDP  |   |
| Security                          | TLS - RFC5246 v1.2, HTTPS (HTTP over TLS) - RFC2818, WS-Security, Certificate Management, Multi-Level Password Protection, IP Address/<br>Filtering, HTTPS Encryption, One-Click Security Hardening, User Access Log, Validate Complex Credentials, Disabling Unused Protocols, IEEE / 802.1x<br>Including: PEAP, EAP-TLS, EAPoL |   |
| Edge Storage                      | micro SDXC up to 512GB   |   |
| Application Programming Interface | iAPI-3   |   |
| ONVIF-Compliant                   | Profile S  |   |
| Memory                            | 512MB RAM, 512MB Flash   | 1GB RAM, 512MB Flash  |
| Environmental                     |  |   |
| Operating Temp / Humidity         | -20°C to +50°C / Less than 90% RH  |   |
| Storage Temp / Humidity           | -20°C to +55°C / Less than 90% RH  |   |
| Vandal Resistance                 | IK08   |   |
| Electrical                        |  |   |
| Input Voltage                     | 24 VAC (-20% ~ +30%, 47 ~ 63 Hz), PoE 802.3af (802.3at Type 1)   |   |
| Power Consumption                 | 24 VAC: Max 7.2W PoE: Max 7.0W   | 24 VAC: Max 8.8W PoE: Max 8.6W  |
| Mechanical                        |  |   |
| Colour / Material                 | White / Aluminum   |   |
| RAL Code                          | RAL9003  |   |
| Dimensions / Weight               | (Ø) 132 x (H) 98 mm / 0.71kg   |   |
| Regulatory                        |  |   |
| Safety                            | UL62368-1; CAN/CSA-C22.2 No. 62368-1, BIS IS13252 Part 1:2010  |   |
| Emissions                         | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/NMB-003 Class A  |   |
| Immunity                          | EN50130-3  |   |
| Environment                       | RoHS; WEEE   |   |

1. Advanced Analytics and Face Detection subject to future firmware release

## IP Cameras - Illustra Flex Mini Domes

# Illustra Flex Gen3 3MP/8MP(4K) Outdoor Dome



The powerful Illustra Flex Compact Mini-Domes are designed to offer a high-image quality, feature rich surveillance option for a wide range of applications. The increased amount of pixels per foot on the 8MP(4K) model improves image detail in wide areas such as loading docks and airport terminals. Also, the Compact Mini-Domes feature built-in IR illuminators to produce clear images at an effective distance in a variety of low light conditions.

Deployments that strive for a combination of high-resolution and high-performance at a competitive price point, all while simplifying installation and configuration stand to benefit the most from the these Illustra Compact Mini-Domes.

### Powerful Technology to Increase Confidence and Savings

The Flex product family cameras feature built-in technology that ensure efficient recording and smart bandwidth management. When paired with a VideoEdge or exacqVision NVR, edge-based failover redundancy allows video recording to continue on the camera when a network disruption occurs or the NVR is offline, then when connection is restored transfers video back to the media database for seamless viewing later. Illustra® IntelliZip continuously monitors and optimizes system streaming parameters to match the level of activity within the camera's field of view.

### Features:

- Easy to install with engineer friendly accessories and WiFi configuration
- Built-in tamper detection for scene change, lens obscuration or blinding light.
- Increased IR Distance
- High speed detection with 60FPS in 2MP resolution
- 3MP & 8MP(4K) resolution provides true HD quality images with video analytics along with improved WDR
- VideoEdge® TrickleStor technology for edge-based failover redundancy
- Advanced analytics (8MP(4K) models only)

### Order Codes:

|                |   |
|----------------|---|
| IFS03-D21-OI03 | Illustra Flex 3MP Gen3 MiniDome, 3.2-10mm, Outdoor, Clear, IP66 IK10, TDN w/IR, WDR   |
| IFS08-D22-OI03 | Illustra Flex 4K Gen3 MiniDome, 4.17-9.48mm, Outdoor, Clear, IP66 IK10, TDN w/IR, WDR |
| IA-CBL-IO-F30  | I/O Cable   |
| IBJB-F-30WB-0  | Junction Box  |
| ADCi6DPCAPOW   | White Pendant Cap   |
| ADLOMARM       | Gooseneck Mounting Arm  |
| ADCDMCRNRO     | Corner Mount Adapter  |
| ADCDMPOLE      | Pole Mount Adapter  |
| ADCiM6WALLWK   | Wall Mount (White)  |

### Safeguard Against Cyber Attacks Across Devices

Illustra Flex Cameras have been designed to be resilient against cyber-threats. Our products are gated, analyzed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Flex Mini Domes

### Technical Specifications:

| Operational                 | 3MP   | 8MP(4K)  |
|-----------------------------|---|--|
| Video Compression           | MJPEG, H.264, H.264 IntelliZip, H.265 and H.265 IntelliZip                                      |  |
| Resolution                  | 2048x1536/ 1920x1080/ 1664x936/<br>1280x720/ 1024x576/ 640x480/<br>640x360/<br>480x360/ 384x288 | 3840x2160/ 3264x1840/ 2688x1520/<br>1920x1080/ 1664x936/ 1280x720/<br>1024x576/ 960x544/ 816x464/<br>640x360/<br>480x272 |
| Max. Framerate              | H.265/H.264: Max. 60fps<br>MJPEG: Max. 20fps  |  |
| Smart Codec                 | IntelliZip  |  |
| Imaging Device              | 1/2.8" 3.21MP CMOS  | 1/1.8" 8.3MP CMOS  |
| Effective Pixels            | 2065(H) x 1553(V)   | 3840(H) x 2160(V)  |
| Min. Illumination           | Colour: min 0.05 lux (1/30sec, 30IRE)<br>BW: 0.005Lux   | Colour: min 0.27 lux (1/30sec, 30IRE)<br>BW: 0.027Lux  |
| Focal Length                | 3.2 ~ 10mm  | 4.17 ~ 9.48mm  |
| Max. Aperture Ratio         | F1.6(W) ~F2.9(T)  | F1.9(W) ~F2.8(T)   |
| Angular Field of View       | H: 94.7°(W)~29.34°(T)<br>V: 68.7°(W)~22°(T)<br>D: 125.21°(W)~36.45°(T)                          | H: 111.66°(W)~ 46.69°(T)<br>V: 62.53°(W)~26.36°(T)<br>D: 131.91°(W)~53.21°(T)  |
| Focus Control               | Simple focus, (software controls: one-touch AF and manual control)                              |  |
| Lens Type                   | Motorised varifocal, P-Iris   |  |
| IR Viewable Length          | 40m Adaptive IR   |  |
| Day & Night                 | Auto Low/ Auto Mid(Default)/ Auto High/ Manual/ Forced Color/ Force B&W                         |  |
| Backlight Compensation      | Exposure Weighting: Top, Bottom, Left, Right, Full, Centre, Spot                                |  |
| Wide Dynamic Range          | True WDR 140db Technologies   | True WDR 120db Technologies  |
| Digital Noise Reduction     | 2D&3DNR   |  |
| Signal to Noise Ratio (SNR) | 50db  |  |
| Digital Image Stabilisation | No  |  |
| Motion Detection            | 3ea, polygonal zones  |  |
| Privacy Masking             | 9ea, rectangular zones  |  |
| Gain Contro                 | Automatic & Manual (3dB increments)   |  |
| White Balance               | Automatic Wide, Automatic Normal (Default), Manual  |  |
| Lens Distortion Correction  | Support   |  |
| Electronic Shutter Speed    | Minimum 1/4s, Maximum 1/10,000s   |  |
| Video Rotation              | Corridor Mode, Mirror & Flip  |  |
| Alarm I/O                   | Input 1ea (digit) / Output 1ea, IO Cable (IA-CBL-IO-F30 ) required                              |  |
| Alarm Triggers              | Motion detection, Tampering detection, Alarm Input, Defocus detection                           |  |
| Alarm Events                | Alarm output, Onboard recording, Snapshot, Notification via e-mail, FTP upload, CIFS upload     |  |
| Audio In                    | Line in, IO Cable (IA-CBL-IO-F30 ) required   |  |
| Audio Out                   | Line out, IO Cable (IA-CBL-IO-F30 ) required  |  |
| Micro USB                   | WiFi Installation Support via Illustra Mobile Toolkit   |  |

## IP Cameras - Illustra Flex Mini Domes

| Video Intelligence Analytics      | 3MP  | 8MP(4K)   |
|-----------------------------------|--|---|
| Standard                          | Tampering, Defocus / Motion Detection  |   |
| Advanced <sup>1</sup>             | -  | Linger, Exit, Direction, Abandoned/<br>Removed Objects, Dwell, Enter,<br>Object Detection, Perimeter, Queue,<br>Crowd |
| Face Detection <sup>1</sup>       | -  | Yes   |
| Tamper Detection                  | Scene Change   |   |
| Blur Detection                    | Yes  |   |
| Network                           |  |   |
| Ethernet                          | RJ-45(10/100BASE-T)  | RJ-45(10/100/1000BASE-T)  |
| Bitrate Control                   | H.264/H.265: CBR or VBR or CVBR  |   |
| Streaming                         | Multiple streaming (Up to 3 profiles)  |   |
| Audio Compression                 | G.711 alaw and ulaw selectable G.711 8KHz  |   |
| Protocol                          | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, RTCP, RTSP, TLS, Unicast, Multicast, NTP, ICMP, IGMP, SMTP, WS-Security, IEEE 802.1x, PEAP, EAP-TLS, EAPoL, SSH, HTTPS, SOAP, WSAddressing, CIFS, SNMP, UPNP, RTSP, LLDP  |   |
| Security                          | TLS - RFC5246 v1.2, HTTPS (HTTP over TLS) - RFC2818, WS-Security, Certificate Management, Multi-Level Password Protection, IP Address/<br>Filtering, HTTPS Encryption, One-Click Security Hardening, User Access Log, Validate Complex Credentials, Disabling Unused Protocols, IEEE / 802.1x<br>Including: PEAP, EAP-TLS, EAPoL |   |
| Edge Storage                      | Micro SD/SDHC/SDXC 1slot 512GB   |   |
| Application Programming Interface | iAPI-3   |   |
| ONVIF-Compliant                   | Profile S  |   |
| Memory                            | 512MB RAM, 512MB Flash   | 1GB RAM, 512MB Flash  |
| Environmental                     |  |   |
| Operating Temp / Humidity         | -40°C ~ +50°C Up to 5 concurrent hours at 60°C / Less than 90% RH  |   |
| Storage Temp / Humidity           | -40°C ~ +55°C / Less than 90% RH   |   |
| Environmental                     | IP66 / IP67  |   |
| Vandal Resistance                 | IK10   |   |
| Electrical                        |  |   |
| Input Voltage                     | 24 VAC (-20% ~ +30%, 47 ~ 63 Hz), PoE 802.3af (802.3at Type 1)   |   |
| Power Consumption                 | 24VAC: Max 14.0W PoE: Max 12.95W   | 24VAC: Max 15.0W PoE: Max 12.95W  |
| Mechanical                        |  |   |
| Colour / Material                 | White / Aluminum   |   |
| RAL Code                          | RAL9003  |   |
| Dimensions / Weight               | (Ø) 91 x (L) 352.5 mm with back box /1.75kg  |   |
| Regulatory                        |  |   |
| Safety                            | UL62368-1; CAN/CSA-C22.2 No. 62368-1, BIS IS13252 Part 1:2010  |   |
| Emissions                         | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/NMB-003 Class A  |   |
| Immunity                          | EN50130-4  |   |
| Environment                       | RoHS; WEEE   |   |

1. Advanced Analytics and Face Detection subject to future firmware release

## IP Cameras - Illustra Flex Multi-Directional Mini Domes

### Illustra Flex Multi-Directional 4x 4MP Mini Dome



The Illustra Flex multi-sensor camera is ideal for applications that require a flexible, cost-effective surveillance solution that provides wide area coverage along with detailed images.

With one IP address and one network cable, the four (4x4MP) multidirectional camera heads provide a flexible, cost-effective solution for multidirectional surveillance. Camera heads can be positioned and angled independently to provide 360 degree coverage in four separate non-stitched streams.

The Flex multi-sensor's magnetic base enables each sensor to be independently placed, providing operators with a multitude of configuration options. The three axis gimbal on each sensor then allows the Field of View (FoV) configuration to be fine tuned with up to 60 degree tilting and provides a total field of view of 180, 270 or 360 degrees.

Illustra Flex multi-sensor cameras have been designed to allow for personalisation for multitude of use cases and any field of view (FoV). From an internal 360 degree hallway or car park installation to external 270 degree corner installation, and even a 180 degree assembly line installation.

The Illustra Flex Multi-Sensor has been designed with cybersecurity at the forefront. Our products exceed the standards of the Johnson Controls Cyber Solutions Product Security Program. Our security mindset starts with a holistic approach, including rapid incident response to meet comprehensive and evolving cybersecurity environments.

#### Features:

- 8MP (4K) high-resolution model options for true HD quality images
- P-Iris for image clarity in changing light conditions
- VideoEdge® TrickleStor technology for edge-based failover redundancy
- Illustra® IntelliZip offers powerful video compression technology for bandwidth management
- True Day/Night functionality for quality video recording in low light conditions
- True Wide Dynamic Range balances challenging lighting conditions
- IR illumination for clear images in low light conditions on outdoor model
- Extended temperature available on outdoor model up to 140°F (60°C) for 5 hours a day in indirect sunlight with IR illuminators off
- Motion detection for instant intruder alerts
- IP66- and IP67-rated environmental enclosure to protect against dust and water damage
- IK10 vandal-resistant rating
- ONVIF Profile S conformant for simplified video streaming integrations
- Included in the Cyber Protection Program

#### Order Codes:

|                |                                 |
|----------------|---------------------------------|
| IFS16-M10-BT03 | Flex 4 x 4MP Multisensor Camera |
| IBWS-M-ISWB-0  | Wall Mount                      |
| IBJB-M-ISWB-0  | Junction Mount                  |
| IBCR-M-ISWT-0  | In-Ceiling Recess Mount         |
| IBPN-M-IS12-0  | Ceiling Pendant Mount           |
| IABL-M-ISC-0   | Replacement Bubble (Clear)      |

The Flex product family cameras feature built-in technology that ensure efficient recording. Multiple streams of H.264 and MJPEG video compression provide excellent image clarity while efficiently managing bandwidth to reduce storage costs.

The Illustra Flex Multi-Sensor is compatible with our VideoEdge NVR, VideoEdge Hybrid, victor Unified Client, ExacqVision recorders and Clients.



## IP Cameras - Illustra Flex Multi-Directional Mini Domes

### Technical Specifications:

| Operational   |  |
|---|--|
| Video Compression                                     | H.264, MJPEG   |
| Max Frame Rate  | 30 fps   |
| Resolution & Aspect Ratio<br>H264: Stream 1 @ 30 fps  | 2560x1440 16:9<br>2304x1296 16:9<br>1920x1080 16:9 (1080p)<br>1280x720 16:9 (720p)   |
| Resolution & Aspect Ratio<br>H264: Stream 2 @ 30 fps  | 640x480 4:3 (VGA)<br>704x576 D1 PAL<br>704x480 D1 NTSC<br>352x288 CIF PAL<br>352x240 CIF NTSC  |
| Resolution & Aspect Ratio<br>MJPEG: Stream 3 @ 10 fps | 1280 x 720 16:9 (720p)<br>800x600 4:3<br>640x480 4:3 (VGA)<br>768x432 16:9<br>704x576 D1 PAL<br>704x480 D1 NTSC<br>352x288 CIF PAL<br>352x240 CIF NTSC |
| Video Streams   | Triple Stream  |
| Imager  | 4 x 4MP 1/3" CMOS Sensor   |
| Lens Type   | Fixed  |
| Aperture  | f/2  |
| Focal Length  | 2.8mm  |
| Field of View (H/V)                                   | 90° / 55°  |
| Shutter Speed   | Auto / Manual (1/15 ~ 1/32000), Anti-Flicker,<br>Slow Shutter (1/2, 1/3, 1/5, 1/6, 1/7.5, 1/10)  |
| Minimum Illumination<br>Colour<br>B/W                 | 0.41 Lux<br>0.022 Lux  |
| Wide Dynamic Range                                    | True WDR 120DB   |
| Day/Night   | True Day/Night   |
| ONVIF-Compliant                                       | Profile S  |
| Motion Detection Zones                                | Up to four areas per sensor  |
| Privacy Zones   | 16 per sensor  |
| Alarm Input/Output                                    | 1/1  |
| Analog Video Output                                   | CVBS 1Vp-p, 4:3 aspect ratio (test port only)  |
| Bi-directional audio                                  | 1/1  |
| Simultaneous Users                                    | 5  |
| Supported Languages                                   | English, Japanese, Korean  |
| SD card event buffering                               | Yes  |
| SD card event download                                | Yes  |
| SD card continuous recording                          | Yes  |

## IP Cameras - Illustra Flex Multi-Directional Mini Domes

| Network                  |  |
|--------------------------|--|
| Ethernet Interface       | 1000 Base-T (1Gbps)  |
| Supported Protocols      | TCP/IP, UDP, AutoIP, RTP(UDP/TCP), RTSP, NTP, HTTP, HTTPS, SSL, DNS, DDNS, DHCP, FTP, SMTP, ICMP, SNMPv1/v2/v3(MIB-2), ONVIF |
| Configuration Management |  |
| WEB Server               | Yes  |
| Security                 | HTTPS(SSL), IP filtering, 802.1x, Digest Authentication  |
| Onboard Storage          |  |
| Card Support             | Micro SD, Micro SDHC, Micro SDXC (128GB Max)   |
| Pre-Alarm Recording      | Up to 5 seconds  |
| Recording Format         | TS   |
| Recording Trigger        | Date, Time, Event (Motion, Alarm, Network Disconnected, Temperature Critical)  |
| Electrical               |  |
| Power Input              | Power over Ethernet (PoE+) IEEE 802.3at Type 2 Class 4, 12VDC  |
| Maximum Power Draw       | PoE+ 17.5W, 12VDC 16.5W  |
| Physical                 |  |
| Dimensions (W x H)       | Ø 192 mm x 84 mm   |
| Weight                   | 2.0 kg   |
| Housing Colour           | White (Pantone RAL 9003)   |
| Operating Temperature    | -20°C to 50°C  |
| Humidity                 | 10-90% RH(Non-Condensing)  |
| Outdoor Rating           | IP66   |
| Vandal Resistant         | IK10   |
| Regulatory               |  |
| Emissions                | FCC, Class A<br>EN 55032, Class A  |
| Immunity                 | EN 55130-4   |
| Enclosure                | IP66, IK10   |
| Environment              | RoHS   |
| NDAA                     | Yes  |

## IP Cameras - Illustra Pro Bullet Cameras

### Illustra Pro 2MP, 3MP, 5MP, 8MP Bullet Cameras



#### Features:

- Pole/pendant mount and arm included for mounting flexibility
- Easily accessible ports simplify installation
- Profile settings allow the bullet to adapt to scenarios such as license plate recognition, gaming, and more
- Ultra low light capabilities to maintain color image quality without IR
- Dual power failover maximizes camera uptime
- Improved accuracy for facial detection with updated library algorithms

The Illustra Pro Gen3 Bullet maximizes video quality while minimizing installation costs and configuration time. Powerful integrated IR provides uninhibited images in total darkness up to 197ft away. Multiple mounting options featuring easily accessible cable ports simplify installation and ongoing maintenance. Building off the previous generation of cameras, the Pro Gen3 Bullet improves on important features such as Wide Dynamic Range, effective failover redundancy, cybersecurity, and Video Intelligence Analytics. Available in a range of resolutions and lens options, the Pro Gen3 Bullet can be added to a variety of deployments in both medium- and large-sized facilities.

Smart Wide Dynamic Range available in the Pro Gen3 Bullet reduces configuration time while greatly improving the quality of the video stream in varying lighting environments. By effectively reading the scene, the Bullet can adjust contrasting and overall scene balance without operator intervention or maintenance. Setup times are also reduced with the addition of application profiles that automatically adjust the camera's settings based on the environment.

Illustra Pro IP cameras have been designed to be resilient against cyber-threats. This solution includes "secure boot" which ensures the camera will not start if software has been tampered with in any way. Additional safeguard controls include an enhanced security mode which forces the use of complex, non-default passwords and encrypted communications.

#### Order Codes:

|                |   |
|----------------|---|
| IPS02-B12-O103 | 2MP Bullet, 2.7-13.Smm, TON w/IR, Indoor/Outdoor              |
| IPS02-B15-O103 | 2MP Bullet, 4.7-47mm, TON w/IR, Indoor/Outdoor                |
| IPS03-B12-O103 | 3MP Bullet, 2.7-13.Smm, TON w/IR, Indoor/Outdoor              |
| IPS03-B15-O103 | 3MP Bullet, 4.7-47mm, TON w/IR, Indoor/Outdoor                |
| IPS05-B12-O103 | 5MP Bullet, 2.7-13.Smm, TON w/IR, Indoor/Outdoor              |
| IPS05-B16-O103 | 5MP Bullet, 13-55mm, TON w/IR, Indoor/Outdoor                 |
| IPS08-B13-O103 | 8MP Bullet, 3.6-10mm, TON w/IR, Indoor/Outdoor                |
| IPS08-B16-O103 | 8MP Bullet, 13-55mm, TON w/IR, Indoor/Outdoor                 |
| ADCDMPOLE      | Pole adaptor, used with ADLOMARM / ADCBMARM                   |
| ADCDMCRNRO     | Corner adaptor, outside corner, used with ADLOMARM / ADCBMARM |

Our products are gated, analysed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Pro Bullet Cameras

### Technical Specifications:

| Operational                   | 2MP   |                       | 3MP   |                       | 5MP   |                       | 8MP  |                       |  |
|-------------------------------|---|-----------------------|---|-----------------------|---|-----------------------|--|-----------------------|--|
| Video Compression             | H.264 / H.265 / MJPEG / IntelliZip  |                       |   |                       |   |                       |  |                       |  |
| Max Frame Rate                | 2MP @ 60 fps  |                       | 3MP @ 30 fps<br>2MP @ 60 fps  |                       | 5MP @ 30 fps<br>2MP @ 60 fps  |                       | 4K @ 30 fps<br>2MP @ 60 fps  |                       |  |
| Resolution & Aspect Ratio     | 1920x1080 (1080p) 16:9<br>1664x936 (HD+) 16:9<br>1280x720 (720p) 16:9<br>1024x576 (PAL+) 16:9<br>960x544 (qHD) 16:9<br>816x464 16:9<br>640x360 (nHD) 16:9<br>480x272 16:9 |                       | 2048x1536 4:3<br>1920x1080 (1080p) 16:9<br>1664x936 (HD+) 16:9<br>1280x960 4:3<br>1280x720 (720p) 16:9<br>800x600 (SVGA) 4:3<br>640x480 (VGA) 4:3<br>640x360 (nHD) 16:9<br>480x360 4:3<br>384x288 4:3 |                       | 2592x1944 4:3<br>2560x1440 16:9<br>2048x1536 4:3<br>1920x1080 (1080p) 16:9<br>1664x936 (HD+) 16:9<br>1280x960 4:3<br>1280x720 (720p) 16:9<br>800x600 (SVGA) 16:9<br>640x480 (VGA) 4:3<br>640x360 (nHD) 16:9<br>480x360 4:3<br>384x288 4:3 |                       | 3840x2160 (4K) 16:9<br>3264x1840 16:9<br>2688x1520 16:9<br>2560 x 1440 16:9<br>1920x1080 (1080p) 16:9<br>1664x936 (HD+) 16:9<br>1280x720 (720p) 16:9<br>1024x576 (PAL+) 16:9<br>960x544 (qHD) 16:9<br>816x464 16:9<br>640x360 (nHD) 16:9<br>480x272 16:9 |                       |  |
| Video Streams                 | Quad Streaming  |                       |   |                       |   |                       |  |                       |  |
| Imager                        | Progressive Scan RGB 1/2.8" CMOS  |                       |   |                       |   |                       | Progressive Scan RGB 1/1.8" CMOS   |                       |  |
| Image Orientation Settings    | None, Mirror, Flip, Flip and Mirror, Corridor (rotate 90° right or left)  |                       |   |                       |   |                       |  |                       |  |
| Lens Type                     | Motorised Varifocal and Focus, P-Iris   |                       |   |                       |   |                       |  |                       |  |
| Focus Control                 | One-Touch Auto Focus or Remote Adjustment   |                       |   |                       |   |                       |  |                       |  |
| Focal Length (mm)             | 2.7-13.5  | 4.7-47                | 2.7-13.5  | 4.7-47                | 2.7-13.5  | 13-55                 | 3.6-10   | 13-55                 |  |
| Field of View Wide (H/V)      | 112°/58°  | 62.2°/37°             | 100°/73°  | 58°/45°               | 103°/74°  | 25°/19°               | 95°/53°  | 33°/17°               |  |
| Field of View Telephoto (H/V) | 35°/20°   | 6.6°/3.7°             | 32°/24°   | 6.5°/4.5°             | 33°/25°   | 6°/4.6°               | 49°/28°  | 8.4°/4.5°             |  |
| Aperture                      | f/1.4 (W)<br>f/2.8 (T)  | f/1.6(W)<br>f/3.0 (T) | f/1.4 (W)<br>f/2.8 (T)  | f/1.6(W)<br>f/3.0 (T) | f/1.4 (W)<br>f/2.8 (T)  | f/1.7(W)<br>f/2.1 (T) | f/1.5 (W)<br>f/2.8 (T)   | f/1.7(W)<br>f/2.1 (T) |  |
| Minimum Illumination          |   |                       |   |                       |   |                       |  |                       |  |
| Color, 1/4s, 30 IRE, AGC      | 0.01 Lux  | 0.1 Lux               | 0.02 Lux  | 0.03 Lux              | 0.03 Lux  | 0.03 Lux              | 0.03 Lux   | 0.03 Lux              |  |
| B/W, 1/4s, 30 IRE, AGC        | 0.0001 Lux  | 0.0001 Lux            | 0.0002 Lux  | 0.0003 Lux            | 0.0002 Lux  | 0.0003 Lux            | 0.0004 Lux   | 0.0005 Lux            |  |
| w/ IR                         | 0.0 Lux   | 0.0 Lux               | 0.0 Lux   | 0.0 Lux               | 0.0 Lux   | 0.0 Lux               | 0.0 Lux  | 0.0 Lux               |  |
| IR Distance                   | Std lens: 60m / Telephoto lens: 70m   |                       |   |                       |   |                       |  |                       |  |
| Dynamic Range                 | True WDR 120 dB Technologies  |                       | True WDR 120 dB Technologies  |                       | True WDR 110 dB Technologies  |                       | True WDR 120 dB Technologies   |                       |  |
| Day/Night                     | True Day/Night  |                       |   |                       |   |                       |  |                       |  |
| Shutter Speed                 | 1/4 - 1/10,000  |                       |   |                       |   |                       |  |                       |  |
| ONVIF-Compliant               | Profile S   |                       |   |                       |   |                       |  |                       |  |

## IP Cameras - Illustra Pro Bullet Cameras

| Operational                  | 2MP  | 3MP | 5MP | 8MP |
|------------------------------|--|-----|-----|-----|
| Video Intelligence Analytics | Linger, exit, direction, abandoned/removed objects, queue, dwell, enter, object detection, crowd, perimeter  |     |     |     |
| Motion Detection Zones       | 3  |     |     |     |
| Face Detection               | Yes  |     |     |     |
| Blur Detection               | Yes  |     |     |     |
| Privacy Zones                | 9  |     |     |     |
| Alarms I/O                   | 2-1  |     |     |     |
| Analog Video Output          | 1  |     |     |     |
| Audio                        | Bi-Directional Full-Duplex   |     |     |     |
| Simultaneous Users           | 10   |     |     |     |
| Languages                    | Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, English (default), French, German, Hindi, Hungarian, Italian, Japanese, Korean, Netherlands, Polish, Portuguese, Spanish, Swedish, Turkish, Russian  |     |     |     |
| Network                      |  |     |     |     |
| Ethernet Interface           | 10/100/1000 BaseT, RJ-45, Auto-Negotiation   |     |     |     |
| Supported Protocols          | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, RTSP, ICMP, Unicast, Multicast, NTP, SMTP, WS-Security, SNMP, CIDS, FSTP, UPnP™, SIP   |     |     |     |
| Configuration Management     |  |     |     |     |
| Web Browsers                 | IE 9 and above, Firefox, Safari, Chrome  |     |     |     |
| Security                     | Enhanced Security Mode (forces complex passwords, HTTPS and disables discovery); TLS 1.2 (256 bit cipher minimum); Security Overview Page (status and configuration); RTSP Authentication; IEEE 802.1X Client; Remote Accessible Audit logs; Role-Based Access Control |     |     |     |
| Onboard Storage              |  |     |     |     |
| Card Support                 | micro SDXC up to 512GB   |     |     |     |
| Pre-Alarm Recording          | Yes  |     |     |     |
| Recording Format             | MP4 File Format  |     |     |     |
| Recording Trigger            | Video Intelligence, Dry Contact Alarms, Motion Detection, Face Detection   |     |     |     |
| VideoEdge TrickleStor        | Yes  |     |     |     |
| Electrical                   |  |     |     |     |
| Power Input                  | Power over Ethernet+ (PoE+) IEEE 802.3at Class 4 (48V 0.38A); 24 VAC 1.27A 50/60Hz   |     |     |     |
| Power Draw                   | PoE 18.2W, 24 VAC 30.5W  |     |     |     |

## IP Cameras - Illustra Pro Bullet Cameras

| Physical              | 2MP   | 3MP | 5MP  | 8MP |
|-----------------------|---|-----|--|-----|
| Dimensions (RxH)      | Std lens: Ø79.9 x 205mm<br>Telephoto lens: Ø79.9 x 217mm              |     | Std lens: Ø79.9 x 205mm<br>Telephoto lens: Ø79.9 x 235.5mm |     |
| Weight                | Std lens: 1.9kg<br>Telephoto lens: 2kg                                |     | Std lens: 1.9kg<br>Telephoto lens: 2.2kg                   |     |
| Housing Colour        | Signal White - RAL 9003   |     |  |     |
| Operating Temperature | -58°C to 60°C   |     |  |     |
| Humidity              | Up to 90% non-condensing  |     |  |     |
| Vandal Resistant      | IK10  |     |  |     |
| Outdoor Rating        | IP67  |     |  |     |
| Plenum Rating         | N/A   |     |  |     |
| Regulatory            |   |     |  |     |
| Safety                | UL/IEC 60950-1, 62368-1, 60950-22; IEC 62471; UL Listed; CB Certified |     |  |     |
| Emissions             | FCC CFR 47/15b Class A; EN55032 Class A                               |     |  |     |
| Immunity              | EN50130-4   |     |  |     |
| Environment           | RoHS; Reach, WEEE, Waste packaging                                    |     |  |     |

## IP Cameras - Illustra Pro Mini Domes

### Illustra PRO 2MP External Mini Domes



#### Features:

- Smart wide dynamic range enhances darkened areas reducing the need for operator interference
- Enhanced IntelliZip provides improved support to 4K models at 30fps and saves storage resources
- Profile settings allow the mini-dome to adapt to scenarios such as retail, gaming, and more
- Ultra low light capabilities to maintain colour image quality
- Integrated IR up to 40 metres allows quality images regardless of the time of day
- Dual power failover maximizes camera uptime
- Improved accuracy for facial detection with updated library and algorithms
- Bubble-free design reduces installation time while increasing IR video quality

The Illustra Pro Gen3 Mini-Dome maximizes video quality while minimizing installation costs and configuration time. Integrated IR provides uninhibited images in total darkness by removing the bubble from the housing, reducing glare and increasing distance capabilities.

Additionally, Illustra® IntelliZip bandwidth management has been improved to optimise resource savings in scenes with varying activity levels. Building off the previous generation of cameras, the Gen3 Mini-Dome improves on important features such as Wide Dynamic Range, effective failover redundancy, cybersecurity, and Video Intelligence Analytics.

Available in a range of resolutions and lens options, the Gen3 Mini-Dome can be added to a variety of deployments in both medium- and large-sized facilities.

#### Smart Technologies Simplify Setup and Configuration

Smart Wide Dynamic Range available in the Pro Gen3 Mini-Dome reduces configuration time while greatly improving the quality of the video stream in varying lighting environments. By effectively reading the scene, the Mini-Dome can adjust contrasting and overall scene balance without operator intervention or maintenance. Setup times are also reduced with the addition of application profiles that automatically adjust the camera's settings based on the environment.

#### Transform Data at the Edge with Video Intelligence Analytics

Save resources when you offload analytic streaming from network video recorders to the edge on Illustra cameras. Video Intelligence Analytics provide real-time event alarms that allows for quick reaction to incidents and behaviors as they occur. Choose from a variety of analytic rules to customize the solution that will be most beneficial to your business and begin gathering transformative data instantly.

#### Safeguard Against Cyber Attacks Across Devices

Illustra Pro IP cameras have been designed to be resilient against cyber-threats. This solution includes "secure boot" which ensures the camera will not start if software has been tampered with in any way. Additional safeguard controls include an enhanced security mode which forces the use of complex, non-default passwords and encrypted communications. Our products are gated, analyzed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Pro Mini Domes

### Technical Specifications:

| Specification  |  |   |
|--|--|---|
| Operational  |  |   |
| Video Compression  | H.264 / H.265 / MJPEG / IntelliZip   |   |
| Max Frame Rate   | 2MP @ 60fps  |   |
| Resolution & Aspect Ratio  | 1920x1080 (1080p) 16:9<br>1280x720 (720p) 16:9<br>960x544 (qHD) 16:9<br>640x360 (nHD) 16:9   | 1664x936 (HD+) 16:9<br>1024x576 (PAL+) 16:9<br>816x464 16:9<br>480x272 16:9 |
| Video Streams  | Quad Streaming   |   |
| Imager   | Progressive Scan RGB 1/2.8" CMOS   |   |
| Image Orientation Settings   | None, Mirror, Flip, Flip and Mirror, Corridor (rotate 90° right or left)   |   |
| Lens Type  | Motorised Varifocal and Focus, P-Iris  |   |
| Focus Control  | One-Touch Auto Focus or Remote Adjustment  |   |
| Focal Length   | <b>2.7-13.5mm</b>  | <b>7-22mm</b>   |
| Field of View Wide (H/V)   | 112°/58°   | 40°/21°   |
| Field of View Telephoto (H/V)  | 35°/20°  | 18°/10°   |
| Aperture   | f/1.4 (W)<br>f/2.8 (T)   | f/1.7 (W)<br>f/2.8 (T)  |
| Minimum Illumination<br>Colour, 1/4s, 30 IRE, AGC<br>B/W, 1/4s, 30 IRE, AGC<br>w/ IR | 0.01 Lux<br>0.0001 Lux<br>0.0 Lux  | 0.02 Lux<br>0.0002 Lux<br>0.0 Lux   |
| IR Distance  | 40m  |   |
| Dynamic Range  | Triple Exposure, True WDR 120 dB Technologies  |   |
| Day/Night  | True Day/Night   |   |
| Shutter Speed  | 1/4 - 1/10,000   |   |
| ONVIF-Compliant  | Profiles S   |   |
| Video Intelligence Analytics   | Linger, Exit, Direction, Abandoned/Removed objects, Queue, Dwell, Enter, Object detection, Crowd, Perimeter  |   |
| Motion Detection Zones   | 3  |   |
| Face Detection   | Yes  |   |
| Blur Detection   | Yes  |   |
| Privacy Zones  | 9  |   |
| Alarm Input/Output   | 2/1  |   |
| Analog Video Output  | Yes  |   |
| Audio  | Bi-Directional Full-Duplex   |   |
| Simultaneous Users 10  | 10   |   |
| Supported Languages  | Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, English (default), French, German, Hungarian, Italian, Japanese, Korean, Netherlands, Polish, Portuguese, Russian, Spanish, Swedish, Turkish |   |



## IP Cameras - Illustra Pro Mini Domes

| Network                  |   |
|--------------------------|---|
| Ethernet Interface       | 10/100/1000 BaseT, RJ-45, Auto-Negotiation  |
| Supported Protocols      | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, RTSP, ICMP, Unicast, Multicast, NTP, SMTP, WS-Security, SNMP, CIDS, FSTP, UPnP™, SIP  |
| Configuration Management |   |
| Web Browsers             | IE 9 and above, Firefox, Safari, Chrome   |
| Security                 | Secure Boot, Enhanced Security Mode (forces complex passwords, HTTPS and disables discovery); TLS 1.2 (256 bit cipher minimum); Security Overview Page (status and configuration); RTSP Authentication; IEEE 802.1X Client; Remote Accessible Audit logs; Role-Based Access Control |
| Onboard Storage          |   |
| Card Support             | micro SDXC up to 512GB  |
| Pre-Alarm Recording      | Yes   |
| Recording Format         | MP4 File Format   |
| Recording Trigger        | Dry Contact Alarms, Motion Detection, Face Detection, Video Intelligence  |
| TrickleStor              | Yes   |
| Electrical               |   |
| Power                    | Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3; 24 VAC<br>Max Draw: PoE 12.95W, 24 VAC 16.5W   |
| Physical                 |   |
| Dimensions (RxH)         | Ø138 x 138mm  |
| Weight                   | 1.13 kg   |
| Housing Colour           | Signal White - RAL 9003   |
| Operating Temperature    | -50° to +60°C   |
| Humidity                 | Up to 90% Non-Condensing  |
| Vandal Resistant         | IK10  |
| Outdoor Rating           | IP66/IP67   |
| Regulatory               |   |
| Safety                   | EN60950-1; UL60950-1; IEC 60950-1; CSA 22.2 No. 60950   |
| Emissions                | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/NMB-003 Class A   |
| Immunity                 | EN55024; EN50130-3  |
| Environment              | RoHS; WEEE  |

## IP Cameras - Illustra Pro Mini Domes

| ILLUSTRATION CAMERA MODEL KEY |                |              |            |                  |               |                        |            |            |                    |                                 |                     |
|-------------------------------|----------------|--------------|------------|------------------|---------------|------------------------|------------|------------|--------------------|---------------------------------|---------------------|
| Illustra                      | Series         | Model        | Resolution | Form Factor      | Lens          | Environment Housing    | Bubble     | Colour     | Day/Night/<br>Ir   | Wdr                             | Other               |
| I                             | E = Essentials | L = Lite     | 01 = 1MP   | B = Bullet       | N = None      | N = None               | N = None   | B = Black  | C = Colour Only    | N = No                          | A = Hardware Update |
|                               | F = Flex       | P = Plus     | 02 = 2MP   | C = Compact Dome | F = Fixed     | A = Indoor Non-Vandal  | C = Clear  | G = Gray   | I = TDN w/ IR      | T = Multi-Exposure (>60 Frames) |                     |
|                               | P = Pro        | S = Standard | 03 = 3MP   | D = Dome         | 0 = 1.8—3 mm  | B = Outdoor Non-Vandal | S = Smoked | S = Silver | S = Soft Day/Night | Y = Yes                         |                     |
|                               | Q = Edge       |              | 05 = 5MP   | F = Fisheye      | 1 = 2.8—12 mm | I = Indoor Vandal      | W = White  | T = TDN    |                    |                                 |                     |
|                               |                |              |            | M = Mini-Bullet  | 2 = 3—9 mm    | O = Outdoor Vandal     |            |            |                    |                                 |                     |
|                               |                |              |            | P = PTZ          | 3 = 9—22 mm   |                        |            |            |                    |                                 |                     |
|                               |                |              |            | W = Wireless     | 4 = 9—40 mm   |                        |            |            |                    |                                 |                     |
|                               |                |              |            | Cube             |               |                        |            |            |                    |                                 |                     |
|                               |                |              |            | X = Box          | 5 = 20x       |                        |            |            |                    |                                 |                     |
|                               |                |              |            |                  | 6 = 30x       |                        |            |            |                    |                                 |                     |

## IP Cameras - Illustra Pro Mini Domes

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### Order Codes:

|                |   |
|----------------|---|
| IPS02-D12-OI03 | Illustra Pro Gen 3<br>minidome, 2 MegaPixel,<br>2.7-13.5mm lens, Outdoor,<br>TDN with IR      |
| IPS02-D17-OI03 | Illustra Pro Gen 3<br>minidome, 2 MegaPixel,<br>7-22mm lens, Indoor /<br>Outdoor, TDN with IR |

### Mounting Options

|               |  |
|---------------|--|
| IPSMDFLUSHOW3 | Illustra Pro Series: Recess<br>Mount, Indoor/Outdoor Gen<br>3          |
| IPSMDWALL3    | Illustra Pro Series: Wall<br>Mount, Indoor/Outdoor                     |
| ADCi6DPCAPIW  | Illustra Dome pendant cap,<br>white, 3/4" NPT                          |
| ADLOMARM      | Illustra gooseneck wall<br>mount arm, white (Requires<br>ADCi6DPCAPIW) |
| ADCDMPOLE     | Twin strap clamp pole-<br>mount adaptor. White finish                  |
| ADCDMCRNRO    | Outside corner adapter   |
| IPSMDEBPLATE  | Universal Electrical Box<br>Mounting Plate                             |

## IP Cameras - Illustra Pro Mini Domes

### Illustra PRO 3MP External Mini Domes



#### Features:

- Smart wide dynamic range enhances darkened areas reducing the need for operator interference
- Enhanced Intellizip provides improved support to 4K models at 30fps and saves storage resources
- Profile settings allow the mini-dome to adapt to scenarios such as retail, gaming, and more
- Ultra low light capabilities to maintain colour image quality
- Integrated IR up to 40 metres allows quality images regardless of the time of day
- Dual power failover maximizes camera uptime
- Improved accuracy for facial detection with updated library and algorithms
- Bubble-free design reduces installation time while increasing IR video quality

The Illustra Pro Gen3 Mini-Dome maximizes video quality while minimizing installation costs and configuration time. Integrated IR provides uninhibited images in total darkness by removing the bubble from the housing, reducing glare and increasing distance capabilities.

Additionally, Illustra® IntelliZip bandwidth management has been improved to optimise resource savings in scenes with varying activity levels. Building off the previous generation of cameras, the Gen3 Mini-Dome improves on important features such as Wide Dynamic Range, effective failover redundancy, cybersecurity, and Video Intelligence Analytics.

Available in a range of resolutions and lens options, the Gen3 Mini-Dome can be added to a variety of deployments in both medium- and large-sized facilities.

#### Smart Technologies Simplify Setup and Configuration

Smart Wide Dynamic Range available in the Pro Gen3 Mini-Dome reduces configuration time while greatly improving the quality of the video stream in varying lighting environments. By effectively reading the scene, the Mini-Dome can adjust contrasting and overall scene balance without operator intervention or maintenance. Setup times are also reduced with the addition of application profiles that automatically adjust the camera's settings based on the environment.

#### Transform Data at the Edge with Video Intelligence Analytics

Save resources when you offload analytic streaming from network video recorders to the edge on Illustra cameras. Video Intelligence Analytics provide real-time event alarms that allows for quick reaction to incidents and behaviors as they occur. Choose from a variety of analytic rules to customize the solution that will be most beneficial to your business and begin gathering transformative data instantly.

#### Safeguard Against Cyber Attacks Across Devices

Illustra Pro IP cameras have been designed to be resilient against cyber-threats. This solution includes "secure boot" which ensures the camera will not start if software has been tampered with in any way. Additional safeguard controls include an enhanced security mode which forces the use of complex, non-default passwords and encrypted communications. Our products are gated, analyzed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Pro Mini Domes

### Technical Specifications:

| Specification  |  |   |
|--|--|---|
| Operational  |  |   |
| Video Compression  | H.264 / H.265 / MJPEG / IntelliZip   |   |
| Max Frame Rate   | 3MP @ 30fps  | 2MP @ 60fps   |
| Resolution & Aspect Ratio  | 2048x1536 4:319<br>1664x936 (HD+) 16:9<br>1280x720 (720p) 16:9<br>640x480 (VGA) 4:3<br>480x360 4:3   | 20x1080 (1080p) 16:9<br>1280x960 4:3<br>800x600 (SVGA) 4:3<br>640x360 (nHD) 16:9<br>384x288 4:3 |
| Video Streams  | Quad Streaming   |   |
| Imager   | Progressive Scan RGB 1/2.8" CMOS   |   |
| Image Orientation Settings   | None, Mirror, Flip, Flip and Mirror, Corridor (rotate 90° right or left)   |   |
| Lens Type  | Motorised Varifocal and Focus, P-Iris  |   |
| Focus Control  | One-Touch Auto Focus or Remote Adjustment  |   |
| Focal Length   | <b>2.7-13.5mm</b>  | <b>7-22mm</b>   |
| Field of View Wide (H/V)   | 100°/73°   | 36°/26°   |
| Field of View Telephoto (H/V)  | 32°/24°  | 16°/12°   |
| Aperture   | f/1.4 (W)<br>f/2.8 (T)   | f/1.7 (W)<br>f/2.8 (T)  |
| Minimum Illumination<br>Colour, 1/4s, 30 IRE, AGC<br>B/W, 1/4s, 30 IRE, AGC<br>w/ IR | 0.02 Lux<br>0.0002 Lux<br>0.0 Lux  | 0.03 Lux<br>0.0003 Lux<br>0.0 Lux   |
| IR Distance  | 40m  |   |
| Dynamic Range  | Triple Exposure, True WDR 120 dB Technologies  |   |
| Day/Night  | True Day/Night   |   |
| Shutter Speed  | 1/4 - 1/10,000   |   |
| ONVIF-Compliant  | Profiles S   |   |
| Video Intelligence Analytics   | Linger, Exit, Direction, Abandoned/Removed objects, Queue, Dwell, Enter, Object detection, Crowd, Perimeter  |   |
| Motion Detection Zones   | 3  |   |
| Face Detection   | Yes  |   |
| Blur Detection   | Yes  |   |
| Privacy Zones  | 9  |   |
| Alarm Input/Output   | 2/1  |   |
| Analog Video Output  | Yes  |   |
| Audio  | Bi-Directional Full-Duplex   |   |
| Simultaneous Users 10  | 10   |   |
| Supported Languages  | Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, English (default), French, German, Hungarian, Italian, Japanese, Korean, Netherlands, Polish, Portuguese, Russian, Spanish, Swedish, Turkish |   |

## IP Cameras - Illustra Pro Mini Domes

| Network                  |   |
|--------------------------|---|
| Ethernet Interface       | 10/100/1000 BaseT, RJ-45, Auto-Negotiation  |
| Supported Protocols      | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, RTSP, ICMP, Unicast, Multicast, NTP, SMTP, WS-Security, SNMP, CIDS, FSTP, UPnP™, SIP  |
| Configuration Management |   |
| Web Browsers             | IE 9 and above, Firefox, Safari, Chrome   |
| Security                 | Secure Boot, Enhanced Security Mode (forces complex passwords, HTTPS and disables discovery); TLS 1.2 (256 bit cipher minimum); Security Overview Page (status and configuration); RTSP Authentication; IEEE 802.1X Client; Remote Accessible Audit logs; Role-Based Access Control |
| Onboard Storage          |   |
| Card Support             | micro SDXC up to 512GB  |
| Pre-Alarm Recording      | Yes   |
| Recording Format         | MP4 File Format   |
| Recording Trigger        | Dry Contact Alarms, Motion Detection, Face Detection, Video Intelligence  |
| TrickleStor              | Yes   |
| Electrical               |   |
| Power                    | Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3; 24 VAC<br>Max Draw: PoE 12.95W, 24 VAC 16.5W   |
| Physical                 |   |
| Dimensions (RxH)         | Ø138 x 138mm  |
| Weight                   | 1.13 kg   |
| Housing Colour           | Signal White - RAL 9003   |
| Operating Temperature    | -50° to +60°C   |
| Humidity                 | Up to 90% Non-Condensing  |
| Vandal Resistant         | IK10  |
| Outdoor Rating           | IP66/IP67   |
| Regulatory               |   |
| Safety                   | EN60950-1; UL60950-1; IEC 60950-1; CSA 22.2 No. 60950   |
| Emissions                | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/NMB-003 Class A   |
| Immunity                 | EN55024; EN50130-3  |
| Environment              | RoHS; WEEE  |

## IP Cameras - Illustra Pro Mini Domes

| ILLUSTR A CAMERA MODEL KEY |                |              |            |                   |               |                       |            |            |                     |                                 |                     |
|----------------------------|----------------|--------------|------------|-------------------|---------------|-----------------------|------------|------------|---------------------|---------------------------------|---------------------|
| Illustra                   | Series         | Model        | Resolution | Form Factor       | Lens          | Environment Housing   | Bubble     | Colour     | Day/ Night/IR       | WDR                             | Other               |
| I                          | E = Essentials | L = Lite     | 01 = 1MP   | B = Bullet        | N = None      | N = None              | N = None   | B = Black  | C = Colour Only     | N = No                          | A = Hardware Update |
|                            | F = Flex       | P = Plus     | 02 = 2MP   | C = Compact Dome  | F = Fixed     | A = Indoor NonVandal  | C = Clear  | G = Gray   | I = TDN w//IR       | T = Multi-Exposure (>60 Frames) |                     |
|                            | P = Pro        | S = Standard | 03 = 3MP   | D = Dome          | 0 = 1.8—3 mm  | B = Outdoor NonVandal | S = Smoked | S = Silver | S = Soft Day/ Night | Y = Yes                         |                     |
|                            | Q = Edge       |              | 05 = 5MP   | F = Fisheye       | 1 = 2.8—12 mm | I = Indoor Vandal     |            | W = White  | T = TDN             |                                 |                     |
|                            |                |              |            | M = Mini-Bullet   | 2 = 3—9 mm    | O = Outdoor Vandal    |            |            |                     |                                 |                     |
|                            |                |              |            | P = PTZ           | 3 = 9—22 mm   |                       |            |            |                     |                                 |                     |
|                            |                |              |            | W = Wireless Cube | 4 = 9—40 mm   |                       |            |            |                     |                                 |                     |
|                            |                |              |            | X = Box           | 5 = 20x       |                       |            |            |                     |                                 |                     |
|                            |                |              |            |                   | 6 = 30x       |                       |            |            |                     |                                 |                     |

## IP Cameras - Illustra Pro Mini Domes

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### Order Codes:

|                |   |
|----------------|---|
| IPS03-D12-OI03 | Illustra Pro 3MP MiniDome, motorised P-Iris 2.7-13.5mm, Indoor/Outdoor IP67, IK10, TDN w/IR up to 40 metres, TWDR |
| IPS03-D17-OI03 | Illustra Pro 3MP MiniDome, motorised P-Iris 7-22mm, Indoor/Outdoor IP67, IK10, TDN w/IR up to 40 metres, TWDR     |

### Mounting Options IPSMDFLUSHOW3

|               |  |
|---------------|--|
| IPSMDFLUSHOW3 | Illustra Pro Series: Recess Mount, Indoor/Outdoor Gen 3          |
| IPSMDWALL3    | Illustra Pro Series: Wall Mount, Indoor/Outdoor                  |
| ADCi6DPCAPIW  | Illustra Dome pendant cap, white, ¾" NPT                         |
| ADLOMARM      | Illustra gooseneck wall mount arm, white (Requires ADCi6DPCAPIW) |
| ADCDMPOLE     | Twin strap clamp pole-mount adaptor. White finish                |
| ADCDMCRNRO    | Outside corner adapter   |
| IPSMDEBPLATE  | Universal Electrical Box Mounting Plate                          |



## IP Cameras - Illustra Pro Mini Domes

# Illustra PRO 8MP External Mini Domes



### Features:

- Smart wide dynamic range enhances darkened areas reducing the need for operator interference
- Enhanced IntelliZip provides improved support to 4K models at 30fps and saves storage resources
- Profile settings allow the mini-dome to adapt to scenarios such as retail, gaming, and more
- Ultra low light capabilities to maintain colour image quality
- Integrated IR up to 40 metres allows quality images regardless of the time of day
- Dual power failover maximizes camera uptime
- Improved accuracy for facial detection with updated library and algorithms
- Bubble-free design reduces installation time while increasing IR video quality

The Illustra Pro Gen3 Mini-Dome maximizes video quality while minimizing installation costs and configuration time. Integrated IR provides uninhibited images in total darkness by removing the bubble from the housing, reducing glare and increasing distance capabilities.

Additionally, Illustra® IntelliZip bandwidth management has been improved to optimise resource savings in scenes with varying activity levels. Building off the previous generation of cameras, the Gen3 Mini-Dome improves on important features such as Wide Dynamic Range, effective failover redundancy, cybersecurity, and Video Intelligence Analytics.

Available in a range of resolutions and lens options, the Gen3 Mini-Dome can be added to a variety of deployments in both medium- and large-sized facilities.

### Smart Technologies Simplify Setup and Configuration

Smart Wide Dynamic Range available in the Pro Gen3 Mini-Dome reduces configuration time while greatly improving the quality of the video stream in varying lighting environments. By effectively reading the scene, the Mini-Dome can adjust contrasting and overall scene balance without operator intervention or maintenance. Setup times are also reduced with the addition of application profiles that automatically adjust the camera's settings based on the environment.

### Transform Data at the Edge with Video Intelligence Analytics

Save resources when you offload analytic streaming from network video recorders to the edge on Illustra cameras. Video Intelligence Analytics provide real-time event alarms that allows for quick reaction to incidents and behaviors as they occur. Choose from a variety of analytic rules to customize the solution that will be most beneficial to your business and begin gathering transformative data instantly.

### Safeguard Against Cyber Attacks Across Devices

Illustra Pro IP cameras have been designed to be resilient against cyber-threats. This solution includes "secure boot" which ensures the camera will not start if software has been tampered with in any way. Additional safeguard controls include an enhanced security mode which forces the use of complex, non-default passwords and encrypted communications. Our products are gated, analyzed, tested and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Pro Mini Domes

### Technical Specifications:

| Specification  |  |  |
|--|--|--|
| Operational  |  |  |
| Video Compression  | H.264 / H.265 / MJPEG / IntelliZip   |  |
| Max Frame Rate   | 8MP @ 30fps  | 2MP @ 60fps  |
| Resolution & Aspect Ratio  | 3840x2160 (4K) 16:9<br>2688x1520 16:9<br>1664x936 (HD+) 16:9<br>1024x576 (PAL+) 16:9<br>816x464 16:9<br>480x272 16:9   | 3264x1840 16:9<br>1920x1080 (1080p) 16:9<br>1280x720 (720p) 16:9<br>960x544 (qHD) 16:9<br>640x360 (nHD) 16:9 |
| Video Streams  | Quad Streaming   |  |
| Imager   | Progressive Scan RGB 1/1.8" CMOS   |  |
| Image Orientation Settings   | None, Mirror, Flip, Flip and Mirror, Corridor (rotate 90° right or left)   |  |
| Lens Type  | Motorised Varifocal and Focus, P-Iris  |  |
| Focus Control  | One-Touch Auto Focus or Remote Adjustment  |  |
| Focal Length   | <b>3.6-10mm</b>  | <b>6-22mm</b>  |
| Field of View Wide (H/V)   | 95°/53°  | 50°/28°  |
| Field of View Telephoto (H/V)  | 49°/28°  | 24°/14°  |
| Aperture   | f/1.5 (W)<br>f/2.8 (T)   | f/1.6 (W)<br>f/2.4 (T)   |
| Minimum Illumination<br>Colour, 1/4s, 30 IRE, AGC<br>B/W, 1/4s, 30 IRE, AGC<br>w/ IR | 0.03 Lux<br>0.0004 Lux<br>0.0 Lux  | 0.02 Lux<br>0.0005 Lux<br>0.0 Lux  |
| IR Distance  | 40m  |  |
| Dynamic Range  | Dual Exposure, True WDR 110 dB Technologies  |  |
| Day/Night  | True Day/Night   |  |
| Shutter Speed  | 1/4 - 1/10,000   |  |
| ONVIF-Compliant  | Profiles S   |  |
| Video Intelligence Analytics   | Linger, Exit, Direction, Abandoned/Removed objects, Queue, Dwell, Enter, Object detection, Crowd, Perimeter  |  |
| Motion Detection Zones   | 3  |  |
| Face Detection   | Yes  |  |
| Blur Detection   | Yes  |  |
| Privacy Zones  | 9  |  |
| Alarm Input/Output   | 2/1  |  |
| Analog Video Output  | Yes  |  |
| Audio  | Bi-Directional Full-Duplex   |  |
| Simultaneous Users 10  | 10   |  |
| Supported Languages  | Arabic, Chinese (Simplified), Chinese (Traditional), Czech, Danish, English (default), French, German, Hungarian, Italian, Japanese, Korean, Netherlands, Polish, Portuguese, Russian, Spanish, Swedish, Turkish |  |

## IP Cameras - Illustra Pro Mini Domes

| Network                  |   |
|--------------------------|---|
| Ethernet Interface       | 10/100/1000 BaseT, RJ-45, Auto-Negotiation  |
| Supported Protocols      | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, RTSP, ICMP, Unicast, Multicast, NTP, SMTP, WS-Security, SNMP, CIDS, FSTP, UPnP™, SIP  |
| Configuration Management |   |
| Web Browsers             | IE 9 and above, Firefox, Safari, Chrome   |
| Security                 | Secure Boot, Enhanced Security Mode (forces complex passwords, HTTPS and disables discovery); TLS 1.2 (256 bit cipher minimum); Security Overview Page (status and configuration); RTSP Authentication; IEEE 802.1X Client; Remote Accessible Audit logs; Role-Based Access Control |
| Onboard Storage          |   |
| Card Support             | micro SDXC up to 512GB  |
| Pre-Alarm Recording      | Yes   |
| Recording Format         | MP4 File Format   |
| Recording Trigger        | Dry Contact Alarms, Motion Detection, Face Detection, Video Intelligence  |
| TrickleStor              | Yes   |
| Electrical               |   |
| Power                    | Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3; 24 VAC<br>Max Draw: PoE 12.95W, 24 VAC 16.5W   |
| Physical                 |   |
| Dimensions (RxH)         | Ø138 x 138mm  |
| Weight                   | 1.13 kg   |
| Housing Colour           | Signal White - RAL 9003   |
| Operating Temperature    | -50° to +60°C   |
| Humidity                 | Up to 90% Non-Condensing  |
| Vandal Resistant         | IK10  |
| Outdoor Rating           | IP66/IP67   |
| Regulatory               |   |
| Safety                   | EN60950-1; UL60950-1; IEC 60950-1; CSA 22.2 No. 60950   |
| Emissions                | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/NMB-003 Class A   |
| Immunity                 | EN55024; EN50130-3  |
| Environment              | RoHS; WEEE  |

## IP Cameras - Illustra Pro Mini Domes

| ILLUSTRATION CAMERA MODEL KEY |                |              |            |                   |               |                       |            |            |                    |                                 |                     |
|-------------------------------|----------------|--------------|------------|-------------------|---------------|-----------------------|------------|------------|--------------------|---------------------------------|---------------------|
| Illustra                      | Series         | Model        | Resolution | Form Factor       | Lens          | Environment Housing   | Bubble     | Colour     | Day/Night/IR       | WDR                             | Other               |
| I                             | E = Essentials | L = Lite     | 01 = 1MP   | B = Bullet        | N = None      | N = None              | N = None   | B = Black  | C = Colour Only    | N = No                          | A = Hardware Update |
|                               | F = Flex       | P = Plus     | 02 = 2MP   | C = Compact Dome  | F = Fixed     | A = Indoor NonVandal  | C = Clear  | G = Gray   | I = TDN w/IR       | T = Multi-Exposure (>60 Frames) |                     |
|                               | P = Pro        | S = Standard | 03 = 3MP   | D = Dome          | 0 = 1.8—3 mm  | B = Outdoor NonVandal | S = Smoked | S = Silver | S = Soft Day/Night | Y = Yes                         |                     |
|                               | Q = Edge       |              | 05 = 5MP   | F = Fisheye       | 1 = 2.8—12 mm | I = Indoor Vandal     |            | W = White  | T = TDN            |                                 |                     |
|                               |                |              |            | M = Mini-Bullet   | 2 = 3—9 mm    | O = Outdoor Vandal    |            |            |                    |                                 |                     |
|                               |                |              |            | P = PTZ           | 3 = 9—22 mm   |                       |            |            |                    |                                 |                     |
|                               |                |              |            | W = Wireless Cube | 4 = 9—40 mm   |                       |            |            |                    |                                 |                     |
|                               |                |              |            | X = Box           | 5 = 20x       |                       |            |            |                    |                                 |                     |
|                               |                |              |            |                   | 6 = 30x       |                       |            |            |                    |                                 |                     |

## IP Cameras - Illustra Pro Mini Domes

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### Order Codes:

|                |  |
|----------------|--|
| IPS08-D13-OI03 | Illustra Pro 8MP MiniDome, motorised P-Iris 3.6-10mm, Indoor/Outdoor IP67, IK10, TDN w/IR up to 40 metres, WDR |
| IPS08-D14-OI03 | Illustra Pro 8MP MiniDome, motorised P-Iris 6-22mm, Indoor/Outdoor IP67, IK10, TDN w/IR up to 40 metres, WDR   |

### Mounting Options

|               |  |
|---------------|--|
| IPSMDFLUSHOW3 | Illustra Pro Series: Recess Mount, Indoor/Outdoor Gen 3          |
| IPSMDWALL3    | Illustra Pro Series: Wall Mount, Indoor/Outdoor                  |
| ADCi6DPCAPIW  | Illustra Dome pendant cap, white, ¾" NPT                         |
| ADLOMARM      | Illustra gooseneck wall mount arm, white (Requires ADCi6DPCAPIW) |
| ADCDMPOLE     | Twin strap clamp pole-mount adaptor. White finish                |
| ADCDMCRNRO    | Outside corner adapter   |
| IPSMDEBPLATE  | Universal Electrical Box Mounting Plate                          |

## IP Cameras - Illustra Pro Compact Mini Domes

### Illustra PRO 2MP & 3MP Compact Mini-Domes



The Illustra Pro 2MP and 3MP Compact Mini-Domes are equipped with corridor mode, a 9x16 field of view aspect ratio for vertically oriented scenes, which is optimal for hallways, aisles or any area where a landscape format is not ideal.

Illustra® IntelliZip video compression improves upon H.264 and H.265 bandwidth management, while VideoEdge® TrickleStor allows recording to continue on the edge when a network outage occurs.

Available for either indoor or outdoor installations, the Pro Compact Mini-Domes are IP67 and IK10 rated for harsh weather protection and high-impact vandal resistance.

#### Efficiently View Hallways with Corridor Mode

The Pro Compact Mini-Domes are equipped with various viewing angles including horizontal view and a corridor mode. The corridor mode is a 9x16 field of view aspect ratio for vertically oriented scenes, which is optimal for places such as a narrow alleyway, office hallway, grocery store aisle, or any area where a landscape format is not ideal.

#### Smart Bandwidth Management Saves Storage Costs

Illustra IntelliZip provides powerful bandwidth management beyond H.264 and H.265, reducing network bandwidth and video storage requirements. This embedded technology continuously monitors and optimizes system streaming parameters to match the level of activity within the camera's field of view. When the camera detects motion, IntelliZip automatically adjusts the video quality to ensure every detail within the region of interest is captured clearly. When the scene becomes static, IntelliZip continues to optimize bitrate.

#### Features:

- 2MP and 3MP models provide true HD quality images
- VideoEdge® TrickleStor technology for edge-based failover redundancy
- Day/Night functionality allows quality video recording in low light conditions
- Illustra® IntelliZip offers powerful video compression technology for bandwidth management
- Compact design allows for discreet deployments
- True Wide Dynamic Range to view areas with multiple wide ranging light levels
- Motion detection instantly alerts operators to intruders
- Corridor Mode for vertical field of view orientation to view hallways or store aisles
- License to a VideoEdge Network Video Recorder at no additional cost
- IP67-rated enclosure protects against dust and water damage
- IK10 vandal-resistant rating
- ONVIF Profile S conformant for simplified video integration

#### Ensure Failover Redundancy with Confidence

The VideoEdge TrickleStor feature on the Pro Compact Mini-Dome product line allows video recording to continue on the edge when an outage occurs. If communications between the NVR and cameras are interrupted or stop, the camera automatically detects the anomaly and begins recording video to its SD card. With TrickleStor, once the connections are restored, the recorded video is then transferred back to the NVR's hard drive for seamless viewing later.

#### Mitigate Risk in the Cyber Protection Program

The Pro Compact Mini-Domes adhere to the rigorous security standards of the Tyco Cyber Protection Product Security Program. The holistic cyber approach begins at initial design concept, continues through product development, and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Pro Compact Mini Domes

### Technical Specifications:

| Operational   |   |   |  |
|---|---|---|--|
| Video Compression   | H.264 /H.265/MJPEG/IntelliZip   |   |  |
| Max Frame Rate  | 30ips @ 3MP, 60ips @ 1080p  |   |  |
| ONVIF-Compliant   | Profile S   |   |  |
| Resolution  | <table border="0"> <tr> <td>(2048x1536) QXGA 4:3<br/>(1920x1080) 1080p 16:9<br/>(1664x936) 16:9<br/>(1280x720) 720p 16:9</td> <td>(1024x576) PAL+ 16:9<br/>(640x360) nHD 16:9<br/>(480x360) 480 4:3<br/>(384x288) 4:3</td> </tr> </table> | (2048x1536) QXGA 4:3<br>(1920x1080) 1080p 16:9<br>(1664x936) 16:9<br>(1280x720) 720p 16:9 | (1024x576) PAL+ 16:9<br>(640x360) nHD 16:9<br>(480x360) 480 4:3<br>(384x288) 4:3 |
| (2048x1536) QXGA 4:3<br>(1920x1080) 1080p 16:9<br>(1664x936) 16:9<br>(1280x720) 720p 16:9 | (1024x576) PAL+ 16:9<br>(640x360) nHD 16:9<br>(480x360) 480 4:3<br>(384x288) 4:3  |   |  |
| Imager  | 1/2.8" CMOS   |   |  |
| Day/Night   | Yes   |   |  |
| Tricklestor   | Yes   |   |  |
| Image Orientation Settings  | None, Mirror, Flip, Flip and mirror, Corridor (rotate 90° right or left)  |   |  |
| Motion Detection  | 3 Zones   |   |  |
| Blur Detection  | Yes   |   |  |
| Privacy Zones   | 9 Zones   |   |  |
| Video Streams   | Triple  |   |  |
| Minimum Illumination  | 0,01 Lux  |   |  |
| True Wide Dynamic Range   | Up to 120dB   |   |  |
| Field of View (H/V)   | 102° / 77°  |   |  |
| Lens Type   | Fixed   |   |  |
| Focal Length  | 2.8mm   |   |  |
| Supported Languages   | Arabic, Czech, Chinese (Simplified), Chinese (Traditional), Danish, Dutch, English (US), French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese (Brazilian), Russian, Spanish, Swedish, Turkish                         |   |  |
| Network   |   |   |  |
| Ethernet Interface  | 10/100Base-T, RJ-45   |   |  |
| Supported Protocols   | TCP/IP, IPv4, IPv6, UDP, FTP, DHCP, WS-Discovery, WS-Addressing, DNS, DDNS, RTP, RTSP, RTCP, TLS, Unicast, Multicast, NTP, SMTP, WSSecurity, IEEE 802.1x, PEAP, SSH, HTTP, HTTPS, SOAP, CIFS, SNMP, UPnP, LLDP, ONVIF                     |   |  |
| Configuration Management  |   |   |  |
| Web Browser   | Internet Explorer 8.0 or above, Firefox, Safari, Chrome   |   |  |
| Security  | One-Click, IP Address Filtering, Certificate Management, Security Hardening, User Access Log, Validate Complex Credentials, Disabling Unused Protocols, IEEE 802.1x including: PEAP, EAP-TLS, EAPoL, ICMP, IGMP                           |   |  |

## IP Cameras - Illustra Pro Compact Mini Domes

### Technical Specifications (Continued):

| Onboard Storage      |   |
|----------------------|---|
| Card support         | Micro SDXC Slot Up TO 128GB; Card not included  |
| Simultaneous Users   |   |
|                      | 5 Simultaneous Users  |
| Electrical           |   |
| Power Input          | PoE IEEE 802.3af class 2  |
| Power Draw           | 6W  |
| Physical             |   |
| Dimensions (WxH)     | 110x52mm  |
| Weight               | 0.5kg   |
| Housing Colour       | White   |
| Operator Temperature | -40°C to 50°C   |
| Vandal Resistant     | IK10  |
| Outdoor Rating       | IP66, IP67  |
| Regulatory           |   |
| Emissions            | FCC Part 15 Class A; EN55032 Class A; AS/NZS CISPR 32 Class A; ICES-003/NMB-003 Class A |
| Immunity             | EN55024; EN50130-4  |
| Safety               | EN60950-1; UL60950-1; IEC 60950-1; CSA 22.2 No. 60950                                   |
| Environment          | RoHS; WEEE  |

### Order Codes:

|                     |   |                     |   |
|---------------------|---|---------------------|---|
| <b>IPS02CFOCWST</b> | illustra Pro 2MP Compact MiniDome Camera, with H.264 / H.265 & Illustra IntelliZip technology & TrickleStor. White, Clear Bubble. | <b>ADLOMARM</b>     | illustra gooseneck wall mount arm, white (requires ADCi6MPCAPIW).         |
| <b>IPS03CFOCWST</b> | illustra Pro 3MP Compact MiniDome Camera, with H.264 / H.265 & Illustra IntelliZip technology & TrickleStor. White, Clear Bubble. | <b>ADCi6MPCAPIW</b> | illustra Compact Indoor / Outdoor Pendant Cap, 3/4" NPT                   |
|                     |   | <b>ADCDMCRNRO</b>   | Outside corner adapter  |
|                     |   | <b>ADCDMPOLE</b>    | Twin strap clamp pole-mount adaptor for use with ADCDMWALL. White finish. |



## IP Cameras - Illustra Pro Fisheye Mini Domes

# Illustra PRO 5MP 825 Fisheye Mini-Dome Cameras



### Features:

- 5MP imager for super high quality images
- Two independent 360-degree fisheye streams
- Available in vandal & non-vandal resistant models
- Wide Dynamic Range creates a balanced scene in challenging lighting conditions
- ONVIF 2.4 Profile S for seamless integrations
- Onboard dewarping for distortion-free images
- Cost-efficient bandwidth and video storage
- Quick and easy installation
- Vandal-resistant model available

The Illustra 825 Fisheye Camera with a 5MP sensor provides a 180° panoramic view when mounted on the wall, or a 360° bird's eye view when mounted on a ceiling. The lens captures an ultra-wide field of view looking in all directions in real-time. The camera's onboard dewarping technology provides distortion corrected video streaming of 180°, 360° panoramic 16:9 or active 4:3 views.

The Illustra 825 Fisheye is ideal for applications such as retail stores, expansive indoor parking areas, casinos, building lobbies, elevator banks, corridor intersections and university lecture halls where situational surveillance covering a wide area can be achieved using a single camera. The Illustra 825 Fisheye Camera is always looking in all directions to capture all activity. The camera produces single or multiple fixed views should forensic investigations be required.

The ePTZ movements of the Illustra 825 Fisheye Camera are ultra smooth creating even transition between pan, tilt and zoom movements. Multiple streams of H.264 and MJPEG video compression provide excellent image clarity while efficiently managing bandwidth to reduce storage costs. In addition, the camera's built-in micro SDHC card slot enables several days of recording to be stored locally on a memory card.

The Illustra 825 Fisheye Camera's sleek, discreet design allows it to blend into any environment for inconspicuous surveillance. The vandal-resistant model protects the camera against external impacts that might occur if an intruder was attempting to take the camera out of operation. It's extremely easy to install and simple to set up. A built-in web server provides easy configuration. In addition, when used with the Illustra Connect software tool, discovery, snapshot, configuration, IP address assignments, diagnostics and firmware upgrades take no time at all.

### **Safeguard Against Cyber Attacks Across Devices**

Illustra Pro IP cameras have been designed to be resilient against cyber-threats. This solution has a security overview page designed to help administrators quickly determine if the proper levels of protection are applied. Safeguard controls include an enhanced security mode which forces the use of complex, non-default passwords and encrypted communications.

Illustra Pro IP cameras adheres to the rigorous standards of the Tyco Cyber Protection Product Security Program. The holistic approach to cyber protection is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP Cameras - Illustra Pro Fisheye Mini Domes

### Technical Specifications:

| Operational          |   |   |   |
|----------------------|---|---|---|
| Video Compression    | H.264/MJPEG   |   |   |
| Max Frame Rate       | 14ips (all resolutions)   |   |   |
| ONVIF-Compliant      | ONVIF 2.4 profile S   |   |   |
| Resolution           | Fisheye<br>1936x1936  | Active Image 1-4<br>960x540<br>800x450<br>640x360<br>480x270<br>320x180 | Wall/Ceiling Panorama<br>1920x1080<br>1600x900<br>1280x720<br>1024x576<br>960x540<br>800x450<br>640x360<br>480x270<br>320x180 |
| Imager               | Type 1/2.5" 5MP CMOS sensor   |   |   |
| Minimum Illumination | 1.2 lux   |   |   |
| Shutter              | AES (Automatic Electronic Shutter)  |   |   |
| Lens Focal Length    | 1.37mm  |   |   |
| Aperture             | 2.0   |   |   |
| Field of View        | 183°  |   |   |
| ePTZ                 | Digital pan/tilt/zoom, presets, sequences, patterns, scans  |   |   |
| White Balance        | Auto Normal, Auto Wide, and Manual  |   |   |
| Alarms               | Motion detection  |   |   |
| Wide Dynamic Range   | 82dB  |   |   |
| Privacy Zones        | 4 zones   |   |   |
| Supported Languages  | English (default), Arabic, Czech, Danish, German, Spanish, French, Hungarian, Italian, Korean, Japanese, Dutch, Polish, Portuguese, Swedish, Turkish, Chinese Traditional, Chinese Simplified |   |   |
| Network              |   |   |   |
| Ethernet Interface   | 10/100Base-T  |   |   |
| Supported Protocols  | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, TLS, Unicast, Multicast, NTP, SMTP, WS-Security  |   |   |
| Onboard Storage      |   |   |   |
| Card Type            | Micro SDHC up to 32GB   |   |   |
| Electrical           |   |   |   |
| Power                | PoE 802.3af Class 3   |   |   |
| Power Consumption    | <12.95W   |   |   |

## IP Cameras - Illustra Pro Fisheye Mini Domes

| Physical              |   |
|-----------------------|---|
| Body Diameter         | 149 mm  |
| Height                |   |
| Vandal-Resistant      | 74 mm   |
| Non Vandal-Resistant  | 60 mm   |
| Weight                |   |
| Vandal-Resistant      | 0.750 kg  |
| Non Vandal-Resistant  | 0.730 kg  |
| Colour                | White (RAL 9003)  |
| Environmental         |   |
| Operating Temperature | -10°C to 45°C   |
| Humidity              | 95% non-condensing  |
| Regulatory            |   |
| Emissions             | FCC CFR 47 Part 15 Class A; AS/NZS CISPR22, Class A; ICES-003/NMB-003 Class A; EN 55022 |
| Immunity              | EN50130-4, EN 61000-6-1, IEC 62599-2, EN55024   |
| Safety                | UL 60950-1, CSA-C22.2 No. 60950, EN 60950-1, IEC 60950-1                                |
| Environmental         | RoHS, EU Directive 2011/65/EU, WEEE, EU Directive 2002/96/EC                            |
| Impact Rating         | IK10  |

## IP Cameras - Illustra Pro Fisheye Mini Domes

### Order Codes:

ADCi825LT-F311 Illustra Pro Fisheye LT, 5MP,  
Indoor, Vandal Resistant

ADCi825LT-F312 Illustra Pro Fisheye LT,  
5MP, Indoor, Non-Vandal  
Resistant

Camera with Free of Charge camera licence  
when ordered for use with an Exacq or VideoEdge  
recorder

ADCi825LT-F311-V Illustra Pro Fisheye LT, 5MP,  
Indoor, Vandal Resistant  
with 1 x FOC VideoEdge IP  
camera licence

ADCi825LT-F312-V Illustra Pro Fisheye LT,  
5MP, Indoor, Non-Vandal  
Resistant with 1 x FOC  
VideoEdge IP camera  
licence

ADCi825LT-F311-EP Illustra Pro Fisheye LT, 5MP,  
Indoor, Vandal Resistant  
with 1 x FOC exacq  
Professional IP camera  
licence

ADCi825LT-F312-EP Illustra Pro Fisheye LT,  
5MP, Indoor, Non-Vandal  
Resistant with 1 x FOC  
exacq Professional IP  
camera licence

ADCi825LT-F311-EE Illustra Pro Fisheye LT,  
5MP, Indoor, Vandal  
Resistant with 1 x FOC  
exacq Enterprise IP camera  
licence

ADCi825LT-F312-EE Illustra Pro Fisheye LT,  
5MP, Indoor, Non-Vandal  
Resistant with 1 x FOC  
exacq Enterprise IP camera  
licence

### Accessories

ADCiM6WALLWK Illustra 600 Indoor/Outdoor  
Wall Mount

ADCi6DPCAPOW Illustra 600 Outdoor  
Pendant Cap

ADLOMARM Discover, Mount, wall arm,  
for NV LookOut, no plate

IPFETILTMOUNT Illustra Pro Fisheye Tilt  
Mount

## IP Cameras - Illustra Pro Thermal Elevated Skin Temperature Camera

### Illustra Pro Thermal EST Solution



Johnson Controls smart elevated skin temperature scanning solution comprises of a dual sensor, one Thermal the other Colour, camera and a External Temperature Reference Source (ETRS) for temperature calibration.

Using advanced face detection technology and in conjunction with the dual sensors, the camera will measure the temperature of a person's forehead whilst the External Temperature Reference Source (ETRS) provides the constant temperature reference point. Should someone in the field of view be detected with a skin temperature above a predetermined level, an operator can be alerted to this fact through a variety of possible methods ranging from alerts in the VMS, events in an Access Control system, via a connected light/sounder to the camera, or even through a web browser connection.

The International Electrotechnical Commission (IEC) standards for the basic safety and essential performance of screening thermographs for human febrile temperature screening are at the heart of the development of the Johnson Controls smart elevated skin temperature scanning solution, tested by UL for accuracy, drift, stability and uniformity of the IEC 80601-2-59:2017 standard. High accuracy brings with it the benefit of reducing false alarms to a minimum, which in turn results in fewer disruptions and increased flow of staff and visitors.

#### Features:

- Dual Image Sensor with thermal detector
- Up to 5MP resolution 2592 x 1944 with visible camera, 384 x 288 resolution with thermal camera
- True day / night
- Built in IR and white light illuminator
- Smart facial temperature detection
- Alarm trigger by temperature anomaly
- High accuracy with External
- Temperature Reference Source (ETRS) calibration to  $\pm 0.2^{\circ}\text{C}$  ( $\pm 0.4^{\circ}\text{F}$ ) in Single Face usage mode
- Customisable sound-light alarm
- 1-CH audio input; 1-CH built-in speaker
- PoE or 12VDC powered
- IP66 rating for outdoor application
- NDAA Compliant

#### Order Codes:

|                 |  |
|-----------------|--|
| IPT05-B29-BN203 | Dual imager temperature detection camera with 220VAC Blackbody                         |
| IATR-ISTR       | EST Camera or Black Body Tripod Mount - 1/4"-20  |
| IBJB-TIS-WB-A   | EST Back Box Mount   |
| IBJB-TIS-WB-B   | EST Back Box With Side Conduit Opening   |
| IBPN-TIS-WB     | EST Ceiling Pendant Mount (Requires a Back Box IBJB-TIS-WB-A or IBJB-TIS-WB-B)         |
| IBPM-TIS-0      | EST Pole Mounting Box with Straps (Requires a Back Box IBJB-TIS-WB-A or IBJB-TIS-WB-B) |
| IBCM-TIS-0      | EST Corner Mount (Requires a Back Box IBJB-TIS-WB-A or IBJB-TIS-WB-B)                  |

The Tyco Illustra Pro Thermal EST Camera, being contactless and therefore non-invasive, is ideal for deployment at controlled entrances to areas and facilities where initial skin temperature measurement is needed for staff and visitors.

With  $\pm 0.2^{\circ}\text{C}$  ( $\pm 0.4^{\circ}\text{F}$ ) accuracy tolerance at an effective distance of 1~2 meters (3.3~6.6 feet), this elevated skin temperature scanning solution provides a high degree of flexibility to meet the individual situational awareness requirements of a wide variety of installations.

## IP Cameras - Illustra Pro Thermal Elevated Skin Temperature Camera

### Technical Specifications:

| <b>Dual Imager Camera</b>               |   |
|---|---|
| Thermal camera                          |   |
| Detector type                           | Amorphous-silicon Bolometers  |
| Pixel pitch                             | 17µm  |
| Infrared spectral range                 | 8~14µm  |
| Effective pixels                        | 384 × 288   |
| Noise equivalent temperature difference | <50mK   |
| Thermal response time                   | ≈40ms   |
| Lens type                               | Fixed   |
| Focal length                            | 12mm @ F1.0   |
| Field of view                           | Horizontal 29.7°, Vertical 22.5°  |
| Visible camera                          |   |
| Imager                                  | 1 / 2.7" 5MP Progressive CMOS   |
| Effective pixels                        | 2592 x 1944   |
| Minimum illumination<br>Colour<br>B/W   | 0.012 Lux @ F2.0<br>0.0012 Lux @ F2.0, 0 Lux with IR  |
| Shutter speed                           | 1/30 s ~ 1 / 10,000 s   |
| S/N ratio                               | ≥52 dB  |
| Lens type                               | Fixed   |
| Focal length                            | 8mm   |
| Field of view                           | Horizontal 38°, Vertical 27.5°  |
| Lens mount                              | M12   |
| Video                                   |   |
| Video compression                       | H.264 / H.265 / MJPEG   |
| H.264 Compression standard              | Base Line / Main Profile / High Profile   |
| H.265 Compression standard              | Main Profile @ Level 4.1 High Tier  |
| Resolution                              | <b>Visible</b><br>5MP (2592×1944), 4MP (2592×1520), 2560×1440, 3MP (2304×1296), 1080P (1920×1080), 720P (1280×720), D1 (720×576), 480×240, CIF (352×240)<br><b>Thermal</b><br>704×576 (Upscaled from 384×288) |
| Maximum frame rate                      | Visible: 30 fps @ all resolution. Thermal: 30 fps @ 704×576 (Upscaled)  |
| Video bit rate                          | 64 Kbps ~ 5 Mbps  |
| Multiple streaming                      | Triple stream   |
| Main stream                             | <b>Visible</b><br>2592×1944, 2592×1520, 2304×1296, 1920×1080, 1280×720<br><b>Thermal</b><br>704×576 (Upscaled from 384×288)   |

## IP Cameras - Illustra Pro Thermal Elevated Skin Temperature Camera

| Video (Continued)           |   |
|-----------------------------|---|
| Second stream               | <b>Visible</b><br>1280x720, 704x480, 352x240  |
| Third stream                | <b>Visible</b><br>704x576, 480x240, 352x288   |
| Bitrate control             | VBR / CBR   |
| Quality control             | 5 levels under VBR; Freely adjustable under CBR   |
| Image setting               | ROI, Saturation, Brightness, Chroma, Contrast, Wide Dynamic, Sharpen, NR  |
| Audio                       |   |
| Audio communication         | 1-CH audio input; 1-CH built-in speaker   |
| Audio compression format    | G.711A, G.711U  |
| Audio bit rate              | 128 Kbps  |
| Operational                 |   |
| Day and night               | True Day/Night with Auto IR Cut Filter  |
| Backlight compensation      | BLC/HLC   |
| Effective IR distance       | 20 metres   |
| Digital noise reduction     | 2D/3D DNR   |
| Digital zoom                | Yes   |
| Video privacy               | 4 zones video mask  |
| Smart codec                 | 8 zones ROI   |
| Display mode                | Visible only, Picture-in-picture, Dual Window   |
| Intelligent video analytics | <b>Visible Camera</b><br>Line crossing direction, Object Abandoned / Removed, Enter an area, Motion detection<br><b>Thermal Camera</b><br>Elevated Skin Temperature Detection |
| Alarm triggers              | Alarm in, Intelligent video analytics, Network disconnect, SD card full, SD card error  |
| Backfilling                 | iAPI3   |
| Temperature detection       |   |
| Detection mode              | Multiple point forehead skin temperature detection  |
| Detection preset            | Single Face (in accordance with IEC standards)  |
| Effective distance          | 1~2m in Single Face usage mode  |
| Temperature alarm           | Over temperature / Temperature anomaly  |
| Response time               | Less than 50ms  |
| Calibration                 | Automatic calibration with External Temperature Reference Source (ETRS)   |
| Accuracy                    | ±0.2°C in Single Face usage mode with External Temperature Reference Source (ETRS) calibration  |

## IP Cameras - Illustra Pro Thermal Elevated Skin Temperature Camera

| Network               |   |
|-----------------------|---|
| Network protocol      | TCP / IP, UDP, DHCP, NTP, RTSP, PPPoE, DDNS, SMTP, FTP, SNMP, UPnP, Unicast, Multicast              |
| Cyber security        | HTTPS / IP Filter / IEEE 802.1X / Firewall / account security                                       |
| Online connection     | Support simultaneous monitoring for up to 10 users  |
| API                   | ONVIF, iAPI3  |
| Interface             |   |
| Network               | RJ45  |
| Audio                 | 1-CH audio input; 1-CH built-in speaker   |
| Alarm                 | Alarm in/out, Built-in sound-light alarm, Customizable voice alarm                                  |
| Hardware reset        | Supported   |
| Environmental         |   |
| Operating temperature | 0°C ~ 35°C  |
| Operating humidity    | 10% ~ 90% relative humidity   |
| Ingress protection    | IP66  |
| General               |   |
| Power supply          | DC12V / PoE   |
| Power consumption     | <9W   |
| Dimensions (LxWxH)    | 278 x 96 x 89mm   |
| Net weight            | 1.2Kg   |
| Installation          | Wall mounting, Ceiling mounting, Tripod mounting  |
| Certification         | Certification testing is pending for major markets, including North America and the European Union. |

| External Temperature Reference Source (ETRS) Calibrator |                                   |
|---|-----------------------------------|
| General   |                                   |
| Temperature range                                       | 20.0°C to 70.0°C                  |
| Emissive area   | 100 x 100mm                       |
| Display resolution                                      | 0.01°C                            |
| Radiance temperature expanded uncertainty               | ± 0.25°C between 33°C and 40°C    |
| Stability   | ± 0.05°C                          |
| Emissivity ratio  | 0.96                              |
| Power supply  | 120 - 240 VAC compatible 50/60 Hz |
| Net weight  | 2kg                               |
| Calibration certificate                                 | 24 months from manufacturing      |



## IP Cameras - Concept Pro Bullet Cameras

# Aspect Professional 5MP IP Bullet Camera



### Features:

- Bullet style housing
- 5MP
- 15fps
- 2.7-13.5mm Motorised Lens
- 35m Smart IR
- White Light
- H.265+
- 1 Alarm Input, 1 Alarm Output
- 1 Audio Input, 1 Audio Output

### Order Codes:

T-BC-IP5M-Z-2

5 MegaPixel bullet camera, IP, 2.7-13.5mm Motorised lens, Smart IR up to 35 metres, IP66 rated housing, 12v dc/POE

S-BASE-IP

Camera base for IP Bullet cameras

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing, Area Intrusion, Region Entrance, Region Exit, Speed of Movement, Unattended Object, Missing Object, Facial Detection, People Gathering, Loitering, Parking analytics available on all Aspect Professional Cameras as standard. Available in 5MP, this Aspect Professional IP Motorised Zoom Lens Bullet Camera is perfect for capturing high-quality HD footage.

Aspect Motorised Lens Zoom Cameras enable users to adjust their level of zoom remotely through modification of the camera's focal length. This eliminates the need for lengthy zoom adjustments and reduces on-site callouts, ensuring motorised zoom minimises disruption for the installer and end user alike.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.



## IP Cameras - Concept Pro Bullet Cameras

### Technical Specifications:

| Camera                  |   |
|-------------------------|---|
| Image Sensor            | 1/1.8" Progressive scan CMOS Sensor   |
| Min. Illumination       | 0.01lux (Colour), 0lux (IR on)  |
| Field of View           | Horizontal FOV: 108°~29°   Vertical FOV: 56°~17°  |
| Lens                    | Motorised 2.7-13.5mm @ F1.3   |
| IR                      | 6pcs  |
| IR Range                | 35m   |
| White Light             | 2pcs  |
| White Light Range       | 10m   |
| Smart IR                | Yes   |
| Shutter Time            | Auto/Manual, 1/3~1/10000s   |
| Day/Night               | IR cut filter with auto switch  |
| Wide Dynamic Range      | WDR & DWDR  |
| Digital noise reduction | 2D/3D DNR   |
| Compression Standard    |   |
| Video Compression       | H.264 / H.264+ / H.265 / H.265+   |
| H.264 Codec profile     | Base/Main/High profile  |
| H.265 Codec profile     | Main profile  |
| Video Bit Rate          | 11 Kbps~9 Mbps  |
| Triple Streams          | Yes   |
| Audio Compression       | G.711A/G.711U   |
| Audio Bit Rate          | 64 Kbps   |
| Image                   |   |
| Max. Image Resolution   | 5MP (2592 × 1944) @ 15FPS   |
| Frame Rate              | 50Hz: 20fps 5MP (2592×1944) 25fps 4MP (2560×1440),<br>23fps 4MP(2304×1728) 25fps 3MP (2048×1536), 25fps<br>1080P (1920×1080) 25fps 960P(1280×960) |
| Sub Stream              | 50Hz: 25fps 720P (1280×720) 25fps D1 (704×576),<br>25fps CIF (352×288)  |
| Third Stream            | 50Hz: 25fps CIF (352×288)   |
| Image Setting           | Brightness/Contrast/Saturation/Hue/Sharpness  |
| BLC                     | Yes   |
| HLC                     | Yes   |
| ROI                     | Yes   |
| Defog                   | Yes   |

## IP Cameras - Concept Pro Bullet Cameras

| Advanced Features       |   |
|-------------------------|---|
| Network Storage         | NAS(NFS/CIFS)   |
| Protocols               | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, IGMP, UPnP, SMTP, UPnP-TM, P2P, Bonjour  |
| Event                   | Motion Detection, Camera Mask   |
| Smart Functions         | Area Intrusion, Line crossing, Region Entrance, Region Exit, Fast Moving, Object Missing, Unattended Object, Loitering Detection, Parking Detection, Face Detection, People Gathering Detection, Scene Change Detection, Audio Level Change Detection, Blur Detection, Line Crossing Statistics |
| Password Reset          | Yes, email password reset function  |
| Security                | User authentication, IP address filtering, Privacy mask, Guard Check, Enhanced Security Password  |
| System compatibility    | Onvif 2.6, Profile S, CGI   |
| Mobile App              | Aspect Viewer - iOS & Android   |
| Interface               |   |
| Communication interface | 1 RJ45 10M / 100M Ethernet Port   |
| Edge Storage            | Built-in Micro SD/SDHC/SDXC slot, up to 128GB   |
| Audio I/O               | 1/1   |
| Alarm I/O               | 1/1   |
| Built in Microphone     | -   |
| Service Video Output    | Yes   |
| Reset button            | Yes   |
| General                 |   |
| Operating Temperature   | -30°C ~ 60°C  |
| Operating Humidity      | 0 - 95% (Non Condensing)  |
| Power Supply            | DC12V ± 10%   |
| POE Supply              | PoE (802.3af)   |
| Power Consumption       | MAX. 11W  |
| IP Rating               | IP66  |
| Dimensions              | 278(W) x 103(H) x 83(D)mm   |
| Weight                  | 1,188g  |

## IP Cameras - Concept Pro Bullet Cameras

# Aspect Professional 8MP IP Bullet Camera



### Features:

- Bullet style housing
- 8MP
- 25FPS
- Enhanced Security Rules
- 3.6 - 11mm Motorised Lens
- 35m Smart IR
- White Light
- H.265+
- Smart Light
- 1 Alarm I/O 1 Audio I/O

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing, Area Intrusion, Region Entrance, Region Exit, Speed of Movement, Unattended Object, Missing Object, Facial Detection, People Gathering, Loitering, Parking analytics available on all Aspect Professional Cameras as standard. Available in 8MP, this Aspect Professional IP Motorised Zoom Lens Bullet Camera is perfect for capturing high-quality HD footage.

Aspect Motorised Lens Zoom Cameras enable users to adjust their level of zoom remotely through modification of the camera's focal length. This eliminates the need for lengthy zoom adjustments and reduces on-site callouts, ensuring motorised zoom minimises disruption for the installer and end user alike.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

### Order Codes:

T-BC-IP8M-Z-1

8 MegaPixel Bullet camera, IP, 3.6-111mm Motorised lens, Smart IR up to 35 metres, IP66 rated housing, 12v dc/POE

L-BASE-IP

Camera base for IP Bullet cameras



## IP Cameras - Concept Pro Bullet Cameras

### Technical Specifications:

| Camera                  |   |
|-------------------------|---|
| Image Sensor            | 1/2.5" Progressive scan CMOS Sensor   |
| Min. Illumination       | 0.01lux (Colour), 0lux (IR on)  |
| Field of View           | Horizontal FOV: 85°~43°   Vertical FOV: 48°~24°   |
| Lens                    | Motorised 3.6-11mm @ F1.5   |
| IR                      | 6pcs  |
| IR Range                | 35m   |
| White Light             | 2pcs  |
| White Light Range       | 10m   |
| Smart IR                | Yes   |
| Shutter Time            | Auto/Manual, 1/3~1/10000s   |
| Day/Night               | IR cut filter with auto switch  |
| Wide Dynamic Range      | WDR & DWDR  |
| Digital noise reduction | 2D/3D DNR   |
| Starlight               | N/A   |
| Compression Standard    |   |
| Video Compression       | H.264 / H.264+ / H.265 / H.265+   |
| H.264 Codec profile     | Base/Main/High profile  |
| H.265 Codec profile     | Main profile  |
| Video Bit Rate          | 11 Kbps~16 Mbps   |
| Triple Streams          | Yes   |
| Audio Compression       | G.711A/G.711U   |
| Audio Bit Rate          | 64 Kbps   |
| Image                   |   |
| Max. Image Resolution   | 8MP (3840 × 2160)   |
| Frame Rate              | 50Hz: 25fps 8MP (3840×2160) 25fps 5MP (2592×1944), 25fps 4MP (2560×1440) 25fps 4MP (2304×1728), 25fps 3MP(2048×1536) 25fps 1080P (1920×1080), 25fps 960P (1280×960) |
| Sub Stream              | 50Hz: 25fps 720P (1280×720) 25fps D1 (704×576), 25fps CIF (352×288)   |
| Third Stream            | 50Hz: 25fps CIF (352×288)   |
| Image Setting           | Brightness/Contrast/Saturation/Hue/Sharpness  |
| BLC                     | Yes   |
| HLC                     | Yes   |
| ROI                     | Yes   |
| Defog                   | Yes   |

## IP Cameras - Concept Pro Bullet Cameras

| Advanced Features       |   |
|-------------------------|---|
| Network Storage         | NAS(NFS/CIFS)   |
| Protocols               | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, IGMP, UPnP, SMTP, UPnP-TM, P2P, Bonjour  |
| Event                   | Motion Detection, Camera Mask   |
| Smart Functions         | Area Intrusion, Line crossing, Region Entrance, Region Exit, Fast Moving, Object Missing, Unattended Object, Loitering Detection, Parking Detection, Face Detection, People Gathering Detection, Scene Change Detection, Audio Level Change Detection, Blur Detection, Line Crossing Statistics |
| Password Reset          | Yes, email password reset function  |
| Security                | User authentication, IP address filtering, Privacy mask, Guard Check, Enhanced Security Password  |
| System compatibility    | Onvif 2.6, Profile S, CGI   |
| Mobile App              | Aspect Viewer - iOS & Android   |
| Interface               |   |
| Communication interface | 1 RJ45 10M / 100M Ethernet Port   |
| Edge Storage            | Built-in Micro SD/SDHC/SDXC slot, up to 128GB   |
| Audio I/O               | 1/1   |
| Alarm I/O               | 1/1   |
| Built in Microphone     | -   |
| Service Video Output    | Yes   |
| Reset button            | Yes   |
| General                 |   |
| Operating Temperature   | -30°C ~ 60°C  |
| Operating Humidity      | 0 - 95% (Non Condensing)  |
| Power Supply            | DC12V ± 10%   |
| POE Supply              | PoE (802.3af)   |
| Power Consumption       | MAX. 11W  |
| IP Rating               | IP66  |
| Dimensions              | Ø80 x 275.8mm   |
| Weight                  | 1,188g  |

## IP Cameras - Concept Pro Mini Domes

### Aspect Professional 5MP IP Mini Dome



#### Features:

- Vandal Resistant Mini dome housing
- 5MP
- 15fps
- 2.8mm Fixed Lens
- 25m Smart IR
- H.265+
- WDR & DWDR
- IP66 Rated

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing, Area Intrusion, Region Entrance, Region Exit, Speed of Movement, Unattended Object, Missing Object, Facial Detection, People Gathering, Loitering, Parking analytics available on all Aspect Professional Cameras as standard. Available in 5MP, this Aspect Professional IP Motorised Zoom Lens Dome Camera is perfect for capturing high-quality HD footage.

Motorised Zoom Lens on Aspect Professional 5MP IP Motorised Zoom Lens Dome Camera enables users to adjust their level of zoom remotely, eliminating the need for lengthy zoom adjustments and on-site callouts, motorised zoom makes life easier for the installer and end user alike.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

#### Order Codes:

T-VD-IP5M-2.8-2

5 MegaPixel Vandal Resistant mini dome camera, IP, 2.8 Fixed lens, Smart IR up to 25 metres, IP66 rated housing, 12v dc/POE

L  
-FD-BASE-IP

Camera base for IP Vandal Resistant Mini domes

WM-BASE-1

Wall mount for AHD and IP Vandal resistant mini domes

CVP-POLE-1

Pole mount for AHD and IP Vandal resistant mini domes (Must be used in conjunction with Wall mount)



## IP Cameras - Concept Pro Mini Domes

### Technical Specifications:

| Camera                  |   |
|-------------------------|---|
| Image Sensor            | 1/2.7" Progressive scan CMOS Sensor   |
| Min. Illumination       | 0.01lux (Colour), 0lux (IR on)  |
| Lens Mount              | M12   |
| Lens                    | 2.8 mm@F1.8: horizontal FOV: 111, vertical FOV:84°  |
| IR                      | 15pcs SMD LED   |
| IR Range                | 25m   |
| Smart IR                | Yes   |
| Shutter Time            | Auto/Manual, 1/3~1/10000s   |
| Day/Night               | IR cut filter with auto switch  |
| Wide Dynamic Range      | WDR & DWDR  |
| Digital noise reduction | 2D/3D DNR   |
| Compression Standard    |   |
| Video Compression       | H.264 / H.264+ / H.265 / H.265+   |
| H.264 Codec profile     | Base/Main/High profile  |
| H.265 Codec profile     | Main profile  |
| Video Bit Rate          | 11 Kbps~9 Mbps  |
| Triple Streams          | Yes   |
| Audio Compression       | G.711A  |
| Audio Bit Rate          | 64 Kbps   |
| Image                   |   |
| Max. Image Resolution   | 5MP (2592 × 1944)   |
| Frame Rate              | 50Hz: 15fps 5MP(2592 × 1944) 25fps 4MP(2560 × 1440)<br>25fps 4MP(2304 × 1728) 25fps 3MP(2048 × 1536) 25fps<br>1080P(1920 × 1080) 25fps 960P(1280 × 960) |
| Sub Stream              | 50Hz: 25fps 720P(1280 × 720) 25fps D1(704 × 576)<br>25fps CIF(352 × 288)  |
| Third Stream            | 50Hz: 25fps CIF(352×288)  |
| Image Setting           | Brightness/Contrast/Saturation/Hue/Sharpness  |
| BLC                     | Yes   |
| HLC                     | Yes   |
| ROI                     | Yes   |
| Defog                   | Yes   |



## IP Cameras - Concept Pro Mini Domes

| Advanced Features     |  |
|-----------------------|--|
| Network Storage       | NAS(NFS/CIFS)  |
| Protocols             | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, IGMP, UPnP, SMTP, UPnP-TM, P2P, Bonjour |
| Event                 | Motion Detection, Video Shelter  |
| Smart Functions       | Area Intrusion, Line crossing, Object Missing, Unattended Object, Fast Moving                                  |
| System compatibility  | Onvif 2.4, Profile S, CGI  |
| Security              | User authentication, IP address filtering, Video mask  |
| Mobile Surveillance   | iPhone, iPad, Android devices  |
| General               |  |
| Operating Temperature | -30°C ~ 60°C   |
| Operating Humidity    | 0 - 95% (Non Condensing)   |
| Power Supply          | DC12V ± 10%  |
| POE Supply            | PoE (802.3af)  |
| Power Consumption     | MAX. 7W  |
| IP Rating             | IP66   |
| Dimensions            | Ø114 x 90mm  |
| Weight                | 650g   |

## IP Cameras - Concept Pro Mini Domes

### Aspect Professional 8MP IP Mini Dome



#### Features:

- Vandal resistant Mini dome housing
- 8MP
- 15fps
- 2.8mm Fixed Lens
- 25m Smart IR
- H.265+
- WDR & DWDR
- IP66 Rated

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing, Area Intrusion, Region Entrance, Region Exit, Speed of Movement, Unattended Object, Missing Object, Facial Detection, People Gathering, Loitering, Parking analytics available on all Aspect Professional Cameras as standard. Available in 8MP, this Aspect Professional IP Motorised Zoom Lens Dome Camera is perfect for capturing high-quality HD footage.

Motorised Zoom Lens on Aspect Professional 8MP IP Motorised Zoom Lens Dome Camera enables users to adjust their level of zoom remotely, eliminating the need for lengthy zoom adjustments and on-site callouts, motorised zoom makes life easier for the installer and end user alike.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

#### Order Codes:

T-VD-IP8M-2.8-1

8 MegaPixel Bullet camera, IP, 3.6-111mm Motorised lens, Smart IR up to 35 metres, IP66 rated housing, 12v dc/POE

FD-BASE-IP

Camera base for IP Vandal Resistant Mini domes

WM-BASE-1

Wall mount for AHD and IP Vandal resistant mini domes

CVP-POLE-1

Pole mount for AHD and IP Vandal resistant mini domes (Must be used in conjunction with Wall mount)



## IP Cameras - Concept Pro Mini Domes

### Technical Specifications:

| Camera                  |   |
|-------------------------|---|
| Image Sensor            | 1/2.5" Progressive scan CMOS Sensor   |
| Min. Illumination       | 0.01lux (Colour), 0lux (IR on)  |
| Lens Mount              | M12   |
| Lens                    | 2.8 mm@F2.0: horizontal FOV: 110, vertical FOV:62°  |
| IR                      | 15pcs SMD LED   |
| IR Range                | 25m   |
| Smart IR                | Yes   |
| Shutter Time            | Auto/Manual, 1/3~1/10000s   |
| Day/Night               | IR cut filter with auto switch  |
| Wide Dynamic Range      | WDR & DWDR  |
| Digital noise reduction | 2D/3D DNR   |
| Compression Standard    |   |
| Video Compression       | H.264 / H.264+ / H.265 / H.265+   |
| H.264 Codec profile     | Base/Main/High profile  |
| H.265 Codec profile     | Main profile  |
| Video Bit Rate          | 11 Kbps~10 Mbps   |
| Triple Streams          | Yes   |
| Audio Compression       | G.711A  |
| Audio Bit Rate          | 64 Kbps   |
| Image                   |   |
| Max. Image Resolution   | 8MP (3840 × 2160)   |
| Frame Rate              | 50Hz: 15fps 8MP(3840 × 2160) 25fps 5MP(2592 × 1944)<br>25fps 4MP(2560 × 1440) 25fps 4MP(2304 × 1728) 25fps<br>3MP(2048 × 1536) 25fps 1080P(1920 × 1080) 25fps<br>960P(1280 × 960) |
| Sub Stream              | 50Hz: 25fps 720P(1280 × 720) 25fps D1(704 × 576)<br>25fps CIF(352 × 288)  |
| Third Stream            | 50Hz: 25fps CIF(352 × 288)  |
| Image Setting           | Brightness/Contrast/Saturation/Hue/Sharpness  |
| BLC                     | Yes   |
| HLC                     | Yes   |
| ROI                     | Yes   |
| Defog                   | Yes   |

## IP Cameras - Concept Pro Mini Domes

| Advanced Features     |  |
|-----------------------|--|
| Network Storage       | NAS(NFS/CIFS)  |
| Protocols             | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, IGMP, UPnP, SMTP, UPnP-TM, P2P, Bonjour |
| Event                 | Motion Detection, Video Shelter  |
| Smart Functions       | Area Intrusion, Line crossing, Object Missing, Unattended Object, Fast Moving                                  |
| System compatibility  | Onvif 2.4, Profile S, CGI  |
| Security              | User authentication, IP address filtering, Video mask  |
| Mobile Surveillance   | iPhone, iPad, Android devices  |
| General               |  |
| Operating Temperature | -30°C ~ 60°C   |
| Operating Humidity    | 0 - 95% (Non Condensing)   |
| Power Supply          | DC12V ± 10%  |
| POE Supply            | PoE (802.3af)  |
| Power Consumption     | MAX. 8W  |
| IP Rating             | IP66   |
| Dimensions            | Ø114 x 90mm  |
| Weight                | 650g   |

## IP Cameras - Concept Pro Mini Domes

# CVP9328DNIR-IP External IP Dome Camera



The CVP9328DNIR-IP is an external, vandal-resistant, true day-night IP eyeball camera with Infra Red from Concept Pro. It has 1080p resolution, a 3.3-12 mm varifocal lens and full POE capability for ease of installation and set-up. The camera includes an analogue Service Video out which also displays the camera IP address for added ease of installation. This camera is part of the Concept Pro HD-IP range, which also includes a choice of 4 NVRs.

### Technical Specifications

|                           |   |
|---------------------------|---|
| Sensor                    | Sony EXMOR™ 1/2.8"  |
| Max Res./ Max Frame Rate  | 1920X1080 / 30FPS   |
| Min. Illumination         | 0.1Lux @ F1.2 (Colour) (0.0 Lux IR Led On)  |
| Day / Night               | True Day / Night With ICR Filter.   |
| Lens                      | 3.3-12 mm Vari-Focal Ir Corrected   |
| Horizontal Field Of View  | 79.3° ~ 29.8°   |
| IR Led                    | 15Pcs High Powered Super  |
| Flux Leds 850Nm           |   |
| IR Distance               | 15-20 M   |
| Video Output              | Setup / Service BNC Video Supported Internal Connector With Dangle Cable Supplied |
| Electronic Shutter        | Auto / User 1/5 - 1/50,0000;  |
| 50/60Hz Software          | Selectable (Except Ccd Models)  |
| Compression               | H-264 High Profile (Support   |
| Baseline Profile) / Mjpeg |   |
| Bit Rate (CBR/VBR)        | Stream1 50Kbps - 12Mbps; Stream2 10Kbps - 6Mbps; Stream3 (Mjpeg Fixed)            |
| Quality Setting (VBR)     | 1 - 9 (9 Highest)   |
| Multi- Streaming          | Three Simultaneous Streams, Two With H-264, One With Mjpeg Stream                 |
| Brightness / Sharpness    | Variable 0~100 / 0~100 Gain Control Auto / Fixed 8~102DB                          |

### Features:

- Eyeball type Mini Dome
- Plug and Play Set up
- Full HD 1080P resolution
- 3-12 mm Varifocal lens
- Up to 15 metres IR Illumination
- H.264 compression
- True Day/night operation
- External IP66 rated
- POE Class 3 / 12 v DC
- Optional Base CVP9328BASE recommended for use internally

### Order Codes:

#### CVP9328DNIR-IP

Eyeball type Mini Dome, Full HD 1080P resolution, 2-12 mm Varifocal lens, up to 15 metres IR Illumination, True Day/night, IP66 rated, POE class 3 / 12 v dc, Min illumination 0.1 lux colour, 0 lux IR on

#### CVP-BASE-W

White base for minidome

|                        |  |
|------------------------|--|
| Orientation            | Horizontal Mirror / Vertical Flip  |
| Text Overlay           | Time / Date / Camera / Custom Osd  |
| Masking                | 3 User Defined Masking Areas < 8% Of Total Picture   |
| Ethernet               | 1 Ethernet (10/100 Base-T) RJ-45 Connector   |
| Tcp/Ip                 | IPV4 / IPV6 (DHCP / Fixed)   |
| Compliance             | Onvif V22 (Profile S)  |
| Recording Simultaneous | Local Micro Sd Memory, Remote Ftp Server, TCP/UDP Cms, Rtsp Connection (Stream 1,2 Or 3)                             |
| Input / Output         | Cable 1 X RCA. Input / 1 X Rca Output @ 1 V Line Level g711 A-Law, 12 V Dc Terminal Input / POE Class 3 On Ethernet. |
| Power                  | Not To Be Used At The Same Time. Temperature Operating: -10°C To 55°C . Storage: -20°C To 60°C                       |
| Operating Humidity     | 10% - 85% Rh   |
| Approvals              | CE / FCC / ROHS Compliant / IP66 / IK6   |
| Dimensions             | 120 X 106 mm   |
| Weight                 | 750 g  |

## IP Cameras - Concept Pro Turret Cameras

# Aspect Professional 5MP IP Mini Dome



### Features:

- Turret style housing
- 5MP
- 15fps
- 2.8mm Fixed Lens
- 25m Smart IR
- H.265+
- WDR & DWDR
- IP66 Rated

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing, Area Intrusion, Speed of Movement, Unattended Object, Missing Object analytics available on all Aspect Lite Cameras as standard. Available in 5MP, this Aspect Lite IP Fixed Lens Turret Camera is perfect for capturing high-quality HD footage.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

H.265+ compression provides high image quality whilst requiring minimal storage space. Due to Aspect's 4k support, H.265+ is a necessity as it is the most advanced Video Codec available.

### Order Codes:

T-TU-IP5M-2.8-1

5 MegaPixel Turret camera, IP, 2.8 Fixed lens, Smart IR up to 25 metres, IP66 rated housing, 12v dc/POE Camera base for IP Turret cameras

S-BASE-IP



## IP Cameras - Concept Pro Turret Cameras

### Technical Specifications:

| Camera                  |   |
|-------------------------|---|
| Image Sensor            | 1/2.7" Progressive scan CMOS Sensor   |
| Min. Illumination       | 0.01lux (Colour), 0lux (IR on)  |
| Lens Mount              | M12   |
| Lens                    | 2.8 mm@F1.8: horizontal FOV: 111, vertical FOV:84°  |
| IR                      | 14μ x 18pcs SMD LED   |
| IR Range                | 25m   |
| Smart IR                | Yes   |
| Shutter Time            | Auto/Manual, 1/3~1/10000s   |
| Day/Night               | IR cut filter with auto switch  |
| Wide Dynamic Range      | WDR & DWDR  |
| Digital noise reduction | 2D/3D DNR   |
| Compression Standard    |   |
| Video Compression       | H.264 / H.264+ / H.265 / H.265+   |
| H.264 Codec profile     | Base/Main/High profile  |
| H.265 Codec profile     | Main profile  |
| Video Bit Rate          | 11 Kbps~9 Mbps  |
| Triple Streams          | Yes   |
| Audio Compression       | G.711A  |
| Audio Bit Rate          | 64 Kbps   |
| Image                   |   |
| Max. Image Resolution   | 5MP (2592 × 1944)   |
| Frame Rate              | 50Hz: 15fps 5MP(2592 × 1944) 25fps 4MP(2560 × 1440)<br>25fps 4MP(2304 × 1728) 25fps 3MP(2048 × 1536) 25fps<br>1080P(1920 × 1080) 25fps 960P(1280 × 960) |
| Sub Stream              | 50Hz: 25fps 720P(1280 × 720) 25fps D1(704 × 576)<br>25fps CIF(352 × 288)  |
| Third Stream            | 50Hz: 25fps CIF(352×288)  |
| Image Setting           | Brightness/Contrast/Saturation/Hue/Sharpness  |
| BLC                     | Yes   |
| HLC                     | Yes   |
| ROI                     | Yes   |
| Defog                   | Yes   |

## IP Cameras - Concept Pro Turret Cameras

| Advanced Features     |  |
|-----------------------|--|
| Network Storage       | NAS(NFS/CIFS)  |
| Protocols             | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, IGMP, UPnP, SMTP, UPnP-TM, P2P, Bonjour |
| Event                 | Motion Detection, Video Shelter  |
| Smart Functions       | Area Intrusion, Line crossing, Object Missing, Unattended Object, Fast Moving                                  |
| System compatibility  | Onvif 2.4, Profile S, CGI  |
| Security              | User authentication, IP address filtering, Video mask  |
| Mobile Surveillance   | iPhone, iPad, Android devices  |
| General               |  |
| Operating Temperature | -30°C ~ 60°C   |
| Operating Humidity    | 0 - 95% (Non Condensing)   |
| Power Supply          | DC12V ± 10%  |
| POE Supply            | PoE (802.3af)  |
| Power Consumption     | MAX. 7W  |
| IP Rating             | IP66   |
| Dimensions            | Ø114 x 83mm  |
| Weight                | 350g   |



## IP Cameras - Concept Pro Turret Cameras

### Aspect Professional 8MP IP Mini Dome



#### Features:

- Turret style housing
- 8MP
- 15fps
- 2.8mm Fixed Lens
- 25m Smart IR
- H.265+
- WDR & DWDR
- IP66 Rated

The Aspect range offers the best in video analytics at an affordable price. With Line Crossing, Area Intrusion, Speed of Movement, Unattended Object, Missing Object analytics available on all Aspect Lite Cameras as standard. Available in 8MP, this Aspect Lite IP Fixed Lens Turret Camera is perfect for capturing high-quality HD footage.

Sony's world-renowned CMOS technology features in these cameras, providing on-chip analogue/digital signal conversion, two-step noise reduction and high-quality footage in low light.

H.265+ compression provides high image quality whilst requiring minimal storage space. Due to Aspect's 4k support, H.265+ is a necessity as it is the most advanced Video Codec available.

#### Order Codes:

T-TU-IP8M-2.8-1

8 MegaPixel Turret camera, IP, 2.8 Fixed lens, Smart IR up to 25 metres, IP66 rated housing, 12v dc/POE Camera base for IP Turret cameras

S-BASE-IP



## IP Cameras - Concept Pro Turret Cameras

### Technical Specifications:

| Camera                  |   |
|-------------------------|---|
| Image Sensor            | 1/2.5" Progressive scan CMOS Sensor   |
| Min. Illumination       | 0.01lux (Colour), 0lux (IR on)  |
| Lens Mount              | M12   |
| Lens                    | 2.8 mm@F2.0: horizontal FOV: 110, vertical FOV:62°  |
| IR                      | 14μ x 18pcs SMD LED   |
| IR Range                | 25m   |
| Smart IR                | Yes   |
| Shutter Time            | Auto/Manual, 1/3~1/10000s   |
| Day/Night               | IR cut filter with auto switch  |
| Wide Dynamic Range      | WDR & DWDR  |
| Digital noise reduction | 2D/3D DNR   |
| Compression Standard    |   |
| Video Compression       | H.264 / H.264+ / H.265 / H.265+   |
| H.264 Codec profile     | Base/Main/High profile  |
| H.265 Codec profile     | Main profile  |
| Video Bit Rate          | 11 Kbps~10 Mbps   |
| Triple Streams          | Yes   |
| Audio Compression       | G.711A  |
| Audio Bit Rate          | 64 Kbps   |
| Image                   |   |
| Max. Image Resolution   | 8MP(3840 × 2160)  |
| Frame Rate              | 50Hz: 15fps 8MP(3840 × 2160) 25fps 5MP(2592 × 1944)<br>25fps 4MP(2560 × 1440) 25fps 4MP(2304 × 1728) 25fps<br>3MP(2048 × 1536) 25fps 1080P(1920 × 1080) 25fps<br>960P(1280 × 960) |
| Sub Stream              | 50Hz: 25fps 720P(1280 × 720) 25fps D1(704 × 576)<br>25fps CIF(352 × 288)  |
| Third Stream            | 50Hz: 25fps CIF(352×288)  |
| Image Setting           | Brightness/Contrast/Saturation/Hue/Sharpness  |
| BLC                     | Yes   |
| HLC                     | Yes   |
| ROI                     | Yes   |
| Defog                   | Yes   |

## IP Cameras - Concept Pro Turret Cameras

| Advanced Features     |  |
|-----------------------|--|
| Network Storage       | NAS(NFS/CIFS)  |
| Protocols             | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, IGMP, UPnP, SMTP, UPnP-TM, P2P, Bonjour |
| Event                 | Motion Detection, Video Shelter  |
| Smart Functions       | Area Intrusion, Line crossing, Object Missing, Unattended Object, Fast Moving                                  |
| System compatibility  | Onvif 2.4, Profile S, CGI  |
| Security              | User authentication, IP address filtering, Video mask  |
| Mobile Surveillance   | iPhone, iPad, Android devices  |
| General               |  |
| Operating Temperature | -30°C ~ 60°C   |
| Operating Humidity    | 0 - 95% (Non Condensing)   |
| Power Supply          | DC12V ± 10%  |
| POE Supply            | PoE (802.3af)  |
| Power Consumption     | MAX. 8W  |
| IP Rating             | IP66   |
| Dimensions            | Ø140 x 105mm   |
| Weight                | 690g   |

## SanDisk Ultra® Memory Cards



With read speeds up to 90MB/s\* and highest available Class 10 speed rating for recording uninterrupted Full HD† video, SanDisk microSDHC and microSDXC cards are the perfect choice. Based on the new High Speed (UHS-I) technology, this card takes advantage of today's advanced camera burst modes. With capacities up to 64GB\*\*, experience the freedom to store your photos, videos, and more.

### Features:

- Waterproof
- Temperature Proof
- Shock Report
- X-Ray Proof

### Additional Benefits:

- Class 10 performance for Full HD† video
- Read speeds up to 90MB/s\*
- UHS-I enabled
- Included SD™ adapter
- Lifetime limited\*\*\* warranty

### Technical Specifications:

|             |   |
|-------------|---|
| Capacities  | 32, 64 GB**                                     |
| Performance | Class 10 (UHS Speed Class 1†), up to 90 MB/sec* |
| Warranty    | Lifetime limited*** warranty                    |

### Order Code:

|                  |   |
|------------------|---|
| SDSQXCY064GGN6MA | Sandisk 64GB Extreme micro SD card SDXC |
|------------------|---|

Not all devices support microSDHC and microSDXC memory card formats. Check with your device manufacturer for more details.

\* Up to 30MB/sec read speed; write speed lower. Based on internal testing; performance may be lower depending upon host device. 1 megabyte (MB) = 1 million bytes.

\*\* 1 gigabyte (GB) = 1 billion bytes. Some capacity not available for data storage.

\*\*\* 10-year warranty in Germany, Canada, and regions not recognizing "lifetime" warranty.

† Compatible device required. Full HD video (1920 x 1080) and HD (1280 x 720) video support may vary based upon host device, file size, resolution, compression, bit rate, content and other factors.

See [www.sandisk.com/proof](http://www.sandisk.com/proof) for additional information.

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# Brackets & Housings

This chapter contains information about Camera Brackets & Housings

- Introduction
- CRT Monitor Brackets and Mounts
- Flat Screen Monitor Brackets and Mounts
- Hay-Metro

# Introduction

## Degree of Protection - IP Codes

IP Codes signify the extent to which a product is protected against water or solid objects or dust getting through the exterior of the product and affecting its performance. The IP codes are defined in IEC standard IEC 529, which is identical to EN 60529 and BS EN 60529. The code is usually given in the form IP.

The first digit refers to the protection given to solid object or, dust the second digit gives the protection provided against water. There are six levels of protection provided against solids and eight levels of protection against water.

| Characteristic Numeral | Solid   | Water   |
|------------------------|---|---|
| 0                      | Non - Protected   | Non - Protected   |
| 1                      | Protected against solid foreign objects of 50 mm Ø and greater  | Protected against vertical drops of water   |
| 2                      | Protection against solid foreign objects of 12.5 mm Ø and greater   | Protected against vertical drops of water when the enclosure is tilted to 15°     |
| 3                      | Protection against solid foreign objects of 2.5 mm Ø and greater  | Protected against sprayed water at an angle of 60° on either side of the vertical |
| 4                      | Protection against solid foreign objects of 1.0 mm Ø and greater  | Protected against splashing water from any direction                              |
| 5                      | Dust-Protected (Dust is not totally prevented but does not penetrate in a quantity to interfere with the satisfactory operation of the apparatus) | Protection against water Jets against the enclosure from any direction            |
| 6                      | Dust tight  | Protected against powerful water jets against the enclosure from any direction    |
| 7                      | -   | Protected against the effects of temporary immersion in water                     |
| 8                      | -   | Protected against the effects of continuous immersion in water                    |

## Flat Screen Monitor Brackets & Mounts

### ADMNMTLCDWAL Black LCD Mount



#### Technical Specifications:

|                  |                   |
|------------------|-------------------|
| Material:        | Metal and plastic |
| Weight:          | 11 Kg             |
| Shipping Weight: | 11.2 Kg           |

#### Order Code:

ADMMWTAD100B

Articulating Wall mount monitor bracket, black, VESA 75mm/100mm max weight 11kg

### WALL 2015 Tilting Monitor Wall Mount



#### Features:

- Locks your monitor securely in place
- Tilt (up to 15°) to avoid reflections

For small monitors up to 26 inch the WALL 2015 is a smart monitor wall mount that provides secure support. It can hold up to 20 kg Not a lot of space? Mount your monitor higher up on the wall. Putting your monitor higher up with the WALL 2015 monitor wall mount is a great way to save space, reduce reflections and keeps your monitor safely out of reach of pets and children.

#### Technical Specifications:

|                         |                        |
|-------------------------|------------------------|
| Tilt                    | 15                     |
| Guarantee               | Life time              |
| Min. screen size (inch) | 17"                    |
| Max. screen size (inch) | 26"                    |
| Max. screen weight (kg) | 20                     |
| Hole pattern (mm) Min.  | 100x100 / Max. 100x100 |
| Min.                    | 75x75 / Max. 75x75     |
| Logistic information    |                        |
| EAN Code Product        | 8712285329944          |
| Net weight (kg)         | 0.87                   |
| Single Box Width (mm)   | 158                    |
| Single Box Length (mm)  | 149                    |
| Single Box Height (mm)  | 55                     |

Simply tilt your monitor forward to watch it in comfort. The WALL Series: simply smart value. Mounting your monitor on the wall saves space, making even the smallest of rooms feel bigger. The brackets in Vogel's wall series make good economic sense too, thanks to a quality build and clean finish at an affordable price. It's simply smart value.

#### Order Code:

WALL2015

Monitor wall mount – suitable for monitors up to 26 inches and 20 kg

## Flat Screen Monitor Brackets & Mounts

### WALL 1020LED/TLC Plasma Wall Mount



Get the best view of your flat screen TV anywhere in the room with the WALL 1020 LED/LCD/Plasma wall mount.

Perfect for mounting a small TV in your children's room, kitchen or workspace. This wall mount turns your TV up to 60 degrees (30 degrees left and 30 degrees right) and tilts your screen 10 degrees forwards and backwards for more viewing flexibility. This mount is part of the Vogel's TURN products...

#### Technical Specifications:

Weight: 1 Kg  
 Dimensions: WxDxH :  
 127 x 245 x 68 mm

#### Order Code:

WALL1020

Monitor Wall mount bracket,  
 one pivot for monitor sizes  
 17" -26" , max weight 15 kg

### WALL 1215 LED/LCD Plasma Wall Mount



Now you can watch a TV that's placed high on a wall with ease thanks to the WALL 1215 LED/LCD/Plasma wall mount. Perfect way to mount your flat screen TV above viewing height on the wall in your bedroom, living room, children's room and kitchen. This wall mount tilts your screen 15 degrees forward for comfortable viewing. This mount is part of the Vogel's TILT products.

#### Technical Specifications:

Max. weight: 3 kg  
 Packaging size: 127 x 500 x 48 mm

#### Order Code:

WALL2215

Monitor wall mount bracket,  
 for monitor sizes 26" - 42" ,  
 max weight 70 kg



## Hay-Metro Housing and Accessories

### Side Opening Camera Housing



This camera housing features an innovative side opening mechanism to allow a simple and quick installation and easy maintenance.

There is a mains powered and low voltage version. It is IP67 rated and is therefore suitable for internal and external installations.

#### Features:

- Cost effective
- Simple , quick installation due to Side Opening feature
- Cable management,
- IP67 rated , suitable for Internal & External installations
- Choice of mains or low voltage versions
- Range of accessories for a variety of installations

#### Order Codes:

|                  |   |
|------------------|---|
| HAY-METRO230-ADT | Housing 230 V Cable managed   |
| HAY-METRO LV-ADT | Housing 12/24 V Cable managed   |
| HAY-METRO230     | External camera housing with cable managed wallbracket, 230 v ac. –<br><b>Europe only</b>                     |
| HAY-METROLV      | External camera housing with cable managed wallbracket, 12 vdc /24 v ac<br><b>Europe only</b>                 |
| HAY-METROB230-EU | External camera housing with cable managed wallbracket, 230 v ac. Includes Blower<br><b>Europe only</b>       |
| HAY-METROBLV-EU  | External camera housing with cable managed wallbracket, 12 vdc /24 v ac includes Blower<br><b>Europe only</b> |

### Hay-Metro - Polemount



Order Code:  
HAY-METROPM

Pole Mount for Metro

# Dome Cameras

This chapter contains information about Functional Dome Cameras

- Introduction
- illustra Flex 2MP
- Dome Controllers
- Cost Effective Fully Functional Dome

# Introduction

A range of Pan, Tilt and Zoom functional domes, offering a choice of Optical Zoom options, Internal and External Housings and brackets.

# Illustra Flex 2MP Indoor and Outdoor PTZ Domes



The illustra Flex 2MP range of PTZ camera expands the capabilities of a PTZ by including integral IR in a bubbleless form factor. Johnson Controls has developed a competitive and capable IR PTZ camera with powerful zoom and control regardless of challenging lighting conditions. Illustra Flex IR PTZ indoor and outdoor cameras feature a 30x optical and 12x digital zoom to effectively resolve scene details at up to 300m.

The powerful IR illuminators on the outdoor model allow for a night scene illumination of up to 150m, whilst the Indoor version has a 25M IR range. Packaged in a bubble-free, environmentally sealed, and vandal-resistant design, the Flex IR PTZ maximizes video quality at any tilt angle.

For crystal clear images day and night, the versatile Illustra Flex cameras feature True Day/Night and True Wide Dynamic Range for balanced images in challenging lighting conditions. Also included are Illustra® IntelliZip bandwidth management and VideoEdge® TrickleStor failover redundancy; thereby making these cameras an ideal PTZ for mission critical installation whilst minimising storage and bandwidth consumption.

## Features:

- Integrated IR of 25m on the indoor model and up to 150m on the outdoor model ensure clear viewing even in complete darkness.
- 30x optical zoom and 12x digital zoom allow operators to focus on details that matter over great distances.
- No-bubble housing means the PTZ is environmentally-sealed and vandal resistant to provide high-quality video at any tilt angle. Allows distortion-free images at all viewing angles.
- High specification, perfect for a diverse range of installations.
- Illustra® IntelliZip video compression enhances current H.264 and H.265 streaming parameters by optimizing bitrate based on scene complexity. This lowers storage costs and offsets the additional bandwidth required for 1080P video surveillance in certain scenarios.
- VideoEdge® TrickleStor allows video recording to continue on the edge when an outage occurs. If communications between the NVR and cameras are interrupted, the camera detects the anomaly and begins recording video to its SD card. Once the connections are restored, video is transferred back to the NVR's hard drive for later viewing.
- Enhanced security meets requirements for high-end network security conscious customers in complex, integrated environments. Some features include multilevel password protection, IP address filtering, user access logs, and certificate management. The Flex product family also adheres to the rigorous standards of the Tyco Cyber Protection Product Security Program.

## Order Codes:

|               |   |
|---------------|---|
| IFS02P6ONWITA | illustra Flex PTZ 2MP Outdoor with Adaptive IR                |
| IFS02P6INWIT  | illustra Flex PTZ 2MP Indoor with Adaptive IR                 |
| IPTZPOEBT60   | Illustra Flex Outdoor UPoE Ultra 60W 1 Port Midspan Injector. |
| RHOSW         | Short Wall Mount with End Cap                                 |
| RHOLW         | Long Wall Mount with End Cap                                  |
| RHOWCA        | Corner Bracket Adapter  |
| RHOWPA        | Pole Strap Adapter  |
| ROENDC        | End Cap Assembly  |
| RHOTR         | Over the Roof Mount   |
| ROTRF         | Over the Roof Floor Mount                                     |

## Technical Specifications:

| Operational                |  |
|----------------------------|--|
| Video Compression          | H.264 / H.264+ IntelliZip / H.265 / MJPEG  |
| Max Frame Rate             | 60ips @ 2MP  |
| Resolution                 | 1920 x 1080 (1080p) 16:9    800 x 450 16:9<br>1600 x 900 (HD+) 16:9    640 x 360 (nHD) 16:9<br>1280 x 720 (720p) 16:9    480 x 270 16:9<br>1024 x 576 (PAL+) 16:9    320 x 180 16:9<br>960 x 540 (qHD) 16:9    160 x 90 16:9 |
| Video Streams              | Triple Streaming with a Maximum of 5 Concurrent Shared Streams   |
| Imager                     | Progress Scan RGB CMOS 1/3"  |
| Image Orientation Settings | Auto Flip  |
| Lens Type                  | IR Optical Corrective, Motorized Varifocal   |
| Focus Control              | Motorised, Auto Focus  |
| Aperture                   | F/1.6(W) - F/4.7(T)  |
| Focal Length               | 4.3 - 129mm  |
| Field of View              |  |
| Wide Angle                 | 65°/38°  |
| Telephoto                  | 2.4°/1.4°  |
| Shutter Speed              | Auto   |
| Minimum Illumination       |  |
| Colour                     | 0.2 Lux at 1/30s; 0.03 Lux at 1/4s   |
| B/W                        | 0.001 Lux at 1/4s  |
| With IR                    | 0.0 Lux  |
| Adaptive IR                | Yes  |
| IR Distance                |  |
| Indoor                     | 25m  |
| Outdoor                    | 150m   |
| Wide Dynamic Range         | Dual Exposure, True WDR 93 dB Technologies   |
| Day/Night                  | True Day/Night with ICR  |
| ONVIF-Compliant            | Profile S  |
| Motion Detection Zones     | 1  |
| Blur Detection Zones       | 1  |
| Privacy Zones              | 8  |
| Alarm Input/Output         | 2/2  |
| Analog Video Output        | PAL/NTSC Composite Video   |
| Audio                      | Bi-Directional 1/1   |
| Simultaneous Users         | 10   |
| Supported Languages        | Arabic, Czech, Chinese (Simplified), Chinese (Traditional), Danish, Dutch, English (US), French, German, Italian, Japanese, Korean, Polish, Portuguese (Brazilian), Russian, Spanish, Turkish                                |

| PTZ Operational                         |  |
|---|--|
| Optical Zoom                            | 30x Optical Zoom, 12x Digital Zoom   |
| Pan Travel                              | 360° Continuous  |
| Tilt Travel                             | -15° ~ +90°  |
| Manual Continuous Speed                 | 0.1° ~ 90°/s   |
| Preset Accuracy                         | 0.1°   |
| Preset Speed                            | Pan Speed: 0.1°/s ~ 240°/s<br>Tilt Speed: 0.1° ~ 160°/s  |
| Presets                                 | 96   |
| Sequences                               | Up to 16, each with 16 steps (presets)   |
| Pattern                                 | 17 Available, 16 Programmable  |
| Home Function                           | Preset, Pattern, Sequence, or Scan   |
| Auto Flip                               | Yes  |
| Noise Reduction                         | Digital Noise Reduction 2D and 3D  |
| Network                                 |  |
| Ethernet Interface                      | IEEE 802.3, 10/100 Base-T Ethernet, Female RJ45, Auto-Negotiation  |
| Supported Protocols                     | TCP/IP, IPv4, IPv6, TCP, UDP, HTTP, FTP, DHCP, WS-Discovery, DNS, DDNS, RTP, RTCP, RTSP, TLS, Unicast, Multicast, NTP, ICMP, IGMP, SMTP, WS-Security, IEEE 802.1x, PEAP, EAP-TLS, EAPoL, SSH, HTTPS, SOAP, WS-Addressing, CIFS, SNMP, UPNP, RTSP, LLDP                         |
| Configuration Management                |  |
| Web Browser                             | IE 9 or above, Firefox, Chrome, Safari   |
| Security                                | HTTPS, TLS, WS-Security, Certificate Management, Multi-Level Password Protection, IP address filtering, HTTPS encryption, One-Click Security Hardening, User Access Log, Validate Complex Credentials, Disabling Unused Protocols, IEEE 802.1x including: PEAP, EAP-TLS, EAPoL |
| Onboard Storage                         |  |
| Card Support                            | SDXC up to 128GB   |
| Pre-Alarm Recording                     | 10s  |
| Recording Format                        | AVI  |
| Playback                                | Via Web Browser  |
| Recording Trigger                       | Alarm Input, Motion Detection, Blur Detection, Network Loss, Temperature   |
| VideoEdge TrickleStor                   | Yes  |
| Electrical                              |  |
| Power Input<br>Indoor<br>Outdoor        | PoE+ 802.3at Class 4, 24VAC<br>UPoE 802.3bt Class 6, 24VAC   |
| Maximum Power Draw<br>Indoor<br>Outdoor | 25W<br>51W   |

| Physical              |   |
|-----------------------|---|
| Dimensions (WxH)      | Ø 190mm   Body Height: 301mm   Height to Pedant Top: 330mm<br>Ball: 6.3in (Ø160mm)            |
| Weight                | 5.2kg   |
| Housing Color         | RAL 9003 - Signal White   |
| Operating Temperature |   |
| Indoor                | -20°C to 50°C   |
| Outdoor               | -50°C to 60°C   |
| Storage Temperature   | -40°C to 60°C   |
| Humidity              | Up to 90% Non-Condensing  |
| Vandal Resistant      | IK10  |
| Outdoor Rating        | IP66  |
| Regulatory            |   |
| Emissions             | FCC Part 15 Class A; CE EN55032 Class A; AS/NZS CISPR 22 Class A;<br>ICES-003/NMB-003 Class A |
| Immunity              | EN55024; EN50130-4  |
| Safety                | UL 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60950-1   |
| Environment           | RoHS; WEEE  |

# ADTT16E Advanced Dome Controller



## Features:

- 3 levels of password protection
- DirectSet dome control (SpeedDome Ultra VII)
- Full control of Multivision Quest Triplex multiplexers
- Direct dome control of up to 64 video inputs
- Controls up to 16 video inputs with a multiplexer or DVR
- Compatible with SensorNet domes (SpeedDome® Ultra and SpeedDome Optima series)
- Controls pan/tilt/zoom functions
- Up to 96 programmable presets per dome
- Three programmable patterns per dome
- One programmable sequence
- Up to four simultaneous dome input alarms
- Supports ten different languages
- Backlit LCD display
- Easily interfaces with the Intellex® Digital Video Management System for dome control

The ADTT16E Advanced Dome Controller, ergonomically designed for ease of operation, is the perfect controller for any small surveillance application. This programmable video controller allows you to control up to 64 SensorNet programmable domes, including both indoor and outdoor versions of SpeedDome® Ultra and SpeedDome Optima.

The controller's tracker ball provides pan/tilt control of the currently selected dome. Buttons for lens zoom, focus and iris functions are located near the tracker enabling one handed operation.

Standard features include programming/control of up to 96 presets and three patterns per dome. The ADTT16E can be used as a standalone unit for control of a single video input or several inputs on dedicated monitors.

In addition, with Multivision Quest Triplex multiplexers, the operator can remotely freeze an image, digital zoom, as well as run multiplexer sequences and select the cameras to display in each window of a multi-image display.

The system can manage up to four simultaneous dome alarm inputs; this ensures that all alarm events are recognised, even if more than one alarm occurs simultaneously.

When used in conjunction with a multiplexer, or Intellex® Digital Video Management System, the controller can define and display a sequence of up to sixteen video inputs on a single monitor. The inputs can also be displayed in multiscreen format.

The ADTT16E supports ten languages and easily integrates with Intellex for dome control.



## Technical Specifications:

The ADTT16E is suitable for use worldwide. Proper low-voltage transformer, with main power cord, is supplied with the unit. Specify country of installation and 120 or 230 VAC at time of order.

### Electrical

|                   |                        |
|-------------------|------------------------|
| Input Voltage     | 16 to 32 VAC, 50/60 Hz |
| Power Supply      | 120 or 230 VAC         |
| Power Consumption | 10.8 watts             |

### Physical

|                        |                                |
|------------------------|--------------------------------|
| Dimensions (H x W x D) | 1<br>30 x 194 x 260 mm         |
| Weight                 | 1.0 kg                         |
| Colour                 | Black shell with grey appliqué |

### Environmental

|                       |                        |
|-----------------------|------------------------|
| Operating Temperature | 0° to 50° C / 5-95% RH |
| Storage Temperature   | -20° to 65° C          |

### Product Compatibility

|         |   |
|---------|---|
| Domes   | All SpeedDome Optima and Ultra Series domes           |
| J-Boxes | All versions of indoor and out door SensorNet J-Boxes |
| Quads   | All Sensormatic, Robot and American Dynamics Quads    |

### Digital Video Recorders

|                    |  |
|--------------------|--|
|                    | All Intellex series and EDVR Multiplexers All Quest series, Sensormatic & Robot brands |
| Protocol Converter | RCSN422, SensorNet to RS-422 converter   |

## Order Codes:

|                                    |  |
|------------------------------------|--|
| <a href="#">ADTT16E</a>            | Dome Controller, Touch Tracker, English layout ,SensorNet, controls up to 16 cameras/domes, European power cod |
| <a href="#">ADTT16E-UK</a>         | Dome Controller, Touch Tracker, English layout ,SensorNet, controls up to 16 cameras/domes, UK power cod       |
| <a href="#">ADTT16BE-FR</a>        | Dome Controller, Touch Tracker,French layout SensorNet, controls up to 16 cameras/domes                        |
| <a href="#">ADTT16BE-GE</a>        | Dome Controller, Touch Tracker,German layout, SensorNet, controls up to 16 cameras/domes                       |
| <a href="#">ADTT16BE-IT</a>        | Dome Controller, Touch Tracker,Italian layout, SensorNet, controls up to 16 cameras/domes                      |
| <a href="#">ADTT16BE-SP</a>        | Dome Controller, Touch Tracker,Spanish layout SensorNet, controls up to 16 cameras/domes                       |
| <a href="#">ADTT16BE-PO</a>        | Dome Controller, TouchTracker, Portuguese layout SensorNet, controls up to 16 cameras/domes                    |
| <a href="#">Accessory RVEIMKIT</a> | Additional external interconnect module (Europe Only)  |

## Concept Pro Cost Effective Fully Functional Dome

# CP-HSD220-AHD2M Concept Pro 2MP AHD 20x Zoom High Speed Dome



The Concept Pro 2MP AHD 20x PTZ Camera (CP-HSD220-AHD2M) is a 1080P 4 in 1 high speed dome with 20x optical zoom and a 150m IR range. The camera can be programmed with 225 preset positions and up to 4 patterns or groups allowing for virtually hands-free operation and can integrate with onsite intruder alarm systems through 4 alarm inputs and 1 outputs which are easily accessible in the function box. Additionally, the camera offers 360 degrees-per-second rotation speed ensuring movement remains responsive even when operated remotely from the coaxitron DVR or RS485 keyboard.

### Superior image quality through the zoom

Each camera will retain image focus when they zoom and micro-stepping technology makes the Pan and Tilt motion smooth, even at maximum optical zoom.

### Enhanced Low Light

Enhanced Low-Light harnesses Sony's Starvis technology to produce clear and crisp colour images where light is at a premium, this ensures our products with Enhanced Low-Light stay in colour for longer.

### Parking Action

The Concept Pro 2MP AHD 20x PTZ Camera (CP-HSD220-AHD) can be configured to run a specified preset, scan, pattern or group after a defined period of inactivity.

### Features:

- 150m Advanced Infrared Technology
- 2MP Analogue High Definition
- Lens Size 4.7 - 94mm
- AHD/TVI/CVI/CVBS with simple DIP switch for changing video output signals.
- Enhanced Low light performance, Colour @ 0.01 Lux
- IP66
- 4 Alarm inputs and 1 Alarm outputs

### Other features

- 255 Presets
- 4 Preset groups
- 20x Optical Zoom
- Home Position (Idle/Parking Action)
- Lightning and Power Surge Protection

### Order Codes:

|                 |  |
|-----------------|--|
| CP-HSD220-AHD2M | 2MP AHD PTZ 20x zoom (inc wall brkt and PSU) |
| CP-HSD220-CM    | Corner bracket for 20x PTZ                   |
| CP-HSD220-P     | Pole bracket for 20x PTZ                     |
| CP-HSD220-SN    | Swan neck adapter for 20x PTZ                |
| VA-KBDPRO       | Keyboard for VHSD-810EXT-AHD                 |

|             | Camera      | DVR         |
|-------------|-------------|-------------|
|             | 2MP         | 720P        |
| Coax (RG59) | Up to 500 m | Up to 500 m |
| CAT5e       | Up to 305 m | Up to 350 m |
| CAT6        | Up to 305 m | Up to 350 m |

\*Approximate distances calculated using HD MasterBaluns. Actual transmission range will vary depending on type and quality of cable and baluns.

# Concept Pro Cost Effective Fully Functional Dome

## Technical Specifications:

| <b>Camera</b>          |  |
|------------------------|--|
| Image Sensor           | 1/2.9" Progressive Scan                            |
| Video Output           | AHD/TVI/CVI/CVBS                                   |
| Max. Resolution        | 1920 x 1080 (2MP)                                  |
| Frame Rate             | 25/30FPS @ 1920 x 1080                             |
| Min. Illumination      | Colour:0.01Lux@(F1.2,AGC ON); B/W:0Lux@(IR LED ON) |
| White Balance          | Auto   |
| Gain Control           | Auto   |
| S/N Ratio              | ≥52dB  |
| Noise Reduction        | Auto / Off / Low / Middle / High                   |
| Backlight compensation | On/Off   |
| Highlight compensation | On/Off   |
| Wide Dynamic Range     | DWDR, OFF/ON                                       |
| Defog                  | -  |
| Shutter Speed          | PAL:1/50-1/50000s, NTSC:1/60-1/60000s              |
| Day/Night              | Ext / AUTO / Colour / MONO                         |
| Digital Zoom           | -  |
| Privacy Mask           | Yes Supported (Max. 4 Areas)                       |
| <b>Lens</b>            |  |
| Focal Length           | 4.7~94mm   |
| Optical Zoom           | 20x  |
| Zoom Speed             | Approx.4.2s(Optical Wide-Tele)                     |
| Aperture               | F1.6(Wide)~F3.5(Tele)                              |
| Angle of View          | H: 58.7°~3.2°                                      |
| Focus                  | Auto/Semi-automatic/Manual                         |
| Iris                   | Fixed  |
| <b>Pan and Tilt</b>    |  |
| Pan/Tilt Range         | Pan: 360° Endless, Tilt: 90°                       |
| Speed                  | Pan: 0.1°/s ~200°/s ,Tilt: 0.1°/s ~180°/s          |
| Proportional Speed     | As the length of focus, to auto-adjust the speed   |
| Preset                 | 128  |
| Auto Scan              | 4  |
| Pattern                | 4  |
| Group (Tour)           | 4  |
| Schedule               | 16   |
| Auto Flip              | Yes  |
| Power Off Memory       | N/A  |
| Park Action            | Yes  |
| Power Up Action        | Yes  |
| Auto Protocol ID       | Yes  |

# Concept Pro Cost Effective Fully Functional Dome

| <b>IR</b>                |                          |
|--------------------------|--------------------------|
| Illumination Range Max.  | 150m                     |
| IR Mode                  | Auto/Manual              |
| IR LED Power Consumption | MAX 20W                  |
| <b>Input/Output</b>      |                          |
| Video Output Connector   | 1 BNC                    |
| RS485                    | Yes                      |
| Protocol                 | Pelco-D/Pelco-P          |
| Baud Rate                | 2400/4800/9600           |
| Up the Coax              | Yes                      |
| Alarm Inputs             | Optional (4)             |
| Alarm Outputs            | Optional (1)             |
| Alarm Trigger Event      | Alarm I/O, Schedule      |
| Audio Inputs             | N/A                      |
| <b>General</b>           |                          |
| Dimensions               | 235 x 235 x 460mm        |
| Net Weight               | 3KG                      |
| Gross Weight             | 5kg                      |
| Operating Temperature    | 40°C ~ 60°C              |
| Operating Humidity       | ≤90% (Non-condensing)    |
| Power Supply             | DC24V/1.5A               |
| Power Consumption        | 9W (IR OFF), 30W (IR ON) |
| Ingress Protection       | IP66                     |
| Impact Protection        | N/A                      |
| Surge Protection         | TVS4000V                 |
| Certification            | CE/FCC                   |

# Infra Red & White Light Illuminators

This chapter contains information about Infra Red Illuminators

- Introduction
- Infra-Red Single
- Infra-Red Dual
- Infra-Red Network
- White-Light Single
- White-Light Dual
- White-Light Network

# Introduction

The challenge to the CCTV professional is to ensure that video footage is effective on a 24/7 basis, 365 days a year. Lighting is fundamental to achieving this.

The key practical challenges of CCTV lighting are:

- Even illumination
- Running and Maintenance cost
- Angle of Illumination
- Distance
- Quality of Illumination

Correctly designed lighting can make a significant impact on the performance and effectiveness of the CCTV system, ensuring that the system works satisfactorily in the day and night.

Lighting, meaning Infra-Red and White-Light, is one of the 3 essential elements needed at the front end of every CCTV system.

CCTV LIGHTING - Which Wavelength?

WHITE LIGHT: A mixture of light from 400-700 nm provides true White-Light

Practical Uses:

- Illuminate an area for the CCTV system
- Improve the overall level of illumination for key personnel
- Provide a welcoming environment for authorised personnel
- Deter crime by illuminating a secure area on intrusion
- Can be used with monochrome, colour and day/night cameras

INFRA-RED: 715-730 nm Overt IR, produces a red glow like a red traffic light.

815-850nm Semi-covert IR with a faintly red glow only just visible.

Provide discrete or covert illumination for CCTV  
 Minimise light pollution  
 Provide very long distance illumination  
 Can be used with monochrome and day/night cameras

As CCTV becomes more advanced the industry will move to view lighting with as much importance as the cinematic and photographic industries in capturing effective images.

To raise standards all CCTV should be designed for 24 hour surveillance, not just day-time operation. To be truly secure, a site must be protected day and night.

## VARIO2 Short Range 6 LED IR Illuminator



### Features:

- Distances up to 78m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Semi-Covert (850nm)
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 i2 Infra-Red series delivers maximum distances up to 78m (256ft).

### VARIO Interchangeable Lens System

Angle of illumination can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### Hot-spot Reduction Technology (HRT)

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage. The HRT system also prevents overexposure of foreground objects.

### Advanced Security Settings

Programming inputs on the VARIO2 illuminator can be disabled if required.

### LED Status Indicator

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### Platinum Elite SMT LED Technology

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### Green Technology

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

### Order Code:

VAR2-i2-1 Vario2 Infra Red Illuminator 850nm with 3 interchangeable lenses, 10x10 up to 78m illumination, 35x10 (fitted as standard) illumination up to 54m, 60x25 up to 36m illumination, 12vdc or 24vac operation

## VAR2-i2-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 78m<br>35° x 10° = 54m<br>60° x 25° = 36m   |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 10W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 6  |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 600g   |
| Dimensions                                | 75 x 100 x 64mm  |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.



# VARIO2 Medium Range 9 LED IR Illuminator



## Features:

- Distances up to 144m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Semi-Covert (850nm)
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 i4 Infra-Red series delivers maximum distances up to 144m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage. The HRT system also prevents overexposure of foreground objects.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

**VAR2-i4-1** Vario2 Infra Red Illuminator 850nm with 3 interchangeable lenses, 10x10 up to 144m illumination, 35x10 (fitted as standard) illumination up to 78m, 60x25 up to 54m illumination, 12vdc or 24vac operation

### VAR2-i4-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 144m<br>35° x 10° = 78m<br>60° x 25° = 54m  |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 13W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 9  |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 950g   |
| Dimensions                                | 100 x 135 x 66mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# VARIO2 Long Range 24 LED IR Illuminator



## Features:

- Distances up to 350m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Semi-Covert (850nm)
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 i8 Infra-Red series delivers maximum distances up to 350m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage. The HRT system also prevents overexposure of foreground objects.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

|                  |  |
|------------------|--|
| <b>VAR2-i8-1</b> | Vario Infra Red Illuminator 850nm with 3 interchangeable lenses, 10x10 up to 350m illumination, 35x10 (fitted as standard) illumination up to 165m, 60x25 up to 95m illumination, 12vdc or 24vac operation |
|------------------|--|

## VAR2-i8-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 350m<br>35° x 10° = 165m<br>60° x 25° = 95m   |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 46W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 24   |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 1.65kg   |
| Dimensions                                | 135 x 180 x 68.2mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# VARIO2 Medium Range 12 LED IR Illuminator



## Features:

- Distances up to 120m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Semi-Covert (850nm)
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology, and Adaptive Illumination™ on double and triple panel models to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 i2-2 Infra-Red series delivers maximum distances up to 120m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage. The HRT system also prevents overexposure of foreground objects.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

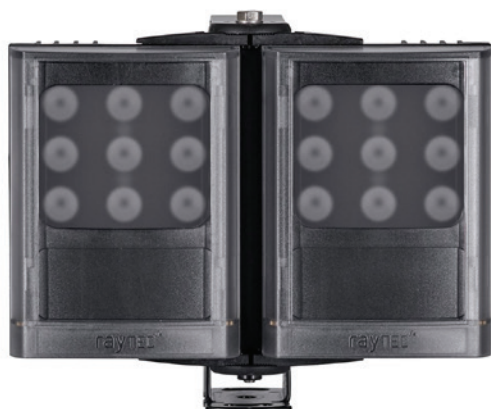
**VAR2-i2-2** Vario2 Infra Red Illuminator 850nm with 3 interchangeable lenses, dual illuminator / adaptive illumination, 10x10 up to 120m illumination, 35x10 (fitted as standard) illumination up to 78m, 60x25 up to 54m illumination, 12vdc or 24vac operation

### VAR2-i2-2 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 120m<br>35° x 10° = 78m<br>60° x 25° = 54m  |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 20W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 12   |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 1.5kg  |
| Dimensions                                | 159 x 144 x 63mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | Adaptive Illumination mounting bracket included  |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

## VARIO2 Long Range 18 LED IR Illuminator



### Features:

- Distances up to 220m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Semi-Covert (850nm)
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology, and Adaptive Illumination™ on double and triple panel models to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 i4-2 Infra-Red series delivers maximum distances up to 220m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage. The HRT system also prevents overexposure of foreground objects.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

### Order Code:

**VAR2-i4-2** Vario2 Infra Red Illuminator 850nm with 3 interchangeable lenses, dual illuminator/ adaptive illumination, 10x10 up to 220m illumination, 35x10 (fitted as standard) illumination up to 120m, 60x25 up to 76m illumination, 12vdc or 24vac operation

## VAR2-i4-2 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 220m<br>35° x 10° = 120m<br>60° x 25° = 76m   |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 20W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 18   |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 2.25kg   |
| Dimensions                                | 209 x 178 x 67mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | Adaptive Illumination mounting bracket included  |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.



# VARIO2 Long Range 24 LED IR Illuminator



## Features:

- Distances up to 282m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Semi-Covert (850nm)
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology, and Adaptive Illumination™ on double and triple panel models to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 i6-2 Infra-Red series delivers maximum distances up to 282m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage. The HRT system also prevents overexposure of foreground objects.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

**VAR2-i6-2** Vario2 Infra Red Illuminator 850nm with 3 interchangeable lenses, dual illuminator/ adaptive illumination, 10x10 up to 282m illumination, 35x10 (fitted as standard) illumination up to 169m, 60x25 up to 99m illumination, 12vdc or 24vac operation

## VAR2-i6-2 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 282m<br>35° x 10° = 169m<br>60° x 25° = 99m   |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 50W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 24   |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 2.25kg   |
| Dimensions                                | 209 x 178 x 67mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | Adaptive Illumination mounting bracket included  |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# VARIO2 Long Range 48 LED IR Illuminator



## Features:

- Distances up to 500m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Semi-Covert (850nm)
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology, and Adaptive Illumination™ on double and triple panel models to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 i8-2 Infra-Red series delivers maximum distances up to 500m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily, quickly and precisely adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage. The HRT system also prevents overexposure of foreground objects.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

**VAR2-i8-2** Vario2 Infra Red Illuminator 850nm with 3 interchangeable lenses, dual illuminator/ adaptive illumination, 10x10 up to 500m illumination, 35x10 (fitted as standard) illumination up to 240m, 60x25 up to 135m illumination, 12vdc or 24vac operation

### VAR2-i8-2 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 500m<br>35° x 10° = 240m<br>60° x 25° = 135m  |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 92W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 48   |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 4.5kg  |
| Dimensions                                | 279 x 223 x 68mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | Adaptive Illumination mounting bracket included  |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# VARIO2 Short Range 3 LED IR PoE Illuminator



## Features:

- Dedicated PoE Lighting for Network Systems
- Distances up to 62m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees - from 1 product
- Semi-Covert (850nm)

Delivering world leading power and illumination distances VARIO2 PoE illuminators can improve the performance of any video surveillance system at night. With PoE power input, the illuminators can be easily plugged into a network infrastructure, without the need for additional power supply units.

VARIO2 PoE illuminators use PLATINUM Elite SMT LED technology to deliver the highest levels of performance. The VARIO2 PoE series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 PoE features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 PoE i2-1 Infra-red PoE illuminator delivers maximum distances up to 62m.

### POE Power Input

VARIO2 PoE illuminators can be plugged into the network infrastructure, offering a simple and low cost installation.

### VARIO Interchangeable Lens System

Angle of illumination can be easily adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### Hot-spot Reduction Technology (HRT)

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage.

### Advanced Security Settings

Programming inputs on the VARIO2 illuminator can be disabled if required.

### LED Status Indicator

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### Platinum Elite SMT LED Technology

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### Green Technology

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

**VAR2-PoE-i2-1** Vario2 POE Infra Red illumination 850nm with 3 interchangeable lenses, 10x 10 up to 62m Illumination, 35 x 10 (fitted as standard) up to 42m, 60x25 up to 26m, 24vdc or POE power required

## VAR2-PoE-i2-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 62m<br>35° x 10° = 42m<br>60° x 25° = 26m   |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | PoE IEEE 802.3af   |
| Consumption                               | 8W   |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 3  |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 600g   |
| Dimensions                                | 75 x 100 x 64mm  |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# VARIO2 Medium Range 12 LED IR PoE Illuminator



## Features:

- Dedicated PoE Lighting for Network Systems
- Distances up to 144m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees - from 1 product
- Semi-Covert (850nm)

Delivering world leading power and illumination distances VARIO2 PoE illuminators can improve the performance of any video surveillance system at night. With PoE power input, the illuminators can be easily plugged into a network infrastructure, without the need for additional power supply units.

VARIO2 PoE illuminators use PLATINUM Elite SMT LED technology to deliver the highest levels of performance. The VARIO2 PoE series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 PoE features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 PoE i4-1 Infra-red PoE illuminator delivers maximum distances up to 144m.

### POE Power Input

VARIO2 PoE illuminators can be plugged into the network infrastructure, offering a simple and low cost installation.

### VARIO Interchangeable Lens System

Angle of illumination can be easily adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### Hot-spot Reduction Technology (HRT)

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage.

### Advanced Security Settings

Programming inputs on the VARIO2 illuminator can be disabled if required.

### LED Status Indicator

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### Platinum Elite SMT LED Technology

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### Green Technology

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

**VAR2-PoE-w4-1** Vario2 POE White Light illumination 850nm with 3 interchangeable lenses, 10x 10 up to 110m Illumination, 35 x 10 (fitted as standard) up to 65m, 60x25 up to 35m, 24vdc or POE + power required

## VAR2-PoE-i4-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Max Distance                              | 10° Circular = 110m<br>35° x 10° = 65m<br>60° x 25° = 35m  |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | PoE IEEE 802.3af   |
| Consumption                               | 15W  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 12   |
| Wavelength                                | 850nm  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Black  |
| Weight                                    | 950g   |
| Dimensions                                | 100 x 135 x 66mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.



# VARIO2 Short Range 6 LED White-Light Illuminator



## Features:

- Distances up to 60m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Excellent Colour Rendition
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 w2 White-Light series delivers maximum distances up to 60m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

VAR2-w2-1

Vario White Light Illuminator with 3 interchangeable lenses, 10x10 up to 60m illumination, 35x10 (fitted as standard) illumination up to 40m, 60x25 illumination up to 25m, 12vdc or 24vac operation

## VAR2-W2-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Total Lumens                              | 932lm per luminaire  |
| Max Distance                              | 10° Circular = 60m<br>35° x 10° = 40m<br>60° x 25° = 25m   |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 11W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 6  |
| Wavelength                                | White-Light  |
| Colour Temp                               | 6000K ~  |
| Colour Reproduction Index                 | >70  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Silver   |
| Weight                                    | 600g   |
| Dimensions                                | 75 x 100 x 64mm  |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# VARIO2 Medium Range 12 LED White-Light Illuminator



## Features:

- Distances up to 110m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Excellent Colour Rendition
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 w4 White-Light series delivers maximum distances up to 110m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

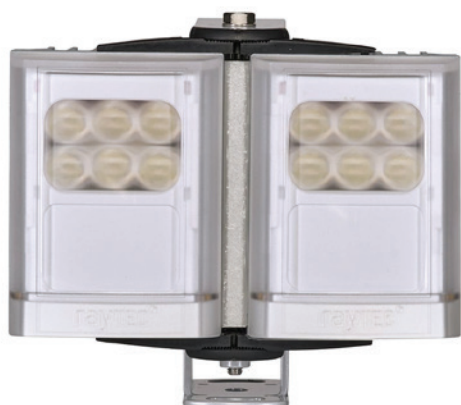
**VAR2-w4-1** Vario White Light Illuminator with 3 interchangeable lenses, 10x10 up to 110m illumination, 35x10 (fitted as standard) illumination up to 65m, 60x25 illumination up to 35m, 12vdc or 24vac operation

## VAR2-W4-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Total Lumens                              | 1863lm per luminaire   |
| Max Distance                              | 10° Circular = 110m<br>35° x 10° = 65m<br>60° x 25° = 35m  |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 24W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 12   |
| Wavelength                                | White-Light  |
| Colour Temp                               | 6000K ~  |
| Colour Reproduction Index                 | >70  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Silver   |
| Weight                                    | 950g   |
| Dimensions                                | 100 x 135 x 66mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

## VARIO2 Medium Range 12 LED White-Light Illuminator



### Features:

- Distances up to 90m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Excellent Colour Rendition
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 w2-2 White-Light series delivers maximum distances up to 90m.

### VARIO Interchangeable Lens System

Angle of illumination can be easily adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### Hot-spot Reduction Technology (HRT)

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage.

### LED Status Indicator

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### Platinum Elite SMT LED Technology

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### Advanced Security Settings

Programming inputs on the VARIO2 illuminator can be disabled if required.

### Green Technology

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

### Order Code:

**VAR2-W2-2** Vario2 White Light Illuminator with 3 interchangeable lenses, dual illuminator/ adaptive illumination, 10x10 up to 90m illumination, 35x10 (fitted as standard) illumination up to 56m 60x25 illumination up to 35m, 12vdc or 24vac operation

## VAR2-W2-2 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Total Lumens                              | 1864lm per luminaire   |
| Max Distance                              | 10° Circular = 90m<br>35° x 10° = 56m<br>60° x 25° = 35m   |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 22W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 12   |
| Wavelength                                | White-Light  |
| Colour Temp                               | 6000K ~  |
| Colour Reproduction Index                 | >70  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Silver   |
| Weight                                    | 1.5kg  |
| Dimensions                                | 159 x 144 x 63mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# VARIO2 Medium Range 24 LED White-Light Illuminator



## Features:

- Distances up to 155m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Excellent Colour Rendition
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 next generation illuminators can improve the performance of any video surveillance system at night.

VARIO2 illuminators use PLATINUM Elite SMT LED technology to deliver more power and greater distances from a smaller platform than current generation illuminators. Providing a broader range of solutions, the VARIO2 series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 w4-2 White-Light series delivers maximum distances up to 155m.

### **VARIO Interchangeable Lens System**

Angle of illumination can be easily adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### **Hot-spot Reduction Technology (HRT)**

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage.

### **LED Status Indicator**

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### **Platinum Elite SMT LED Technology**

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### **Advanced Security Settings**

Programming inputs on the VARIO2 illuminator can be disabled if required.

### **Green Technology**

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

**VAR2-W4-2** Vario2 White Light Illuminator with 3 interchangeable lenses, dual illuminator/ adaptive illumination, 10x10 up to 155m illumination, 35x10 (fitted as standard) illumination up to 92m 60x25 illumination up to 49m, 12vdc or 24vac operation

## VAR2-W4-2 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Total Lumens                              | 3726lm per luminaire   |
| Max Distance                              | 10° Circular = 155m<br>35° x 10° = 92m<br>60° x 25° = 49m  |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | 12/24V AC/DC   |
| Consumption                               | 48W max  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 24   |
| Wavelength                                | White-Light  |
| Colour Temp                               | 6000K ~  |
| Colour Reproduction Index                 | >70  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Silver   |
| Weight                                    | 2.25kg   |
| Dimensions                                | 209 x 178 x 67mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell following output</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.



# VARIO2 Short Range 3 LED White-Light PoE Illuminator



## Features:

- Dedicated PoE Lighting for Network Systems
- Distances up to 42m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Excellent Colour Rendition
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 PoE illuminators can improve the performance of any video surveillance system at night. With PoE power input, the illuminators can be easily plugged into a network infrastructure, without the need for additional power supply units.

VARIO2 PoE illuminators use PLATINUM Elite SMT LED technology to deliver the highest levels of performance. The VARIO2 PoE series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 PoE features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 PoE w2-1 White-Light PoE illuminator delivers maximum distances up to 42m.

### POE Power Input

VARIO2 PoE illuminators can be plugged into the network infrastructure, offering a simple and low cost installation.

### VARIO Interchangeable Lens System

Angle of illumination can be easily adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### Hot-spot Reduction Technology (HRT)

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage.

### LED Status Indicator

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### Platinum Elite SMT LED Technology

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### Advanced Security Settings

Programming inputs on the VARIO2 illuminator can be disabled if required.

### Green Technology

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

**VAR2-PoE-w2-1** Vario2 White Light Illuminator with 3 interchangeable lenses, dual illuminator/ adaptive illumination, 10x10 up to 90m illumination, 35x10 (fitted as standard) illumination up to 56m 60x25 illumination up to 35m, 12vdc or 24vac operation

# White-Light Network Units

## VAR2-PoE-W2-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Total Lumens                              | 466lm per luminaire  |
| Max Distance                              | 10° Circular = 90m<br>35° x 10° = 56m<br>60° x 25° = 35m   |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | PoE IEEE 802.3af   |
| Consumption                               | 9W   |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 3  |
| Wavelength                                | White-Light  |
| Colour Temp                               | 6000K ~  |
| Colour Reproduction Index                 | >70  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Silver   |
| Weight                                    | 600g   |
| Dimensions                                | 75 x 100 x 64mm  |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# VARIO2 Medium Range 12 LED White-Light PoE Illuminator



## Features:

- Dedicated PoE Lighting for Network Systems
- Distances up to 110m
- PLATINUM Elite SMT LED Technology
- Hot-spot Reduction Technology (HRT)
- VARIO Interchangeable Lens System
- Angles from 10-120 degrees – from 1 product
- Excellent Colour Rendition
- Advanced Security Settings

Delivering world leading power and illumination distances VARIO2 PoE illuminators can improve the performance of any video surveillance system at night. With PoE power input, the illuminators can be easily plugged into a network infrastructure, without the need for additional power supply units.

VARIO2 PoE illuminators use PLATINUM Elite SMT LED technology to deliver the highest levels of performance. The VARIO2 PoE series also offers a suite of advanced security features for easier programming and safer operation of smart lighting systems.

VARIO2 PoE features an interchangeable lens system with Hot-spot Reduction Technology to deliver highly even illumination, where it is most needed, for outstanding night-time images.

The VARIO2 PoE w4-1 White-Light PoE illuminator delivers maximum distances up to 110m.

### POE Power Input

VARIO2 PoE illuminators can be plugged into the network infrastructure, offering a simple and low cost installation.

### VARIO Interchangeable Lens System

Angle of illumination can be easily adjusted by changing the VARIO holographic lens insert, to match the specific camera field of view.

### Hot-spot Reduction Technology (HRT)

HRT - Hot-Spot Reduction Technology delivers a highly diffused, elliptical beam shape to deliver more light where it is needed, generating both longer distances and minimizing light wastage.

### LED Status Indicator

Quick operational feedback on status and performance of the illuminator. Allows simple and quick commissioning of the installation and easy maintenance reviews.

### Platinum Elite SMT LED Technology

VARIO2 illuminators use cutting edge PLATINUM Elite SMT LED technology together with an enhanced Cool Running™ thermal management system to deliver World leading power, reliability and flexibility.

### Advanced Security Settings

Programming inputs on the VARIO2 illuminator can be disabled if required.

### Green Technology

In-built green features such as power adjust, telemetry control and timer function enhance the potential for energy savings.

## Order Code:

**VAR2-PoE-w4-1** Vario2 POE White Light illumination 850nm with 3 interchangeable lenses, 10x 10 up to 110m Illumination, 35 x 10 (fitted as standard) up to 65m, 60x25 up to 35m, 24vdc or POE + power required

## VAR2-PoE-W4-1 Technical Specifications:

| Illuminator                               |  |
|---|--|
| Total Lumens                              | 1863lm per luminaire   |
| Max Distance                              | 10° Circular = 110m<br>35° x 10° = 65m<br>60° x 25° = 35m  |
| Angle                                     | Standard pack includes 10° circular + 35° x 10° (fitted as standard) and 60° x 25° elliptical lenses.  |
| Input                                     | PoE IEEE 802.3af   |
| Consumption                               | 25W  |
| Beam Shape                                | Elliptical with HRT (Hot-spot Reduction Technology)  |
| Beam Angle System                         | VARIO Interchangeable Lens System  |
| LED type                                  | Platinum Elite SMT LEDs  |
| Number of LEDs                            | 12   |
| Wavelength                                | White-Light  |
| Colour Temp                               | 6000K ~  |
| Colour Reproduction Index                 | >70  |
| IP rating                                 | IP66   |
| Temperature Range                         | -50° to +50°C  |
| Colour                                    | Silver   |
| Weight                                    | 950g   |
| Dimensions                                | 100 x 135 x 66mm   |
| Cable Length                              | 2.5m   |
| Bracketry                                 | U bracket included   |
| Country of Manufacture                    | United Kingdom   |
| Integrated Command and Control Technology |  |
| Integrated Standard Features              | <ul style="list-style-type: none"> <li>• Power adjust from 20-100%</li> <li>• In-built photocell for automatic on/off operation</li> <li>• Photocell sensitivity adjust</li> <li>• LED status indicator provides status on performance of the unit</li> <li>• LED status indicator on/off</li> <li>• Disable programming mode</li> </ul> |

Specifications and distances based on the POWERS lighting standard.

# Lenses

This chapter contains information about CCTV Lenses

- Introduction
- Lenses

## Introduction

All our lenses will work with Infra-Red equipment. DD or DC/MS Lenses come with a 90 mm lead and are fitted with the standard plug. Our Video Drive Lenses are supplied with a 300 mm lead.

Manual Calculation- there are a number of formulas available to calculate the focal length and they are all based on three factors:

- The height or the width of the area to be viewed (H) or (W)
- The distance between the scene and the camera (D)
- The format of the imaging device

### Formats

Camera Vertical imager dimension (v)

1/3" 3.6 mm

1/2" 4.8 mm

### Where

f = Focal length of the lens

v = Vertical size of the imaging device

D = Distance from the lens to target

V = Vertical size represented by the full screen at D

e.g. We need to achieve a view of a person 1.6 meters tall to represent 10% of the screen height 20 meters from the camera. Therefore the screen must represent 16 meters at 20 meters away from the camera

For a 1/2" camera the Vertical size of the CCD is 4.8mm

f = 20 m x 4.6mm

16m

f = 5.75 mm or 6 mm

(Lens calculators are available on request)

### Did You Know ?

There are 3 main types of Iris: Manual, Auto Iris and Direct Drive (DC Iris) Manual:

This type of lens only has an iris which is manually adjustable by hand and therefore can only be used in areas where the light level is fairly good and constant and there is little effect from changing light levels e.g. sunlight through windows. This allows the use of cameras which have electronic iris to be used.

Auto: This type of lens is needed when using cameras outdoors or in areas where the light level is changing or where affected by external sources e.g. sunlight. The lens contains an amplifier which converts the video signal from the camera into a voltage which drives the iris motors on the lens to open or close.

Direct Drive: These lenses work in much the same way as auto iris lenses but they do not contain an amplifier. These lenses utilise amplifiers which are built into the camera on which it is to be used. This tends to make them slightly cheaper than auto iris lenses.

It is important to use the right lens for the light conditions and desired field of view, otherwise the images seen and recorded will not be satisfactory. CCTV Cameras with an integral lens are less expensive but do not offer lens choices and are therefore limited in their usefulness. The important factors that govern the choice of lens are:

## Focal Length

Lenses either have a fixed or variable focal length. Manually variable focal length lenses are called Vari-Focal Lenses. Electrically powered variable focal length lenses are called Zoom Lenses and while they are often used in high-end video surveillance systems, they are generally too expensive for use in most systems. The focal length of a lens is usually given in Millimetres (mm). Focal lengths of most CCTV camera lenses vary from 3.6mm to 16mm for fixed focal length lenses, to well over 70mm for zoom lenses. So what does that mean? In general short focal length lenses (e.g. 4mm) have wide fields of view. This is good for close-ups or for seeing a large area. Objects appear smaller, rapidly, as distance from the camera increases. As lens focal length increases, the field of view narrows and more distant objects are easier to define.

## The Lens Iris

CCTV Cameras that are used in good and constant light conditions (e.g. indoors with electric lighting) will perform satisfactorily with a "Fixed Iris Lens". Fixed Iris lenses with fixed focal length are the least expensive and the most widely used.

In varying light conditions (e.g. outside or inside facing a window ) the iris on the camera will need to open and close to accommodate changes in light intensity, otherwise the camera images will be too bright or too dark. Lenses with electrically powered irises which automatically adjust as light conditions change are called "Auto Iris Lenses". They are more expensive but do a much better job in varying light conditions.

In constant light conditions that are either dim or very bright, a "Manual Iris Lens" may be the answer. As it's name implies, this type of lens can have the Iris aperture adjusted by hand to give the optimum camera image quality. Pricing for "Manual Iris" lenses is higher than Fixed Iris and lower than Auto Iris lenses.

The "F Stop" value of the lens.

While "F Stop" is actually a ratio between focal length and lens aperture, in practice, when comparing lenses of the same focal length, it is an indication of the lens aperture.

The smaller the "F Stop" the wider the lens aperture and the more light that lens will let into the camera. This is of particular importance in lenses with adjustable irises (both manual and auto).

## Lens Specification Chart

| Suppliers Code                            | CCD  | Focal Length | F-Stop | IRIS   | lens Mount | Angle of view H | Angle of view V |
|---|------|--------------|--------|--|------------|-----------------|-----------------|
| T2616FICS-3                               | 1/3" | 2.6 mm       | 1.6    | Manual iris & focus with lock screws                                   | CS         | 74.9°           | 98.7°           |
| TG2616AFCS                                | 1/3" | 2.6 mm       | 1.6    | Manual focus No amplifier (Direct Drive) with 4 pin plug & lock screws | CS         | 74.9°           | 98.7°           |
| Varifocal Lenses Auto Iris - Direct Drive |      |              |        |  |            |                 |                 |
| T10Z0513FCS                               | 1/3" | 5 - 50 mm    | 1.6    | Manual focus no amplifier (Direct Drive) with 4 pin plug & lock screws | CS         | 3.6° to 53.6°   | 2.7° to 40.2°   |
| LIRC2811CS                                | 1/3" | 2.8 - 11mm   | 1.4    | Manual focus no amplifier (Direct Drive) with IR corrected             | CS         | 36.2° to 97.4°  | 19.7° to 72.4°  |
| LIRC1040CS                                | 1/3" | 10 - 40 mm   | 1.4    | Manual focus no amplifier (Direct Drive) with IR corrected             | CS         | 7.0° to 27.6°   | 5.3° to 20.4°   |
| TG10Z0513CFS                              | 1/3  | 5 - 50 mm    | 1.6    | Manual focus no amplifier (Direct Drive) with 4 pin plug & lock screws | CS         | 51.8° to 5.6°   | 39.2° to 4.3°   |
| TG3Z0312FCS-MPIR                          | 1/3" | 3-8 mm       | F1.2   | Auto Iris DC   | CS         | 90.7° - 35.2°   | 67.3° - 26.5°   |

## Lenses At A Glance



T2616FICS-3



LIRC2811CS



LIRC1040CS



TG2616AFCS



TG10Z0513CFS



TG3Z0312FCS-MPIR



# SL183 Varifocal Ultra Wide No Distortion 5 Megapixel Lens



## Features:

- Patented Linear Optical Technology® provides ultra wide field of view adjustable from 115° to 77° for greater coverage with fewer cameras
- EasyZoom™ allows the user to optimize the field of view with minimal need for refocusing
- IR corrected for true Day/Night cameras
- Supports multi megapixel resolution cameras for demanding applications

These lenses have been specially developed for MegaPixel cameras using Linear Optical Technology® which allow the creation of an ultra wide field of view without distortion. This distortion correction is done optically in the lens without the need for any additional imaging software.

Some examples of applications where these lenses could be utilised are:

Universities & Schools  
External Car Parks  
Parking entry points  
Train & Tram Platforms  
Power stations  
Warehouses  
Retail / Point of Sale areas

## Order Codes: ADSL183A

1.8 - 3.0mm wide angle vari-focal MEGApix auto iris CS mount Day/Night IR corrected lens. Incorporates patented Linear Optical Technology which allows a very wide field of view without barrel distortion common in other wide angle lenses (Typically <1% distortion). Suitable for cameras of up to 5MP and for use with sensors up to 1/2". Note that images from 1/2" cameras should be cropped vertically to eliminate evidence of vignetting (dark corners).

## ADSL183M

1.8 - 3.0 mm wide angle vari-focal MEGApix manual iris CS mount Day/Night IR corrected lens. Incorporates patented Linear Optical Technology which allows a very wide field of view without barrel distortion common in other wide angle lenses (Typically <1% distortion). Suitable for cameras of up to 5MP and for use with sensors up to 1/2". Note that images from 1/2" cameras should be cropped vertically to eliminate evidence of vignetting (dark corners).  
**Europe Only**

## Technical Specifications

| Lenses                                 | SL183A DC-autoiris     |            | SL183M         |
|--|------------------------|------------|----------------|
| Focal length                           | 1.8-3.0 mm             |            |                |
| Linear Optical Technology <sup>®</sup> | Yes                    |            | Distortion <1% |
| Resolution                             | Up to 5MPix resolution |            |                |
| F/#                                    | F/1.8 to close         |            |                |
| IR Correction                          | Day/Night              |            |                |
| EasyZoom™                              | Yes                    |            |                |
| Mount                                  | CS                     |            |                |
| Iris cable length                      | 30 cm                  |            | N/A            |
| Sensor Size                            | 1/3"                   |            |                |
| Field of view H                        | 105° - 77°             | 111° - 84° | 115° - 88°     |
| Field of view V                        | 90° - 62°              | 95° - 68°  | 99° - 71°      |
| Field of view D                        | 90° - 62°              | 123° - 96° | 126° - 100°    |

## Day/Night Megapixel Lenses

### SL940 Telephoto Day/Night Five Megapixel Lens



#### Features:

- 9-40 mm for long reach and field of view optimization
- IR corrected for true Day/Night cameras
- Supports multi megapixel resolution cameras for demanding applications up to five megapixels 40 mm
- Compact design to fit into domes as small as 4" minidome size
- Designed with auto or manual iris, CS-mount 1/3", 1/2.7"
- HD, and 1/2.5" sensors

These lenses have been specially developed for MegaPixel cameras using Linear Optical Technology® which allow the creation of an ultra wide field of view without distortion. This distortion correction is done optically in the lens without the need for any additional imaging software..

Some examples of applications where these lenses could be utilised are:

Universities & Schools  
 External Car Parks  
 Parking entry points  
 Train & Tram Platforms  
 Power stations  
 Warehouses  
 Retail / Point of Sale areas

#### Order Codes:

##### ADSL940A

9.0 - 40 mm telephoto vari-focal MEGApix auto iris CS mount Day/Night IR corrected lens. Suitable for cameras of up to 5MP and for use with sensors up to 1/2". Note that images from 1/2" cameras should be cropped vertically to eliminate evidence of vignetting (dark corners).

##### **Europe Only**

##### ADSL940M

1.8 - 3.0 mm telephoto vari-focal MEGApix manual iris CS mount Day/Night IR corrected lens. Suitable for cameras of up to 5MP and for use with sensors up to 1/2". Note that images from 1/2" cameras should be cropped vertically to eliminate evidence of vignetting (dark corners).

##### **Europe Only**

## Day/Night Megapixel Lenses

### Technical Specifications:

| Lenses            | SL940A DC-autoiris     | SL940M     |             |
|-------------------|------------------------|------------|-------------|
| Focal length      | 9-40 mm                |            |             |
| Resolution        | Up to 5MPix resolution |            |             |
| F/#               | F/1.5 to close         |            |             |
| IR Correction     | Day/Night              |            |             |
| Mount             | CS                     |            |             |
| Iris cable length | 30 cm                  | N/A        |             |
| Sensor Size       | 1/3"                   |            |             |
| Field of view H   | 30° - 7.1°             | 37° - 8.6° | 36° - 8.5°  |
| Field of view V   | 22° - 5.3°             | 20° - 4.8° | 27° - 6.3°  |
| Field of view D   | 38° - 8.8°             | 42° - 9.9° | 46° - 10.6° |

## Day/Night Megapixel Lenses

# SY110 Megapixel Lens Ultra-Wide Day/Night - No Distortion



These lenses have been specially developed for MegaPixel cameras using Linear Optical Technology® which allow the creation of an ultra wide field of view without distortion. This distortion correction is done optically in the lens without the need for any additional imaging software.

Some examples of applications where these lenses could be utilised are:

Universities & Schools  
 External Car Parks  
 Parking entry points  
 Train & Tram Platforms  
 Power stations  
 Warehouses  
 Retail / Point of Sale areas

### Technical Specifications

| Lenses          | SY110A CS-mount DC-autoiris lens |      | SL940M   |
|-----------------|----------------------------------|------|----------|
| Focal length    | 1.67mm                           |      |          |
| Resolution      | Multi-Megapixel                  |      |          |
| F/#             | F/1.8 to closed                  |      |          |
| Sensor Size     | 1/4"                             | 1/3" | 1/2.5" * |
| Field of view H | 94°                              | 110° | 120°     |
| Field of view V | 78°                              | 94°  | 104°     |
| Field of view D | 107°                             | 122° | 130°     |

### Features:

- Ultra wide horizontal field of view up to 120° provides greater security
- Patented Linear Optical Technology™ enables no barrel distortion for maximum resolution
- IR corrected for Day/Night cameras
- Supports multi megapixel resolution cameras for demanding applications
- Near and far objects continuously in focus without lens adjustment
- Available with CS-mount and with auto or manual iris

### Order Codes:

ADSY110A

1.7 mm ultra wide angle MEGApix auto iris CS mount Day/Night IR corrected lens. Incorporates patented Linear Optical Technology which allows a very wide field of view without barrel distortion common in other wide angle lenses (Typically <1% distortion). Suitable for cameras of up to 3MP and for use with sensors up to 1/2". Note that images from 1/2" cameras should be cropped vertically to eliminate evidence of vignette (dark corners).  
 1.7 mm ultra wide angle MEGApix manual iris CS mount Day/Night IR corrected lens. Incorporates patented

ADSY110M

Linear Optical Technology which allows a very wide field of view without barrel distortion common in other wide angle lenses (Typically <1% distortion). Suitable for cameras of up to 3MP and for use with sensors up to 1/2". Note that images from 1/2" cameras should be cropped vertically to eliminate evidence of vignette (dark corners).

## Multi Megapixel Lenses

# SY125 Lens Ultra-Wide Multi Megapixel - No Distortion



These lenses have been specially developed for MegaPixel cameras using Linear Optical Technology® which allow the creation of an ultra wide field of view without distortion. This distortion correction is done optically in the lens without the need for any additional imaging software..

Some examples of applications where these lenses could be utilised are:

Universities & Schools  
 External Car Parks  
 Parking entry points  
 Train & Tram Platforms  
 Power stations  
 Warehouses  
 Retail / Point of Sale areas

## Technical Specifications

|                    |   |      |          |
|--------------------|---|------|----------|
| Lenses             | SY125M-CS-mount Manual iris lens<br>SY125A-CS-mount DC-auto iris lens<br>MY125M machine vision C-mount manual iris lens |      |          |
| Focal length       | 1.3 mm  |      |          |
| Resolution         | Up to 5 megapixels  |      |          |
| F/#                | F/1.8 to closed   |      |          |
| Distortion (H)     | <3% barrel (for 1/3" sensor)  |      |          |
| Pan-focus distance | 10cm to ∞   |      |          |
| Sensor Size        | 1/4"  | 1/3" | 1/2.5" * |
| Field of view H    | 109°  | 125° | 135°     |
| Field of view V    | 93°   | 109° | 119°     |
| Field of view D    | 122°  | 137° | 141°     |

## Features:

- Ultra wide field of view sees the complete image while the operator can digitally pan-tilt-zoom (dPTZ)
- Patented Linear Optical Technology™ enables a rectilinear lens with very low distortion for maximum resolution
- Supports multi megapixel resolution cameras for demanding applications
- Pan focus keeps near and far objects continuously in focus without lens adjustment
- Available with CS-mount or C-mount and with auto or manual iris

## Order Codes:

ADSY125A

1.3 mm ultra wide angle MEGApix auto iris CS mount lens. Incorporates patented Linear Optical Technology which allows an ultra wide field of view without barrel distortion common in other wide angle lenses (Typically <3% distortion). Suitable for cameras of up to 5MP and for use with sensors up to 1/2". Note that images from 1/2" cameras should be cropped vertically to eliminate evidence of vignette (dark corners).

1.3 mm ultra wide angle MEGApix manual iris CS mount lens. Incorporates patented Linear Optical Technology which allows an ultra wide field of view without barrel distortion common in other wide angle lenses (Typically <3% distortion). Suitable for cameras of up to 5MP and for use with sensors up to 1/2". Note that images from 1/2" cameras should be cropped vertically to eliminate evidence of vignette (dark corners).

ADSY125M

\*Some vignetting may occur using a 1/2.5" sensor depending on sensor mechanical tolerance.

# Matrix Switchers Controller Systems

This chapter contains information about Matrix Switchers and Controller Systems

- Introduction
- ADTTE Touch Tracker<sup>®</sup>
- AD2089 Full-Function CCTV System Keyboard
- Accessories

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# Introduction

## What is a Matrix Switcher?

A device for routing multiple camera inputs to multiple monitor outputs.

## Matrix Switcher Solutions

Our matrix switchers solutions give you the basic building blocks for developing a video surveillance system tailored to the dimensions your situation dictates. Every one of our matrix switchers is full cross point, equipped with dome control and sophisticated alarm handling. You can program a variety of responses from one or multiple alarms to include any combination of salvos, presets, patterns, auxiliary actions and more.

The greatest strength of our matrix switchers besides proven reliability, lies in their scalability, start as small as 16 inputs by 4 outputs and grow your system to accommodate 1000s of cameras and domes.

## Matrix Keyboards

Whether you prefer a small footprint or a traditional industrial design, we have the right keyboard for you.

## Matrix System Accessories

We offer the accessories you need to complete your system, including cables, video distribution and line amplifiers, BNC connectors, power supplies and more.



# ADTTE Touch Tracker® Keyboard



## Features:

- Attractive ergonomic design
- Camera, monitor and satellite site selection
- New controlstick provides pan/tilt functions
- Lens control (zoom, focus, iris)
- Supports dome "flip" feature
- Preset, pattern auxiliary control
- Tour, salvo and alarm control
- Built-in self-test hardware and software operation
- Backlit LCD display

The ADTTE Touch Tracker matrix switcher keyboard is compact, ergonomically-designed and compatible with MegaPower matrix switcher/controller systems. This keyboard provides easy access to a complete selection of video switching options – from basic camera and monitor selection to the most advanced automatic control.

The new control stick provides pan/tilt functions of the currently selected dome. Buttons for lens zoom, focus, and iris functions are located near the control stick enabling one handed operation. The keypad features buttons that allow you to assign any camera to any monitor and access special features such as salvos, tours, and alarms.

The LCD displays the selected camera, monitor, and site. It also enables you to see the numbers as you enter them and it displays system prompts and messages.

## Order Code:

ADTTE-UK

Touch Tracker® Keyboard -  
MP48, AD Matrixes - RS232  
English Layout - UK power  
cord

Note: The ADTTE is suitable for use worldwide. Proper low-voltage transformer, with main power cord, is supplied with the unit. Specify country of installation and 120 or 230 VAC at time of order.

## Technical Specifications

|                        |   |
|------------------------|---|
| Input Voltage          | 16 to 32 VAC, 50/60 Hz  |
| Power Supply           | 120 or 230 VAC  |
| Power Consumption      | 10.8 watts  |
| Dimensions (H x W x D) | 130 x 194 x 260 mm  |
| Weight                 | 1.0 kg  |
| Colour                 | Black shell with grey appliqué  |
| Operating Temperature  | 0° to 50° C   |
| Humidity               | 5-95% RH (non-condensing)   |
| Storage Temperature    | -20° to 65° C   |
| Emissions              | FCC: 47 CFR Part 15 Subpart B,<br>Class A<br>CE: EN55022 Class B<br>CE: EN6100-3-2<br>CE: EN6100-3-3<br>AS/NZS 3548, Class A<br>CISPR22<br>ICES-003 |
| Immunity Safety        | CE: EN50130-4<br>UL: UL1950<br>cUL:CSA 22.2 No. 950<br>IEC950<br>CE: EN60950  |

# AD2089 Full-Function CCTV System Keyboard



The AD2089 series includes robust, full-function CCTV system keyboards available in desktop and rack mount versions and are compatible with MegaPower™ Matrix Switcher/Controller Systems and Intellex Digital Video Management Systems.

The keyboards feature full-travel keys that provide true tactile feel. Dedicated keys enable user log-on, intuitive site and monitor/DVR/VCR selection, and camera or salvo call-up. All system activities, including tours and alarms, can be controlled directly from the keyboard. AD2089 keyboards provide userdefined macro keys that make even the most complex and demanding installations easy to manage. Each operator can customize his or her own keyboard to perform a multitude of system tasks via simple, easy to remember keystrokes.

## Technical Specifications

### Connectors

|                        |   |
|------------------------|---|
| RJ-45                  | RS-232, Power   |
| Supply Voltage         |   |
| AD2089 Series          | 120 VAC, 50/60 Hz                                     |
| AD2089-1 Series        | 230 VAC, 50/60 Hz                                     |
| Power Consumption      | 5.0 watts (nominal)                                   |
| Non-Volatile Memory    | User-defined programming stored in EEROM indefinitely |
| Dimensions (H x W x D) |   |
| Desktop                | 76.2 x 419 x 133 mm                                   |
| Rack Mount             | 133.4 x 482.6 x 38.1 mm                               |
| Weight                 | 2.55 kg   |
| Shipping Weigh         | 3.65 kg   |
| Colour                 | Black   |
| Operating Temperature  | 0° to 40°C  |
| Humidity               | 5-90% RH (non-condensing)                             |
| Storage Temperature    | -40° to 70°C  |
| Emissions              | FCC Part 15, Subpart B Class A CE: EN55022 Class B    |
| Immunity               | CE: EN50082-1   |
| Safety                 | UL2044<br>CSA 22.2 No. 1                              |

### Features:

- Variable-speed, vector solving, twist-to-zoom joystick for pan/tilt /zoom control
- Camera, monitor, DVR, VCR and satellite site selection
- 1000 user-defined macros
- Eight customizable macro keys
- DVR control
- LED display with brightness control
- Tactile full-travel keys
- Preset, pattern and auxiliary control
- Joystick push-button for dome flip function
- Lens control
- Tour and salvo control
- Alarm control
- Supports American Dynamics Intellex® digital video management systems

The keyboard also offers recorder control for digital video recorders. The keyboard's vector-solving joystick provides one-handed control of the selected variable-speed pan/tilt or programmable dome. The joystick's twist action feature provides zoom control of motorized lenses. The push-button at the top of the joystick enables users to quickly flip a compatible dome 180° for uninterrupted surveillance of subjects who pass directly underneath the dome.

The keyboard's internal beeper sounds for five seconds upon receipt of an alarm. It has adjustable baud rates to properly match the keyboard to the network and matrix switcher/controller system, and a self-test mode to verify both hardware and software operation of the communications port, LEDs, joystick, beeper, and memory.

### Order Codes:

|           |   |
|-----------|---|
| AD2089-1  | Keyboard, RS232, macro keys and recorder control, desktop, 230 VAC    |
| AD2089R-1 | Keyboard, RS232, macro keys and recorder control, rack mount, 230 VAC |
| AD2089    | Keyboard, RS232, macro keys and recorder control, desktop, 120 VAC    |
| AD2089R   | Keyboard, RS232, macro keys and recorder control, rack mount, 120 VAC |

## Manchester Dome Protocol Accessories (AD2091 & AD1691 Series)



The AD2091 series Manchester Control Code Generator / Distributor provides economical distribution of AD Manchester code to SpeedDome® Ultra Series Domes, SpeedDome Optima Series Domes and compatible receiver/drivers. The AD2091 interfaces with the MegaPower™ 1024 or 168 via a high speed data line.

The AD2091 provides up to 64 independent buffered AD Manchester Control Code outputs in four groups of 16. Each group is capable of controlling separate blocks of 64 camera sites. Multiple units can be cascaded to provide control for up to 1024 camera sites.

Each output will drive up to 5000 ft. of cable. Alternatively, a single RS-232 output, with selectable baud rates may be used for transmitting code over suitably equipped devices.

The AD2091 can also be used to combine control code from two different matrix systems. The unit can be mounted in a rack or on a wall.

### Features:

- AD2091 Series Manchester Control Code Generator/Distributor
- Generator/Distributor
- 64 Manchester outputs in four groups of 16
- One RS-232 output
- Can be used as a code combiner
- Diagnostic LEDs
- Universal wall, surface or rack mount
- Quick-connect screw terminals for all cable connections
- AD1691 Series Manchester Control Code Distributor
- 64 Manchester outputs
- Ideal for distributing Manchester code
- Surface mount design

### Order Code:

AD2091-1

Manchester Control Code Generator / distributor, 230 VAC **(Europe Only)**

## AD2081 Series RS-232 Port Expander for Matrix



### Features:

- Four RS-232 device ports and one CPU port
- Selectable baud rate via dip switches
- Status LEDs on front and back of unit
- Installation friendly RJ-45 connections

The AD2081 is used to expand a single RS-232 port on a matrix switching system to four ports. Each of the four ports then has an alphanumeric designation such as 1a, 1b, 1c and 1d. The Port Expander is compatible with the full range of American Dynamics Matrix Switcher/Controller Systems and Keyboards as well as accessory products such as the Alarm Interface Unit.

The AD2081 series is installation friendly, utilising RJ-45 connectors for all device connections. It can be mounted virtually anywhere with the high-strength Velcro pads.

Power on status and RS-232 activity is indicated with easy to see LEDs.

### Order Code:

AD2081-1

Port expander for AD matrix  
1 port RS232 to 4 ports  
RS232 **(Europe Only)**

### Technical Specifications:

|             |                         |
|-------------|-------------------------|
| Dimensions: | 20.6H x 13.3W x 2.9D cm |
| Weight:     | 0.6 kg                  |
| Colour:     | Black                   |

## AD2083-02C RS-422 Code Distributor



Distribution of American Dynamics RS-422 code to the SpeedDome® Ultra and SpeedDome Optima Series domes. Using the AD2083-02C Code Distributor, multiple dome sites can be driven from the powerful family of American Dynamics Matrix Switcher/Controller Systems.

The AD2083-02C outputs code for pan, tilt, focus, iris, zoom, preset and pattern control. It can also receive alarm information from SpeedDome Ultra Series domes and relay it to an American Dynamics Matrix System. In addition, an alarm from any of the domes activates a Form C relay.

### Features:

- Cost-effective RS-422 distribution
- Sixteen RS-422 connections
- Daisy chain of up to ten domes per connection
- Provides pan, tilt, and zoom control for SpeedDome Ultra and SpeedDome Optima Series domes
- Quick-connect screw terminals for all cable connections
- Universal wall, rack, and surface mounting
- Diagnostic LEDs
- Interfaces to both American Dynamics High Speed Data Line and Manchester code-based systems
- Relays alarms from domes/receivers to American Dynamics Matrix Switchers
- Form C relay output

### Order Code:

AD2083-02C-1

Matrix code converter,  
1 High Speed Data or 1  
Manchester to 16 SEC  
RS422, 230 VAC

## RCSN422 SensorNet to RS-422 Code Convertor



The SensorNet to RS-422 Code Converter allows an ADTT16E controller to control existing RS-422 SpeedDome® Series domes. The Converter receives SensorNet communication from the ADTT16E controller and converts it into RS-422 protocol for use by the domes. This provides a practical and price competitive upgrade path from older RS-422 based systems - in particular the VM1 - to the newer SensorNet-based ADTT16E controllers. The Converter permits upgrades without having to replace existing cabling or domes. This minimises additional installation expense, system downtime and disruptions.

Upgrading to ADTT16E provides proportional variable speed dome control and intuitive access to features like dome flip, apple peel, and repeat pattern.

In addition, SensorNet domes can be added to the system, thus allowing users to take advantage of SensorNet installations. The converter includes seven RS-422 output ports. The ports use pluggable Euro-style screw terminal connectors, each with a dual colour data LED. The converter has one SensorNet port to accommodate the ADTT16E controller and seven RS-422 output ports.

### Features:

- Allows ADTT16E systems to control existing RS-422 SpeedDome Series domes
- Class 2 LPS Certification
- Universal mount design
- Supports four presets per suitably equipped dome
- Supports three patterns per suitably equipped dome, including apple peel
- Supports proportional speed dome control and dome flip features
- Comprehensive diagnostics with front panel indicators

### Order Code:

RCSN422

Sensornet to RS422  
protocol converter

# Monitors

This chapter contains information about Monitors

- Introduction
- LCD Flat Panel (Multi-Mode) Monitors
- LED Flat Panel (Multi-Mode) Monitors
- LCD Flat Panel (VGA Input Only) Monitors

## Introduction

A range of Flat screen monitors with a choice of either VGA only or Multimode inputs in a variety of screen sizes

## LCD Flat Panel (Multi-Mode) Monitors

# Multiple Input Monitors Performance Series 17" and 19" Displays



American Dynamics 17" and 19" Multiple Input Monitors Performance Series is a proven, cost effective and high quality line of video display monitors, supporting both digital and analogue composite video input signals. These monitors are an excellent choice for price sensitive markets, providing a high quality monitor solution. American Dynamics Multiple Input Monitors produce sharp,

true colour images even at wide viewing angles. These monitors are an excellent choice as part of your video surveillance needs. Each monitor features user friendly, onscreen menus and front panel controls for adjusting monitor display parameters to your specific preference.

American Dynamics Performance Series monitors deliver exceptionally sharp, crisp pictures with a brightness of 250 cd/m<sup>2</sup>, a contrast ratio of 1000:1 and a response time of 5ms. The monitors are slim, lightweight requiring less power and space. These monitors have a desktop stand that tilts to a 90 degree angle, and can be used as a "picture frame" wall mount. Monitors also feature a standard 100 x 100 (mm) VESA™ mounting pattern.

Long-life fluorescent backlights help maintain consistent brightness levels, providing an advantage over aging CRT monitors that become progressively dimmer over time.

### Features:

- High quality and cost effective
- HDMI and VGA input for DVRs or PC applications
- 1x CVBS looping and 1x S-Video input
- Supports up to 1280 x 1024 (SXGA) resolution
- 3D de-interlace and 3D comb filter
- Auto scale digital and analogue video inputs
- Key lock to prevent unauthorized access
- Low power consumption (<25 W)
- PiP (Picture-in-Picture)
- Auto power recovery from outages
- Auto-shift option to prevent pixel burn-in
- Built-in stereo audio speakers
- HDMI to DVI adapter cable included

### Order Codes:

#### ADLCD19MB

19" LCD MIM Performance  
- 1280x1024 CCFL, HDMI, VGA, S-Video, 1-BNC Looping, Stereo Audio Input, 3D Comb Filter, 3D De-interlace, HDMI to DVI Adapter

#### ADLCD17MB

17" LCD MIM Performance  
- 1280x1024 CCFL, HDMI, VGA, S-Video, 1-BNC Looping, Stereo Audio Input, 3D Comb Filter, 3D De-interlace, HDMI to DVI Adapter



## LCD Flat Panel (Multi-Mode) Monitors

### Technical Specifications:

#### General

|                     |  |
|---------------------|--|
| Panel size          | 17" / 19" Diagonal   |
| Backlight type      | CCFL 2 lamps   |
| Native aspect ratio | 5:4  |
| Native resolution   | 1280 x 1024  |
| Brightness          | 250 cd/m <sup>2</sup>  |
| Pixel pitch H/V     | 17" 0.264 mm x 0.264 mm<br>19" 0.294 mm x 0.294 mm   |
| Contrast ratio      | 1000:1   |
| Viewing angle H/V   | 160 / 160, 179 / 160   |
| Response time       | 5 ms   |
| OSD Language        | English (US), French (Fr),<br>German, Spanish (Int), Italian,<br>Portuguese(Brazilian), Chinese<br>(Si), Dutch |

#### Input / Output

|                |   |
|----------------|---|
| VGA input      | 1 VGA (15pins D-Sub)  |
| HDMI input     | 1 HDMI  |
| CVBS input     | BNC input with passive loop<br>through output x1                  |
| S-Video input  | Mini-din 4pins  |
| Audio input    | OD3.5mm Stereo phone jack<br>input with loop through output<br>x1 |
| Speaker output | 1W x 2 embedded   |

#### Video

|                    |                                 |
|--------------------|---------------------------------|
| Video format       | NTSC / PAL auto detect          |
| Scanning frequency | NTSC: 15750Hz ± 500Hz /<br>60Hz |
| PAL                | 15625Hz ± 500Hz / 50Hz          |
| TVL                | 700                             |

#### Electrical

|                                      |                     |
|--------------------------------------|---------------------|
| Power input<br>(AC/DC power adapter) | 100~240Vac, 50/60Hz |
| Power input (display)                | 12V DC/3A           |
| Power consumption                    | 22W, 23W (17", 19") |
| Stand-by mode PC                     | 1.7 W               |
| Off mode PC                          | 0.3 W               |

#### Environment

|                       |                                  |
|-----------------------|----------------------------------|
| Operating temperature | 0°C to 40°C                      |
| Operating humidity    | 10% to 85%RH<br>(non-condensing) |
| Storage temperature   | -20°C to 60°C                    |
| Storage humidity      | 10% to 95%RH<br>(non-condensing) |

#### Mechanical

|                            |  |
|----------------------------|--|
| Cabinet                    | ABS plastic                                      |
| Colour                     | Black  |
| Desktop stand              | Wall mountable desktop stand                     |
| Stand tilt / Swivel / Lift | 90° Tilt   |
| VESATM                     | 100 x 100 (mm)                                   |
| Dimension (monitor only)   |  |
| Dimension (W x H x D)      |  |
| Monitor only               | 17" 371 x 325 x 54 mm<br>19" 419 x 358 x 54 mm   |
| Including stand            | 17" 371 x 376 x 197 mm<br>19" 419 x 423 x 197 mm |

#### Weight

|                         |                          |
|-------------------------|--------------------------|
| Monitor only (net)      | 17" 2.7 kg<br>19" 3.3 kg |
| Including stand (gross) | 17" 3.5 kg<br>19" 4.1 kg |
| Shipping weight         | 17" 5.6 kg<br>19" 6.3 kg |

#### Regulatory

Safety and Regulatory UL/cUL, FCC, CE, RoHS, WEEE  
Accessories (included)

CD (user's guide), power cord, universal AC/DC power adapter, VGA cable, HDMI to DVI cable, audio cable

## LCD Flat Panel (Multi-Mode) Monitors

# General Purpose Monitors Performance Series 20", 22", 24" and 32" Displays



American Dynamics General Purpose Monitors feature a wide range of horizontal and vertical viewing angles that provide comfortable and clear viewing. Each monitor features user friendly, on-screen menus and front panel controls for adjusting monitor display parameters to your specific preference.

Available in four distinct sizes, these LED monitors are slim, lightweight, and require less power and space. They can also be installed on a wall with optional wall mounts with ease providing increased desktop workspace.

Using these high-performance monitors, customers can experience crystal-clear detail and vivid colors with a wide viewing angle. All of the general purpose monitors come with VGA, as well as digital DVI-D or HDMI connections, and produce sharp, true color images. Sporting a thin bezel for side by side viewing, enhance your viewing capabilities with tilt-stand and wall mounting options.

### Features:

- Available in 20", 22", 24", and 32" display sizes
- Supports Full HD 1920x1080 viewing
- Auto adjustment for image positioning
- Long-life LED backlights help maintain consistent brightness levels
- Auto power recovery from outages
- Built-in stereo audio speakers for 22" model and above
- Standard 100 x 100mm VESA™ mounting pattern

### Order Codes:

|                               |   |
|-------------------------------|---|
| <a href="#">ADLCD20GBHD</a>   | 20" LED Monitor, Full HD 1920x1080, HDMI, VGA   |
| <a href="#">ADLCD22GBHD</a>   | 22" LED Monitor, Full HD 1920x1080, HDMI, VGA, Audio                                    |
| <a href="#">ADLCD24GBHD</a>   | 24" LED Monitor, Full HD 1920x1080, HDMI, VGA, Audio                                    |
| <a href="#">ADLCD32GBHD</a>   | 32" LED Monitor, Full HD 1920x1080, HDMI, VGA, Audio                                    |
| <a href="#">ADWA1TR75100B</a> | Articulating Wall Mount for Displays up to 24", Black 75/100MM VESA 3" Wall Mount Black |
| <a href="#">ADMMWTAD100B</a>  | Ceiling Mount for 15"–26" Displays, Black   |
| <a href="#">ADCT75100B</a>    | Ceiling Mount for 32"–55" Displays, Black   |

## LCD Flat Panel (Multi-Mode) Monitors

### Technical Specifications:

|                        | ADLCD20GBHD  | ADLCD22GBHD     | ADLCD24GBHD     | ADLCD32GBHD          |
|------------------------|--|-----------------|-----------------|----------------------|
| Cabinet Material       | Plastic  |                 |                 |                      |
| Colour                 | Black  |                 |                 |                      |
| Weight                 | 2.8kg  | 3.9kg           | 3.5kg           | 8.2kg                |
| Pixel Pitch (mm)       | 0.2265x0.221   | 0.24825x0.24825 | 0.2745x0.2745   | 0.12125x0.36375      |
| Backlight              | LED  |                 |                 |                      |
| Aspect Ratio           | 16:9   |                 |                 |                      |
| Viewing Angle          | 178(H) / 178(V)  | 170(H) / 160(V) | 178(H) / 178(V) |                      |
| Contrast Ratio         | 3000 : 1   | 1000 : 1        |                 |                      |
| Response Time          | 20ms   | 5ms             | 14ms            | 8ms                  |
| Brightness             | 250cd/m <sup>2</sup>   |                 |                 | 300cd/m <sup>2</sup> |
| Recommended Resolution | 1920x1080  |                 |                 |                      |
| Audio                  |  |                 |                 |                      |
| Speaker Power          | -  | 2W x 2          |                 |                      |
| Speakers               | -  | Built-in        |                 |                      |
| Interface              |  |                 |                 |                      |
| VGA In                 | 1  |                 |                 |                      |
| HDMI                   | 1  |                 |                 |                      |
| Stereo Audio In        | -  | 1 (3.5mm)       |                 |                      |
| Controls               |  |                 |                 |                      |
| Controls Available     | Power, Up/Down, Left/Right, Source, OSD Menu                         |                 |                 |                      |
| Environmental          |  |                 |                 |                      |
| Operating Temperature  | 0°C - 40°C   |                 |                 |                      |
| Storage Temperature    | -20°C 60°C   |                 |                 |                      |
| Operating Humidity     | 20% - 90% RH   |                 |                 |                      |
| Storage Humidity       | 10% - 90% RH   |                 |                 |                      |
| Power                  |  |                 |                 |                      |
| Input rating           | 100-240Vac 1.0-0.7A, 50/60Hz   |                 |                 |                      |
| Typical power          | 30W  | 30W             | 30W             | 60W                  |
| Off mode Efficiency    | Energy Star  |                 |                 |                      |
| Accessories            |  |                 |                 |                      |
| VESA Wall Mount Holes  | 100mm x 100mm  |                 |                 |                      |
| Additional Accessories | Power Cord, HDMI Cable, Desk stand                                   |                 |                 |                      |
| Regulatory Standards   |  |                 |                 |                      |
| Safety                 | UL/IEC/EN60950-1 UL listed   |                 |                 |                      |
| EMC                    | FCC CFR 47.15b; EN55032 Class A; EN61000-3-3; EN61000-3-2; EN50130-4 |                 |                 |                      |
| Environmental          | RoHS, Reach, WEEE, Waste Packaging                                   |                 |                 |                      |

## LCD Flat Panel (Multi-Mode) Monitors

# Multiple Input Monitors Professional Series 17", 19" and 21.5" Displays



### Features:

- High quality with leading technology
- HDMI and VGA input for DVRs or PC applications
- 2x CVBS looping and 1x S-Video input
- Supports up to 1280 x 1024 (SVGA) resolution (17 and 19 inch monitors)
- Support up to 1920 x 1080 (FHD) resolution (21.5 inch monitor)
- 3D de-interlace and 3D comb filter
- Auto scale digital and analogue video inputs
- Key lock to prevent unauthorized access
- PiP (Picture in Picture)
- Hard glass protection
- Auto power recovery from outages
- Auto-shift option to prevent pixel burn-in
- Built-in stereo audio speakers
- HDMI to DVI adapter cable included

American Dynamics 17", 19" and 21.5" Multiple Input Monitors Professional Series produce sharp, true colour images even at wide viewing angles. Each monitor features user friendly, on-screen menus and front panel controls for adjusting monitor display parameters to your specific preference.

These monitors are high quality with the latest features and technology such as hard glass protection, enhanced power savings, and latest de-interlace technology and comb filters.

The Professional Series supports HD digital as well as sharp analogue composite video input signals. The monitors are slim, lightweight and require less power and space.

These monitors have a desktop stand that tilts to a 90 degree angle, and can be used as a "picture frame" wall mount. Monitors also feature a standard 100 x 100 (mm) VESATM mounting pattern.

Long-life backlights help maintain consistent brightness levels, providing an advantage over aging CRT monitors that become progressively dimmer over time.

### Order Codes:

**ADLCD17MPB**

17" LCD 1280 x 1024, HDMI, VGA, Y/C, 2xBNC IN w/loop, audio, 3D CF & DI, hard glass protection

**ADLCD19MPB**

19" LCD 1280 x 1024, HDMI, VGA, Y/C, 2xBNC IN w/loop, audio, 3D CF & DI, hard glass protection

**ADLCD22MPB**

21.5"W LCD 1920 x 1080 FHD LED, HDMI, VGA, Y/C, 2xBNC IN w/loop, audio, 3D CF & DI, hard glass protection

## LCD Flat Panel (Multi-Mode) Monitors

### Technical Specifications:

#### General

|                     |  |
|---------------------|--|
| Panel size          | 17" / 19" / 21.5" Diagonal   |
| Backlight type      | CCFL 2 lamps, LED edge-lit (21.5")   |
| Native aspect ratio | 5:4, 16:9 (21.5")  |
| Native resolution   | 1280 x 1024, 1920 x 1080 (21.5")   |
| Brightness          | 250 cd/m <sup>2</sup>  |
| Pixel pitch H/V     | 17" 0.264 x 0.264 mm<br>19" 0.294 x 0.294 mm<br>21.5" 0.248 x 0.248 mm                           |
| Contrast ratio      | 1000:1   |
| Viewing angle H/V   | 160 / 160, 170 / 160, 170 / 160  |
| Response time       | 5ms  |
| OSD Language        | English (US), French (Fr), German, Spanish, Italian, Portuguese (Brazilian), Chinese (Si), Dutch |

#### Input / Output

|                |  |
|----------------|--|
| VGA input      | 1 (15pins D-Sub)                                       |
| HDMI input     | 1  |
| CVBS input     | BNC input with passive loop through output x2          |
| S-Video input  | Mini-din 4pins   |
| Audio input    | OD3.5 mm Stereo phone jack with loop through output x1 |
| Speaker output | 1W x2 embedded   |

#### Video

|                    |                              |
|--------------------|------------------------------|
| Video format       | NTSC / PAL auto detect       |
| Scanning frequency | NTSC: 15750Hz ± 500Hz / 60Hz |
| PAL                | 15625Hz ± 500Hz / 50Hz       |
| TVL                | 700                          |

#### Electrical

|                                   |   |
|-----------------------------------|---|
| Power input (AC/DC power adapter) | 100-240 Vac, 50/60Hz                            |
| Power input (display)             | 12 V DC/3A (17" & 19")<br>12 V DC/4.16A (21.5") |
| Power consumption                 | 26 W, 28W, 32 W (17", 19", 21.5")               |
| Stand-by mode PC                  | 1.8 W   |
| Off mode PC                       | 0.3 W   |

#### Environment

|                       |                               |
|-----------------------|-------------------------------|
| Operating temperature | 0°C to 40°C                   |
| Operating humidity    | 10% to 85%RH (non-condensing) |
| Storage temperature   | -20°C to 60°C                 |
| Storage humidity      | 10% to 95%RH (non-condensing) |

#### Mechanical

|                  |  |
|------------------|--|
| Cabinet / Colour | ABS plastic  |
| Desktop stand    | Wall mountable desktop stand<br>Stand tilt / Swivel / Lift<br>90° Tilt       |
| VESA™            | 100 x 100 (mm)<br>Dimension (W x H x D)                                      |
| Monitor Only     | 17" 371 x 325 x 54 mm<br>19" 419 x 358 x 54 mm<br>21.5" 513 x 326 x 58 mm    |
| Including Stand  | 17" 371 x 376 x 197 mm<br>19" 419 x 423 x 197 mm<br>21.5" 513 x 404 x 197 mm |

#### Weight

|                         |   |
|-------------------------|---|
| Monitor only (net)      | 17" 3.27 kg<br>19" 4.04 kg<br>21.5" 3.92kg  |
| Including stand (gross) | 17" 4.07 kg<br>19" 4.84 kg<br>21.5" 4.72 kg |
| Shipping                | 17" 6.36 kg<br>19" 7.23 kg<br>21.5" 7.71 kg |

#### Regulatory

Safety and Regulatory UL/cUL, FCC, CE, RoHS, WEEE

#### Accessories (included)

CD (user's guide), power cord, universal AC/DC power adapter, VGA cable, HDMI to DVI cable, audio cable

## LCD Flat Panel (Multi-Mode) Monitors

### VLCD32MB 32" LCD Monitor



#### Features:

- 2" Screen
- 1920 x 1080 resolution
- Robust metal housing
- HDMI, S-Video , VGA and BNC (x2) inputs
- 4000:1 Contrast ratio
- 240 V DC

The VLCD32MB is a 32" LCD monitor, combining a glass screen with a robust metal housing. It boasts 1920 x 1080 resolution and includes HDMI, S-Video, VGA and BNC (x2) inputs. It comes complete with a power supply, VGA cable user manual and remote control.

#### Order Code:

VLCD32MB

32 inch Multimode monitor, wall mounting, (requires separate bracket) Inputs

#### Technical Specifications:

|                               |  |
|-------------------------------|--|
| LCD Panel Type                | 32" Active Matrix Metal Case Glass Front High Resolution |
| Maximum Resolution            | 1920(H) x 1080 (V)                                       |
| Active Display Area           | 708.954 (H) x 398.592 (V) mm                             |
| Pixel Pitch                   | 0.1730 (H) x 0.5190 (V)                                  |
| Bezel Thickness               | 33 mm  |
| Contrast Ratio                | 4000 : 1 Ratio   |
| Brightness                    | 450 cd/m <sup>2</sup>                                    |
| Response Time                 | 16 ms  |
| Viewing Angle                 | 85 / 85 / 85 / 85  |
| Display Colours               | 16.7 M   |
| Video Synchronization         | TTL Positive or Negative                                 |
| PC Compatible Frequency       | 30-80KHz (H) / 50-75Hz (V) Max.1366 x 768                |
| Adjustable Colour Temperature | 9300K / 6500K / 5800K / User                             |
| Video Compatibilty            | Multi-Standard for NTSC / PAL                            |
| Aspect Ratio                  | 16 : 9 Ratio and 4 : 3 Ratio                             |
| VGA Auto Frequency Correction | Yes  |
| Number of Speakers            | Right x 1 Left x 1                                       |
| Sound Demodulation            | Stereo. Audio  |
| Mute                          | Yes  |
| Work Humidity                 | 20 % - 70 %  |
| Work Temperature              | - 10 to 50   |
| Accessories                   | Kettle Lead / VGA Cable /User Manual, Remote             |

## LCD Flat Panel (Multi-Mode) Monitors

| IN/OUT INTERFACE             |   |
|------------------------------|---|
| Video Interface              | DC VGA x 1, Video in x 2 (BNC) Video Out x 2 ( BNC ) S-Video x 1 HDMI input x 1 |
| Audio Interface              | Audio in x 1, Audio Out x 1   |
| Power Interface              | AC in x 1   |
| Termination                  | 75 Ohms (Automatic termination)   |
| Safety & EMC Certification   | CE / FCC / ROHS   |
| Vesa Standard Mount          | 380 x 170 mm  |
| Stand Type                   | None  |
| Colour                       | Black   |
| LCD Dimension (Without Base) | 770 (W) x 460 (H) x 100 (D) mm  |
| Packing Dimension            | 970 (W) x 660 (H) x 300 (D) mm  |
| NET Weight                   | 36 Kgs  |
| GROSS Weight                 | 43 Kgs  |
| POWER                        |   |
| Power Supply                 | 240 V   |
| Voltage                      | AC100 - 240V 50 / 60Hz  |
| Power Consumption            | < 180 W   |
| OSD                          |   |
| OSD Controls                 | Contrast, Brightness, Clock, Phase, H-Position, V-Position, Language, Reset     |
| OSD Language                 | English, French, German, Spanish, Italian, Chines                               |

## LED Flat Panel (Multi-Mode) Monitors

# Large Panel Multiple Input Monitors Professional Series 24" W and 32" W Displays



### Features:

- High quality with leading technology
- LED backlighting
- HDMI, DVI and VGA input for DVRs, NVRs or PC applications
- 2x CVBS looping and 1x S-Video input looping
- Supports up to 1920 x 1080 (FHD) resolution
- Low power consumption
- Slim design LCD
- 3D de-interlace and 3D comb filter
- Auto scale digital and analogue video inputs
- PiP (Picture in Picture)
- Auto power recovery from outages
- Auto-shift option to prevent pixel burn-in
- Built-in stereo audio speakers

American Dynamics 24" W and 32" W Large Panel Multiple Input Monitors Professional Series produce sharp, true colour images even at wide viewing angles. These monitors are an excellent choice as part of your video solutions needs. Each monitor features user friendly, on-screen menus and front panel controls for adjusting monitor display parameters to your specific preference.

These monitors are high quality with the latest features and technology such as LED backlighting, enhanced power savings, and latest de-interlace technology and comb filters. The Professional Series supports full HD digital as well as sharp analogue composite video input signals.

These attractive LED edge-lit monitors, with slim metal chassis design, include a desktop stand and feature VESA™ standard mounting patterns. Supported mounting patterns include 100 x 100 mm and 200 x 100 mm for the 24" display and 200 x 200 mm and 400 x 200 mm for the 32" display. Easy positioning Height Adjustable Stand (HAS) is provided with the 24" display allowing landscape or portrait positioning.

Long-life, solid state LED backlights help maintain consistent brightness levels and consume less power than traditional LCD monitors with CCFL backlighting.

### Order Codes:

ADLCD24MPB

24" W LCD 1920 x 1080 FHD LED, HDMI, DVI, VGA, Y/C, 2-BNC IN 2/loop, audio, 3D CF & DI, IR remote control

ADLCD32MPB

32" W LCD 1920 x 1080 FHD LED, HDMI, DVI, VGA, Y/C, 2-BNC IN 2/Loop, audio, 3D CF & DI, IR remote control



## LED Flat Panel (Multi-Mode) Monitors

### Technical Specifications:

#### General

|                       |  |
|-----------------------|--|
| Panel size (diagonal) | 24" and 32"  |
| Backlight type        | LED, edge-lit  |
| Native aspect ratio   | 16:9   |
| Native resolution     | 920 x 1080   |
| Brightness            | 24" 250 cd/m <sup>2</sup> , 32" 350 cd/m <sup>2</sup>  |
| Contrast ratio        | 24" 1000:1, 32" 3000:1   |
| Viewing angle H/V     | 24" 170 / 160, 32" 178 / 178   |
| Response time         | 5 ms   |
| OSD Language          | English (US), French (Fr), German, Spanish (Int), Italian, Portuguese (Brazilian), Chinese (Si), Dutch |

#### Input / Output

|                               |                                    |
|-------------------------------|------------------------------------|
| Composite video input (CVBS)  | 2 BNC inputs                       |
| Composite video output (CVBS) | 2 BNC passive loop-through outputs |
| Camera audio input            | 2 sets RCA (R/L)                   |
| S-Video input                 | (Y/C) input                        |
| S-Video output 1              | (Y/C) output                       |
| VGA input                     | 1 VGA (15pin D-Sub)                |
| Plug & Play monitor           | DDC compatible (DDC 2B)            |
| DVI-D input                   | 1 DVI-D Input                      |
| HDMI input                    | 1 HDMI                             |
| Audio input                   | Stereo audio input 3.5 mm          |
| Speaker output                | 5W x2 embedded                     |

#### Video

|                    |                             |
|--------------------|-----------------------------|
| Video format       | NTSC/PAL auto detect        |
| Scanning frequency | NTSC: 15750Hz ± 500Hz /60Hz |
| PAL                | 15625Hz ± 500Hz /50Hz       |
| TVL                | 650TVL                      |

#### Electrical

|                         |                        |
|-------------------------|------------------------|
| Power consumption       | 24" < 40 W, 32" < 55 W |
| Power input             | 24 V DC/2.7A           |
| Power output for camera | 2V DC/0.4A             |
| Stand-by                | < 2 W                  |
| Off mode                | < 1 W                  |

#### Environment

|                       |                             |
|-----------------------|-----------------------------|
| Operating temperature | 0°C to 40°C                 |
| Operating humidity    | 10% to 85% (non-condensing) |
| Storage temperature   | -20°C to 60°C               |
| Storage humidity      | 10% to 95% (non-condensing) |

#### Mechanical

|                       |  |
|-----------------------|--|
| Cabinet               | Metal  |
| Colour                | Black  |
| Desktop stand         | 24" Height adjustable desktop stand<br>32" fixed desktop stand         |
| VESA™                 | 24" 200 x 100 mm;<br>100 x 100 mm<br>32" 400 x 200 mm;<br>200 x 200 mm |
| Dimension (H x W x D) |  |
| Monitor only          | 24" 402 x 571 x 243 mm<br>32" 504 x 742 x 230 mm                       |
| Shipping box          | 24" 512 x 633 x 303 mm<br>32" 657 x 887 x 293 mm                       |

#### Weight

|                         |                            |
|-------------------------|----------------------------|
| Monitor only (net)      | 24" 8.80 kg, 32" 13.60 kg  |
| Including stand (gross) | 24" 10.00 kg, 32" 19.50 kg |
| Shipping                | 24" 11.90 kg, 32" 23.00 kg |

#### Regulatory

UL/cUL, FCC, RoHS, WEEE, ENERGY STAR, CE

#### Accessories (included)

CD (User Guide, Quick Start Guide), DC power adapter, VGA cable, HDMI cable, power cords, remote control

## LED Flat Panel (Multi-Mode) Monitors

### VLED22MB 22" LED Screen



The VLED22MB is a high resolution 22" LED monitor housed in a robust metal casing. The unit boasts a contemporary and slim line design. To conserve workspace the monitor can be easily wall mounted using industry standard VESA mounting equipment.

#### Technical Specifications:

|                     |                                    |
|---------------------|------------------------------------|
| Size                | 21.6"                              |
| Resolution          | 1920 x 1080                        |
| Brightness          | 310CD                              |
| Contrast            | 1000:1                             |
| Response time       | 5 ms                               |
| Colours             | 16.3 m                             |
| Viewing angle (V/H) | 160/170                            |
| TV Lines            | 800 Lines                          |
| Composite Inputs    | 2x BNC, VGA, S-video, HDMI         |
| Composite Outputs   | 2x BNC                             |
| 3D Comb Filter      | Yes                                |
| 3D Noise Reduction  | Yes                                |
| PIP                 | Yes                                |
| Audio               | 2x Input                           |
| Speaker             | 2x 2.5 W                           |
| Power Consumption   | < 20 W                             |
| Wall hanging        | Vesa standard                      |
| Auto adjustment     | Yes                                |
| OSD Control         | Yes                                |
| Remote Control      | Yes                                |
| OSD Language        | English                            |
| Accessories         | Power cord, adapter, stand, remote |
| PSU,                | control, cable management,         |
| cable               | VGA cable, user guide, audio       |
| Weight              | 6.5 Kg                             |

#### Features:

- 21.6" LED Screen
- Metal housing with tempered acrylic plate
- 1920 x 1080 Resolution
- 800 TV Lines
- HDMi Input: View high quality images
- Multiple Video Input types
- Built-in 3D Combs
- Stereo Audio (VGA input only)
- BNC loop through
- Picture in Picture (PIP)
- Built-in speakers and remote control
- Mounting and Bracket Options

#### Order Code:

VLED22MB

22 inch widescreen LED Monitor Multimode with HDMI input ,1920 x 1080 max resolution. It also features 2 x BNC input, VGA, S-Video & 2 BNC Outputs

## LCD Flat Panel (VGA Input Only) Monitors

### VLCD19VGA 18.5" LCD Screen



#### Features:

- 18.5" LCD Screen
- Plastic housing
- 1366 x 768 Resolution
- VGA Input

The VLCD19VGA is an entry-level VGA monitor in a plastic casing. It is desk mounted and includes power and VGA cables as well as a user manual on CD. It offers an affordable VGA monitor for installations where budget is important.

#### Order Code:

VLCD19VGA

18.5" LCD Monitor ,LED Backlit, plastic housing, desktop stand , VGA input

#### Technical Specifications:

|                      |  |
|----------------------|--|
| Size:                | 18.5"  |
| Resolution:          | 1366 x 768 (16:9)                                  |
| Brightness:          | 250CD  |
| Contrast:            | 1000:1   |
| Response time:       | 5 ms   |
| Colours:             | 16.7 m   |
| Viewing angle (V/H): | 160/160  |
| Composite Inputs:    | VGA  |
| Power Consumption:   | 28 W   |
| Power Saving Energy: | Star 5.0   |
| OSD Control:         | Yes  |
| OSD Language:        | Various (inc English)                              |
| Accessories:         | Power cord, stand, PSU, VGA cable, user guide (CD) |
| Weight:              | 2.5 Kg   |
| Dimensions:          | 340 mm (H) x 445 mm (L) x 175 mm (D)               |

## LCD Flat Panel (VGA Input Only) Monitors

### VLED22PW 22" LED Backlit Screen



#### Features:

- 21.5" LED Backlit Screen
- High Resolution 1920 x 1080
- 250CD/M2
- 1000:1 Contrast Ratio
- Stereo Audio
- BNC, HDMI & VGA inputs
- 170 Deg. Viewing Angle

#### Other features

- Discreet, side-mounted controls
- BNC loop through
- Low Power Consumption

The VLED22PW is a high resolution 21.5" LED monitor housed in a robust plastic casing. The unit boasts a contemporary, slim line design including discreet, side mounted controls.

To conserve workspace the monitor can be easily wall mounted using industry standard VESA mounting equipment.

#### Order Code:

VLED22PW

21.5" widescreen monitor with HDMI, VGA and BNC inputs

## LCD Flat Panel (VGA Input Only) Monitors

### Technical Specifications:

|                               |  |
|-------------------------------|--|
| Panel Type                    | 21.5" 16:9 LED Panel   |
| Case Type                     | Plastic  |
| Maximum Resolution            | 1920 (H) x 1080 (V)  |
| Active Display Area           | 477 (H) x 268 (V) mm   |
| Pixel Pitch                   | 0.24825 (H) x 0.24825 (V) mm   |
| Bezel Thickness               | Left/Right 20 mm Top 20 mm Bottom 35 mm  |
| Contrast Ratio                | 1000:1   |
| Brightness                    | 250cd/m <sup>2</sup>   |
| Response Time(TF)             | 5 ms   |
| Viewing Angle                 | 170/160 (H/V)  |
| Display Colours               | 6.7 m  |
| Video Synchronisation         | Yes  |
| PC Compatible Frequency       | 30-60 KHz (H)/56-75 K Hz (V)   |
| Adjustable Colour Temperature | 9300K/6500K/5800K/User   |
| Video Compatibility           | PAL/NTSC   |
| Aspect Ratio                  | 16:9   |
| VGA Auto Frequency Correction | Yes  |
| Speaker                       | 2 x 2.5 w  |
| Sound Demodulation            | Audio, Stereo  |
| Maximum HDMI                  | 5M   |
| Operating Humidity            | 5% -90%  |
| Operating Temperature         | - 10°C /+50°C  |
| Volume +/-Power on/off        | Yes  |
| Video Interface               | DC in x 1  |
| Termination                   | 75 Ohms  |
| Safety &EMC Certification     | CE, RoHS, FCC-DOC  |
| VESA Standard Mount           | 75 mm x 75 mm  |
| Stand Type                    | Desktop  |
| Colour                        | Black  |
| Button Position               | To the right, underside of the screen  |
| Dimensions                    | 518 (W) x 380 (H) x 155 mm (D) (With base)<br>518 (W) x 324 (H) x 40 mm (D) (Without base) |
| NET Weight                    | 3.7 KG   |
| GROSS Weight                  | 4.2 KG   |
| Power                         | 12 vDC, 3 Amp  |
| Supply Voltage                | AC110 V - 240 V 50/60n Hz  |
| Power Consumption             | >25 W  |
| OSD Controls                  | Contrast, Brightness, Colour, Sharpness, Colour temperature,                               |
| OSD Languages                 | English, German, Italian, Spanish, French, Russian, Portugese, Polish                      |
| Accessories                   | VGA Cable, User Manual, Aux Cable, Power Adapter, Kettle Lead                              |

# Perimeter Protection

This chapter contains information about Perimeter Protection

- Introduction
- Perimeter Protection Detectors

## Introduction

Physical Security addresses actions you can take to protect buildings, property and assets against intruders. When designing a physical security program, the three levels you need to protect are your outer perimeter, your inner perimeter and your interior. If you can implement two or three forms of security at each level, then you will more than likely have an effective physical security system.

One method of providing Perimeter protection is the use of Passive Infra Red Detectors (also known as PIR's).

Our range of Detectors offer choices to protect small, medium and large areas.

Detectors can be used for a variety of functions such as triggering recordings on Digital Video Recorders or , Preset positions on Pan, Tilt and Zoom functional domes.

An alternative to using PIR detectors is the use of Video analytics, which by the use of advanced algorithms can provide high resilience to unwanted alarms from small animals, clouds, wind and rain.

## SIP-3020 SIP-4010 SIP-404



### Features:

- Intelligent PIR Detection System
- Detection of ambient temperature and illuminance for automatic sensitivity management  
Advanced detection algorithm Three dual pyro-elements with patented Double Sheilding
- Anti-vandalism functions
- Anti-rotation function with 3-axis accelerometer
- Anti-masking function with photo-beam
- Reinforced polycarbonate housing
- Max. 4 m installation height
- Independent sensitivity selector for near/far areas
- Detection logic selector
- Detection range selector
- Independent N.C and N.O. outputs
- Adjustable alarm interval time
- BS8418 Compliant - U.K

The SIP-3020, SIP-4010 and SIP-404 detectors in the REDWALL-V series are designed for use in small and mid-sized outdoor areas. They have an intelligent detection system that uses data on the ambient environment, such as temperature and illuminance conditions, to automatically adjust the sensitivity.

Mechanisms for easy installation enables accurate adjustment of the detection area at setup, which results in more reliable operation. The optional AVF-1 Area View Finder allows the installer to visually identify the detection area.

The detectors are also equipped with anti-rotation and anti-masking. They can also detect vandalism or tampering on the units. These functions provide greater security in operations. Detectors in the REDWALL-V series are ideal for triggering outdoor camera systems where high performance is required.

### Order Codes:

|          |                                    |
|----------|------------------------------------|
| SIP-4010 | Redwall-V 40 m x 10 m PIR detector |
| SIP-404  | Redwall-V 40 m x 4 m PIR detector  |
| SIP-3020 | Redwall-V 30 m x 20 m PIR detector |



## Technical Specifications:

| Model                    | SIP-3020   | SIP-4010  | SIP-404  |
|--------------------------|--|-----------|----------|
| Detection method         | Passive Infrared                                     |           |          |
| Coverage                 | 30 x 20 m  | 40 x 10 m | 40 x 4 m |
| Power Input              | 11-16 VDC 22-26 VAC                                  |           |          |
| Current Draw             | 35 mA max. (12 VDC) 70 mA max. (24 VAC)              |           |          |
| Mounting Height          | 2.3 to 4 m   |           |          |
| Sensitivity Selector     | Far:SH/H/M/L Near:SH/H/M/L                           |           |          |
| Range Selector           | Far: On / Off  |           |          |
| Detection logic Selector | AND/OR   |           |          |
| Alarm Output             | N.O., N.C., 28 VDC 0.2A max                          |           |          |
| Alarm Interval period    | Off/15, 30, 60 sec                                   |           |          |
| Trouble Output           | N.C, 28 VDC 0.2 A max                                |           |          |
| Tamper Output            | N.C, 28 VDC 0.1 A max                                |           |          |
| Alarm Period             | Approx. 2 sec.                                       |           |          |
| Warm up Period           | Approx. 60 sec.                                      |           |          |
| Operating Temperature    | -25 to +60°C, -40 to 60°C with optional heating unit |           |          |
| IP Rating Chassis:IP55   | Main Unit: IP65                                      |           |          |
| Dimensions (HxWxD)       | 227 x 102 x 266 mm                                   |           |          |
| Weight                   | 1.2 kg   |           |          |

## SIP-3020/5 SIP-4010/5 SIP-404/5



The SIP-3020/5, SIP-4010/5 and SIP-404/5 are designed for detection applications outdoors to trigger video transmission systems and PTZ camera control.

These detectors have an intelligent detection system that uses data from the ambient environment, such as temperature and illuminance conditions, to automatically adjust the sensitivity. They are also equipped with anti-rotation and anti-masking functions, which can detect vandalism or tampering with the unit.

Units in this series have an additional PIR detector on the bottom to cover the area just below the unit. The PIR detector on the bottom has independent output separate from the main detection.

For Video surveillance applications, the detection area should be within the camera's field of view in order to ensure that an intruder who triggers the alarm is seen. The detection angle in the main area of the SIP-3020/5, SIP-4010/5 and SIP-404/5 can be adjusted to easily match the camera field of view, and the creep zone detector can be used for the detection below and around the unit.

### Features:

- Intelligent PIR Detection System
- Detection of ambient temperature and illuminance for automatic sensitivity management
- Advanced detection algorithm
- Three dual pyro-elements with patented Double Conductive Shielding for main area
- Built-in creep zone detector (Double dual pyro-elements)
- BS 8418 Compliant
- Anti-rotation function with 3-axis accelerometer
- Anti-masking function with photo-beam
- Reinforced polycarbonate housing
- Max. 4 m installation height
- Independent sensitivity selector for creep/near/far areas
- Detection logic selector
- Detection range selector
- Independent N.C. and N.O. outputs
- Adjustable alarm interval time

### Order Codes:

|            |                                   |
|------------|-----------------------------------|
| SIP-4010-5 | Redwall-V 40 m x 10 m & creep     |
| SIP-404-5  | Redwall-V 40 m x 4 m PIR & creep  |
| SIP-3020-5 | Redwall-V 30 m x 20 m PIR & creep |

## PIR Detection System

## Technical Specifications:

| Model                    | SIP-3020/5   | SIP-4010/5 | SIP-404/5 |
|--------------------------|--|------------|-----------|
| Detection method         | Passive Infrared   |            |           |
| Coverage                 | 30 x 20 m  | 40 x 10 m  | 40 x 4 m  |
| Coverage (Creep Zone)    | 3 x 5 m installed at 2.3 m height, 6 x 9 m installed at 4 m height Detection angle adjustable horizontally |            |           |
| Power Input              | 11-16 VDC 22-26 VAC  |            |           |
| Current Draw             | 40 mA max. (12 VDC) 75 mA max. (24 VAC))   |            |           |
| Mounting Height          | 2.3 to 4 m   |            |           |
| Sensitivity Selector     | Far:SH/H/M/L Near:SH/H/M/L Creep Zone:SH/H/M/L   |            |           |
| Range Selector           | Far area: On / Off   |            |           |
| Detection logic Selector | AND/OR   |            |           |
| Alarm Output             | N.O., N.C., 28 VDC 0.2A max  |            |           |
| Alarm Output Creep Zone  | N.O., N.C., 28 VDC 0.2A max  |            |           |
| Alarm Interval period    | Off/15, 30, 60 sec   |            |           |
| Trouble Output           | N.C, 28 VDC 0.2 A max  |            |           |
| Tamper Output            | N.C, 28 VDC 0.1 A max  |            |           |
| Alarm Period             | Approx. 2 sec..  |            |           |
| Warm up Period           | Approx. 60 sec.  |            |           |
| Operating Temperature    | -25 to +60°C, -40 to 60°C with optional heating unit   |            |           |
| IP Rating Chassis:IP55   | Main Unit: IP65  |            |           |
| Dimensions (HxWxD)       | 248 x 102 x 266 mm   |            |           |
| Weight                   | 1.4 kg   |            |           |

## SIP-5030 / SIP-100



The SIP-5030 offers wide angle-detection for large areas outside. It has an intelligent detection system that uses data from the ambient environment, such as temperature and illuminance conditions, to automatically adjust the sensitivity.

In addition, the SIP-5030 has another PIR detection on the bottom of the unit to cover the creep zone. The PIR detector on the bottom has an independent output that is separate from the main output. The main output can trigger the CCTV system, and the output from creep zone detection can be used for the protection of the unit.

The SIP-100 offers detection with a long range of 100 m and a total of three outputs: two separate outputs for far and near areas and another for creep-zone detection. Multiple outputs are useful for activating video transmission systems and controlling PTZ cameras. The detection angle in the main area of the SIP-5030 and SIP-100 can be adjusted to easily match the camera field in view, and the creep zone detector can be used for detection below and around the unit.

The SIP-5030 and SIP-100 are also equipped with anti-rotation and antimasking functions, which can detect vandalism or tampering with the unit.

### Features:

- Intelligent PIR Detection System
  - BS 8418 Compliant
  - Four dual/One quad pyro elements with patented Double Conductive Shielding for visible light disturbance protection
  - Surrounding Temperature recognition and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Anti-rotation with 3-axis accelerometer
  - Anti-masking with photo-beam
  - Independent Sensitivity selector for near / far area
  - N.C and N.O. Independent Outputs for main areas
  - Adjustable alarm interval time
  - Built-in, fully adjustable, creep zone detector (Double dual pyro-elements)
- 
- Intelligent PIR Detection System
  - Patent Double Conductive Shielding for visible light disturbance protection
  - Surrounding Temperature recognition and illuminance for automatic sensitivity management
  - Advanced detection algorithm
  - Anti-rotation with 3-axis accelerometer
  - Anti-masking with photo-beam
  - Independent Sensitivity selector for near / far area
  - 2 x N.C and N.O. Independent Outputs for main areas (Near and Far Areas)
  - Adjustable alarm interval time
  - Built-in, fully adjustable, creep zone detector (Double dual pyro-elements)
  - Reinforced polycarbonate housing

### Order Codes:

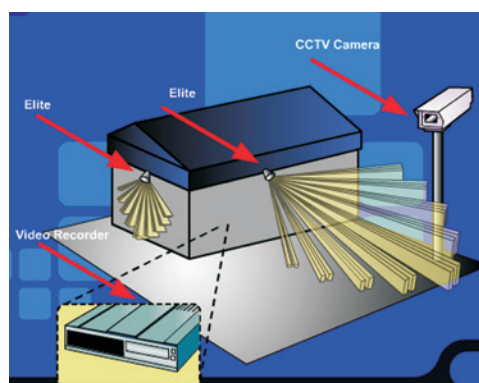
|          |                                       |
|----------|---------------------------------------|
| SIP-5030 | Redwall-V 50 m x 30 m PIR & creep     |
| SIP-100  | Redwall-V 100 m x 3 m PIR & 3 outputs |

## PIR Detection System

## Technical Specifications:

| Model                    | SIP-5030  | SIP-100   |
|--------------------------|---|---|
| Detection method         | Passive Infrared  |   |
| Coverage                 | 50 x 30 m   | 100 x 3 m   |
| Coverage (Creep Zone)    | 3 x 5 m installed at 2.3 m height, 6 x 9 m installed at 4 m height<br>Detection angle adjustable horizontally |   |
| Power Input              | 11-16 VDC 22-26 VAC   |   |
| Current Draw             | 40 mA max. (12 VDC) 75 mA max. (24 VAC)   | 45 mA max. (12 VDC) 80 mA max. (24 VAC)   |
| Mounting Height          | 2.3 to 4 m  |   |
| Sensitivity Selector     | Far:SH/H/M/L Near:SH/H/M/L Creep Zone:SH/H/M/L  |   |
| Detection logic Selector | AND/OR  |   |
| Alarm Output main area   | N.O., N.C., 28 VDC 0.2A max   | Far area N.O., N.C., 28 VDC 0.2 A max<br>Near area N.O., N.C., 28 VDC 0.2 A max |
| Alarm Output Creep Zone  | N.O., N.C., 28 VDC 0.2 A max  |   |
| Alarm Interval period    | Off/15, 30, 60 sec  |   |
| Trouble Output           | N.C, 28 VDC 0.2 A max   |   |
| Tamper Output            | N.C, 28 VDC 0.1 A max   |   |
| Alarm Period             | Approx. 2 sec..   |   |
| Warm up Period           | Approx. 60 sec.   |   |
| Operating Temperature    | -25 to +60°C, -40 to 60°C with optional heating unit  |   |
| IP Rating Chassis:IP55   | Main Unit: IP65   |   |
| Dimensions (HxWxD)       | 271 x 102 x 290 mm  |   |
| Weight                   | 1.6 kg  |   |

## GJD Opal Elite



### Features:

- Weatherproof PIR
- Designed to simultaneously or individually control CCTV switchers, Video recorders & GJD lighting controllers
- Two sets of voltage free signal contacts
- Two separate negative switching outputs
- Compatible with GJD security lighting controllers for activating security or IR camera lighting
- Intelligent Signal Processing microprocessor achieves a more stable performance

The Opal Elite is a weatherproof PIR designed to simultaneously or individually control CCTV switchers video recorders and GJD Intruder Lighting Controllers.

Two sets of voltage free signal contacts provide the necessary signals to control CCTV switcher/s and video recorder/s. etc.

Two separate negative switching outputs are provided for further advanced applications if required. These signals are compatible with GJD security lighting controllers for activating security or infra-red camera lighting. The microprocessor controlled electronics with a Intelligent Signal Processing achieves a more stable performance in all weather conditions.

### Technical Specifications:

|                 |  |
|-----------------|--|
| Range Coverage: | Adjustable to 35 metres 90°  |
| GJD             | Multifunction lens. With lens Masking facility (supplied)  |
| Supply:         | 200 metre max.<br>12 VDC at 8 mA nominal<br>(21 mA Max) 7 / 0.2 mm cable<br>12 VDC at 5 mA in low power mode.  |
| Adjustment:     | 180 degrees pan & 90 degrees tilt.   |
| CCTV Output:    | Voltage free signal contacts rated (Solid State Relay) at 24 VAC/DC with 80R series resistor. Selectable normally open or normally closed configuration with various timing options. |

### Order Code:

A25216

GJD Opal Elite CCTV Alarm  
Input PIR  
**(UK Only)**

## D-TECT 3 Motion Detector



The D-TECT 3 incorporates advanced signal processing, unique optical systems and an adjustable microwave sensor for the highest immunity to false alarms. The D-TECT3 is a BS 8418 compliant, quad PIR and microwave external movement detector which can be used to control cameras and also interfaces with GJD's lighting control systems.

The detector's triple technology sensing module is equipped with two volt free and two negative switched outputs with a programmable beam range of up to 30 metres, avoiding boundary overspill and offering truly exceptional resistance to false alarms.

No other movement detectors are more versatile or offer such a wide range of features to enhance the detection of threats and significantly reduce the incidence of false alarms.

The D-TECT range sets new standards of performance and control, is easier to install and yet is highly cost-effective.

### Order Codes:

|                     |   |
|---------------------|---|
| GJD310ABS           | D-TECT Motion Detector                            |
| <b>Accessories:</b> |   |
| GJD380              | D-TECT walk tester                                |
| GJD303              | D-TECT IR Programmer Key Fob <b>UK Only</b>       |
| GJD304              | D-TECT Conduit cable entry adapter <b>UK Only</b> |
| GJD308              | D-Guard protective cage <b>All UK Only</b>        |

### Features:

- Modern design
- Exceptional resistance to false alarms
- Adjustable pan (180°) & tilt (90°)
- Programmable via an optional key fob remote control
- Availability of a conduit cable adaptor
- A robust zinc alloy metal case

### Technical Specifications:

|                          |  |
|--------------------------|--|
| Range Programmable       | Up to 30 m   |
| Coverage                 | 100 - 700 detection angle, 30 m x 30 m max   |
| Adjustment               | 1800 pan + 900 tilt  |
| Mounting Height Variable | Up to 6 m - optimum 3 m  |
| Fresnel Lens             | 28 zones for each Pyro pair  |
| Customised Optics        | Double silicon shielded quad element eliminates 50,000 lux of white light  |
| Indicators               | 3 x LEDs green-microwave, red-both PIRs, blue-alarm output   |
| Microwave Frequency      | UK - 10.587 GHz, Europe - 10.525 GHz   |
| Outputs                  | 2 volt-free, silent solid state magnetically immune contacts<br>2 neg. switched plus one common tamper (front and rear switches) |
| Power input              | 9 to 15 VDC  |
| Current                  | 15 mA (12 V nominal)   |
| Pulse Count              | 1 - 3  |
| Walk Test                | Output test mode with LED indication   |
| Operating Temp           | -20°C to + 55°C Conformally coated electronics for increased stability   |
| Temp. Compensation       | Digital sensitivity adjustment   |
| Adjustable timer options | 2 to 60 seconds  |
| Adjustable light sensing | Dusk (2 Lux) to 24 hour  |
| Housing                  | High impact zinc alloy   |
| Protection Rating        | Minimum IP 55  |
| Dimensions               | 145 x 120 x 115 mm   |
| Weight                   | 770 g NET, 910 g GROSS   |
| Cable < 200 m            | Utilising all five outputs (incl. tamper) - 12 core 7/0.2 mm   |
| Cable < 500 m            | Utilising all five outputs (incl. tamper) - 12 core 16/0.2 mm  |

## GJD300 ABS Motion Detector



The D-TECT 2 is a BS 8418 compliant, quad element PIR external movement detector which can be used to control cameras and also interfaces with GJD's lighting control systems.

The detector's Quad PIR sensing module is equipped with two volt free and two negative switched outputs with a programmable beam range of up to 30 metres, avoiding boundary overspill and offering truly exceptional resistance to false alarms.

### Features:

- Aesthetically pleasing modern design incorporating advanced technological features with radically powerful capabilities.
- The D-TECT 2 has a well proven exceptional resistance to false & nuisance alarms. It also has a high immunity to triggers from the sun, reactions and shadows enabling response centres to deal with genuine threats.
- The adjustable pan (180°) & tilt (90°) electronics module, coupled with variable mounting height, allows the view of D-TECT 2 sensor and the camera to be matched.
- All detectors in the D-TECT range are programmable via an optional key fob remote control, which is a great benefit for post installation adjustments.
- No other movement detectors are more versatile or offer such a wide range of features to enhance the detection of threats and significantly reduce the incidence of false alarms.
- A conduit cable adaptor is available for surface mount connections.
- The zinc alloy metal case is IP65 rated and fitted with front and rear tamper switches.
- Easy to install and highly cost-effective.
- Packed with engineer friendly features to ease cable terminations, set-up and servicing.

### Order Code:

GJD300 ABS

D-TECT2 30 M ABS  
Housing



## PIR Detection System

## Technical Specifications:

| <b>Model</b>                 | <b>GJD300 D-TECT 2 MKII, 30m Quad PIR (High Impact Plastic Housing)</b>   |
|------------------------------|---|
| Range Programmable           | Up to 30 m  |
| Coverage                     | 10° - 70° detection angle, 30 m x 30 m max  |
| Adjustment                   | 180° pan + 90° tilt, with visual pan & tilt alignment markers   |
| Mounting Height Variable     | Up to 6 m (with range detectors) - Optimum 3 m  |
| Fresnel Lens                 | 28 zones for each Pyro pair   |
| Customised Optics            | Double silicon shielded quad element eliminates 50,000 Lux of white light   |
| Indicators                   | 1 x Blue LED on detection   |
| Outputs                      | 2 volt-free, silent solid state magnetically immune contacts 2 neg. switched plus one common tamper (front and rear switches) |
| End Of Line Resistance (Eol) | Selectable from 1K, 2K2, 3K3, 4K7, 5K6, 6K8   |
| Power Input                  | 9-24 V AC/DC  |
| Current                      | 11 mA (12 V nominal)  |
| Pulse Count                  | 1-3   |
| Walk Test                    | Output test mode with LED indication  |
| Operating Temp.              | -20°C to +55°C Conformally coated electronics for increased stability   |
| Temp. Compensation           | Digital sensitivity adjustment  |
| Adjustable Timer Options     | 2 to 60 seconds   |
| Adjustable Light Sensing     | Dusk (2 Lux) to 24 hour   |
| Housing                      | High impact zinc alloy  |
| Protection Rating            | Minimum IP65  |
| Dimensions                   | 145 x 120 x 115 mm  |
| Weight                       | 770 g NET, 910 g GROSS  |
| Cable <200 M                 | Utilising all five outputs (incl. tamper) - 12 core 7/0.2 mm  |
| Cable <500 M                 | Utilising all five outputs (incl. tamper) - 12 core 16/0.2 mm   |

## GJD340 ABS Motion Detector



Advanced signal processing and unique optical systems with a programmable beam range from 20-40 metres.

GJD's D-TECT 40, BS 8418 compliant, movement detectors combine advanced signal processing and unique optical systems which allow for the detection range to be programmed from 20-40 metres, thus avoiding boundary overspill. The D-TECT 40 Motion Detector is particularly effective for perimeter detection and offers truly exceptional resistance to false alarms.

### Features:

- Programmable detection areas of up to 40 m x 4 m or 40 m x 8 m.
- Each detector is supplied with 4 m & 8 m wide lenses.
- Outputs include 2 x Volt-free, 2 x negative switched plus selectable EOL resistors.
- The detector features a unique electronic range adjustment for tailoring the range to specific site requirements.
- Other features that can also be adjusted electronically include; pulse count 1 or 2, LED on/o, photocell adjustment and the configuration and reset time of the relays.
- The D-TECT 40's detector module orientation is uniquely hidden behind a fully tampered front cover, which makes it impossible to tell which way the detector is orientated.
- The adjustable pan (180°) & tilt (90°) electronics module coupled with mounting height of up to 4 metres, allows the view of D-TECT 40 sensor and the camera to be matched.
- All detectors in the D-TECT range are programmable via an optional key fob remote control, which is a great benefit for post installation adjustments.
- Easy to install and yet highly cost-effective.
- No other movement detectors are more versatile or offer such a wide range of features to enhance the detection of threats and significantly reduce the incidence of false alarms.

### Order Code:

GJD340 ABS

D-TECT40 ABS Housing  
(40 m x 4 m & 8 m lens)

## PIR Detection System

## Technical Specifications:

| <b>Model</b>                 | <b>340 ABS D-TECT 40 MKII - 40 m Quad PIR (High Impact Plastic)</b>  |
|------------------------------|--|
| Detection Area               | Programmable between 20-40 metres (20 25 30 35 40)   |
| Coverage                     | Two Fresnel lenses giving up to 40 m x 40 m or 40 m x 8 m  |
| Adjustment                   | 180° pan = 90° tilt  |
| Mounting Height Variable     | Up to 4 m - Optimum 3 m  |
| Fresnel Lens                 | 4 or 12 zones for each Pyro pair   |
| Customised Optics            | Double silicon shielded quad element eliminates 50,000 Lux of White light  |
| Indicators                   | 1 x Blue LED on detection (configurable on/off)  |
| Outputs                      | 2 volt-free, silent solid state magnetically immune<br>2 neg.switched plus one common tamper (front and rear switches) |
| Tamper Switches              | Front and rear tamper switches, case open and removal from wall  |
| End Of Line Resistance (Eol) | Selectable from 1K, 2K2, 3K3, 4K7, 5K6, 6K8  |
| Power Input                  | 9-24 V AC/DC   |
| Current                      | 9 m A (12 V nominal)   |
| Pulse Count                  | 1 - 2  |
| Walk Test                    | Output test mode with LED indication   |
| Operating Temp.              | -20°C to +55° Conformally coated electronics for increased stability   |
| Temp. Compensation           | Digital sensitivity adjustment   |
| Adjustable Timer Options     | 2 to 60 seconds  |
| Adjustable Light Sensing     | Dusk (2 Lux) to 24 hour  |
| Housing                      | High impact zinc alloy   |
| Protection Rating            | IP65   |
| Dimensions                   | 145 x 120 x 115 mm   |
| Weight                       | 750 g NET, 880 g GROSS   |
| Cable <200 M                 | Utilising all five outputs (incl. tamper) - 12 core 7/0.2 mm   |
| Cable <500 M                 | Utilising all five outputs (incl. tamper) - 12 core 16/0.2 mm  |

## GJD350 ABS Motion Detector



### Features:

- Detection Area giving up to 50 m x 10 m.
- Has exceptional resistance to false alarms and a high immunity to triggers from the sun, reflections and shadows to minimise the potential for false alarms, enabling response centres to deal with genuine threats.
- The adjustable pan (180°) & tilt (90°) electronics module, coupled with a mounting height of up to 6 metres, allows the view of D-TECT 50 sensor and the camera to be matched.
- All detectors in the D-TECT range are programmable via an optional key fob remote control, which is a great benefit for post installation adjustments.
- A conduit cable adaptor is available for surface mount connections.
- The robust zinc alloy metal case is IP55 rated and fitted with front & rear tamper switches.

Advanced signal processing and unique optical systems with a programmable beam range from 25 to 50 metres The D-TECT50, BS 8418 compliant movement detectors combine advanced signal processing and unique optical systems which allow for the beam range to be programmed from 25 to 50 metres, thus avoiding boundary overspill, making them particularly effective for perimeter detection.

No other movement detectors are more versatile or offer such a wide range of features to enhance the detection of threats and significantly reduce the incidence of false alarms.

### Order Code:

GJD350 ABS

D-TECT50 ABS Housing  
(50 m X 10 m)

## Technical Specifications:

| <b>Model</b>             | <b>GJD350 - Silver zinc alloy housing, white polyethylene cover</b>   |
|--------------------------|---|
| Range Programmable       | From 25 m to 50 m   |
| Coverage                 | Detection Area 50 m x 10 m  |
| Adjustment               | 180° pan + 90° tilt   |
| Mounting Height Variable | Optimum 3 m   |
| Fresnel Lens             | 12 zones for each Pyro pair   |
| Customised Optics        | Double silicon shielded quad element eliminates 50,000 Lux of white light   |
| Indicators               | 1 x blue LED on detection (configurable on/off)   |
| Outputs                  | 2 volt-free, silent solid state magnetically immune, 2 neg, switched plus one common tamper (front and rear switched) |
| Power Input              | 9 - 24 AC/DC  |
| Current                  | 12 mA (12 V nominal)  |
| Pulse Count              | 1-2   |
| Walk Test                | Output test mode with LED indication  |
| Operating Temp.          | -20°C to +55°C Conformally coated electronics for increased stability   |
| Temp. Compensation       | Digital sensitivity adjustment  |
| Adjustable Timer Options | 2 to 60 seconds   |
| Adjustable Light Sensing | Dusk (2 Lux) to 24 hour   |
| Housing                  | High impact zinc alloy  |
| Protection Rating        | Minimum IP55  |
| Dimensions               | 145 x 120 x 115 mm  |
| Weight                   | 750 g NET, 880 g GROSS  |
| Cable <200 M             | Utilising all five outputs (incl. tamper) - 12 core 7/0.2 mm  |
| Cable <500 M             | Utilising all five outputs (incl. tamper) - 12 core 16/0.2 mm   |

## Xtralis ADPRO Presidium Mini



### Features:

- i-LIDS® approved secondary detection system for operational alert use in sterile zone monitoring applications
- Advanced algorithms to maximise target detection and tracking under a wide range of environmental conditions
- High resilience to unwanted alarms from small animals, clouds, wind and rain
- Multiple free-form trigger areas
- Contrast alarms for sabotage detection
- Video loss detection for camera, lens or cable failure
- Easy to commission via quick setup feature

The dual channel Xtralis ADPRO Presidium Mini is the latest generation of video motion detection systems designed specifically for outdoor perimeter and area protection applications.

With Xtralis's more than 20 years of experience in video-based outdoor protection, the Presidium Mini is the ideal combination of research and development expertise and real world know-how.

With the focus on prevention rather than post-alarm analysis, the potential for loss to your property is greatly reduced.

Presidium Mini provides reliable intruder detection in a wide range of indoor and outdoor applications.

### Order Code:

202182

Presidium Mini 2 video channels:  
**(UK only)**

# Perimeter Detection Analytics

## Technical Specifications:

|                     |   |                                |   |
|---------------------|---|--------------------------------|---|
| Video inputs        | 2 independent camera inputs. Each input 1 Volt p/p video 75 Ohm or high impedance   | Outputs per unit               | 1 fault relay (SPDT) activates on the occurrence of any system fault: power loss, over temperature condition, system reset  |
| input,              |   | Network Connections            | LAN 10BaseT / 100BaseT Ethernet Port supporting TCP/IP  |
| Video outputs       | 2 independent video outputs provide 1 Volt p/p video output when terminated by a 75 ohm load Each video output is designed to connect to DVR or monitor to display the original video input signal plus additional alarm related information for easy alarm verification  | Setup                          | Via an intuitive, PC based utility that connects to the unit via a network connection   |
| Inputs per channel  | All external inputs are transient protected and designed to be driven by dry contacts or logic levels. Voltage input <0.8 V - logic low, 7 mA (max); between 3.5 V and 5.0 V - logic high. Screw terminal connectors Normally Open (NO), Normally Closed (NC), Single End of Line (SEOL) or Dual End of Line (DEOL) tamper detection on each input using supplied resistors. Input isolation to disable detection, no video and contrast alarms | Voltage and Power Requirements | 12 V DC, 1.5 A. Maximum power dissipation 18 W. Universal AC power adaptor supplied   |
| Alarm               | input with programmable hold time.  | Dimensions (enclosure only)    | 263 mm (10.3") W x 73 mm (1.3") H x 236 mm (9.3") L   |
| Access/Secure Input | Screw terminal connector Programmable as Normally Open (NO), Normally Closed (NC), SEOL, DEOL   | Weight                         | 2 kilograms   |
| Outputs per channel | Alarm output relay activates when alarm condition in field of view of camera is met. In addition, output relay can be configured to activate for 'no-video' and/or contrast alarms  | Temperature Range              | Operating range 0°C - 40°C Humidity less than 90% noncondensing   |
|                     |   | EMC Compliance                 | Emissions: Class A compliance to EN55022:1998 +A1+A2, AS/NZS CISPR 22:2006, FCC Part 15 Harmonic Current Emissions: EN61000-3-2:2000 Voltage Fluctuations & Flicker: EN61000-3-3:1995 +A1 Immunity: EN50130-4:1995 + A1 + A2 (Alarm Systems Family Immunity Standard) |
|                     |   | Product Safety Compliance      | IEC 60950-1:2001 (CB Report including national deviations for AU, CA, KR, US and EU Group) when used with supplied universal AC power adaptor   |

# Digital Recording

This chapter contains information about Digital Video Recorders

- Introduction
- Intellex Digital Video Management System
- Intellex Management Suite
- Intellex Accessories
- Plug & Play IP Recorders
- Analogue High Definition Recorders
- IP & Hybrid Servers (Exacq)
- Accessories



## Introduction

### **Intellex LT (available with 4, 8 and 16 channels)**

Intellex LT delivers the key Intellex features in an economical package, providing the best solution for small retail stores, health care facilities and small offices. It can store more than 900 hours of video and supports as many as five simultaneous Network Client users.

### **Comprehensive Video Management**

American Dynamics offers the most comprehensive range of digital video management products on the market. From smaller installations (Intellex LT) to mid-size applications (Intellex DVMS) and now to more demanding applications that require higher resolution and performance (Intellex Ultra), there is a solution for any situation. Plus, we provide the flexibility of IP based video surveillance (Intellex IP) and every platform can be remotely managed using Network Client Remote Management Software. Intellex has added the option of password authorization in order for Network Client to access an Intellex unit, providing increases security on your video surveillance network. But Intellex does more than just record. You can simultaneously record, play back and archive video, text and audio while using sophisticated search functions.

### **Simple, Intuitive User Interface**

The Intellex user interface is extremely easy to use, no matter what your skill level. Access all operations using one-click buttons, pull-down menus, adjustable sliders and tabbed screens. The GUI is designed to be used with 4:3 aspect ratio monitors as well as with widescreen monitors.

### **Save Time and Money with ATM/POS Integration**

Intellex gives you an accurate representation of specific transactions by recording RS-232 text data streams from devices like cash registers and ATMs. It displays this information side by side with time-synchronised video in addition to the related audio. Efficiently search the transaction database or schedule recording by specifying the exact text or transaction criteria.

### **Capture Only the Events You Need**

Use IntellexCord to conserve space on your hard drive by recording only events that trigger an alarm at times that matter. You can set triggers for alarms generated electronically within Intellex based on: 1) any motion 2) crossing a perimeter 3) changes in light and 4) specific motion exceptions. You can also set triggers for any external wired alarm that provides a contact closure.

Additionally, you can configure settings to automatically re-position cameras in response to an alarm IntellexCord enables you to customize the settings for each camera on your system and thereby optimize security and record duration.

Intellex retains up to five minutes of pre-alarm video when you set IntellexCord to record on alarm only. Unlimited pre-alarm video is available when you set Intellex to record continuously, the first 15 minutes of which can be conveniently retrieved via a pre-alarm video index.

### **Instantly Find Video Based on Motion Criteria**

Use Smart Search to filter through hours of video to find clips fast. With the click of a mouse, you'll be able to view every instance when someone crossed a perimeter, turned lights on and off, or moved or drove a vehicle in the wrong direction at an inappropriate speed, and more. For motion exception, simply specify the type of motion that you are looking for— speed, direction, size of the moving object—and Intellex will find it for you.

## **Easily Share Incidents**

The integrated CD-RW or DVD-RW allows you to save video to a standard recordable CD or DVD. This is ideal when you need to provide the authorities, vendors or other non-security personnel with video, audio, and text data of incidents to view on their own PC<sup>9</sup>. The Intellex Player software may be added to the CD or DVD as well so no additional software needs to be purchased to view the video. Network Client provides the ability to concatenate exported video clips and play a series of related clips, creating an “incident storyboard” that can be used for video evidence or auditing.

Play Back Video from any External Source on any Intellex View video from any external source you choose – CD, DVD, network drive, or a flash drive directly from Intellex. Simply click on the “External” button, select the appropriate drive, and view stored video.

## **Integrity of Evidence You Can Trust**

The Intellex recording format gives each image a unique identification “stamp”. Even though the file structure is PC-compatible, the original video images are virtually impossible to alter or modify. By ensuring authenticity in this way, Intellex protects the court admissibility of your video evidence.

## **Easy to Set up and Operate**

Intellex not only reduces equipment expenses and investigation time, it also features simple on-screen menus that make training and operation intuitive and easy. Customize access rights for multiple operators with passwords. Choose between NTSC and PAL. The removable BNC panel on 16-channel models and camera termination via software provide hassle-free camera connections. Intellex can be configured to provide alarm notification in the event of a hard drive failure, ensuring your critical events are always captured. Add swappable<sup>10</sup> hard drives on Intellex Ultra and you’ve got a highly reliable system that’s easy to use and maintain.

9) Sold separately.

(10) Hot-swap available in RAID configuration. Base units are simple-swappable.

# Intellex Digital Video Management System



Intellex Ultra is a reliable, high performance platform that captures higher resolution, de-interlaced images (4CIF, 480 ips)<sup>3</sup> without compromising the capability to record full motion video. Its 3U chassis saves expensive rack space, making it an ideal solution for applications like casinos or government facilities with limited space for security equipment. For ultimate flexibility and security, Intellex Ultra has up to four front-accessible, swappable 3.5 inch hard drive bays which can optionally be used in a RAID5 configuration. Plus, an industry first, separate, solid-state, embedded system drive means no moving parts to wear out or fail.

The original digital video management system, Intellex DVMS has been leading the market since 1997. Intellex DVMS offers a 16-channel system that records up to 200 ips at 4CIF. Intellex DVMS is offered in a desktop or rack mount chassis with Premier packages. This means simplified packaging for easier ordering, maintenance and configuration. And because Intellex DVMS is networkable and easily integrates with other equipment and software applications, it's a cost-effective solution for many new and existing applications

## Features:

- Gain the ability to multiplex, detect alarms and events, record video, audio and text, and much more
- Set dome presets, patterns and configurations right from the Intellex GUI
- Search for specific clips using video analysis tools and advanced text
- Operate Intellex like a virtual matrix via Network Client<sup>1</sup> with CCTV keyboard based camera control and an expanded capacity to stream video simultaneously from multiple cameras
- React faster to potential emergencies with immediate email notification of system events and alarms
- View recorded video in streaming playback mode on
- Network Client without downloading the video onto that PC
- Respond to events with alarm-triggered dome positioning
- Record higher frame rates per second for certain cameras and assign the remainder to less critical cameras
- Combine video clips in Network Client into a single video incident storyboard<sup>2</sup>
- Use 3rd party applications—such as access control from Software House and Kantech as well as video forensics, virtual matrix, remote monitoring and more—integrated with Intellex via the powerful API
- Supports up to 20 simultaneous Client connections (Ultra, DVMS)
- Use SmartSearch to easily locate video incidents in the video database.



(1) Requires v4.0 or higher.

(2) Sold separately.

(3) All ips measurements reflect NTSC format. 120 ips NTSC = 100 ips PAL.

|   | Intellex Ultra (Premier)   | Intellex DVMS Premier  | Intellex LT  |
|---|--|--|--|
| Maximum Images per Second (NTSC/PAL)                  |  |  |  |
| 4CIF  | 480/400  | 240/200  | 120/100  |
| 2CIF  | 480/400  | 480/400  | 240/200  |
| 1CIF  | 480/400  | 480/400  | 480/400  |
| Storage Capacity                                      | 1.0 Tb, 2.0 TB, 3.0 TB 4.0 TB (RAID 5 3.0 TB)  | 250 GB, 500 GB, 1.0 TB, 1.5 TB <sup>4</sup>  | 250 GB, 500 GB   |
| Windows® 7  | Yes  | Yes  | Yes  |
| Record Mode   | Linear or Circular/Continuous  | Linear or Circular/Continuous  | Linear or Circular/Continuous  |
| Pre-Alarm Recording                                   | Yes (up to 5 minutes)  | Yes (up to 5 minutes)  | Yes (up to 60 seconds)   |
| Alarm Indexing  | Yes (15 minutes)   | Yes (15 minutes)   | No   |
| Alarm/Event Notification: Remote                      | Yes (via Network Client)   | Yes (via Network Client)   | Yes (via Network Client)   |
| Local   | Yes  | Yes  | Yes  |
| Email   | Yes  | Yes  | Yes  |
| Video Resolutions Available:                          |  |  |  |
| 4CIF (NTSC/PAL)                                       | 704 x 480/704 x 576  | 704 x 480/704 x 576  | 704 x 480/704 x 576  |
| 2CIF  | 704 x 240/704 x 288  | 704 x 240/704 x 288  | 704 x 240/704 x 288  |
| 1CIF  | 352 x 240/352x 288   | 352 x 240/352x 288   | 352 x 240/352x 288   |
| Text Insertion (Via Serial Port)                      | Yes - 16 channels  | Yes5 (up to 8 channels)  | Yes5 (up to 8 channels)  |
| Video Analysis Tools(Size, Speed,Direction of Motion) | Yes  | Yes, Premier Edition only  | No   |
| Smart Search  | Yes  | Yes  | Yes  |
| Custom Schedule/Weekends                              | Yes, with IntelleCord  | Yes, with IntelleCord  | Yes, with IntelleCord  |
| Multi-Screen Playback                                 | Yes  | Yes  | Yes  |
| Covert Camera   | Yes  | Yes  | Yes  |
| Dome Control  | Via Network Client, browser Client or Intellex GUI(via ADTT16E, ADACSNET, MP48, MP168 MP1024, MP3200 or other third party switchers) | Via Network Client, browser Client or Intellex GUI(via ADTT16E, ADACSNET, MP48, MP168 MP1024, MP3200 or other third party switchers) | Via Network Client, browser Client or Intellex GUI(via ADTT16E, ADACSNET, MP48, MP168 MP1024, MP3200 or other third party switchers) |

|   | Intellex Ultra (Premier) | Intellex DVMS Premier                  | Intellex LT                            |
|---|--------------------------|--|--|
| Alarm-Triggered Camera Action   | Yes                      | Yes                                    | Yes                                    |
| User-Defined Matrix & Dome Control Camera Handler   | Yes                      | Yes                                    | Yes                                    |
| Activity Log (Who, When, What)  | Yes                      | Yes                                    | Yes                                    |
| 3rd Party Integration via API   | Yes                      | Yes                                    | Yes                                    |
| Chassis Configuration   | 3U, Desktop/Rack Mount   | 4U, Desktop or Rack Mount <sup>6</sup> | 4U, Desktop or Rack Mount <sup>7</sup> |
| Alarm Quality & Sensitivity   | Yes                      | Yes                                    | Yes                                    |
| Camera-Selectable Frame   | Yes                      | Yes                                    | Yes                                    |
| One-Click Clip Export   | Yes, DVD-RW              | Yes, DVD-RW                            | Yes, DVD-RW                            |
| Extended Storage Devices  | Yes                      | Yes                                    | Yes                                    |
| Support for Remote Configuration & Management   | Yes                      | Yes                                    | Yes                                    |
| NTSC/PAL Toggle   | Yes                      | Yes                                    | Yes                                    |
| <p>4) 250 GB and 500 GB are available in Standard Edition; 500 GB, 1.0TB and 1.5 TB (rack mount) are available in Deluxe and Premier Editions.<br/> (5) Premier Edition only.<br/> (6) Rack mount is only available in Deluxe and Premier Editions.<br/> (7) Accessory Kit is required for rack mount, ordered separately.<br/> (8) CD-RW is only available in the Standard and Deluxe Editions; DVD-RW is only available in the Premier Edition.</p> |                          |  |  |

## Model Number Configuration for Intellex Ultra, DVMS and LT platforms

| Brand    | Family                                | Channels   | Chassis  | Platform                                 | Features         | Video Card                 | Storage   |
|----------|---------------------------------------|--|--|--|------------------|----------------------------|---|
| AD<br>AD | D<br>Digital Video Management Systems | 6<br>6 = 16 Channels                                     | 0A<br>0A = Desktop/<br>Rack Mount configurable | UL<br>UL = Ultra<br>UR = Ultra<br>Raid13 | P<br>P = Premier | V<br>V=Enhanced Video Card | 100<br>100 = 1 TB 300 = 3.0 TB<br>200 = 2.0 TB<br>400 = 4.0 TB    |
| AD       | D                                     | 6<br>8 = 8 channels<br>6 = 16 channels                   | 0A<br>0A = Desktop<br>RA = Rack Mount          | DV<br>DV = DVMS                          | P<br>P = Premier | V                          | 02514<br>025 = 250 GB<br>050 = 500GB<br>100 = 1.0 TB 150 = 1.5 TB |
| AD       | D                                     | 4<br>4 = 4 channels<br>8 = 8 channels<br>6 = 16 channels | 0A<br>0A = Desktop                             | LT<br>LT = LT                            | P                | V                          | 025<br>025 = 250 GB<br>050 = 500 GB                               |

|  | Intellex Ultra                                       | Intellex DVMS  | Intellex LT  |
|--|--|--|--|
| General                                |  |  |  |
| Drive Type                             | Front Access SATA                                    | Internal SATA  | Internal SATA  |
| Exporting                              | DVD-RW   | DVD-RW   | DVD-RW   |
| Video Inputs                           | 16   | 8 (non-looping) or 16 (looping)                        | 4 & 8 (non-looping) or 16 (looping)                    |
| Main Monitor Output                    | SVGA, DVI  | SVGA, DVI  | SVGA, DVI  |
| Analog Output                          | Call/Spot <sup>16</sup> Live/Play back <sup>17</sup> | Call/Spot <sup>16</sup> , Live/Play back <sup>17</sup> | Call/Spot <sup>16</sup> , Live/Play back <sup>17</sup> |
| Camera Looping Outputs                 | 16 with optional looping panel                       | Standard on 16-channel system                          | Standard on 16-channel system                          |
| Alarm Inputs and Outputs <sup>18</sup> | 16 (toolless)  | 8, 16  | 4, 8, 16   |
| Single Channel Audio <sup>19</sup>     | Included   | Premier  | Included   |
| Network                                | 2x gigabit   | 1x gigabit   | 1x gigabit   |
| USB (front/back)                       | 2/8  | 2/6  | 2/6  |
| Serial Port (RS-232) <sup>20</sup>     | 1x DB 9  | 1x DB 9  | 1x DB 9  |
| Visual Indicators                      | Power, alarm, record, disk available, disk activity  | Power, alarm, record                                   | Power, alarm, record                                   |
| Mouse                                  | PC mouse included as standard                        | PC mouse included as standard                          | PC mouse included as standard                          |
| Printer                                | PC printer compatibility <sup>21</sup>               | PC printer compatibility                               | PC printer compatibility                               |

|                        | Intellex Ultra                  | Intellex DVMS      | Intellex LT        |
|------------------------|---------------------------------|--------------------|--------------------|
| Physical               |                                 |                    |                    |
|                        | Desktop/Rack Mount Configurable | Desktop            | Desktop            |
| Dimensions (H x W x D) | 130 x 429 x 546 mm              | 172 x 432 x 464 mm | 172 x 432 x 464 mm |
| Unit Weight            | 17.3 kg                         | 14.50 kg           | 14.50 kg           |
| Shipping Weight        | 25 kg                           | 16.93 kg           | 16.93 kg           |
| Rackmount              |                                 |                    |                    |
| Dimensions (H x W x D) | 175 x 432 x 521 mm              |                    |                    |
| Unit Weight            | 20.39 kg                        |                    |                    |
| Shipping Weight        | 27.24 kg                        |                    |                    |

(15) CD-RW is only available in the Standard and Deluxe Editions; DVD-RW is only available in the Premier Edition.

(16) Call mode displays video from one selected camera in single pane format; spot mode automatically switches from this camera to any alarmed cameras. Available on 16-channel Deluxe and Premier systems only.

(17) Live/Play Back composite output can display the same video as your Intellex monitor or display live video only.

(18) Two part connector—TTL inputs. Open collector outputs.

(19) Jack (3.5 mm).

(20) On-board serial port recommended for multiplexer control. Additional serial port available in Premier Edition via USB converter.

(21) No parallel port (USB or Ethernet only).

## Order Codes:

| Intellex LT DeskTop Models          |  |
|-------------------------------------|--|
| ADD80ALTPV050                       | American Dynamics Intellex LT Premier v5.0, 8 channel, desktop, NTSC/PAL. 500GB (1x500GB HDD)  |
| ADD80ALTPV100                       | American Dynamics Intellex LT Premier v5.0, 8 channel, desktop, NTSC/PAL. 1TB (1x1TB HDD)  |
| ADD60ALTPV050                       | American Dynamics Intellex LT Premier v5.0, 16 channel, desktop, NTSC/PAL. 500GB (1x500GB HDD)   |
| ADD60ALTPV200                       | American Dynamics Intellex LT Premier v5.0, 16 channel, desktop, NTSC/PAL. 2TB (2x1TB HDD)   |
| Intellex DVMS DeskTop Models        |  |
| ADD80ADVPV050                       | American Dynamics Intellex DVMS Premier v5.0, 8 channel, desktop, NTSC/PAL. 500GB  |
| ADD60ADVPV050                       | American Dynamics Intellex DVMS Premier v5.0, 16 channel, desktop, NTSC/PAL. 500GB (1x500GB HDD)   |
| ADD60ADVPV100                       | American Dynamics Intellex DVMS Premier v5.0, 16 channel, desktop, NTSC/PAL. 1TB (1x1TB HDD)   |
| ADD60ADVPV200                       | American Dynamics Intellex DVMS Premier v5.0, 16 channel, desktop, NTSC/PAL. 2TB (2x1TB HDD)   |
| Intellex Ultra Non Raid Models      |  |
| ADD60AULPV100                       | American Dynamics Intellex Ultra Premier v5.0. 16 channel, desktop or 3U rack mount. PAL/NTSC. 1TB (1x1TB HDD)   |
| ADD60AULPV400                       | American Dynamics Intellex Ultra Premier v5.0. 16 channel, desktop or 3U rack mount. PAL/NTSC. 4TB (4x1TB HDD)   |
| Intellex Ultra Raid Models          |  |
| ADD60AURPV300                       | American Dynamics Intellex Ultra Premier RAID v5.0. 16 channel, desktop or 3U rack mount. PAL/NTSC. 3TB (4x1TB Drives, 3TB Usable Storage)   |
| Intellex Remote Management Software |  |
| ADDSNC50                            | American Dynamics Intelligent Network Client 5.0 single license  |
| SP0352-0522-01                      | A RAM upgrade kit has been created to increase the amount of RAM in these Intellex units to 1GB. This resolves the performance issues found in early versions of the Intellex units. |



# Intellex Management Suite

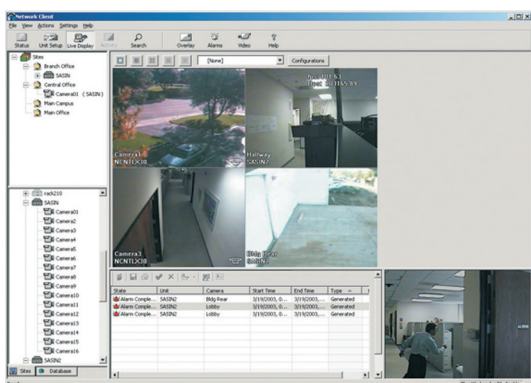


The Intellex<sup>®</sup> Management Suite takes video security to the next level by expanding your ability to centrally manage multiple Intellex systems over a computer network. These Windows<sup>®</sup>-based products make it easy to remotely manage, access, store, and secure your surveillance video. With our remote software, you can manage thousands of cameras either through American Dynamics<sup>®</sup> matrix switchers or via its virtual matrix capabilities.

## Features:

- Add an extra layer of protection to your video system
- Tighten control over access to video
- Merge video security with IT security
- Archive video to off-site locations and network-attached storage

## Intellex Network Client



Intellex is the only digital video management system on the market today with a single remote management software program, Network Client, that works with every Intellex platform (DVMS, LT, Ultra, and IP). Install Network Client on any PC with a network connection and you'll have control of every Intellex on your system, no matter how far-flung or decentralised the operation. Simply log in and access a menu just as if you were sitting in front of an Intellex. Network Client integrates seamlessly with cameras linked to MegaPower matrix switchers or lets you view up to 64 cameras from multiple Intellex systems simultaneously with the single click of an American Dynamics CCTV keyboard<sup>1</sup>.

1) Feature licensed and sold separately. CCTV keyboard sold separately.

## Features:

- View Line video up to 64 cameras simultaneously
- Remote alarm notification
- A keyboard can be connected to give virtual matrix functionality

## Order Codes:

|              |  |
|--------------|--|
| ADDSNCVMK    | Network Client Virtual Matrix/Keyboard single license                                    |
| ADDSNCVMKUL  | Network Client Virtual Matrix/Keyboard unlimited license                                 |
| ADDSNC50     | Intelligent Network Client 5.0 license   |
| ADDSNC50UL   | Unlimited Network Client 5.0 license   |
| ADDSNC5I     | Network Client Snap-In Manager License   |
| ADACKBPC2000 | Keyboard accessory, keyboard to PC connection kit for AD2000 series keyboards            |
| ADACKBPCMPCC | Keyboard accessory, keyboard to PC connection kit, for MegaPower ControlCenter Keyboards |

# Intellex Policy Manager



Intellex Policy Manager provides additional security for a collective network of Intellex units and remote workstations running either Network Client or third party software applications that use the Intellex Application Programming Interface (API). Intellex Policy Manager enables administrators to assign detailed privileges to user and user group accounts for local and remote access to Intellex and Intellex functions.

## Additional Benefits

- Provides higher level of security by integrating local and remote accessibility of Intellex DVMS into MS Windows® security
- Tightens control over local and remote access to Intellex units, Intellex information and functions by assigning access and usage privileges by user ID and password
- Saves time applying Advanced Security on additional Intellex units by copying default security attributes from one Intellex to multiple Intellex units in the same "zone" in one operation
- Sets up, configures and changes settings from any authorised computer on the network using Intellex Policy Manager Admin Client.
- Integrates with Microsoft Management Console (MMC by using the existing users and user groups on the domain. Benefits from the interface with the Event Viewer of the MS Windows operating system to monitor if all Intellex units are online or not.
- Implements Intellex Policy Manager on LAN/WAN VPN via TCP/IP on one or more logical network domain(s).
- Uses MS Windows administration GUI conventions, making it easy for administrators to learn and operate.

## Features:

- Higher Level of Security
- Saves Time
- Integrates with Microsoft Management Console (MMC)

## Order Codes:

**ADDSPM50U10**

Intellex Policy Manager, USB port hardware key, valid for up to 10 Intellex units

**ADDSPM50U25**

Intellex Policy Manager, USB port hardware key, valid for up to 25 Intellex units

**ADDSPM50UUL**

Intellex Policy Manager, USB port hardware key, valid for unlimited Intellex units

## License Upgrade

If additional Intellex units are added, the license must be upgraded. The following model numbers indicate the upgrades available:

### Upgrade Options product codes

**ADDSPMLU1025**

License upgrade from 10 to 25 licenses, requires a valid PID for 10 licenses

**ADDSPMLU10UL**

License upgrade from 10 to unlimited licenses, requires a valid PID for 10 licenses

**ADDSPMLU25UL**

License upgrade from 25 to unlimited licenses, requires a valid PID for 25 licenses

# Intellex Archive Manager



Intellex Archive Manager works seamlessly with Intellex to manage and organise stored video, audio, and text data on network-attached storage (NAS) devices.

Easily access and manage network-stored data through Network Client and integrate with Intellex Policy Manager to extend advanced security settings from each camera to the archived video that it has recorded.

## Features:

- Manages the storage of video, audio and text data to a network-attached storage device instead of a DAT drive
- Provides Network Client access to network stored data
- Integrates with Intellex Policy Manager for securing access to network stored data
- Runs independently from Intellex, allowing access to network stored data even when Intellex is offline
- Provides the ability to assign storage space per Intellex unit and control which storage devices are online or offline
- Available on LAN, WAN or VPN over the Internet on one or more logical network domain(s)
- Intellex Archive Manager GUI uses the Windows<sup>®</sup> MMC, utilising Microsoft GUI conventions for easy administration

## Order Codes:

|              |   |
|--------------|---|
| ADDSAM50U10  | Intellex Archive Manager, USB port hardware key, valid for up to 10 Intellex units  |
| ADDSAM50U25  | Intellex Archive Manager, USB port hardware key, valid for up to 25 Intellex units  |
| ADDSAM50UUL  | Intellex Archive Manager, USB port hardware key, valid for unlimited Intellex units |
| ADDSAMLU1025 | Intellex Archive Manager, license upgrade, from 10 to 25 Intellex units             |
| ADDSAMLU10UL | Intellex Archive Manager, license upgrade, from 10 to unlimited Intellex units      |
| ADDSAMLU25UL | Intellex Archive Manager, license upgrade, from 25 to unlimited Intellex unit       |

## Browser Client Remote Viewer



### Features:

- Remote dome control through Intellex
- Remote viewing of live Intellex video through web browser
- Access to multiple Intellex units
- Similar GUI to Network Client™
- Free Web Administration software package
- Easy 1-2-3 step installation and setup for the administrator
- Ability to custom tailor background for the viewer
- Self installing plug in software upon connection
- Password protected
- Online help to use Browser Client

Browser Client is a browser-based remote viewer for the Intellex® Digital Video Management System product line, enabling IT administrators to host live video from one or more Intellex units on a dedicated web server.

Subsequently, end users type in a URL of the video web server, and once they log in, they can view live video from any of the Intellex units that the IT administrator has included in the list. The IT administrator controls how many end users can log in and to which units they have access.

Browser Client software runs on Windows® operating systems with Microsoft's Internet Information Server services. End users can access Browser Client on any computer that runs Internet Explorer and Windows operating system.

Browser Client lets you view live Intellex video through a web browser. This free software package makes it easy for IT administrators to set up a dedicated website to view Intellex video, define which Intellex units to make available for viewing, and set up and administer a group of authorised users.

### Order Code:

Download from [www.tycoemea.com](http://www.tycoemea.com)

## RAID Storage System



The American Dynamics RAID Storage System is a highly reliable storage device that offers high-density, high performance storage expansion for Intellex digital video management systems.

This low cost-per-terabyte storage solution features high drive density in a rack-mountable 2U form factor complete with twelve (12) hot-swappable drive bays. Powerful Direct Attached Storage (DAS) and network configurations provide scalable, high-availability video storage.

### Features:

- Highly reliable storage device
- Offers high-density, high performance storage expansion for DVMS systems
- Cost effective

### Technical Specifications:

#### Minimum Requirements

|          |  |
|----------|--|
| Hardware | Intellex Ultra   |
| Software | Intellex v4.0 Service Pack 1 (v4.03) or higher with RAID Storage System Compatibility Update installed |

### Order Codes:

|            |   |
|------------|---|
| ADHDRSS250 | RSS, KIT, HDD & TRAY, 250 GB, 16 MB CACHE |
| ADHDRSS250 | RSS, KIT, HDD & TRAY, 250 GB, 16 MB CACHE |

## Rack Mount Kits

Turn your standard desktop Intellex DVMS or LT into a rackmountable unit with our steel constructed front rack mount kit.

Our Intellex BNC rack mount extension kit provides an additional option, enabling you to install the BNC video and alarm board on the back of the rack and connect it to Intellex using flexible extension ribbon cables.

### Order Codes:

|         |   |
|---------|---|
| DVRM-01 | Intellex rack mount kit for Intellex v2.0 or higher with desktop chassis; 16-channel DVMS or LT platforms only  |
| UHRM09  | Intellex BNC rack mount extension kit for 16-channel Intellex v2.0 or higher; DVMS or LT desktop platforms only |

## USB to RS-232 Adapters

Capture more data or expand the control of your digital video management system. Our USB to RS-232 adapters provide the interface you need to record text from cash registers, ATMs and other devices as well as integrate Intellex with the complete line of American Dynamics MegaPower® matrix switcher controller systems. The adapters are available in models with one, four, or eight RS-232 ports to match your data collection requirements.

### Order Codes:

|             |  |
|-------------|--|
| RDVUSB23201 | Intellex USB to RS-232 adapter; incl. cable    |
| RDVEXP01    | Intellex USB to 4X RS-232 adapter; incl. cable |
| RDVEXP02    | Intellex USB to 8X RS-232 adapter; incl. cable |

### Technical Specifications:

#### Minimum Requirements

|          |  |
|----------|--|
| Hardware | 16-channel Intellex DVMS, IP or Ultra; 4- or 8-channel units may require removing Firewire or 56K modem to make PCI slot available |
| Software | Intellex v2.4 or higher  |

## USB Control Module

Get the tools to control, program, monitor and upgrade your American Dynamics SpeedDome® programmable dome cameras. Our USB Control Module lets you operate SpeedDome Ultra, Optima and Optima LT from Intellex, Network Client or a PC using all the features of a Touch Tracker® including DirectSet™. You can update firmware via SensorNet as well as program and ping-test your SpeedDomes without physically accessing them. Utilities and associated files are posted at [www.tycoemea.com](http://www.tycoemea.com).

### Order Code:

|          |  |
|----------|--|
| ADACSNET | USB Control Module<br>Includes one install kit and one USB cable |
|----------|--|

## Intellex Ultra Accessories

### Video BNC Looping Kit for Intellex Ultra

Add a matrix switcher or other video accessory without a distribution amplifier with this looping kit for Intellex Ultra.

### Order Codes:

|             |   |
|-------------|---|
| ADACHULP    | Intellex Ultra, looping panel; includes a BNC looping board, ribbon cable, right angle audio adapters and mounting hardware |
| ADACHDDC500 | Intellex Ultra 500 GB hard disk with drive caddy  |

### Intellex Ultra 400 and 500 GB Disk Upgrade

Expand the storage of your Intellex Ultra without opening the chassis by sliding in a 400 or 500 GB disk drive.

# Un-Interruptible Power Supply



### Features:

- Automatic start
- Intelligent monitoring software
- USB connectivity and HID Functionality
- Separate surge protected outlets
- Battery backed outlets

The C60-800 is one of the most practical and compact UPS solutions available. Compatible with most operating systems, the intuitive monitoring software provides safe shutdown in the event of an extended power failure with the UPS automatically restarting when power is restored.

The CertaUPS C60 800VA UPS is a line interactive uninterruptible power supply with a 3-6 minute battery (load dependent) ideal for small system back-up power protection. The UPS has a built-in automatic voltage regulator (AVR) to reduce battery usage and extend battery working life. The unit also has a front panel LCD providing critical operating status information and 4 output sockets with back-up (3) and surge protection only (1).

This unit provides a power (VA) max figure of 800 and a Power (W) max of 480.



### Order Code:

C60-800

800VA Uninterruptable Power Supply

### Key:

1. AC input
2. C13 IEC outlets
3. C13 surge only outlet
4. USB connectivity
5. Telephone protection

## Technical Specifications:

|                                 |   |
|---------------------------------|---|
| Specifications                  | 800 VA  |
| Capacity                        |   |
| Power (VA) Max                  | 800 VA  |
| Power (W) Max                   | 480 W   |
| Input                           |   |
| Voltage                         | 220/230/240VAC  |
| Voltage Tolerance               | 162-290VAC  |
| Frequency                       | 50/60Hz   |
| Frequency Tolerance             | 45/65Hz   |
| Phase                           | 1   |
| Output                          |   |
| Power Factor                    | 0.6   |
| Waveform                        | Simulated Sinewave  |
| Voltage                         | 220/230/240VAC  |
| Frequency                       | 50/60Hz   |
| Efficiency                      | >97%  |
| Phase                           | Single  |
| Battery                         |   |
| Runtime                         | 3 Minutes   |
| DC Voltage                      | 12VDC   |
| Charger Capacity                | 0.5A  |
| Mechanical                      |   |
| Operating Temperature Tolerance | UPS: 0 to 40°C / Batteries: 20 to 25°C  |
| Storage Temperature Tolerance   | UPS: -10 to 50°C  |
| Relative Humidity               | 0-90% Relative Humidity (Non-condensing)  |
| Operating Altitude Tolerance    | >1000m  |
| Features                        |   |
| Communication                   | USB Connectivity  |
| Optional Comms                  | N/A   |
| Functions                       | Off-Mode Charging, AVR, Auto-Restart, Cold Start, USB, RJ11 & 45 Filters, LCD Display |



## Plug and Play IP - Concept Pro HD-IP Lite

# VUHD IPL-4 Plug and Play Concept Pro HD-IP Lite



The Concept Pro Lite VUHD IPL-4 model is a four channel entry level NVR that can record up to 8 megapixel, 4K UHD network video on all channels. The VUHD IPL range also supports the latest H.265 video compression codec for greater storage savings.

The NVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices and compatibility with the license-free iPIMS VMS.

### Features:

- 4 PoE IP Camera Inputs
- Secure P2P Connection
- Real-time 8MP Camera Video Recording (4K UHD)
- H.265 and H.264 Video Codec Support
- 4K HDMI and VGA Display Output
- Up to 10TB Internal Hard Disk
- Enhanced Password Security Rule
- Fanless Design
- Arm/Disarm Switch to Configure Alarm Notifications
- Smart Storage Compression
- Concept Pro Video Analytics
- WD Purple Surveillance HDD's inside all recorders
- 2CH Alarm Input/1CH Alarm Output
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Integrated Network Alarm Support
- Remote included

### Order Codes:

VUHD IPL-4-2000

Concept Pro HD-IP Lite recorder 4 way, 2TB storage

VUHD IPL-4-4000

Concept Pro HD-IP Lite recorder 4 way, 4TB storage

## Technical Specifications

| MODEL                                 | VUHD IPL-4-2000 / VUHD IPL-4-4000               |
|---------------------------------------|---|
| Video and Audio Inputs/Outputs        |   |
| IP Video Inputs                       | 4CH   |
| Power over Ethernet (PoE) Inputs      | 4 x RJ45 plugs                                  |
| Supported Video Signal Types          | PAL/NTSC  |
| Supported Video Resolution/Frame Rate | Max. 25FPS @ 3840x2160 (8MP 4K UHD) per channel |
| Incoming Bandwidth                    | Max. 40Mbps                                     |
| Max PoE Output per Channel            | Max. 15W per channel, Total Max. 30W            |
| Audio Inputs                          | -   |
| Audio Outputs                         | -   |
| Two-Way Audio                         | N/A   |
| Audio Compression Codec               | N/A   |
| Spot Monitor View Type                | Programmable, 1CH/4CH                           |

## Plug and Play IP - Concept Pro HD-IP Lite

### Technical Specifications

| Recording                             |   |
|---------------------------------------|---|
| Video Compression Codec               | H.265/H.264 (BP,MP,HP)  |
| Recording Resolution                  | 4 x RJ45 plugs Max. 8MP (3840x2160) / 5MP / 4MP / 3MP / 2MP / 1MP / D1 / CIF    |
| Recording Rate                        | Max. 100FPS @ 3840x2160 (8MP 4K UHD)  |
| Bit Rate                              | VBR/CBR, Stream 1: 1,000-8,000Kbps, Stream 2: 600-2,000Kbps                     |
| Recording Modes                       | Continuous, Intensive (Motion, Alarm, Panic)                                    |
| Recording Scheduling Method           | Hourly / Daily / Weekly   |
| Pre-Event Recording                   | Yes, 0 / 1 / 2 / 3 / 4 / 5 / 10 / 15s   |
| Post-Event Recording                  | Yes, 5 / 10 / 15 / 20 / 30 / 60 / 180s  |
| Reserved Data/Bookmarking             | Yes   |
| SSC                                   | Yes   |
| Display                               |   |
| Main Display Outputs                  | HDMI x1 (4K 2.0), VGA x1  |
| Main Display Resolution               | 3840x2160 / 1920x1080 / 1280x1024 / 1280x720                                    |
| Main Display Resolution Configuration | Auto / Manual   |
| Dual Monitor Functions                | Main Display Mirroring  |
| Display Rate                          | Max. 100FPS; 1CH: 25FPS@8MP, 4CH: 25FPS@4MP                                     |
| Display Mode                          | 1CH / 4CH   |
| Programmable Sequence                 | Supported, 1CH / 4CH  |
| Spot Monitor Output                   | -   |
| Spot Monitor View Type                | -   |
| PTZ Control                           | Network, RS-485 (Pan, Tilt, Zoom, Focus, Iris, Preset Sync)                     |
| Fisheye Dewarping                     | -   |
| Monitor PoE & Network Status          | Yes   |
| Search and Playback                   |   |
| Search Modes                          | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event                       |
| Event Search Options                  | Instant Playback, Alarm, Motion, Video, Record, System, Storage, Network, Setup |
| Playback Display Mode                 | 1CH / 4CH   |
| Simultaneous Playback                 | 1CH@Main Stream, 4CH@Second Stream  |
| Playback Speed                        | 1x, 2x, 4x, 8x, 16x, 32x, 64x   |
| Archiving                             |   |
| Archiving Devices                     | USB, FTP  |
| Remote Archiving                      | Web, iPIMS (PC), FTP  |
| Archived Video Format                 | RAW / AVI   |
| Backup Encryption                     | MD5, with Built-in Verification Watermark                                       |
| Snapshot                              | Live, Playback (JPEG)   |
| System                                |   |
| Language                              | English French Dutch German Spanish   |
| Max UTP Transmission                  | 90m   |
| Firmware Upgrade                      | USB, Network  |

## Plug and Play IP - Concept Pro HD-IP Lite

| Network                                |  |
|--|--|
| Network Interface                      | 1x RJ-45 10M/100M BASE-TX  |
| POE Standard                           | PoE 802.3af  |
| Max. User Connections                  | 32   |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH, Search, Playback, PTZ, Setup)<br>Chrome, Firefox (Live 1CH Second Stream, Setup)                    |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)   |
| PC Software                            | iPIMS (PC) Version 1.4.13.28 onwards   |
| Transmission Rate                      | Max. 100FPS  |
| Adaptive Network Streaming             | Yes  |
| P2P Cloud Service                      | Yes, Sequirinet (European Servers)   |
| DDNS Service                           | Yes, DVRLINK Free Service  |
| Support IPv4 / IPv6                    | IPv4/IPv6  |
| Dual SMTP E-mail Server                | Yes (with SSL support)   |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel   |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK   |
| Network Protocols                      | WS-Discovery, RTP, RTSP, RTCP, SMTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL                           |
| Alarm Interface and Event Notification |  |
| Alarm Inputs                           | x2 (NVR), x4 (IP Camera), Virtual Alarm (CGI)  |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification, Video Pop-up  |
| Alarm Outputs                          | x1 (NVR Relay), x4 (IP Camera)   |
| Motion Detection                       | Yes (supported IPC)  |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification   |
| Event Notification                     | Buzzer, Video Pop-up, Video Pop-up, E-mail, FTP, Mobile Push   |
| E-mail Notification                    | Yes, Snapshot Optional   |
| E-mail Notification Schedule           | Up to 10 Schedules   |
| Alarm Arm/Disarm Function              | Yes  |
| System Detection                       | Video Loss, Disk, Record, System & Network Event Detection   |
| Video Analytics                        | Yes (Selected Concept Pro cameras)<br>Area Entrance/Exit, Forward/Reverse Line Crossing, Loitering, Stopped, Object Removed, Counter |
| Storage                                |  |
| Internal Hard Disk                     | 1x (Max 10TB)  |
| SMART Support                          | Yes, Manual/Automatic  |
| RAID Configuration                     | No, please see VUHDPIE   |
| Partial Data Deletion                  | Yes  |
| External Storage Support               | FTP/NAS (for backup)   |

## Plug and Play IP - Concept Pro HD-IP Lite

| Security                                       |   |
|--|---|
| Enhanced Security Rules                        | Yes   |
| Covert Camera                                  | Yes, Configurable by User and Group Authority   |
| Privacy Masking                                | Yes, Max. 4 Areas (supported IP cameras only)   |
| User Groups                                    | Max. 3 (Admin/Manager/User)   |
| Number of Users                                | Max. 10   |
| Group Authority                                | Search, Archiving, System Setup, Record Setup, Event Action Control, Remote Access, Shutdown                      |
| Network Security Features                      | IP Filter, RTSP Encryption (SEED_128), HTTPS  |
| System Security Features                       | Password Expiration, Auto Log-out, Search/Archiving Password Check, Audio Support Toggle, Snapshot Support Toggle |
| Encrypted System Settings File Import / Export | Yes   |
| Auxiliary Interface                            |   |
| USB  | x2  |
| RS-485   | x1  |
| Supported RS-485 Protocols                     | Pelco-D, Pelco-P, D-max   |
| RS-232   | -   |
| Remote Control                                 | Yes (Included)  |
| Keyboard Controller                            | RS-485  |
| General  |   |
| Operating System                               | Concept Pro UI  |
| Power Supply                                   | DC48V   |
| BTU/h  | Max. 23.88 BTU/h without HDD or cameras   |
| Power Consumption                              | Max. 7W without HDD or Cameras  |
| Fan  | No, fanless design  |
| Dimensions                                     | 260(W) × 262.6(D) × 44(H) mm, 1U  |
| Rack Mountable                                 | -   |
| Net Weight                                     | 1.55 kg   |
| Gross Weight                                   | 2.47 kg   |
| Operating Conditions                           | 0°C to +40°C, 10 - 90% NC   |
| Storage Conditions                             | 0°C to +50°C, 10 - 90% NC   |
| Certifications                                 |   |
| Certifications                                 | FCC, CE   |

## Plug and Play IP - Concept Pro HD-IP Lite

# VUHD IPL-8 Plug and Pay Concept Pro HD-IP Lite



The Concept Pro Lite VUHD IPL-8 model is an eight channel entry level NVR that can record up to 8 megapixel, 4K UHD network video on all channels. The VUHD IPL range also supports the latest H.265 video compression codec for greater storage savings.

The NVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices and compatibility with the license-free iPIMS VMS.

### Features:

- 8 PoE IP Camera Inputs
- Secure P2P Connection
- Real-time 8MP Camera Video Recording (4K UHD)
- H.265 and H.264 Video Codec Support
- 4K HDMI and VGA Display Output
- Up to 20TB Internal Hard Disk
- Enhanced Password Security Rule
- Arm/Disarm Switch to Configure Alarm Notifications
- Smart Storage Compression
- Concept Pro Video Analytics
- WD Purple Surveillance HDD's inside all recorders
- 2CH Alarm Input/1CH Alarm Output
- Remote Monitoring via Concept Pro
- Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Integrated Network Alarm Support
- Remote included

### Order Codes:

|                 |  |
|-----------------|--|
| VUHD IPL-8-4000 | Concept Pro HD-IP Lite recorder 8 way, 4TB storage |
| VUHD IPL-8-8000 | Concept Pro HD-IP Lite recorder 8 way, 8TB storage |

## Technical Specifications

| MODEL                                 | VUHD IPL-8-4000 / VUHD IPL-8-8000               |
|---------------------------------------|---|
| Video and Audio Inputs/Outputs        |   |
| IP Video Inputs                       | 8CH   |
| Power over Ethernet (PoE) Inputs      | 8 x RJ45 plugs                                  |
| Supported Video Signal Types          | PAL/NTSC  |
| Supported Video Resolution/Frame Rate | Max. 25FPS @ 3840x2160 (8MP 4K UHD) per channel |
| Incoming Bandwidth                    | Max. 65Mbps                                     |
| Max PoE Output per Channel            | Max. 15W per channel, Total Max. 60W            |
| Audio Inputs                          | -   |
| Audio Outputs                         | -   |
| Two-Way Audio                         | N/A   |
| Audio Compression Codec               | N/A   |

## Plug and Play IP - Concept Pro HD-IP Lite

### Technical Specifications

| Recording                             |   |
|---------------------------------------|---|
| Video Compression Codec               | H.265/H.264 (BP,MP,HP)  |
| Recording Resolution                  | Max. 8MP (3840x2160)/5MP/4MP/3MP/2MP/1MP/D1/CIF                                 |
| Recording Rate                        | Max. 200FPS @ 3840x2160 (8MP UHD)   |
| Bit Rate                              | VBR/CBR, Stream 1: 1,000-8,000Kbps, Stream 2: 600-2,000Kbps                     |
| Recording Modes                       | Continuous, Intensive (Motion, Alarm, Panic)                                    |
| Recording Scheduling Method           | Hourly / Daily / Weekly   |
| Pre-Event Recording                   | Yes, 0 / 1 / 2 / 3 / 4 / 5 / 10 / 15s   |
| Post-Event Recording                  | Yes, 5 / 10 / 15 / 20 / 30 / 60 / 180s  |
| Reserved Data/Bookmarking             | Yes   |
| SSC                                   | Yes   |
| Display                               |   |
| Main Display Outputs                  | HDMI x1 (4K 2.0), VGA x1  |
| Main Display Resolution               | 3840x2160 / 1920x1080 / 1280x1024 / 1280x720                                    |
| Main Display Resolution Configuration | Auto / Manual   |
| Dual Monitor Functions                | Main Display Mirroring  |
| Display Rate                          | Max. 200FPS; 1CH: 25FPS @ 8MP, 4CH: 25FPS@4MP, 8CH: 25FPS@2MP                   |
| Display Mode                          | 1CH / 4CH / 5CH / 6CH / 9CH   |
| Programmable Sequence                 | Supported, 1CH / 4CH / 5CH / 6CH / 9CH  |
| Spot Monitor Output                   | -   |
| Spot Monitor View Type                | -   |
| PTZ Control                           | Network, RS-485 (Pan, Tilt, Zoom, Focus, Iris, Preset Sync)                     |
| Fisheye Dewarping                     | -   |
| Monitor PoE & Network Status          | Yes   |
| Search and Playback                   |   |
| Search Modes                          | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event                       |
| Event Search Options                  | Instant Playback, Alarm, Motion, Video, Record, System, Storage, Network, Setup |
| Playback Display Mode                 | 1CH / 4CH / 5CH / 6CH / 9CH   |
| Simultaneous Playback                 | 1CH@Main Stream, 8CH@Second Stream  |
| Playback Speed                        | 1x, 2x, 4x, 8x, 16x, 32x, 64x   |
| Archiving                             |   |
| Archiving Devices                     | USB, FTP  |
| Remote Archiving                      | Web, iPIMS (PC), FTP  |
| Archived Video Format                 | RAW / AVI   |
| Backup Encryption                     | MD5, with Built-in Verification Watermark                                       |
| Snapshot                              | Live, Playback (JPEG)   |
| System                                |   |
| Language                              | English French Dutch German Spanish   |
| Max UTP Transmission                  | 90m   |
| Firmware Upgrade                      | USB, Network  |

## Plug and Play IP - Concept Pro HD-IP Lite

| Network                                |  |
|--|--|
| Network Interface                      | 1x RJ-45 10M/100M BASE-TX  |
| POE Standard                           | PoE 802.3af  |
| Max. User Connections                  | 32   |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH/8CH, Search, Playback, PTZ, Setup)<br>Chrome, Firefox (Live 1CH Second Stream, Setup)                |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)   |
| PC Software                            | iPIMS (PC) Version 1.4.13.28 onwards   |
| Transmission Rate                      | Max. 200FPS  |
| Adaptive Network Streaming             | Yes  |
| P2P Cloud Service                      | Yes, Sequirinet (European Servers)   |
| DDNS Service                           | Yes, DVRLINK Free Service  |
| Support IPv4 / IPv6                    | IPv4/IPv6  |
| Dual SMTP E-mail Server                | Yes (with SSL support)   |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel   |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK   |
| Network Protocols                      | WS-Discovery, RTP, RTSP, RTCP, SMTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL                           |
| Alarm Interface and Event Notification |  |
| Alarm Inputs                           | x2 (NVR), x8 (IP Camera), Virtual Alarm (CGI)  |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification, Video Pop-up  |
| Alarm Outputs                          | x1 (NVR Relay), x8 (IP Camera)   |
| Motion Detection                       | Yes (supported IPC)  |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification   |
| Event Notification                     | Buzzer, Video Pop-up, Video Pop-up, E-mail, FTP, Mobile Push   |
| E-mail Notification                    | Yes, Snapshot Optional   |
| E-mail Notification Schedule           | Up to 10 Schedules   |
| Alarm Arm/Disarm Function              | Yes  |
| System Detection                       | Video Loss, Disk, Record, System & Network Event Detection   |
| Video Analytics                        | Yes (Selected Concept Pro cameras)<br>Area Entrance/Exit, Forward/Reverse Line Crossing, Loitering, Stopped, Object Removed, Counter |
| Storage                                |  |
| Internal Hard Disk                     | 2x (Max 20TB)  |
| SMART Support                          | Yes, Manual/Automatic  |
| RAID Configuration                     | No, please see VUHDPIE   |
| Partial Data Deletion                  | Yes  |
| External Storage Support               | FTP/NAS (for backup)   |

## Plug and Play IP - Concept Pro HD-IP Lite

| Security                                       |   |
|--|---|
| Enhanced Security Rules                        | Yes   |
| Covert Camera                                  | Yes, Configurable by User and Group Authority   |
| Privacy Masking                                | Yes, Max. 4 Areas (supported IP cameras only)   |
| User Groups                                    | Max. 3 (Admin/Manager/User)   |
| Number of Users                                | Max. 10   |
| Group Authority                                | Search, Archiving, System Setup, Record Setup, Event Action Control, Remote Access, Shutdown                      |
| Network Security Features                      | IP Filter, RTSP Encryption (SEED_128), HTTPS  |
| System Security Features                       | Password Expiration, Auto Log-out, Search/Archiving Password Check, Audio Support Toggle, Snapshot Support Toggle |
| Encrypted System Settings File Import / Export | Yes   |
| Auxiliary Interface                            |   |
| USB  | x2  |
| RS-485   | x1  |
| Supported RS-485 Protocols                     | Pelco-D, Pelco-P, D-max   |
| RS-232   | -   |
| Remote Control                                 | Yes (Included)  |
| Keyboard Controller                            | RS-485  |
| General  |   |
| Operating System                               | Concept Pro UI  |
| Power Supply                                   | DC48V   |
| BTU/h  | Max. 37.53 BTU/h without HDD or cameras   |
| Power Consumption                              | Max. 11W without HDD or Cameras   |
| Fan  | x1  |
| Dimensions                                     | 380(W) × 314.6(D) × 44(H) mm, 1U  |
| Rack Mountable                                 | Yes   |
| Net Weight                                     | 2.52 kg   |
| Gross Weight                                   | 3.82kg  |
| Operating Conditions                           | 0°C to +40°C, 10 - 90% NC   |
| Storage Conditions                             | 0°C to +50°C, 10 - 90% NC   |
| Certifications                                 |   |
| Certifications                                 | FCC, CE   |



## Plug and Play IP - Concept Pro HD-IP Lite

# VUHD IPL-16 Plug and Pay Concept Pro HD-IP Lite



The Concept Pro Lite VUHD IPL-16 model is a sixteen channel entry level NVR that can record up to 8 megapixel, 4K UHD network video on all channels. The VUHD IPL model also supports the latest H.265 video compression codec for greater storage savings.

The NVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices, and compatibility with the license-free iPIMS VMS.

### Features:

- 16 PoE IP Camera Inputs
- Secure P2P Connection
- Real-time 8MP Camera Video Recording (4K UHD)
- H.265 and H.264 Video Codec Support
- 4K HDMI and VGA Display Output
- Up to 20TB Internal Hard Disk
- Enhanced Password Security Rule
- Arm/Disarm Switch to Configure Alarm Notifications
- Smart Storage Compression
- WD Purple Surveillance HDD's inside all recorders
- 2CH Alarm Input/1CH Alarm Output
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Integrated Network Alarm Support
- Remote included

### Order Codes:

|                   |  |
|-------------------|--|
| VUHD IPL-16-8000  | Concept Pro HD-IP Lite recorder 16 way, 8TB storage  |
| VUHD IPL-16-16000 | Concept Pro HD-IP Lite recorder 16 way, 16TB storage |

## Technical Specifications

| MODEL                                 | VUHD IPL-16-8000 / VUHD IPL-16-16000            |
|---------------------------------------|---|
| Video and Audio Inputs/Outputs        |   |
| IP Video Inputs                       | 16CH  |
| Power over Ethernet (PoE) Inputs      | 8 x RJ45 plugs + 8 x Hub (Supplied separately)  |
| Supported Video Signal Types          | PAL/NTSC  |
| Supported Video Resolution/Frame Rate | Max. 25FPS @ 3840x2160 (8MP 4K UHD) per channel |
| Incoming Bandwidth                    | Max. 120Mbps                                    |
| Max PoE Output per Channel            | Max. 15W per channel, Total Max. 72W            |
| Audio Inputs                          | -   |
| Audio Outputs                         | -   |
| Two-Way Audio                         | N/A   |
| Audio Compression Codec               | N/A   |

## Plug and Play IP - Concept Pro HD-IP Lite

### Technical Specifications

| Recording                             |   |
|---------------------------------------|---|
| Video Compression Codec               | H.265/H.264 (BP,MP,HP)  |
| Recording Resolution                  | Max. 8MP (3840x2160)/5MP/4MP/3MP/2MP/1MP/D1/CIF                                 |
| Recording Rate                        | Max. 400FPS @ 3840x2160 (8MP UHD)   |
| Bit Rate                              | VBR/CBR, Stream 1: 1,000-8,000Kbps, Stream 2: 600-2,000Kbps                     |
| Recording Modes                       | Continuous, Intensive (Motion, Alarm, Panic)                                    |
| Recording Scheduling Method           | Hourly / Daily / Weekly   |
| Pre-Event Recording                   | Yes, 0 / 1 / 2 / 3 / 4 / 5 / 10 / 15s   |
| Post-Event Recording                  | Yes, 5 / 10 / 15 / 20 / 30 / 60 / 180s  |
| Reserved Data/Bookmarking             | Yes   |
| SSC                                   | Yes   |
| Display                               |   |
| Main Display Outputs                  | HDMI x1 (4K 2.0), VGA x1  |
| Main Display Resolution               | 3840x2160 / 1920x1080 / 1280x1024 / 1280x720                                    |
| Main Display Resolution Configuration | Auto / Manual   |
| Dual Monitor Functions                | Main Display Mirroring  |
| Display Rate                          | Max. 400FPS; 1CH: 25FPS @ 8MP, 25FPS@4MP, 9/16CH: 25FPS@2MP                     |
| Display Mode                          | 1CH / 4CH / 5CH / 6CH / 9CH / 16CH  |
| Programmable Sequence                 | Supported, 1CH / 4CH / 5CH / 6CH / 9CH / 16CH                                   |
| Spot Monitor Output                   | BNC x1  |
| Spot Monitor View Type                | 1CH/4CH Split Screen  |
| PTZ Control                           | Network, RS-485 (Pan, Tilt, Zoom, Focus, Iris, Preset Sync)                     |
| Fisheye Dewarping                     | -   |
| Monitor PoE & Network Status          | Yes   |
| Search and Playback                   |   |
| Search Modes                          | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event                       |
| Event Search Options                  | Instant Playback, Alarm, Motion, Video, Record, System, Storage, Network, Setup |
| Playback Display Mode                 | 1CH / 4CH / 5CH / 6CH / 9CH / 16CH  |
| Simultaneous Playback                 | 1CH@Main Stream, 16CH@Second Stream   |
| Playback Speed                        | 1x, 2x, 4x, 8x, 16x, 32x, 64x   |
| Archiving                             |   |
| Archiving Devices                     | USB, FTP  |
| Remote Archiving                      | Web, iPIMS (PC), FTP  |
| Archived Video Format                 | RAW / AVI   |
| Backup Encryption                     | MD5, with Built-in Verification Watermark                                       |
| Snapshot                              | Live, Playback (JPEG)   |
| System                                |   |
| Language                              | English French Dutch German Spanish   |
| Max UTP Transmission                  | 90m   |
| Firmware Upgrade                      | USB, Network  |

## Plug and Play IP - Concept Pro HD-IP Lite

| Network                                |  |
|--|--|
| Network Interface                      | 2x RJ-45 10M/100M/1000M BASE-TX  |
| POE Standard                           | PoE 802.3af  |
| Max. User Connections                  | 32   |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH/9CH/16CH), Search, Playback, PTZ, Setup<br>Chrome, Firefox (Live 1CH Second Stream, Setup)           |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)   |
| PC Software                            | iPIMS (PC) Version 1.4.13.28 onwards   |
| Transmission Rate                      | Max. 400FPS  |
| Adaptive Network Streaming             | Yes  |
| P2P Cloud Service                      | Yes, Sequirinet (European Servers)   |
| DDNS Service                           | Yes, DVRLINK Free Service  |
| Support IPv4 / IPv6                    | IPv4/IPv6  |
| Dual SMTP E-mail Server                | Yes (with SSL support)   |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel   |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK   |
| Network Protocols                      | WS-Discovery, RTP, RTSP, RTCP, SMTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL                           |
| Alarm Interface and Event Notification |  |
| Alarm Inputs                           | x2 (NVR), x16 (IP Camera), Virtual Alarm (CGI)   |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification, Video Pop-up  |
| Alarm Outputs                          | x1 (NVR Relay), x16 (IP Camera)  |
| Motion Detection                       | Yes (supported IPC)  |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification   |
| Event Notification                     | Buzzer, Video Pop-up, Video Pop-up, E-mail, FTP, Mobile Push   |
| E-mail Notification                    | Yes, Snapshot Optional   |
| E-mail Notification Schedule           | Up to 10 Schedules   |
| Alarm Arm/Disarm Function              | Yes  |
| System Detection                       | Video Loss, Disk, Record, System & Network Event Detection   |
| Video Analytics                        | Yes (Selected Concept Pro cameras)<br>Area Entrance/Exit, Forward/Reverse Line Crossing, Loitering, Stopped, Object Removed, Counter |
| Storage                                |  |
| Internal Hard Disk                     | 2x (Max 20TB)  |
| SMART Support                          | Yes, Manual/Automatic  |
| RAID Configuration                     | No, please see VUHDIPe   |
| Partial Data Deletion                  | Yes  |
| External Storage Support               | FTP/NAS (for backup)   |

## Plug and Play IP - Concept Pro HD-IP Lite

| Security                                       |   |
|--|---|
| Enhanced Security Rules                        | Yes   |
| Covert Camera                                  | Yes, Configurable by User and Group Authority   |
| Privacy Masking                                | Yes, Max. 4 Areas (supported IP cameras only)   |
| User Groups                                    | Max. 3 (Admin/Manager/User)   |
| Number of Users                                | Max. 10   |
| Group Authority                                | Search, Archiving, System Setup, Record Setup, Event Action Control, Remote Access, Shutdown                      |
| Network Security Features                      | IP Filter, RTSP Encryption (SEED_128), HTTPS  |
| System Security Features                       | Password Expiration, Auto Log-out, Search/Archiving Password Check, Audio Support Toggle, Snapshot Support Toggle |
| Encrypted System Settings File Import / Export | Yes   |
| Auxiliary Interface                            |   |
| USB  | x2  |
| RS-485   | x1  |
| Supported RS-485 Protocols                     | Pelco-D, Pelco-P, D-max   |
| RS-232   | -   |
| Remote Control                                 | Yes (Included)  |
| Keyboard Controller                            | RS-485  |
| General  |   |
| Operating System                               | Concept Pro UI  |
| Power Supply                                   | DC48V   |
| BTU/h  | Max. 37.53 BTU/h without HDD or cameras   |
| Power Consumption                              | Max. 11W without HDD or Cameras   |
| Fan  | x1  |
| Dimensions                                     | 380(W) × 314.6(D) × 44(H) mm, 1U<br>PoE Hub: 305(W) × 142(D) × 38(H) mm   |
| Rack Mountable                                 | Yes   |
| Net Weight                                     | 2.52kg<br>PoE Hub : 0.93 kg   |
| Gross Weight                                   | Unit / PoE Hub Bundle Package : 5.3kg   |
| Operating Conditions                           | 0°C to +40°C, 10 - 90% NC   |
| Storage Conditions                             | 0°C to +50°C, 10 - 90% NC   |
| Certifications                                 |   |
| Certifications                                 | FCC, CE   |

## Plug and Play IP - Concept Pro NVR with PoE

# VUHDIP-16V2 16 Channel 8MP NVR with PoE



The Concept Pro VUHDIP-16V2V2 model is a sixteen channel professional NVR that can record up to 8 megapixel, 4K UHD network video on all channels. The VUHDIP range also supports the latest H.265 video compression codec for greater storage savings.

The NVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices, and compatibility with the license-free iPIMS VMS.

### Professional Remote Monitoring

Provides 24 hour remote monitoring for clients and is available on all Concept Pro recorders with Alarm Receiving Stations using Immix Cloud and Sentinel platforms.

### License Free Remote Viewing

Connect up to 254 Concept Pro IP and AHD recorders through iPIMS, a powerful license free video management software. Remote viewing is also available on smart phones and tablets through Concept Pro Viewer, utilising a secured European server, the app allows control over various elements of Concept Pro recorders.

### Deep Learning (DL)

Unlock the power of Deep Learning. Purchasing an optional DL license opens up multiple channels of highly accurate intrusion detection and illegal parking detection. With DL, a system can be configured to focus specifically on people, and/or vehicles. Reducing false alarms through static object filters and confidence thresholds, ensures only objects of interest trigger notifications. Double knock integrations with additional PIR sensors allows for an extra level assurance on alarms. DL Search also ensures target objects can be found efficiently.

### Features:

- 16 PoE IP Camera Inputs
- Secure P2P Connection
- Real-time 8MP Camera Video Recording (4K UHD)
- H.265 and H.264 Video Codec Support
- 4K HDMI and VGA Display Output
- Up to 20TB Internal Hard Disk
- Enhanced Password Security Rule
- Arm/Disarm Switch to Configure Notifications
- 8 Alarm Inputs
- Smart Storage Compression
- Concept Pro Video Analytics
- Concept Pro Deep Learning
- WD Purple Surveillance HDD's inside all recorders
- 8CH Alarm Input/1CH Alarm Output
- Two Way Audio & Audio Recording
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Integrated Network Alarm Support
- Remote Triggered Alarm Output
- Mouse and remote included

### Order Codes:

VUHDIP-16V2-16TB    Concept Pro 16ch Pro NVR  
16TB

### Sequirinet

Sequirinet enables installers to add Enhanced Password Control (EPC) to their recorder systems, ensuring our Concept Pro recorders are the most secure on the market. This prohibits the use of easily infiltrated passwords by ensuring a user creates their own complex password to access their device.

### Storage Compression

All Concept Pro recorders come with a variety of options to reduce storage requirements. H.265 allows for compression in storage capacity between 40% and 95%. Variable Bit Rate (VBR) automatically adjusts the bitrate depending on the amount of motion in the scene and Smart Storage Compression (SSC) adjusts the bitrate depending on the frames per second selected.

## Plug and Play IP - Concept Pro NVR with PoE

### Technical Specifications

| Video and Audio Inputs/Outputs |   |
|--------------------------------|---|
| IP Video Inputs                | 16CH  |
| Power over Ethernet PoE Inputs | 16 x RJ45 plugs   |
| Video Signal Types             | PAL/NTSC  |
| Video Resolution/Frame Rate    | Max. 25FPS @ 3840x2160 (8MP 4K UHD) per channel                                 |
| Incoming Bandwidth             | Max. 160Mbps  |
| Max PoE Output per Channel     | Max. 25W per channel, Total Max. 180W   |
| Audio Inputs                   | x1 + IP Camera Audio Input x16  |
| Audio Outputs                  | x1  |
| Two-Way Audio                  | Yes   |
| Audio Compression Codec        | G.711u  |
| Recording                      |   |
| Video Compression Codec        | H.265/H.264 (BP,MP,HP)  |
| Recording Resolution           | Max. 8MP (3840x2160) /5MP/4MP/3MP/2MP/1MP/D1/CIF                                |
| Recording Rate                 | Max. 400FPS @ 3840x2160 (8MP UHD)   |
| Bit Rate                       | VBR/CBR, Stream 1: 1000-8000Kbps, Stream 2: 600-2000Kbps                        |
| Recording Modes                | Continuous, Intensive (Motion, Alarm, Panic)                                    |
| Recording Scheduling Method    | Hourly/Daily/Weekly   |
| Pre-Event Recording            | Yes, 0/1/2/3/4/5/10/15s   |
| Post-Event Recording           | Yes, 5/10/15/20/30/60/180s  |
| Reserved Data/Bookmarking      | Yes   |
| SSC                            | Yes   |
| Display                        |   |
| Main Display Outputs           | HDMI x1, VGA x1   |
| Main Display Resolution        | 3840x2160/1920x1080/1280x1024/1280x720  |
| Main Display Resolution Config | Auto/Manual   |
| Dual Monitor Functions         | Main Display Mirroring  |
| Display Rate                   | Max. 400FPS; 1CH: 25FPS @ 8MP, 4CH:25FPS@8MP, 9/16CH: 25FPS@2MP                 |
| Display Mode                   | 1CH/4CH/5/CH/6CH/9CH/16CH   |
| Programmable Sequence          | Supported, 1CH/4CH/5CH/6CH/9CH/16CH   |
| Spot Monitor Output            | BNC x1  |
| Spot Monitor View Type         | 1CH/4CH Split Screen  |
| PTZ Control                    | Network, RS-485 (Pan, Tilt, Zoom, Focus, Iris, Preset Sync)                     |
| Fisheye Dewarping              | -   |
| Monitor PoE & Network Status   | Yes   |
| Search and Playback            |   |
| Search Modes                   | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Deep Learning, Event        |
| Event Search Options           | Instant Playback, Alarm, Motion, Video, Record, System, Storage, Network, Setup |
| Playback Display Mode          | 1CH/4CH/5/CH/6CH/9CH/16CH   |
| Simultaneous Playback          | Max 400FPS; 1CH:25FPS@8MP, 4CH:25FPS@8MP, 9/16CH:25FPS@2M                       |
| Playback Speed                 | 1x, 2x, 4x, 8x, 16x, 32x, 64x   |

## Plug and Play IP - Concept Pro NVR with PoE

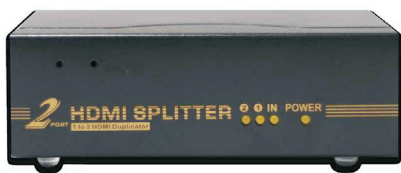
| Archiving                              |  |
|--|--|
| Archiving Devices                      | USB, FTP   |
| Remote Archiving                       | Web, iPIMS (PC), FTP   |
| Archived Video Format                  | RAW/AVI  |
| Backup Encryption                      | MD5, with Built-in Verification Watermark  |
| Snapshot                               | Live, Playback (JPEG)  |
| Network                                |  |
| Network Interface                      | 2x RJ-45 10M/100M/1000M Ethernet   |
| POE Standard                           | PoE 802.3af/PoE 802.3at  |
| Max. User Connections                  | 32   |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH/9CH/16CH), Search, Playback, PTZ, Setup), Chrome, Firefox (Live 1CH Second Stream, Setup)  |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)   |
| PC Software                            | iPIMS CMS  |
| Transmission Rate                      | Max. 400FPS  |
| Adaptive Network Streaming             | Yes  |
| P2P Cloud Service                      | Yes, Securinet (European Servers)  |
| DDNS Service                           | Yes, DVRLINK Free Service  |
| Support IPv4 / IPv6                    | IPv4/IPv6  |
| Dual SMTP E-mail Server                | Yes (with SSL support)   |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel   |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK   |
| Network Protocols                      | WS-Discovery, RTP, RTSP, RTCP, SMTP, NTP, HTTP, FTP, DDNS, DHCP, uPNP (Router Port Forwarding), HTTPS, SSL   |
| Alarm Interface and Event Notification |  |
| Alarm Inputs                           | x8 (NVR), x16 (IP Camera), Virtual Alarm (CGI)   |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification, Video Pop-up  |
| Alarm Outputs                          | x1 (NVR Relay), x 16 (IP Camera)   |
| Motion Detection                       | Yes (supported IPC)  |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification   |
| Event Notification                     | Buzzer, Video Pop-up, Video Pop-up, E-mail, FTP, Mobile Push   |
| E-mail Notification                    | Yes, Snapshot Optional   |
| E-mail Notification Schedule           | Up to 10 Schedules   |
| Alarm Arm/Disarm Function              | Yes  |
| System Detection                       | Video Loss, Disk, Record, System, & Network Event Detection  |
| Video Analytics                        | Yes (with selected Concept Pro cameras)<br>Area Entrance/Exit, Forward/Reverse Line Crossing, Loitering, Stopped, Object Removed, Counter  |
| Deep Learning                          | Yes<br>Max 2 Channels; Intrusion Detection (Human/Vehicle), Illegal Parking Detection, DL Search (Note: Built-in DL License sold separately)<br>Compatible with Deep Learning Plus |

## Plug and Play IP - Concept Pro NVR with PoE

| Storage                                      |   |
|--|---|
| Internal Hard Disk                           | x2 Max. 20TB  |
| SMART Support                                | Yes, Manual/Automatic   |
| RAID Configuration                           | No  |
| Partial Data Deletion                        | Yes   |
| External Storage Support                     | FTP/NAS (for backup)  |
| Security                                     |   |
| Enhanced Security Rules                      | Yes   |
| Covert Camera                                | Yes, Configurable by User and Group Authority   |
| Privacy Masking                              | Yes, Max. 4 Areas (supported IP cameras only)   |
| User Groups                                  | Max. 3 (Admin/Manager/User)   |
| Number of Users                              | Max. 10   |
| Group Authority                              | Search, Archiving, System Setup, Record Setup, Event Action Control, Audio, Remote Access, Shutdown               |
| Network Security Features                    | IP Filter, RTSP Encryption (SEED_128), HTTPS  |
| System Security Features                     | Password Expiration, Auto Log-out, Search/Archiving Password Check, Audio Support Toggle, Snapshot Support Toggle |
| Encrypted System Settings File Import/Export | Yes   |
| Auxiliary Interface                          |   |
| USB  | x2  |
| RS-485                                       | x1  |
| Supported RS-485 Protocols                   | Pelco-D, Pelco-P, D-max, etc.   |
| RS-232                                       | -   |
| Remote Control                               | Yes (Included)  |
| Keyboard Controller                          | RS-485  |
| System                                       |   |
| Language                                     | English French Dutch German Spanish   |
| Max UTP Transmission                         | 90m   |
| Firmware Upgrade                             | USB, Network  |
| General                                      |   |
| Operating System                             | Concept Pro UI  |
| Power Supply                                 | SMPS 51V/200W   |
| BTU/h  | Max. 37.53 BTU/h without HDD or cameras   |
| Power Consumption                            | Max. 11W without HDD or Cameras   |
| Fan  | x1  |
| Dimensions Unit                              | 380(W) × 314.6(D) × 44(H) mm, 1U  |
| Rack Mountable                               | Yes   |
| Net Weight Unit                              | 2.52 kg   |
| Gross Weight                                 | 3.82 kg   |
| Operating Conditions                         | 0°C to +40°C, 10 - 90% NC   |
| Storage Conditions                           | 0°C to +50°C, 10 - 90% NC   |
| Certifications                               | FCC, CE   |



# HDMI2SPLIT 2 Way Splitter for HDMI



## Features:

- Splits The HDMI Signal To 2 HDMI displays
- Maintains 480P, 720P, 720I, 1080I and 1080P Resolutions
- Connects to two HDMI displays at the same time
- Supports HDCP Compliant Devices
- Installs in seconds
- All Metal Housing

This is a twin HDMI splitter which has one HDMI input and two identical HDMI outputs. The two outputs are synchronized to show the same display. The unit has the ability to buffer and amplify.

## Additional Features

- Supports high resolution video up to 1080p
- Compact size

## Technical Specifications:

|                             |                         |
|-----------------------------|-------------------------|
| Video Amplifier Bandwidth   | 1.65 GHZ                |
| Input Video Signal          | 1.4 Volts P-P           |
| Input Ddc Signal            | 5 Volts P-P (TTL)       |
| Maximum Single Link Range   | 1920 X 1080             |
| Input/Output Connector Type | 19 PIN HDMI             |
| Power Consumption           | 15 WATTS (MAX)          |
| Power Supply                | 5 V DC/AC 100 V - 240 V |
| Cable Distance              | Input 5 m (max) -       |
| Output                      | 15 m (max)              |

## Order Code:

HDMI2SPLIT

HDMI Splitter to provide identical output to two monitors

## HDMIEXT-CAT6 HDMI Extender & Cables



### Features:

- One pair as a fully functional module, no need to change any settings
- One piece of cat-5E/6 cable can substitute HDMI cable to achieve long distance transmission
- Follows IEEE-568B standard
- Transmission distance can be up to 50 metres for 1080P using UTP cable
- Auto-adjustment of feedback, equalization and amplification
- Compact size

The HDMI Extender uses one length of CAT5e or CAT6 UTP cable to extend the HDTV display up to 50 metres for 1080p. It not only breaks the limitation of the HDMI cable transmission length, but also allows more flexibility and convenience in cable construction.

### Additional Features

- Supports High Resolution Video up to 1080P
- Supports 165MHZ/1.65GBPS Per Channel (4.95Gbps All Channel) Bandwidth.
- Supports 8BIT Per Channel (24BIT All Channel Deep Colour).
- Supports Uncompressed 2 Channel Audio such as LPCM
- Wall Mountable

### Benefits

- The length of an HDMI cable is fixed at manufacture. Because the HDMI connector cannot easily be soldered or terminated, the end-user is unable to extend or reduce it. However, CAT-5e/6 cable is widely available and can be cut and terminated easily by the user or installer.
- CAT5e/6 is much easier to bend and put through walls and along cable trays than HDMI cables. HDMI cables can be quite thick and the connectors are much larger than RJ45 connectors.
- Using this extender together with UTP cable, the transmission distance can be up to 50 metres for 1080p.

## Plug and Play IP - Accessories

### Technical Specifications:

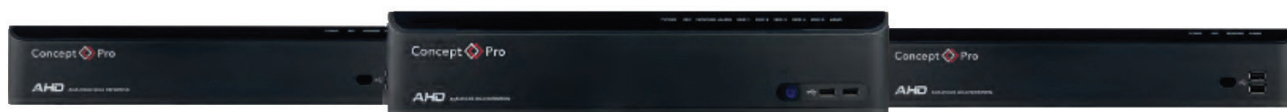
|                                      |  |
|--------------------------------------|--|
| Signal Inputs/Output                 |  |
| Input Video Signal                   | 0.5 - 1.0 VOLTS P-P                      |
| Output Video HDMI                    |  |
| Video Format Supported               |  |
| DTV/HDTV                             | 480I/576I/480P/576P/720P/<br>1080I/1080P |
| Operating Frequency                  |  |
| Video Amplifier Bandwidth            | 1.65GPBS / 165MHZ                        |
| Vertical Frequency Range             |  |
|                                      | 50 / 60HZ                                |
| Resolutions (HDTV)                   |  |
| Interlaced                           | (50 & 60HZ) 480I / 576I / 1080I          |
| Progressive                          | (50 & 60HZ) 480P, 576P, 720P<br>1080P    |
| Mechanical                           |  |
| Size (L-W-H)                         | 100 X 65 X 25.5 mm                       |
| Weight (NET)                         | 385 G                                    |
| Warranty                             |  |
| Limited Warranty                     | 1 years part and labour                  |
| Environmental                        |  |
| Operating Temperature                |  |
|                                      | 0°C TO 70°C                              |
| Operating Humidity (No Condensation) |  |
|                                      | 10% TO 85% RH                            |
| Storage Temperature                  |  |
|                                      | -10C TO +80C                             |
| Storage Humidity (No Condensation)   |  |
|                                      | 5% TO 90% RH                             |
| Power Requirement                    |  |
| Power Supply                         | 5 V DC @2 A                              |
| Power Consumption (Max)              | 5 W                                      |
| Regulatory Approvals                 |  |
| Converter Unit                       | FCC, CE, UL                              |
| Power Supply                         | UL, CE, FCC                              |
| Accessories                          |  |
| AC Power Adapter                     | UK 5 V DC Power Supply                   |

### Order Codes:

|                 |  |
|-----------------|--|
| HDMIEXT-CAT6    | HDMI Extender requires Cat5E cable to extend up to 50 metres |
| HAY-HDMIV2-1.5M | HDMI Lead V 2.0 (Length 1.5M)                                |
| HAY-HDMIV2-3M   | HDMI Lead V 2.0 (Length 3M)                                  |
| HAY-HDMIV2-10M  | HDMI Lead V 2.0 (Length 10M)                                 |
| HAY-HDMIV2-20M  | HDMI Lead V 2.0 (Length 20M)                                 |

## Analogue HD Digital Recording - Concept Pro

# Concept Pro Lite & Professional AHD Recorders



### Concept Pro AHD Recorder Comparison Chart

| Level                                       | LITE       |            |             | PROFESSIONAL |           |            |
|---|------------|------------|-------------|--------------|-----------|------------|
| Model                                       | VXH5AHDL-4 | VXH5AHDL-8 | VXH5AHDL-16 | VXH5AHD-4    | VXH5AHD-8 | VXH5AHD-16 |
| Channel                                     | 4          | 8          | 16          | 4            | 8         | 16         |
| iPIMS Compatibility                         | •          | •          | •           | •            | •         | •          |
| Sequirinet P2P Connectivity                 | •          | •          | •           | •            | •         | •          |
| Concept Pro Viewer Mobile App Compatibility | •          | •          | •           | •            | •         | •          |
| Remote Monitoring                           | •          | •          | •           | •            | •         | •          |
| Concept Pro Intuitive User Interface        | •          | •          | •           | •            | •         | •          |
| Free DVRLINK Dynamic DNS Service            | •          | •          | •           | •            | •         | •          |
| E-mail/Dual SMTP                            | •          | •          | •           | •            | •         | •          |
| Two Way Audio                               | •          | •          | •           | •            | •         | •          |
| Coaxitron Support                           | •          | •          | •           | •            | •         | •          |
| RS-485 Keyboard Support                     | •          | •          | •           | •            | •         | •          |
| RS-232 Point of Sale Support                |            |            |             |              | •         | •          |
| e-SATA External Storage Support             |            |            |             |              | •         | •          |
| RAID 1/5 Support                            |            |            |             |              | •         | •          |
| Rack Mount Capability                       |            | •          | •           |              | •         | •          |
| Fanless Design                              | •          |            |             | •            |           |            |
| Dual Monitor Support                        |            |            |             | •            | •         | •          |
| 1080p Display Resolution Support            | •          | •          | •           | •            | •         | •          |
| 1440p QHD Display Resolution Support        |            |            |             | •            | •         | •          |
| 2160p UHD Display Resolution Support        |            |            |             | •            | •         | •          |
| 5MP AHD/TVI Camera Support                  | •          | •          | •           | •            | •         | •          |

## Analogue HD Digital Recording - Concept Pro

| Level                        | LITE       |            |             | PROFESSIONAL |           |            |
|------------------------------|------------|------------|-------------|--------------|-----------|------------|
| Model                        | VXH5AHDL-4 | VXH5AHDL-8 | VXH5AHDL-16 | VXH5AHD-4    | VXH5AHD-8 | VXH5AHD-16 |
| 2MP IP Camera Hybrid Support | •          | •          | •           | •            | •         | •          |
| 5MP IP Camera Hybrid Support |            |            |             | •            | •         | •          |
| IPv4/IPv6 Support            | •          | •          | •           | •            | •         | •          |
| Maximum HDD Capacity         | 3TB        | 4TB        | 8TB         | 4TB          | 6TB       | 6TB / 16TB |
| Spot Out                     | x1         | x1         | x1          | x1           | x1        | x1         |
| Number of Alarms             | x2/x1      | x2/x1      | x2/x1       | x4/x1        | x8/x1     | x16/x1     |
| Warranty                     | 3 Years    | 3 Years    | 3 Years     | 3 Years      | 3 Years   | 3 Years    |

## Analogue HD Digital Recording - Concept Pro

# VXH5AHDL-4 4 Channel 5MP Hybrid DVR



The Concept Pro Lite VXH5AHDL-4 model is a four channel professional DVR that can record up to 5 megapixel analogue video and 2 megapixel IP video on all channels. It is a hybrid recorder compatible with AHD, HD-TVI, traditional standard definition analogue cameras, and IP cameras. The DVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices, and compatibility with the license-free iPIMS VMS.

### Professional Remote Monitoring

Allowing installers access to repeat revenue streams, remote monitoring integration is available on all Concept Pro professional recorded to stations using Immix Cloud and Sentinel platforms.

### iPims - License Free Software

iPims is a powerful, license-free video management software solution that can connect to all Concept Pro professional IP, AHD and Analogue CCTV recorders and record footage from up to 256 recorders regardless of platform.

### Secure P2P Networking

Utilising a Secured European server, P2P is the simplest way to connect a Concept Pro professional recorder for remote viewing on smartphones and tablets.

### Sequirinet

Sequirinet enables Installers to add Enhanced Password Control (EPC) to their Professional recorder systems, ensuring our Concept Pro recorders are the most secure on the market. This prohibits the use of easily infiltrated passwords by ensuring a user creates their own complex password to access recordings stored using our secure European server.

### Features:

- 4 Channel Hybrid DVR
- AHD, TVI, CVBS and IP Compatible
- Max. 48FPS Recording @ 5MP, Real-time Recording @ 2MP
- HDMI and VGA Display Output
- CVBS Spot Monitor Output
- 3 or 6TB Internal Hard Disk
- x2 Alarm Input/x1 Alarm Output
- x4 Audio Input/x1 Audio Output
- Secure P2P/Relay Server Service
- Two Way Audio & Audio Recording
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Up the Coax (Coaxitron) Protocol Support
- RS-485 x1
- Fanless Design

### IP Hybrid Support

This Concept Pro DVR provides the facility to record various types of analogue cameras up to 5 megapixel resolution and IP cameras up to 2 megapixel resolution to one recording device and work as one system. The 4 Channel DVR allows you connect a maximum of 4 cameras in an IP and AHD combination.

### Analogue HD Typical Cable Distance

|       | 1080P      | 720P       |
|-------|------------|------------|
| COAX  | Up to 300m | Up to 500m |
| CAT5E | Up to 200m | Up to 350m |
| CAT6  | Up to 220m | Up to 385m |

### Order Codes:

VXH5AHDL-4-3000

Concept Pro Lite Hybrid AHD recorder 4 Channel with 3TB storage

VXH5AHDL-4-6000

Concept Pro Lite Hybrid AHD recorder 4 Channel with 6TB storage

# Analogue HD Digital Recording - Concept Pro

## Technical Specifications

| MODEL                                     | VXH5AHDL-4-3000 / VXH5AHDL-4-6000   |
|---|---|
| Video and Audio Inputs/Outputs            |   |
| Analogue Camera Video Inputs              | 4CH   |
| Supported Analogue Formats                | AHD/TVI/CVBS  |
| Supported Video Signal Types              | PAL/NTSC  |
| Supported Analogue Resolution/Frame Rate  | 5MP@20/12FPS, 4MP@25/15FPS, 3MP@25/18FPS, 2MP@25FPS, 960H@25FPS   |
| IP Camera Video Inputs                    | Max. 4CH  |
| Supported IP Camera Resolution/Frame Rate | 2MP@25FPS   |
| Supported PTZ Protocols                   | UTC Coaxitron, RS-485 (Pelco-D, Pelco-P, and more)  |
| Audio Inputs                              | 4CH RCA   |
| Audio Outputs                             | 1CH RCA + HDMI  |
| Two-Way Audio                             | Supported   |
| Audio Compression Codec                   | G.711u  |
| Recording                                 |   |
| Video Compression Codec                   | H.264   |
| Recording Resolution                      | 5MP, 4MP, 3MP, 2MP, 1MP, 960H, D1, 2CIF, CIF  |
| Recording Rate                            | [Analogue] Max. 80FPS @ 1296x1944 (5MP Half)<br>Max. 48FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 60FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1024x1536 (3MP Half)<br>Max. 72FPS @ 1920x1536 (3MP)<br>Max. 100FPS @ 1920x1080 (2MP)<br>[IP] Max. 100FPS @ 1920x1080 (2MP) |
| Bit Rate                                  | CBR/VBR   |
| Recording Modes                           | Continuous, Motion, Alarm, Panic  |
| Recording Scheduling Method               | Hourly/Daily/Weekly   |
| Pre-Event Recording                       | 0/1/2/3/4/5/10/15s  |
| Post-Event Recording                      | 5/10/15/20/30/60/180s   |
| Display                                   |   |
| Main Display Outputs                      | HDMI 1EA, VGA 1EA   |
| Main Display Resolution                   | 1920x1080/1280x1024/1280x720  |
| Main Display Resolution Configuration     | Auto/Manual   |
| Dual Monitor Functions                    | Main Display Mirroring  |
| Display Rate                              | [Analogue] Max. 80FPS @ 1296x1944 (5MP Half)<br>Max. 48FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 60FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1024x1536 (3MP Half)<br>Max. 72FPS @ 1920x1536 (3MP)<br>Max. 100FPS @ 1920x1080 (2MP)<br>[IP] Max. 100FPS @ 1920x1080 (2MP) |
| Display Mode                              | 1CH/4CH   |
| Programmable Sequence                     | Supported, 1CH/4CH  |
| Spot Monitor Output                       | CVBS 1EA  |
| Spot Monitor View Type                    | Programmable, 1CH/4CH   |

## Analogue HD Digital Recording - Concept Pro

| Search & Playback                      |   |
|--|---|
| Search Modes                           | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event, Text-in  |
| Event Search Options                   | All, Alarm, Motion, Video, Record, System, Storage, Network, Setup  |
| Playback Preview from Search Menu      | Yes   |
| Playback Display Mode                  | 1CH/4CH   |
| Playback Rate                          | [Analogue] Max. 80FPS @ 1296x1944 (5MP Half)<br>Max. 48FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 60FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1024x1536 (3MP Half)<br>Max. 72FPS @ 1920x1536 (3MP)<br>Max. 100FPS @ 1920x1080 (2MP)<br>[IP] Max. 100FPS @ 1920x1080 (2MP) |
| Playback Speed                         | 1x, 2x, 4x, 8x, 16x, 32x, 64x   |
| Archiving                              |   |
| Archiving Devices                      | USB, FTP  |
| Remote Archiving                       | Web, iPIMS (PC), FTP  |
| Archived Video Format                  | RAW/AVI   |
| Watermarking                           | MD5, with Built-in Verification   |
| Network                                |   |
| Network Interface                      | 1EA RJ-45 10M/100MBASE-TX   |
| Max. User Connections                  | 32 users  |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH), Search, Playback, PTZ, Setup)<br>Chrome, Firefox (Live 1CH Second Stream, Setup)  |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)  |
| Remote Software                        | iPIMS (PC), SmartRA (Mac)   |
| Transmission Rate                      | Max. 100FPS   |
| Adaptive Network Streaming             | Yes   |
| P2P/Relay Server Cloud Service         | Yes, Sequirinet (European Servers)  |
| Dual SMTP E-mail Server                | Yes   |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel  |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK  |
| IP Address System                      | IPv4/IPv6   |
| Network Protocols                      | RTP, RTSP, RTCP, SMTP, NTP, HTTP, HTTPS, FTP, DDNS, DHCP, UPnP  |
| Streaming Method                       | Unicast/Multicast   |
| Alarm Interface and Event Notification |   |
| Alarm Inputs                           | x2  |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification   |
| Alarm Outputs                          | x1 Relay  |
| Motion Detection                       | Supported, 22x18 Cells  |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification  |
| Event Notification                     | Buzzer, Video Pop-up, OSD Pop-up, E-mail, FTP, Mobile Push  |
| E-mail Notification                    | Text-only/Snapshot Included   |
| E-mail Notification Schedule           | Up to 10 Schedule Profiles  |
| Alarm Arm/Disarm Switch                | Yes   |



## Analogue HD Digital Recording - Concept Pro

| Alarm Interface and Event Notification (Continued) |   |
|--|---|
| Video Loss Detection                               | Yes   |
| Disk Event Detection                               | Overwrite Start, Disk Full, % Disk Space Exhausted, SMART, No Disk                                  |
| Record Event Detection                             | Panic Record Start  |
| System Event Detection                             | Booting, Log-in Fail  |
| Network Event Detection                            | Trouble in Internet Connection, Remote Log-in Fail, DDNS Update Fail, IP Conflict                   |
| Storage  |   |
| Internal Hard Disk                                 | SATA 1EA, 3TB / 6TB   |
| SMART Support                                      | Yes, Manual/Automatic   |
| Security   |   |
| Enhanced Security Rules                            | Direct ID Input, Enhanced User ID/Password Rules  |
| Covert Camera                                      | Supported, Configurable by User and Group Authority   |
| Privacy Masking                                    | Yes, Max. 4 Areas   |
| Group Authority                                    | Search, Archiving, System Setup, Record Setup, Event Action Control, Audio, Remote Access, Shutdown |
| IP Filter  | Yes   |
| Record Time Limit                                  | Yes   |
| Erase Video  | Yes   |
| RTSP Encryption                                    | SEED_128  |
| HTTPS  | Basic/Digest Authentication   |
| Password Expiration                                | Off/On (1/2/4/6 Months)   |
| Auto Log-out                                       | Off/On (1/2/3/5/10 Minutes)   |
| Search/Archiving Password Check                    | Off/On  |
| Audio Support Toggle                               | Yes   |
| Snapshot Support Toggle                            | Yes   |
| Auxiliary Interface                                |   |
| USB  | x2 (Front)  |
| RS-485   | x1  |
| Remote Control                                     | Yes (Included)  |
| Keyboard Controller                                | Yes (VA-KBDPRO+)  |
| General  |   |
| Power Supply                                       | 12VDC/2A  |
| Power Consumption                                  | Max. 6W without HDD   |
| Dimensions   | 260mm (W) x 262.6mm (D) x 44mm (H)  |
| Net Weight   | 1.54kg  |
| Gross Weight                                       | 2.28kg  |
| Operating Conditions                               | 0°C to 40°C, 10% to 90% NC  |
| Certifications                                     |   |
| Certifications                                     | CE/FCC  |

## Analogue HD Digital Recording - Concept Pro

# VXH5AHDL-8 8 Channel 5MP Hybrid DVR



The Concept Pro Lite VXH5AHDL-8 model is an eight channel professional DVR that can record up to 5 megapixel analogue video and 2 megapixel IP video on all channels. It is a hybrid recorder compatible with AHD, HD-TVI, traditional standard definition analogue cameras, and IP cameras. The DVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices, and compatibility with the license-free iPIMS VMS.

### Professional Remote Monitoring

Allowing installers access to repeat revenue streams, remote monitoring integration is available on all Concept Pro professional recorders to stations using Immix Cloud and Sentinel platforms.

### iPims - License Free Software

iPims is a powerful, license-free video management software solution that can connect to all Concept Pro professional IP, AHD and Analogue CCTV recorders and record footage from up to 256 recorders regardless of platform.

### Secure P2P Networking

Utilising a Secured European server, P2P is the simplest way to connect a Concept Pro professional recorder for remote viewing on smartphones and tablets.

### Sequirinet

Sequirinet enables Installers to add Enhanced Password Control (EPC) to their Professional recorder systems, ensuring our Concept Pro recorders are the most secure on the market. This prohibits the use of easily infiltrated passwords by ensuring a user creates their own complex password to access recordings stored using our secure European server.

### Features:

- 8 Channel Hybrid DVR
- AHD, TVI, CVBS and IP Compatible
- Max. 96FPS Recording @ 5MP, Real-time Recording @ 2MP
- HDMI and VGA Display Output
- CVBS Spot Monitor Output
- 4 or 8TB Internal Hard Disk
- x2 Alarm Input/x1 Alarm Output
- x4 Audio Input/x1 Audio Output
- Secure P2P/Relay Server Service
- Two Way Audio & Audio Recording
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Up the Coax (Coaxitron) Protocol Support
- RS-485 x1

### IP Hybrid Support

This Concept Pro DVR provides the facility to record various types of analogue cameras up to 5 megapixel resolution and IP cameras up to 2 megapixel resolution to one recording device and work as one system. The 8 Channel DVR allows you connect a maximum of 8 cameras in an IP and AHD combination.

### Analogue HD Typical Cable Distance

|       | 1080P      | 720P       |
|-------|------------|------------|
| COAX  | Up to 300m | Up to 500m |
| CAT5E | Up to 200m | Up to 350m |
| CAT6  | Up to 220m | Up to 385m |

### Order Codes:

VXH5AHDL-8-4000

Concept Pro Lite Hybrid AHD recorder 8 Channel with 4TB storage

VXH5AHDL-8-8000

Concept Pro Lite Hybrid AHD recorder 8 Channel with 8TB storage

# Analogue HD Digital Recording - Concept Pro

## Technical Specifications

| MODEL                                     | VXH5AHDL-8-4000 / VXH5AHDL-8-8000  |
|---|--|
| Video and Audio Inputs/Outputs            |  |
| Analogue Camera Video Inputs              | 8CH  |
| Supported Analogue Formats                | AHD/TVI/CVBS   |
| Supported Video Signal Types              | PAL/NTSC   |
| Supported Analogue Resolution/Frame Rate  | 5MP@20/12FPS, 4MP@25/15FPS, 3MP@25/18FPS, 2MP@25FPS, 960H@25FPS  |
| IP Camera Video Inputs                    | Max. 8CH   |
| Supported IP Camera Resolution/Frame Rate | 2MP@25FPS  |
| Supported PTZ Protocols                   | UTC Coaxitron, RS-485 (Pelco-D, Pelco-P, and more)   |
| Audio Inputs                              | 4CH RCA  |
| Audio Outputs                             | 1CH RCA + HDMI   |
| Two-Way Audio                             | Supported  |
| Audio Compression Codec                   | G.711u   |
| Recording                                 |  |
| Video Compression Codec                   | H.264  |
| Recording Resolution                      | 5MP, 4MP, 3MP, 2MP, 1MP, 960H, D1, 2CIF, CIF   |
| Recording Rate                            | [Analogue] Max. 160FPS @ 1296x1944 (5MP Half)<br>Max. 96FPS @ 2592x1944 (5MP)<br>Max. 200FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 120FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1024x1536 (3MP Half)<br>Max. 144FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>[IP] Max. 200FPS @ 1920x1080 (2MP) |
| Bit Rate                                  | CBR/VBR  |
| Recording Modes                           | Continuous, Motion, Alarm, Panic   |
| Recording Scheduling Method               | Hourly/Daily/Weekly  |
| Pre-Event Recording                       | 0/1/2/3/4/5/10/15s   |
| Post-Event Recording                      | 5/10/15/20/30/60/180s  |
| Display                                   |  |
| Main Display Outputs                      | HDMI 1EA, VGA 1EA  |
| Main Display Resolution                   | 1920x1080/1280x1024/1280x720   |
| Main Display Resolution Configuration     | Auto/Manual  |
| Dual Monitor Functions                    | Main Display Mirroring   |
| Display Rate                              | [Analogue] Max. 160FPS @ 1296x1944 (5MP Half)<br>Max. 96FPS @ 2592x1944 (5MP)<br>Max. 200FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 120FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1024x1536 (3MP Half)<br>Max. 144FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>[IP] Max. 200FPS @ 1920x1080 (2MP) |
| Display Mode                              | 1CH/4CH/6CH/8CH/9CH  |
| Programmable Sequence                     | Supported, 1CH/4CH/6CH/8CH/9CH   |
| Spot Monitor Output                       | CVBS 1EA   |
| Spot Monitor View Type                    | Programmable, 1CH/4CH/9CH  |

## Analogue HD Digital Recording - Concept Pro

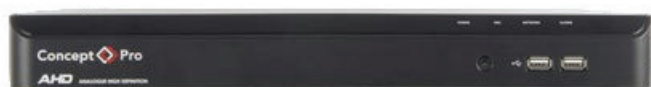
| Search & Playback                      |  |
|--|--|
| Search Modes                           | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event, Text-in   |
| Event Search Options                   | All, Alarm, Motion, Video, Record, System, Storage, Network, Setup   |
| Playback Preview from Search Menu      | Yes  |
| Playback Display Mode                  | 1CH/4CH/6CH/8CH/9CH  |
| Playback Rate                          | [Analogue] Max. 160FPS @ 1296x1944 (5MP Half)<br>Max. 96FPS @ 2592x1944 (5MP)<br>Max. 200FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 120FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1024x1536 (3MP Half)<br>Max. 144FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>[IP] Max. 200FPS @ 1920x1080 (2MP) |
| Playback Speed                         | 1x, 2x, 4x, 8x, 16x, 32x, 64x  |
| Archiving                              |  |
| Archiving Devices                      | USB, FTP   |
| Remote Archiving                       | Web, iPIMS (PC), FTP   |
| Archived Video Format                  | RAW/AVI  |
| Watermarking                           | MD5, with Built-in Verification  |
| Network                                |  |
| Network Interface                      | 1EA RJ-45 10M/100MBASE-TX  |
| Max. User Connections                  | 32 users   |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH/6CH/8CH/9CH), Search, Playback, PTZ, Setup)<br>Chrome, Firefox (Live 1CH Second Stream, Setup)   |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)   |
| Remote Software                        | iPIMS (PC), SmartRA (Mac)  |
| Transmission Rate                      | Max. 200FPS  |
| Adaptive Network Streaming             | Yes  |
| P2P/Relay Server Cloud Service         | Yes, Securinet (European Servers)  |
| Dual SMTP E-mail Server                | Yes  |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel   |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK   |
| IP Address System                      | IPv4/IPv6  |
| Network Protocols                      | RTP, RTSP, RTCP, SMTP, NTP, HTTP, HTTPS, FTP, DDNS, DHCP, UPnP   |
| Streaming Method                       | Unicast/Multicast  |
| Alarm Interface and Event Notification |  |
| Alarm Inputs                           | x2   |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification  |
| Alarm Outputs                          | x1 Relay   |
| Motion Detection                       | Supported, 22x18 Cells   |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification   |
| Event Notification                     | Buzzer, Video Pop-up, OSD Pop-up, E-mail, FTP, Mobile Push   |
| E-mail Notification                    | Text-only/Snapshot Included  |
| E-mail Notification Schedule           | Up to 10 Schedule Profiles   |
| Alarm Arm/Disarm Switch                | Yes  |

## Analogue HD Digital Recording - Concept Pro

| Alarm Interface and Event Notification (Continued) |   |
|--|---|
| Video Loss Detection                               | Yes   |
| Disk Event Detection                               | Overwrite Start, Disk Full, % Disk Space Exhausted, SMART, No Disk                                  |
| Record Event Detection                             | Panic Record Start  |
| System Event Detection                             | Booting, Log-in Fail  |
| Network Event Detection                            | Trouble in Internet Connection, Remote Log-in Fail, DDNS Update Fail, IP Conflict                   |
| Storage  |   |
| Internal Hard Disk                                 | SATA 1EA, 4TB / 8TB   |
| SMART Support                                      | Yes, Manual/Automatic   |
| Security   |   |
| Enhanced Security Rules                            | Direct ID Input, Enhanced User ID/Password Rules  |
| Covert Camera                                      | Supported, Configurable by User and Group Authority   |
| Privacy Masking                                    | Yes, Max. 4 Areas   |
| Group Authority                                    | Search, Archiving, System Setup, Record Setup, Event Action Control, Audio, Remote Access, Shutdown |
| IP Filter  | Yes   |
| Record Time Limit                                  | Yes   |
| Erase Video  | Yes   |
| RTSP Encryption                                    | SEED_128  |
| HTTPS  | Basic/Digest Authentication   |
| Password Expiration                                | Off/On (1/2/4/6 Months)   |
| Auto Log-out                                       | Off/On (1/2/3/5/10 Minutes)   |
| Search/Archiving Password Check                    | Off/On  |
| Audio Support Toggle                               | Yes   |
| Snapshot Support Toggle                            | Yes   |
| Auxiliary Interface                                |   |
| USB  | x2 (Front)  |
| RS-485   | x1  |
| Remote Control                                     | Yes (Included)  |
| Keyboard Controller                                | Yes (VA-KBDPRO+)  |
| General  |   |
| Power Supply                                       | 12VDC/3A  |
| Power Consumption                                  | Max. 13W without HDD  |
| Dimensions   | 380mm (W) x 314.6mm (D) x 44mm (H)  |
| Net Weight   | 2.52kg  |
| Gross Weight                                       | 3.63kg  |
| Operating Conditions                               | 0°C to 40°C, 10% to 90% NC  |
| Certifications                                     |   |
| Certifications                                     | CE/FCC  |

## Analogue HD Digital Recording - Concept Pro

# VXH5AHDL-16 16 Channel 5MP Hybrid DVR



The Concept Pro Lite VXH5AHDL-16 model is a sixteen channel professional DVR that can record up to 5 megapixel analogue video and 2 megapixel IP video on all channels. It is a hybrid recorder compatible with AHD, HD-TVI, traditional standard definition analogue cameras, and IP cameras. The DVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices, and compatibility with the license-free iPIMS VMS.

### Professional Remote Monitoring

Allowing installers access to repeat revenue streams, remote monitoring integration is available on all Concept Pro professional recorders to stations using Immix Cloud and Sentinel platforms.

### iPims - License Free Software

iPims is a powerful, license-free video management software solution that can connect to all Concept Pro professional IP, AHD and Analogue CCTV recorders and record footage from up to 256 recorders regardless of platform.

### Secure P2P Networking

Utilising a Secured European server, P2P is the simplest way to connect a Concept Pro professional recorder for remote viewing on smartphones and tablets.

### Sequirinet

Sequirinet enables Installers to add Enhanced Password Control (EPC) to their Professional recorder systems, ensuring our Concept Pro recorders are the most secure on the market. This prohibits the use of easily infiltrated passwords by ensuring a user creates their own complex password to access recordings stored using our secure European server.

### Features:

- 16 Channel Hybrid DVR
- AHD, TVI, CVBS and IP Compatible
- Max. 96FPS Recording @ 5MP, Max. 200FPS Recording @ 2MP
- HDMI and VGA Display Output
- CVBS Spot Monitor Output
- 8 or 16TB Internal Hard Disk
- x2 Alarm Input/x1 Alarm Output
- x4 Audio Input/x1 Audio Output
- Secure P2P/Relay Server Service
- Two Way Audio & Audio Recording
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Up the Coax (Coaxitron) Protocol Support
- RS-485 x1

### IP Hybrid Support

This Concept Pro DVR provides the facility to record various types of analogue cameras up to 5 megapixel resolution and IP cameras up to 2 megapixel resolution to one recording device and work as one system. The 16 Channel DVR allows you connect a maximum of 16 cameras in an IP and AHD combination.

### Analogue HD Typical Cable Distance

|       | 1080P      | 720P       |
|-------|------------|------------|
| COAX  | Up to 300m | Up to 500m |
| CAT5E | Up to 200m | Up to 350m |
| CAT6  | Up to 220m | Up to 385m |

### Order Codes:

- VXH5AHDL-16-8000 Concept Pro Lite Hybrid AHD recorder 16 Channel with 8TB storage
- VXH5AHDL-16-16000 Concept Pro Lite Hybrid AHD recorder 16 Channel with 16TB storage

# Analogue HD Digital Recording - Concept Pro

## Technical Specifications

| MODEL                                     | VXH5AHDL-16-8000 / VXH5AHDL-16-16TB   |
|---|---|
| Video and Audio Inputs/Outputs            |   |
| Analogue Camera Video Inputs              | 16CH  |
| Supported Analogue Formats                | AHD/TVI/CVBS  |
| Supported Video Signal Types              | PAL/NTSC  |
| Supported Analogue Resolution/Frame Rate  | 5MP@20/12FPS, 4MP@25/15FPS, 3MP@25/18FPS, 2MP@25FPS, 960H@25FPS   |
| IP Camera Video Inputs                    | Max. 16CH   |
| Supported IP Camera Resolution/Frame Rate | 2MP@25FPS   |
| Supported PTZ Protocols                   | UTC Coaxitron, RS-485 (Pelco-D, Pelco-P, and more)  |
| Audio Inputs                              | 4CH RCA   |
| Audio Outputs                             | 1CH RCA + HDMI  |
| Two-Way Audio                             | Supported   |
| Audio Compression Codec                   | G.711u  |
| Recording                                 |   |
| Video Compression Codec                   | H.264   |
| Recording Resolution                      | 5MP, 4MP, 3MP, 2MP, 1MP, 960H, D1, 2CIF, CIF  |
| Recording Rate                            | [Analogue] Max. 160FPS @ 1296x1944 (5MP Half)<br>Max. 96FPS @ 2592x1944 (5MP)<br>Max. 200FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 120FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1024x1536 (3MP Half)<br>Max. 144FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>*With Noise Filtering Turned OFF*<br>[IP] Max. 400FPS @ 1920x1080 (2MP) |
| Bit Rate                                  | CBR/VBR   |
| Recording Modes                           | Continuous, Motion, Alarm, Panic  |
| Recording Scheduling Method               | Hourly/Daily/Weekly   |
| Pre-Event Recording                       | 0/1/2/3/4/5/10/15s  |
| Post-Event Recording                      | 5/10/15/20/30/60/180s   |
| Display                                   |   |
| Main Display Outputs                      | HDMI 1EA, VGA 1EA   |
| Main Display Resolution                   | 1920x1080/1280x1024/1280x720  |
| Main Display Resolution Configuration     | Auto/Manual   |
| Dual Monitor Functions                    | Main Display Mirroring  |
| Display Rate                              | [Analogue] Max. 160FPS @ 1296x1944 (5MP Half)<br>Max. 96FPS @ 2592x1944 (5MP)<br>Max. 200FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 120FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1024x1536 (3MP Half)<br>Max. 144FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>*With Noise Filtering Turned OFF*<br>[IP] Max. 400FPS @ 1920x1080 (2MP) |
| Display Mode                              | 1CH/4CH/6CH/8CH/9CH/16CH  |
| Programmable Sequence                     | Supported, 1CH/4CH/6CH/8CH/9CH/16CH   |

## Analogue HD Digital Recording - Concept Pro

| Display (Continued)                    |   |
|--|---|
| Spot Monitor Output                    | CVBS 1EA  |
| Spot Monitor View Type                 | Programmable  |
| Search & Playback                      |   |
| Search Modes                           | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event, Text-in  |
| Event Search Options                   | All, Alarm, Motion, Video, Record, System, Storage, Network, Setup  |
| Playback Preview from Search Menu      | Yes   |
| Playback Display Mode                  | 1CH/4CH/6CH/8CH/9CH/16CH  |
| Playback Rate                          | [Analogue] Max. 160FPS @ 1296x1944 (5MP Half)<br>Max. 96FPS @ 2592x1944 (5MP)<br>Max. 200FPS @ 1344x1520/1280x1440 (4MP Half)<br>Max. 120FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1024x1536 (3MP Half)<br>Max. 144FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>*With Noise Filtering Turned OFF*<br>[IP] Max. 400FPS @ 1920x1080 (2MP) |
| Playback Speed                         | 1x, 2x, 4x, 8x, 16x, 32x, 64x   |
| Archiving                              |   |
| Archiving Devices                      | USB, FTP  |
| Remote Archiving                       | Web, iPIMS (PC), FTP  |
| Archived Video Format                  | RAW/AVI   |
| Watermarking                           | MD5, with Built-in Verification   |
| Network                                |   |
| Network Interface                      | 1EA RJ-45 10M/100M BASE-TX  |
| Max. User Connections                  | 32 users  |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH/6CH/8CH/9CH/16CH), Search, Playback, PTZ, Setup)<br>Chrome, Firefox (Live 1CH Second Stream, Setup)   |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)  |
| Remote Software                        | iPIMS (PC), SmartRA (Mac)   |
| Transmission Rate                      | Max. 400FPS   |
| Adaptive Network Streaming             | Yes   |
| P2P/Relay Server Cloud Service         | Yes, Sequirinet (European Servers)  |
| Dual SMTP E-mail Server                | Yes   |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel  |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK  |
| IP Address System                      | IPv4/IPv6   |
| Network Protocols                      | RTP, RTSP, RTCP, SMTP, NTP, HTTP, HTTPS, FTP, DDNS, DHCP, UPnP  |
| Streaming Method                       | Unicast/Multicast   |
| Alarm Interface and Event Notification |   |
| Alarm Inputs                           | x2  |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification   |
| Alarm Outputs                          | x1 Relay  |
| Motion Detection                       | Supported, 22x18 Cells  |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification  |



## Analogue HD Digital Recording - Concept Pro

| Alarm Interface and Event Notification (Continued) |   |
|--|---|
| Event Notification                                 | Buzzer, Video Pop-up, OSD Pop-up, E-mail, FTP, Mobile Push  |
| E-mail Notification                                | Text-only/Snapshot Included   |
| E-mail Notification Schedule                       | Up to 10 Schedule Profiles  |
| Alarm Arm/Disarm Switch                            | Yes   |
| Video Loss Detection                               | Yes   |
| Disk Event Detection                               | Overwrite Start, Disk Full, % Disk Space Exhausted, SMART, No Disk                                  |
| Record Event Detection                             | Panic Record Start  |
| System Event Detection                             | Booting, Log-in Fail  |
| Network Event Detection                            | Trouble in Internet Connection, Remote Log-in Fail, DDNS Update Fail, IP Conflict                   |
| Storage  |   |
| Internal Hard Disk                                 | SATA 1EA, 8TB / 16TB  |
| SMART Support                                      | Yes, Manual/Automatic   |
| Security   |   |
| Enhanced Security Rules                            | Direct ID Input, Enhanced User ID/Password Rules  |
| Covert Camera                                      | Supported, Configurable by User and Group Authority   |
| Privacy Masking                                    | Yes, Max. 4 Areas   |
| Group Authority                                    | Search, Archiving, System Setup, Record Setup, Event Action Control, Audio, Remote Access, Shutdown |
| IP Filter  | Yes   |
| Record Time Limit                                  | Yes   |
| Erase Video  | Yes   |
| RTSP Encryption                                    | SEED_128  |
| HTTPS  | Basic/Digest Authentication   |
| Password Expiration                                | Off/On (1/2/4/6 Months)   |
| Auto Log-out                                       | Off/On (1/2/3/5/10 Minutes)   |
| Search/Archiving Password Check                    | Off/On  |
| Audio Support Toggle                               | Yes   |
| Snapshot Support Toggle                            | Yes   |
| Auxiliary Interface                                |   |
| USB  | x2 (Front)  |
| RS-485   | x1  |
| Remote Control                                     | Yes (Included)  |
| Keyboard Controller                                | Yes (VA-KBDPRO+)  |
| General  |   |
| Power Supply                                       | 12VDC/3A  |
| Power Consumption                                  | Max. 14W without HDD  |
| Dimensions   | 380mm (W) x 314.6mm (D) x 44mm (H)  |
| Net Weight   | 2.58kg  |
| Gross Weight                                       | 3.69kg  |
| Operating Conditions                               | 0°C to 40°C, 10% to 90% NC  |
| Certifications                                     |   |
| Certifications                                     | CE/FCC  |

## Analogue HD Digital Recording - Concept Pro

# VXH5AHD-4-4000 4 Channel 5MP Hybrid DVR



The Concept Pro VXH5AHD-4 model is a four channel professional DVR that can record up to 5 megapixel analogue video and 5 megapixel IP video on all channels. It is a hybrid recorder compatible with AHD, HD-TVI, traditional standard definition analogue cameras, and IP cameras. Additionally, the number of channels can be expanded to a total of eight channels and the recorder features four alarm inputs. The DVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices, and compatibility with the license-free iPIMS VMS.

### Professional Remote Monitoring

Allowing installers access to repeat revenue streams, remote monitoring integration is available on all Concept Pro professional recorded to stations using Immix Cloud and Sentinel platforms

### iPims - License Free Software

iPims is a powerful, license-free video management software solution that can connect to all Concept Pro professional IP, AHD and Analogue CCTV recorders and record footage from up to 256 recorders regardless of platform.

### Secure P2P Networking

Utilising a Secured European server, P2P is the simplest way to connect a Concept Pro professional recorder for remote viewing on smartphones and tablets.

### Sequirinet

Sequirinet enables Installers to add Enhanced Password Control (EPC) to their Professional recorder systems, ensuring our Concept Pro recorders are the most secure on the market. This prohibits the use of easily infiltrated passwords by ensuring a user creates their own complex password to access recordings stored using our secure European server.

### Features:

- 4 Channel Hybrid DVR
- AHD, TVI, CVBS and IP Compatible
- Max. 80FPS Recording @ 5MP, Real-time Recording @ 4MP
- 4K HDMI and VGA Display Output
- Dual Monitor Support (Main+Spot)
- CVBS Spot Monitor Output
- 4TB Internal Hard Disk
- x4 Alarm Input/x1 Alarm Output
- x4 Audio Input/x1 Audio Output
- Secure P2P/Relay Server Service
- Two Way Audio & Audio Recording
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Up the Coax (Coaxitron) Protocol Support
- RS-485 x1

### IP Hybrid Support

This Concept Pro DVR provides the facility to record various types of analogue and IP cameras up to 5-megapixel resolution to one recording device and work as one system. The 4 Channel DVR allows you connect a maximum of 8 cameras in an IP and AHD combination.

### Analogue HD Typical Cable Distance

|       | 1080P      | 720P       |
|-------|------------|------------|
| COAX  | Up to 300m | Up to 500m |
| CAT5E | Up to 200m | Up to 350m |
| CAT6  | Up to 220m | Up to 385m |

### Order Codes:

VXH5AHD-4-4000

Concept Pro Professional Hybrid AHD recorder 4 channel with 4TB storage

# Analogue HD Digital Recording - Concept Pro

## Technical Specifications

| MODEL                                     | VXH5AHD-4-4000   |
|---|--|
| Video and Audio Inputs/Outputs            |  |
| Analogue Camera Video Inputs              | 4CH  |
| Supported Analogue Formats                | AHD/TVI/CVBS   |
| Supported Video Signal Types              | PAL/NTSC   |
| Supported Analogue Resolution/Frame Rate  | 5MP@20/12FPS, 4MP@25/15FPS, 3MP@25/18FPS, 2MP@25FPS, 960H@25FPS  |
| IP Camera Video Inputs                    | Max. 4CH   |
| Supported IP Camera Resolution/Frame Rate | 5MP@20FPS  |
| Supported PTZ Protocols                   | UTC Coaxitron, RS-485 (Pelco-D, Pelco-P, and more)   |
| Audio Inputs                              | 4CH RCA  |
| Audio Outputs                             | 1CH RCA + HDMI   |
| Two-Way Audio                             | Supported  |
| Audio Compression Codec                   | G.711u   |
| Recording                                 |  |
| Video Compression Codec                   | H.264  |
| Recording Resolution                      | 5MP, 4MP, 3MP, 2MP, 1MP, 960H, D1, 2CIF, CIF   |
| Recording Rate                            | [Analogue] Max. 80FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1920x1536 (3MP)<br>Max. 100FPS @ 1920x1080 (2MP)<br>[IP] Max. 96FPS @ 5MP<br>Max. 200FPS @ 4/3/2MP |
| Bit Rate                                  | CBR/VBR  |
| Recording Modes                           | Continuous, Motion, Alarm, Panic   |
| Recording Scheduling Method               | Hourly/Daily/Weekly  |
| Pre-Event Recording                       | 0/1/2/3/4/5/10/15s   |
| Post-Event Recording                      | 5/10/15/20/30/60/180s  |
| Display                                   |  |
| Main Display Outputs                      | HDMI 1EA, VGA 1EA  |
| Main Display Resolution                   | 3840x2160/1920x1080/1280x1024/1280x720   |
| Main Display Resolution Configuration     | Auto/Manual  |
| Dual Monitor Functions                    | Main Display Mirroring or Main Display+Spot Monitor  |
| Display Rate                              | [Analogue] Max. 80FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1920x1536 (3MP)<br>Max. 100FPS @ 1920x1080 (2MP)<br>[IP] Max. 96FPS @ 5MP<br>Max. 200FPS @ 4/3/2MP |
| Display Mode                              | 1CH/4CH/6CH/8CH/9CH  |
| Programmable Sequence                     | Supported, 1CH/4CH/6CH/8CH/9CH   |
| Spot Monitor Output                       | CVBS 1EA + HDMI/VGA  |
| Spot Monitor View Type                    | Programmable, 1CH/4CH/9CH  |
| Search & Playback                         |  |
| Search Modes                              | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event, Text-in   |

## Analogue HD Digital Recording - Concept Pro

| Search & Playback (Continued)          |  |
|--|--|
| Event Search Options                   | All, Alarm, Motion, Video, Record, System, Storage, Network, Setup   |
| Playback Preview from Search Menu      | Yes  |
| Playback Display Mode                  | 1CH/4CH/6CH/8CH/9CH  |
| Playback Rate                          | [Analogue] Max. 80FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1920x1536 (3MP)<br>Max. 100FPS @ 1920x1080 (2MP)<br>[IP] Max. 96FPS @ 5MP<br>Max. 200FPS @ 4/3/2MP |
| Playback Speed                         | 1x, 2x, 4x, 8x, 16x, 32x, 64x  |
| Archiving                              |  |
| Archiving Devices                      | USB, FTP   |
| Remote Archiving                       | Web, iPIMS (PC), FTP   |
| Archived Video Format                  | RAW/AVI  |
| Watermarking                           | MD5, with Built-in Verification  |
| Network                                |  |
| Network Interface                      | 1EA RJ-45 10M/100M BASE-TX   |
| Max. User Connections                  | 32 users   |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH/6CH/8CH/9CH), Search, Playback, PTZ, Setup)<br>Chrome, Firefox (Live 1CH Second Stream, Setup)   |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)   |
| Remote Software                        | iPIMS (PC), SmartRA (Mac)  |
| Transmission Rate                      | Max. 200FPS  |
| Adaptive Network Streaming             | Yes  |
| P2P/Relay Server Cloud Service         | Yes, Securinet (European Servers)  |
| Dual SMTP E-mail Server                | Yes  |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel   |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK   |
| IP Address System                      | IPv4/IPv6  |
| Network Protocols                      | RTP, RTSP, RTCP, SMTP, NTP, HTTP, HTTPS, FTP, DDNS, DHCP, UPnP   |
| Streaming Method                       | Unicast/Multicast  |
| Alarm Interface and Event Notification |  |
| Alarm Inputs                           | x4   |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification  |
| Alarm Outputs                          | x1 Relay   |
| Motion Detection                       | Supported, 22x18 Cells   |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification   |
| Event Notification                     | Buzzer, Video Pop-up, OSD Pop-up, E-mail, FTP, Mobile Push   |
| E-mail Notification                    | Text-only/Snapshot Included  |
| E-mail Notification Schedule           | Up to 10 Schedule Profiles   |
| Alarm Arm/Disarm Switch                | Yes  |
| Video Loss Detection                   | Yes  |
| Disk Event Detection                   | Overwrite Start, Disk Full, % Disk Space Exhausted, SMART, No Disk   |

## Analogue HD Digital Recording - Concept Pro

| Alarm Interface and Event Notification (Continued) |   |
|--|---|
| Record Event Detection                             | Panic Record Start  |
| System Event Detection                             | Booting, Log-in Fail  |
| Network Event Detection                            | Trouble in Internet Connection, Remote Log-in Fail, DDNS Update Fail, IP Conflict                   |
| Storage  |   |
| Internal Hard Disk                                 | SATA 1EA, 4TB   |
| SMART Support                                      | Yes, Manual/Automatic   |
| Security   |   |
| Enhanced Security Rules                            | Direct ID Input, Enhanced User ID/Password Rules  |
| Covert Camera                                      | Supported, Configurable by User and Group Authority   |
| Privacy Masking                                    | Yes, Max. 4 Areas   |
| Group Authority                                    | Search, Archiving, System Setup, Record Setup, Event Action Control, Audio, Remote Access, Shutdown |
| IP Filter  | Yes   |
| Record Time Limit                                  | Yes   |
| Erase Video  | Yes   |
| RTSP Encryption                                    | SEED_128  |
| HTTPS  | Basic/Digest Authentication   |
| Password Expiration                                | Off/On (1/2/4/6 Months)   |
| Auto Log-out                                       | Off/On (1/2/3/5/10 Minutes)   |
| Search/Archiving Password Check                    | Off/On  |
| Audio Support Toggle                               | Yes   |
| Snapshot Support Toggle                            | Yes   |
| Auxiliary Interface                                |   |
| USB  | x2 (Front)  |
| RS-485   | x1  |
| Remote Control                                     | Yes (Included)  |
| Keyboard Controller                                | Yes (VA-KBDPRO+)  |
| General  |   |
| Power Supply                                       | 12VDC/2A  |
| Power Consumption                                  | Max. 7W without HDD   |
| Dimensions   | 260mm (W) x 262.6mm (D) x 44mm (H)  |
| Net Weight   | 1.54kg  |
| Gross Weight                                       | 2.28kg  |
| Operating Conditions                               | 0°C to 40°C, 10% to 90% NC  |
| Certifications                                     |   |
| Certifications                                     | CE/FCC  |

## Analogue HD Digital Recording - Concept Pro

# VXH5AHD-8-6000 8 Channel 5MP Hybrid DVR



The Concept Pro VXH5AHD-8 model is an eight channel professional DVR that can record up to 5 megapixel analogue video and 5 megapixel IP video on all channels. It is a hybrid recorder compatible with AHD, HD-TVI, traditional standard definition analogue cameras, and IP cameras. Additionally, the number of channels can be expanded to a total of sixteen channels and the recorder features eight alarm inputs. The DVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices, and compatibility with the license-free iPIMS VMS.

### Professional Remote Monitoring

Allowing installers access to repeat revenue streams, remote monitoring integration is available on all Concept Pro professional recorded to stations using Immix Cloud and Sentinel platforms

### iPims - License Free Software

iPims is a powerful, license-free video management software solution that can connect to all Concept Pro professional IP, AHD and Analogue CCTV recorders and record footage from up to 256 recorders regardless of platform.

### Secure P2P Networking

Utilising a Secured European server, P2P is the simplest way to connect a Concept Pro professional recorder for remote viewing on smartphones and tablets.

### Sequirinet

Sequirinet enables Installers to add Enhanced Password Control (EPC) to their Professional recorder systems, ensuring our Concept Pro recorders are the most secure on the market. This prohibits the use of easily infiltrated passwords by ensuring a user creates their own complex password to access recordings stored using our secure European server.

### Features:

- 8 Channel Hybrid DVR
- AHD, TVI, CVBS and IP Compatible
- Max. 96FPS Recording @ 5MP, Real-time Recording @ 2MP
- 4K HDMI and VGA Display Output
- Dual Monitor Support (Main+Spot)
- CVBS Spot Monitor Output
- 6TB Internal Hard Disk
- x8 Alarm Input/x1 Alarm Output
- x4 Audio Input/x1 Audio Output
- Secure P2P/Relay Server Service
- Two Way Audio & Audio Recording
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Up the Coax (Coaxitron) Protocol Support
- RS-485 x1

### IP Hybrid Support

This Concept Pro DVR provides the facility to record high various types of analogue and IP cameras up to 5-megapixel resolution to one recording device and work as one system. The 8 Channel DVR allows you connect a maximum of 8 cameras in an IP and AHD combination.

### Analogue HD Typical Cable Distance

|       | 1080P      | 720P       |
|-------|------------|------------|
| COAX  | Up to 300m | Up to 500m |
| CAT5E | Up to 200m | Up to 350m |
| CAT6  | Up to 220m | Up to 385m |

### Order Codes:

VXH5AHD-8-6000

Concept Pro Professional Hybrid AHD recorder 8 channel with 6TB storage

# Analogue HD Digital Recording - Concept Pro

## Technical Specifications

| MODEL                                     | VXH5AHD-8-6000  |
|---|---|
| Video and Audio Inputs/Outputs            |   |
| Analogue Camera Video Inputs              | 8CH   |
| Supported Analogue Formats                | AHD/TVI/CVBS  |
| Supported Video Signal Types              | PAL/NTSC  |
| Supported Analogue Resolution/Frame Rate  | 5MP@20/12FPS, 4MP@25/15FPS, 3MP@25/18FPS, 2MP@25FPS, 960H@25FPS   |
| IP Camera Video Inputs                    | Max. 8CH  |
| Supported IP Camera Resolution/Frame Rate | 5MP@20FPS   |
| Supported PTZ Protocols                   | UTC Coaxitron, RS-485 (Pelco-D, Pelco-P, and more)  |
| Audio Inputs                              | 4CH RCA   |
| Audio Outputs                             | 1CH RCA + HDMI  |
| Two-Way Audio                             | Supported   |
| Audio Compression Codec                   | G.711u  |
| Recording                                 |   |
| Video Compression Codec                   | H.264   |
| Recording Resolution                      | 5MP, 4MP, 3MP, 2MP, 1MP, 960H, D1, 2CIF, CIF  |
| Recording Rate                            | [Analogue] Max. 96FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>[IP] Max. 192FPS @ 5MP<br>Max. 400FPS @ 4/3/2MP |
| Bit Rate                                  | CBR/VBR   |
| Recording Modes                           | Continuous, Motion, Alarm, Panic  |
| Recording Scheduling Method               | Hourly/Daily/Weekly   |
| Pre-Event Recording                       | 0/1/2/3/4/5/10/15s  |
| Post-Event Recording                      | 5/10/15/20/30/60/180s   |
| Display                                   |   |
| Main Display Outputs                      | HDMI 1EA, VGA 1EA   |
| Main Display Resolution                   | 3840x2160/1920x1080/1280x1024/1280x720  |
| Main Display Resolution Configuration     | Auto/Manual   |
| Dual Monitor Functions                    | Main Display Mirroring or Main Display+Spot Monitor   |
| Display Rate                              | [Analogue] Max. 96FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>[IP] Max. 192FPS @ 5MP<br>Max. 400FPS @ 4/3/2MP |
| Display Mode                              | 1CH/4CH/6CH/8CH/9CH/16CH  |
| Programmable Sequence                     | Supported, 1CH/4CH/6CH/8CH/9CH/16CH   |
| Spot Monitor Output                       | CVBS 1EA + HDMI/VGA   |
| Spot Monitor View Type                    | Programmable, 1CH/4CH/9CH/16CH  |
| Search & Playback                         |   |
| Search Modes                              | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event, Text-in  |

## Analogue HD Digital Recording - Concept Pro

| Search & Playback (Continued)          |   |
|--|---|
| Event Search Options                   | All, Alarm, Motion, Video, Record, System, Storage, Network, Setup  |
| Playback Preview from Search Menu      | Yes   |
| Playback Display Mode                  | 1CH/4CH/6CH/8CH/9CH   |
| Playback Rate                          | [Analogue] Max. 96FPS @ 2592x1944 (5MP)<br>Max. 100FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 100FPS @ 1920x1536 (3MP)<br>Max. 200FPS @ 1920x1080 (2MP)<br>[IP] Max. 192FPS @ 5MP<br>Max. 400FPS @ 4/3/2MP |
| Playback Speed                         | 1x, 2x, 4x, 8x, 16x, 32x, 64x   |
| Archiving                              |   |
| Archiving Devices                      | USB, FTP  |
| Remote Archiving                       | Web, iPIMS (PC), FTP  |
| Archived Video Format                  | RAW/AVI   |
| Watermarking                           | MD5, with Built-in Verification   |
| Network                                |   |
| Network Interface                      | 1EA RJ-45 10M/100M BASE-TX  |
| Max. User Connections                  | 32 users  |
| Remote Web Access                      | Internet Explorer (Live 1CH/4CH/6CH/8CH/9CH/16CH), Search, Playback, PTZ, Setup)<br>Chrome, Firefox (Live 1CH Second Stream, Setup)   |
| Smart Phone Mobile App                 | Concept Pro Viewer (iOS/Android)  |
| Remote Software                        | iPIMS (PC), SmartRA (Mac)   |
| Transmission Rate                      | Max. 400FPS   |
| Adaptive Network Streaming             | Yes   |
| P2P/Relay Server Cloud Service         | Yes, Securinet (European Servers)   |
| Dual SMTP E-mail Server                | Yes   |
| Remote Monitoring                      | Sureview Immix, Monitorsoft Sentinel  |
| Interoperability                       | ONVIF Profile S, HTTP/RTSP SDK  |
| IP Address System                      | IPv4/IPv6   |
| Network Protocols                      | RTP, RTSP, RTCP, SMTP, NTP, HTTP, HTTPS, FTP, DDNS, DHCP, UPnP  |
| Streaming Method                       | Unicast/Multicast   |
| Alarm Interface and Event Notification |   |
| Alarm Inputs                           | x8  |
| Alarm Input Trigger Actions            | Alarm Recording, Alarm Output, PTZ Preset, Event Notification   |
| Alarm Outputs                          | x1 Relay  |
| Motion Detection                       | Supported, 22x18 Cells  |
| Motion Detection Trigger Actions       | Motion Recording, Alarm Output, PTZ Preset, Event Notification  |
| Event Notification                     | Buzzer, Video Pop-up, OSD Pop-up, E-mail, FTP, Mobile Push  |
| E-mail Notification                    | Text-only/Snapshot Included   |
| E-mail Notification Schedule           | Up to 10 Schedule Profiles  |
| Alarm Arm/Disarm Switch                | Yes   |
| Video Loss Detection                   | Yes   |
| Disk Event Detection                   | Overwrite Start, Disk Full, % Disk Space Exhausted, SMART, No Disk  |



## Analogue HD Digital Recording - Concept Pro

| Alarm Interface and Event Notification (Continued) |   |
|--|---|
| Record Event Detection                             | Panic Record Start  |
| System Event Detection                             | Booting, Log-in Fail  |
| Network Event Detection                            | Trouble in Internet Connection, Remote Log-in Fail, DDNS Update Fail, IP Conflict                   |
| Storage  |   |
| Internal Hard Disk                                 | SATA 1EA, 6TB   |
| SMART Support                                      | Yes, Manual/Automatic   |
| Security   |   |
| Enhanced Security Rules                            | Direct ID Input, Enhanced User ID/Password Rules  |
| Covert Camera                                      | Supported, Configurable by User and Group Authority   |
| Privacy Masking                                    | Yes, Max. 4 Areas   |
| Group Authority                                    | Search, Archiving, System Setup, Record Setup, Event Action Control, Audio, Remote Access, Shutdown |
| IP Filter  | Yes   |
| Record Time Limit                                  | Yes   |
| Erase Video  | Yes   |
| RTSP Encryption                                    | SEED_128  |
| HTTPS  | Basic/Digest Authentication   |
| Password Expiration                                | Off/On (1/2/4/6 Months)   |
| Auto Log-out                                       | Off/On (1/2/3/5/10 Minutes)   |
| Search/Archiving Password Check                    | Off/On  |
| Audio Support Toggle                               | Yes   |
| Snapshot Support Toggle                            | Yes   |
| Auxiliary Interface                                |   |
| USB  | x2 (Front)  |
| RS-485   | x1  |
| Remote Control                                     | Yes (Included)  |
| Keyboard Controller                                | Yes (VA-KBDPRO+)  |
| General  |   |
| Power Supply                                       | 12VDC/3A  |
| Power Consumption                                  | Max. 13W without HDD  |
| Dimensions   | 380mm (W) x 314.6mm (D) x 44mm (H)  |
| Net Weight   | 2.52kg  |
| Gross Weight                                       | 3.63kg  |
| Operating Conditions                               | 0°C to 40°C, 10% to 90% NC  |
| Certifications                                     |   |
| Certifications                                     | CE/FCC  |

## Analogue HD Digital Recording - Concept Pro

# VXH5AHD-16-6000 / VXH5AHD-16-16000 16 Channel 5MP Hybrid DVRs



The Concept Pro VXH5AHD-16 model is a sixteen channel professional DVR that can record up to 5 megapixel analogue video and 5 megapixel IP video on all channels. It is a hybrid recorder compatible with AHD, HD-TVI, traditional standard definition analogue cameras, and IP cameras. Additionally, the recorder features sixteen alarm inputs. The DVR offers a range of features suited for advanced applications, including remote monitoring station integration, P2P connectivity for remote viewing on mobile devices, and compatibility with the license-free iPIMS VMS.

### Professional Remote Monitoring

Allowing installers access to repeat revenue streams, remote monitoring integration is available on all Concept Pro professional recorded to stations using Immix Cloud and Sentinel platforms

### iPims - License Free Software

iPims is a powerful, license-free video management software solution that can connect to all Concept Pro professional IP, AHD and Analogue CCTV recorders and record footage from up to 256 recorders regardless of platform.

### Secure P2P Networking

Utilising a Secured European server, P2P is the simplest way to connect a Concept Pro professional recorder for remote viewing on smartphones and tablets.

### Sequirinet

Sequirinet enables Installers to add Enhanced Password Control (EPC) to their Professional recorder systems, ensuring our Concept Pro recorders are the most secure on the market. This prohibits the use of easily infiltrated passwords by ensuring a user creates their own complex password to access recordings stored using our secure European server.

### Features:

- 16 Channel Hybrid DVR
- AHD, TVI, CVBS and IP Compatible
- Max. 192FPS Recording @ 5MP, Realtime Recording @ 2MP
- 4K HDMI and VGA Display Output
- Dual Monitor Support (Main+Spot)
- CVBS Spot Monitor Output
- 6TB or 16TB Internal Hard Disk
- x16 Alarm Input/x1 Alarm Output
- x4 Audio Input/x1 Audio Output
- Secure P2P/Relay Server Service
- Two Way Audio & Audio Recording
- Remote Monitoring via Concept Pro Viewer Mobile App
- Supported by iPIMS License-free VMS
- Thumbnail and Event Search
- Instant Playback
- Up the Coax (Coaxitron) Protocol Support
- RS-485 x1

### IP Hybrid Support

This Concept Pro DVR provides the facility to record various types of analogue and IP cameras up to 5-megapixel resolution to one recording device and work as one system. The 16 Channel DVR allows you connect a maximum of 16 cameras in an IP and AHD combination.

### Analogue HD Typical Cable Distance

|       | 1080P      | 720P       |
|-------|------------|------------|
| COAX  | Up to 300m | Up to 500m |
| CAT5E | Up to 200m | Up to 350m |
| CAT6  | Up to 220m | Up to 385m |

### Order Codes:

VXH5AHD-16-6000

Concept Pro Professional Hybrid AHD recorder 16 channel with 6TB storage.

VXH5AHD-16-16000

Concept Pro Professional Hybrid AHD recorder 16 channel with 16TB storage.

# Analogue HD Digital Recording - Concept Pro

## Technical Specifications

| MODEL                                     | VXH5AHD-16-6000   | VXH5AHD-16-6000 |
|---|---|-----------------|
| Video and Audio Inputs/Outputs            |   |                 |
| Analogue Camera Video Inputs              | 16CH  |                 |
| Supported Analogue Formats                | AHD/TVI/CVBS  |                 |
| Supported Video Signal Types              | PAL/NTSC  |                 |
| Supported Analogue Resolution/Frame Rate  | 5MP@20/12FPS, 4MP@25/15FPS, 3MP@25/18FPS, 2MP@25FPS, 960H@25FPS   |                 |
| IP Camera Video Inputs                    | Max. 16CH   |                 |
| Supported IP Camera Resolution/Frame Rate | 5MP@20FPS   |                 |
| Supported PTZ Protocols                   | UTC Coaxitron, RS-485 (Pelco-D, Pelco-P, and more)  |                 |
| Audio Inputs                              | 4CH RCA   |                 |
| Audio Outputs                             | 1CH RCA + HDMI  |                 |
| Two-Way Audio                             | Supported   |                 |
| Audio Compression Codec                   | G.711u  |                 |
| Recording                                 |   |                 |
| Video Compression Codec                   | H.264   |                 |
| Recording Resolution                      | 5MP, 4MP, 3MP, 2MP, 1MP, 960H, D1, 2CIF, CIF  |                 |
| Recording Rate                            | [Analogue] Max. 192FPS @ 2592x1944 (5MP)<br>Max.200FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1920x1536 (3MP)<br>Max. 400FPS @ 1920x1080 (2MP)<br>[IP] Max. 192FPS @ 5MP<br>Max. 400FPS @ 4/3/2MP |                 |
| Bit Rate                                  | CBR/VBR   |                 |
| Recording Modes                           | Continuous, Motion, Alarm, Panic  |                 |
| Recording Scheduling Method               | Hourly/Daily/Weekly   |                 |
| Pre-Event Recording                       | 0/1/2/3/4/5/10/15s  |                 |
| Post-Event Recording                      | 5/10/15/20/30/60/180s   |                 |
| Display                                   |   |                 |
| Main Display Outputs                      | HDMI 1EA, VGA 1EA   |                 |
| Main Display Resolution                   | 3840x2160/1920x1080/1280x1024/1280x720  |                 |
| Main Display Resolution Configuration     | Auto/Manual   |                 |
| Dual Monitor Functions                    | Main Display Mirroring or Main Display+Spot Monitor   |                 |
| Display Rate                              | [Analogue] Max. 192FPS @ 2592x1944 (5MP)<br>Max.200FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1920x1536 (3MP)<br>Max. 400FPS @ 1920x1080 (2MP)<br>[IP] Max. 192FPS @ 5MP<br>Max. 400FPS @ 4/3/2MP |                 |
| Display Mode                              | 1CH/4CH/6CH/8CH/9CH/16CH  |                 |
| Programmable Sequence                     | Supported, 1CH/4CH/6CH/8CH/9CH/16CH   |                 |
| Spot Monitor Output                       | CVBS 1EA + HDMI/VGA   |                 |
| Spot Monitor View Type                    | Programmable, 1CH/4CH/9CH/16CH  |                 |
| Search & Playback                         |   |                 |
| Search Modes                              | Calendar (Date/Time HH:MM:SS), Timeline, Thumbnail, Event, Text-in  |                 |

## Analogue HD Digital Recording - Concept Pro

| Search & Playback (Continued)                 | VXH5AHD-16-6000   | VXH5AHD-16-6000 |
|---|---|-----------------|
| Event Search Options                          | All, Alarm, Motion, Video, Record, System, Storage, Network, Setup  |                 |
| Playback Preview from Search Menu             | Yes   |                 |
| Playback Display Mode                         | 1CH/4CH/6CH/8CH/9CH/16CH  |                 |
| Playback Rate                                 | [Analogue] Max. 192FPS @ 2592x1944 (5MP)<br>Max.200FPS @ 2688x1520/2560x1440 (4MP)<br>Max. 200FPS @ 1920x1536 (3MP)<br>Max. 400FPS @ 1920x1080 (2MP)<br>[IP] Max. 192FPS @ 5MP<br>Max. 400FPS @ 4/3/2MP |                 |
| Playback Speed                                | 1x, 2x, 4x, 8x, 16x, 32x, 64x   |                 |
| <b>Archiving</b>                              |   |                 |
| Archiving Devices                             | USB, FTP  |                 |
| Remote Archiving                              | Web, iPIMS (PC), FTP  |                 |
| Archived Video Format                         | RAW/AVI   |                 |
| Watermarking                                  | MD5, with Built-in Verification   |                 |
| <b>Network</b>                                |   |                 |
| Network Interface                             | 1EA RJ-45 10M/100MBASE-TX   |                 |
| Max. User Connections                         | 32 users  |                 |
| Remote Web Access                             | Internet Explorer (Live 1CH/4CH/6CH/8CH/9CH/16CH), Search, Playback, PTZ, Setup)<br>Chrome, Firefox (Live 1CH Second Stream, Setup)   |                 |
| Smart Phone Mobile App                        | Concept Pro Viewer (iOS/Android)  |                 |
| Remote Software                               | iPIMS (PC), SmartRA (Mac)   |                 |
| Transmission Rate                             | Max. 400FPS   |                 |
| Adaptive Network Streaming                    | Yes   |                 |
| P2P/Relay Server Cloud Service                | Yes, Securinet (European Servers)   |                 |
| Dual SMTP E-mail Server                       | Yes   |                 |
| Remote Monitoring                             | Sureview Immix, Monitorsoft Sentinel  |                 |
| Interoperability                              | ONVIF Profile S, HTTP/RTSP SDK  |                 |
| IP Address System                             | IPv4/IPv6   |                 |
| Network Protocols                             | RTP, RTSP, RTCP, SMTP, NTP, HTTP, HTTPS, FTP, DDNS, DHCP, UPnP  |                 |
| Streaming Method                              | Unicast/Multicast   |                 |
| <b>Alarm Interface and Event Notification</b> |   |                 |
| Alarm Inputs                                  | x16   |                 |
| Alarm Input Trigger Actions                   | Alarm Recording, Alarm Output, PTZ Preset, Event Notification   |                 |
| Alarm Outputs                                 | x1 Relay  |                 |
| Motion Detection                              | Supported, 22x18 Cells  |                 |
| Motion Detection Trigger Actions              | Motion Recording, Alarm Output, PTZ Preset, Event Notification  |                 |
| Event Notification                            | Buzzer, Video Pop-up, OSD Pop-up, E-mail, FTP, Mobile Push  |                 |
| E-mail Notification                           | Text-only/Snapshot Included   |                 |
| E-mail Notification Schedule                  | Up to 10 Schedule Profiles  |                 |
| Alarm Arm/Disarm Switch                       | Yes   |                 |
| Video Loss Detection                          | Yes   |                 |
| Disk Event Detection                          | Overwrite Start, Disk Full, % Disk Space Exhausted, SMART, No Disk  |                 |

## Analogue HD Digital Recording - Concept Pro

| Alarm Interface and Event Notification (Cont) | VXH5AHD-16-6000   | VXH5AHD-16-6000 |
|---|---|-----------------|
| Record Event Detection                        | Panic Record Start  |                 |
| System Event Detection                        | Bootling, Log-in Fail   |                 |
| Network Event Detection                       | Trouble in Internet Connection, Remote Log-in Fail, DDNS Update Fail, IP Conflict                   |                 |
| Storage                                       |   |                 |
| Internal Hard Disk                            | SATA 1EA, 6TB   | SATA 1EA, 16TB  |
| SMART Support                                 | Yes, Manual/Automatic   |                 |
| Security                                      |   |                 |
| Enhanced Security Rules                       | Direct ID Input, Enhanced User ID/Password Rules  |                 |
| Covert Camera                                 | Supported, Configurable by User and Group Authority   |                 |
| Privacy Masking                               | Yes, Max. 4 Areas   |                 |
| Group Authority                               | Search, Archiving, System Setup, Record Setup, Event Action Control, Audio, Remote Access, Shutdown |                 |
| IP Filter                                     | Yes   |                 |
| Record Time Limit                             | Yes   |                 |
| Erase Video                                   | Yes   |                 |
| RTSP Encryption                               | SEED_128  |                 |
| HTTPS   | Basic/Digest Authentication   |                 |
| Password Expiration                           | Off/On (1/2/4/6 Months)   |                 |
| Auto Log-out                                  | Off/On (1/2/3/5/10 Minutes)   |                 |
| Search/Archiving Password Check               | Off/On  |                 |
| Audio Support Toggle                          | Yes   |                 |
| Snapshot Support Toggle                       | Yes   |                 |
| Auxiliary Interface                           |   |                 |
| USB   | x2 (Front)  |                 |
| RS-485  | x1  |                 |
| Remote Control                                | Yes (Included)  |                 |
| Keyboard Controller                           | Yes (VA-KBDPRO+)  |                 |
| General                                       |   |                 |
| Power Supply                                  | 12VDC/3A  |                 |
| Power Consumption                             | Max. 16W without HDD  |                 |
| Dimensions                                    | 380mm (W) x 314.6mm (D) x 44mm (H)  |                 |
| Net Weight                                    | 2.58kg  |                 |
| Gross Weight                                  | 3.69kg  |                 |
| Operating Conditions                          | 0°C to 40°C, 10% to 90% NC  |                 |
| Certifications                                |   |                 |
| Certifications                                | CE/FCC  |                 |

# exacqVision Q-Series IP Servers & Hybrid Recorder



## Features:

- Ideal small business solution
- Cost-effective NVR & live monitoring station
- Supports up to 24 IP and 16 analogue cameras
- 4 Professional IP camera licenses included

The Q-Series network video recorder offers an easy-to-use video recording upgrade solution for an existing installation of analogue cameras, or provides a fully featured dedicated IP camera solution for brand new systems.

The exacqVision Q-Series brings together an optimal combination of performance and affordability into a single network video recording solution. This cost-effective NVR offers support for up to 24 IP and 16 analogue cameras and doubles as a live monitoring station.

Shipping with 4 free exacqVision Professional IP camera licenses enables the user to benefit from such features as Mapping and Archiving.

A 3 year included Software Support Agreement means that the Q-Series NVR can be easily kept up to date with all of the latest feature releases.

### Use Case:

The Q-Series is ideal for businesses with smaller locations searching for an uncompromising NVR and an attractive total cost of ownership.

A combination of up to 12TB of on-board storage together with a 150Mbps throughput provides the flexibility to install high MP cameras, such as 4Ks, Fisheyes and Multi-Sensors, without the need to use a large higher capacity NVR. This helps to keep down installation costs. The NDAA-compliant Q-Series leverages the benefits of integrating to an IP-capable system without sacrificing any existing analogue infrastructure.

### Compatibility and Accessories:

Supports IP and analogue cameras from thousands of camera models. USB I/O module, rackmount shelf, and surveillance keypad compatible

### Flexible installation, simplified support

The Q-Series has a desktop form factor or can be easily installed on a server rack using the available rackmount shelf option. An optional surveillance keypad provides advanced controls at the fingertips of monitoring personnel, or easily add configurable trigger inputs and outputs with an optional external USB I/O module.

### Safeguard against cyber attacks

The exacqVision Q-Series is NDAA compliant and is designed to be resilient against cyber threats. Tyco Exacq adheres to the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program. This holistic approach to cyber protection is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through development, including a rapid response to meet the comprehensive and evolving cybersecurity environments.

## IP and Hybrid Servers - Exacq

| Features                                    | Benefits   |
|---|--|
| Cost-effective NVR                          | The new exacqVision Q-Series brings together an optimal combination of performance and affordability into a single network video recording solution that doubles as a live monitoring station. This solution offers the best combination of the systems it is replacing - the performance of an ELP-Series, at the price of an LC-Series |
| Uncompromising Performance                  | With an Intel chip at its core and a full Ubuntu 18.04 desktop on a solid-state drive, this NVR and live video monitoring station features impressive local client performance. Users can watch 16 live, full HD streams simultaneously at 15 frames per second. The system also supports thousands of camera models.                    |
| Hybrid and IP Options                       | The IP system supports 24 IP cameras and the hybrid system supports 16 analogue cameras in addition to the 24 IP cameras.  |
| exacqVision Professional IP camera licenses | Ships with 4 free exacqVision Professional software licenses, unlimited software updates for 3 years and open camera support.  |
| Rich set of accessories available           | Add configurable trigger inputs and outputs with an optional external USB I/O module. With a desktop form factor, the Q-Series can be easily used on a server rack using the available rackmount shelf option, and the surveillance keypad provides advanced control of a video security solution.                                       |
| Simplified installation and support         | Using a single vendor for hardware and software reduces installation risk and improves the support experience throughout the product's lifecycle.  |

### Technical Specifications

|                                   |   |
|-----------------------------------|---|
| Maximum IP Cameras                | 24  |
| Included IP Licenses              | 4   |
| Pre-Loaded VMS Software           | Professional                                  |
| Typical Video Storage Rate (Mbps) | 150 Mbps                                      |
| Local Client Display Rate (FPS)   | 240 @ HD resolution / 600 @ analog resolution |
| Maximum Hard Drives               | 1   |
| Maximum Storage                   | 12TB  |
| Monitor Output                    | HDMI, VGA, DP, DVI-D                          |
| Operating System                  | Ubuntu Linux 18.04                            |
| CPU                               | Intel Celeron                                 |
| RAM                               | 4 GB  |
| NIC                               | 2x 1 Gbps                                     |
| USB                               | 4 x USB 2.0, 2 x USB 3.0                      |
| Analog Inputs (Hybrid systems)    | 8/16  |
| Compression (Hybrid systems)      | H.264, MJPEG                                  |
| Frame Rate (Hybrid systems)       | 240/480 (NTSC) / 200/400 (PAL)                |
| Alarm Inputs                      | Up to 48 (Optional External)                  |
| Alarm Outputs                     | Up to 20 24 TTL, 6 Relay (Optional External)  |
| Analog Outputs (Hybrid systems)   | 1 multiplexed                                 |
| Audio Inputs (Hybrid systems)     | 8/16  |
| Keyboard & Mouse                  | Included                                      |
| Regulatory                        | CE, FCC, UL                                   |

## IP and Hybrid Servers - Exacq

### Order Codes:

Solutions supporting upto 8 analogue cameras:

|            |  |
|------------|--|
| 0804-02T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 8 analogue at 30 FPS. Includes 2TB Storage capacity.   |
| 0804-04T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 8 analogue at 30 FPS. Includes 4TB Storage capacity.   |
| 0804-06T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 8 analogue at 30 FPS. Includes 6TB Storage capacity.   |
| 0804-08T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 8 analogue at 30 FPS. Includes 8TB Storage capacity.   |
| 0804-12T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 8 analogue at 30FPS. Includes 12TB Storage capacity.   |
| 1604-02T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 16 analogue at 30 FPS. Includes 2TB Storage capacity.  |
| 1604-04T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 16 analogue at 30 FPS. Includes 4TB Storage capacity.  |
| 1604-06T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 16 analogue at 30 FPS. Includes 6TB Storage capacity.  |
| 1604-08T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 16 analogue at 30 FPS. Includes 8TB Storage capacity.  |
| 1604-12T-Q | Hybrid Desktop recorder with 4 IP cameras licenses (24 max) and 16 analogue at 30 FPS. Includes 12TB Storage capacity. |

IP only camera models:

|            |  |
|------------|--|
| IP04-02T-Q | IP Desktop recorder with 4 IP cameras licenses (24 max). Includes 2TB Storage capacity.  |
| IP04-04T-Q | IP Desktop recorder with 4 IP cameras licenses (24 max). Includes 4TB Storage capacity.  |
| IP04-06T-Q | IP Desktop recorder with 4 IP cameras licenses (24 max). Includes 6TB Storage capacity.  |
| IP04-08T-Q | IP Desktop recorder with 4 IP cameras licenses (24 max). Includes 8TB Storage capacity.  |
| IP04-12T-Q | IP Desktop recorder with 4 IP cameras licenses (24 max). Includes 12TB Storage capacity. |



## exacqVision G Series Micro Server



The exacqVision G-Series Micro NVR is a cost effective video recording solution designed for customers who want to leverage the enhanced accessibility and reliability of cloud video storage with low upfront costs.

A compact 'gateway' to the cloud, exacqVision G-Series Micro NVR supports the newly released exacqVision Cloud Drive storage, giving customers an economical option to store, access, and search critical surveillance video in the cloud from up to eight IP cameras.

### Affordable Access to Cloud Video Storage

The exacqVision G-Series Micro NVR is an affordable video recording solution designed for customers who want to leverage the enhanced accessibility and reliability of cloud video storage with low upfront costs. A compact 'gateway' to the cloud, the G-Series Micro supports exacqVision Cloud Drive storage, giving customers a cost-effective option to store, access, and search critical surveillance video in the cloud from up to 8 IP cameras. The system includes exacqVision Professional VMS software and two free professional IP camera licenses.

### Reliable and Compact Recording Solution

The G-Series Micro is compact and can be easily mounted to a wall or in any covert location - ideal for applications without the space for a large video management system. The system's fan-less convection cooling offers quiet, failure-resistant operation, and is ruggedized to handle environmental factors such as high temperatures and dust. It is perfect for businesses demanding zero disruption to operations

### Features:

- Low-cost gateway to video in the cloud
- Supports exacqVision Cloud Drive storage
- Compact size ideal for space constrained applications
- Fan-less convection cooling offers quiet, failure-resistant operation
- Supports up to 8 IP cameras
- Includes exacqVision Professional and two IP camera licenses
- Versatile VESA mount provides flexibility
- 3-year hardware warranty, and 3 years of free software updates

### Safeguard Against Cyber Attacks Across Devices

exacqVision G-Series Network Video Recorders (NVR) have been designed to be resilient against cyber-threats. This solution includes role based access control that allows administrators to restrict access to functions and cameras by user role. Safeguard controls include an enhanced security mode which forces the use of complex, non-default passwords and encrypted communications. G-Series NVRs adheres to the rigorous standards of the Tyco Cyber Protection Product Security Program. The holistic approach to cyber protection is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

## IP and Hybrid Servers - Exacq

### Technical Specifications

| Capacity, Features & Licensing |  |
|--------------------------------|--|
| Maximum IP Cameras             | 8  |
| Included IP Licenses           | 2 Professional Licenses  |
| Audio Inputs                   | 1  |
| Audio Outputs                  | 1  |
| Pre-Loaded VMS Software        | exacqVision Professional (included); exacqVision Enterprise (optional) |
| Typical Video Storage Rate     | 60 MBps  |
| Local Client Performance       | Client use recommended only for configuration purposes                 |
| Hardware Requirements          |  |
| Maximum Hard Drives            | 1  |
| Maximum Storage                | 1 TB   |
| Monitor Output                 | HDMI, Mini DP  |
| Operating System               | Ubuntu Linux 16.04   |
| CPU                            | Intel Celeron  |
| RAM                            | 2 GB   |
| NIC                            | 2 x 1 Gbps   |
| USB                            | 4 (2 front, 2 rear)  |
| Included Peripherals           | Mouse  |
| General                        |  |
| Dimensions                     | 11.2 cm x 8.4 cm x 2.4 cm  |
| Weight                         | 0.45 Kg  |
| Input Voltage                  | 12V-DC, 7.5A   |
| Operating Temperature          | 0° - 45°C  |
| Regulatory                     | CE, FCC  |

### Order Codes:

**IP02-01T-GM**      exacqVision G-Series Micro, 1TB, includes 2 Professional IP licenses and 1 year of Cloud Storage

#### Accessories:

**EVCD-01-1MB**      1-year Cloud Drive subscription for 1 day of retention for a 1Mb/s continuous video stream. Equivalent to 2880 30-second clips

**5000-50300**      Rack Shelf

**5000-50301**      VESA mount bracket for G-Series Micro

# exacqVision G-Series PoE Network Video Recorder



As a range of 4, 8 and now 16 PoE channel systems, the exacqVision G-Series PoE offers sophisticated performance from a cost-effective NVR without the hassle of wiring cameras to a power supply, or a PoE switch. Equipped with a generous PoE budget, this NVR delivers an average of 15 watts simultaneously on all ports, and up to 30 watts on any port, giving customers substantial flexibility in choosing cameras, many with exacq EasyConnect the simple plug-and-play setup.

In addition to the new 16ch model, the G-Series PoE NVRs are now bundled with exacqVision Professional Edition IP camera licenses which means that the system operator is able to use such features as Mapping, Archiving, Multi-streaming and other such operational benefits. Additionally the 3 year included Software Support Agreement means that the G-Series NVR can be easily kept up to date with the latest feature releases.

Do the introduction of these new G-Series models the LC Una models shown below will be discontinued once current inventory has been exhausted.

Whilst its footprint is small, this solution is uncompromising and is ideal for customers with smaller facilities, or as part of a larger deployment of exacq NVRs. A choice of up to 12TB of local storage provides the flexibility to select the model best suited to the installation and, additionally, the local storage can easily be augmented with exacqVision Cloud Drive storage for customers looking to store critical video data off-site and access it from any location.

## Features:

- Single NVR pre-loaded with exacqVision VMS
- Ships with free exacqVision Professional IP camera licenses
- Unlimited exacqVision VMS software updates for 3 years
- Flexible installation with rack and wall-mount options
- 4, 8, 16 PoE camera ports with no external switch required
- Generous PoE budget of 15W simultaneous on all ports and up to 30W on any port
- NVR doubles as a live-view monitoring station
- Remotely power recycle cameras with the click of a button from exacqVision Client

## Order Codes:

|               |   |
|---------------|---|
| IP02-01T-GP04 | G-Series 4 port PoE 60W, 1TB, 2 Professional licenses, 60Mbps                   |
| IP02-02T-GP04 | G-Series 4 port PoE 60W, 2TB, 2 Professional licenses, 60Mbps                   |
| IP02-04T-GP04 | G-Series 4 port PoE 60W, 4TB, 2 Professional licenses, 60Mbps                   |
| IP04-02T-GP08 | G-Series 8 port PoE 120W, 2TB, 4 Professional licenses, 60Mbps                  |
| IP04-04T-GP08 | G-Series 8 port PoE 120W, 4TB, 4 Professional licenses, 60Mbps                  |
| IP04-06T-GP08 | G-Series 8 port PoE 120W, 6TB, 4 Professional licenses, 60Mbps                  |
| IP04-08T-GP08 | G-Series 8 port PoE 120W, 8TB, 4 Professional licenses, 60Mbps                  |
| IP04-12T-GP08 | G-Series 8 port PoE 120W, 12TB, 4 Professional licenses, 60Mbps                 |
| IP04-02T-GP16 | Desktop PoE recorder with 16 PoE+ IP camera ports, 2TB storage, 4 Pro Licenses  |
| IP04-04T-GP16 | Desktop PoE recorder with 16 PoE+ IP camera ports, 4TB storage, 4 Pro Licenses  |
| IP04-06T-GP16 | Desktop PoE recorder with 16 PoE+ IP camera ports, 6TB storage, 4 Pro Licenses  |
| IP04-08T-GP16 | Desktop PoE recorder with 16 PoE+ IP camera ports, 8TB storage, 4 Pro Licenses  |
| IP04-12T-GP16 | Desktop PoE recorder with 16 PoE+ IP camera ports, 12TB storage, 4 Pro Licenses |

## IP and Hybrid Servers - Exacq

### Technical Specifications

|                                   | G-Series PoE 4-Port   | G-Series PoE 8-Port  | G-Series PoE 16-Port   |
|-----------------------------------|---|--|--|
| PoE Camera Ports                  | 4   | 8  | 16   |
| Included IP Licenses              | 2 PRO   | 4 PRO  | 4 PRO  |
| PoE Power                         | 15 W (all ports simultaneously)<br>30 W max (indiv. port)<br>60 W (total) | 15 W (all ports simultaneously)<br>30 W max (indiv. port)<br>120 W (total) | 15 W (all ports simultaneously)<br>30 W max (indiv. port)<br>240 W (total) |
| Pre-Loaded VMS Software           | Professional<br>Enterprise (Optional)                                     | Professional<br>Enterprise (Optional)                                      | Professional<br>Enterprise (Optional)                                      |
| Include SSA                       | 3 Years   | 3 Years  | 3 Years  |
| Operating System                  | Linux Ubuntu 18.04  | Linux Ubuntu 18.04   | Linux Ubuntu 18.04   |
| Maximum Storage                   | 4TB   | 12TB   | 12TB   |
| Maximum Hard Drives               | 1   | 1  | 1  |
| Typical Video Storage Rate        | 60 Mbps   | 60 Mbps  | 120 Mbps   |
| Local Client Display Rate (1080p) | 4 streams @ 15 FPS each   | 8 streams @ 15 FPS each  | 16 streams @ 15 FPS each   |
| CPU                               | Intel® Atom   | Intel® Atom  | Intel® Atom  |
| RAM                               | 4 GB  | 4 GB   | 4 GB   |
| Monitor Input                     | DisplayPort, HDMI<br>2 Simultaneous                                       | DisplayPort, HDMI<br>2 Simultaneous  | DisplayPort, HDMI<br>2 Simultaneous  |
| NIC                               | 2 x 1 Gbps  | 2 x 1 Gbps   | 2 x 1 Gbps   |
| USB                               | 2 USB 2.0 Front, 2 USB 3.0 Rear   | 2 USB 2.0 Front, 2 USB 3.0 Rear  | 2 USB 2.0 Front, 2 USB 3.0 Rear  |
| Audio Inputs                      | 1   | 1  | 1  |
| Audio Outputs                     | 1   | 1  | 1  |
| DVD                               | External (Optional)   | External (Optional)  | External (Optional)  |
| Accessories                       | Keyboard (on-screen),<br>Mouse  | Keyboard (on-screen),<br>Mouse   | Keyboard (on-screen),<br>Mouse   |
| Dimensions (H x W x D)            | 4.4 x 27.5 x 22 cm  | 4.4 x 27.5 x 22 cm   | 4.4 x 32 x 28 cm   |
| Weight                            | 2.72 kg   | 2.72 kg  | 4.54 kg  |
| Regulatory                        | UL, CE, FCC   | UL, CE, FCC  | UL, CE, FCC  |
| Input Voltage                     | 56V-DC, 1.8A<br>Auto-Sensing  | 56V-DC, 3.2A<br>Auto-Sensing   | 56V-DC, 5.53A<br>Auto-Sensing  |
| Power Supplies                    | Single  | Single   | Single   |
| Power & Heat                      | 100 Watts/342 BTU/h (Max)<br>23 Watts/78 BTU/h + POE Usage (Typical)      | 180 Watts/614 BTU/h (Max)<br>23 Watts/78 BTU/h + POE Usage (Typical)       | 310 Watts/ 1058 BTU/h (Max)<br>70 Watts/239 BTU/h + POE Usage (Typical)    |
| Operating Temperature             | 0° - 40°C   | 0° - 40°C  | 0° - 40°C  |
| Warranty                          | 3 Years   | 3 Years  | 3 Years  |

## Recordable CD-R / DVD-R

This section contains information on products that help to achieve compliance with the Data Protection Act and accessories for use with Digital Video recorders.



### Features:

- Write once optical media
- CD-R or DVD-R for increased storage capacity
- Supplied in packs of 10
- ADT Branding

### Order Code:

604.002.229

ADT.DVD.PACK



Recordable CD-R Branded ADT (Pack of 10). Suitable for archiving with all stocked DVR's featuring a recordable CD drive (UK Only)

ADT Branded DVD-R (Pack of 10). Suitable for archiving with all stocked DVR's featuring a recordable DVD drive

\* except the American Dynamics HDVR range (see below)

## 8GB Flash Memory Stick



### Features:

- Compact design – easily transportable
- USB connectivity
- Fast data transfer speed

The new cost effective 8GB Flash drive , which can be used to save configurations and Video Data from Digital Video recorders.

### Order Code:

USBMEM-8

8GB Flash memory stick

## ADT DVD PLUS PACK

### Order Code:

ADT.DVDPLUS.PACK

Pack of 10x DVD+ R, ADT branded (for use with the American Dynamics Hybrid DVR range)

## Haydon Lockable DVR Boxes



A range of lockable DVR enclosures suitable for a variety of different sized DVRs and offering the option of additional cooling by the use of integral fans.

All units are of a Powder coated Steel construction and are secured by a radial lock with interlocking hooked cam. These units also allow easy cabling for IEC sockets, BNC's and RS232 and Parallel cables.

### Technical Specifications:

#### HAY-LDVE-A

Can be used for a DVR or capacity for 1 x Std VCR + 1U Mux

External Dimensions

Depth 445 mm x Width 404 mm x Height 120 mm

Internal Dimensions

Depth 400 mm x Width 354 mm x Height 91 mm

Weight 6.0 kg

#### HAY-LDVR2-A

External Dimensions

Depth 540 mm x Width 510 mm x Height 124 mm

Internal Dimensions

Depth 510 mm x Width 506 mm x Height 103 mm

Weight 7.9 kg

#### HAY-LDVR2-F-A

2 x 12 V fans expelling hot air from the cabinet @ 70CFM

12V Power Supply complete with mains cable

External Dimensions

Depth 540 mm x Width 510 mm x Height 124 mm

Internal Dimensions

Depth 510 mm x Width 506 mm x Height 103 mm

Weight 7.9 kg

### Features:

#### HAY-LDVE-A

- Powder coated Steel construction
- Radial Lock with interlocking hooked cam
- Vented Both Sides
- Easy cabling for IEC sockets, BNC's , RS232 and parallel

#### HAY-LDVR2-A

- Powder coated steel construction
- Radial lock with interlocking hooked cam
- Front venting to help air flow for front mounted hard drives
- Easy cabling for IEC sockets, BNC's , RS232 and parallel

#### HAY-LDVR-F-A

- Powder coated steel construction
- Radial lock with interlocking hooked cam
- Front venting to help air flow for front mounted hard drives
- Easy cabling for IEC sockets, BNC's , RS232 and parallel
- 2 x 12 v fans for expelling air , complete with 12 v psu and mains cable

### Order Codes:

|              |  |
|--------------|--|
| HAY-LDVE-A   | Lockable DVR Enclosure<br>Medium size          |
| HAY-LDVR2-A  | Lockable DVR Enclosure<br>Large size           |
| HAY-LDVR-F-A | Lockable DVR Enclosure<br>with Fans Large size |

# Video Transmission

This chapter contains information about Video Transmission

- Introduction
- CamTel<sup>®</sup>
- CamDisc
- Audio Over ISDN
- HeiTel
- ADPRO<sup>®</sup>
- Video Transmission Using UTP Cable



# Introduction

**PSTN** Public Switched Telephone Network :also known as "dial-up".

**POTS** Plain Old Telephone Service.

**ISDN** Integrated Services Digital Network An international standard for end-to-end digital transmission of voice, data, and signalling.

**GSM** Global System for Mobile communication. A European digital standard for mobile or cellular telephony.

**HSCSD** High Speed Circuit Switched Data: dedicated circuit-switched data communications technology for GSM which boosts data throughput up to 14.4 Kbps in a single channel, and by aggregating channels, up to 57.6 Kbps.

**LAN** A local area network is a computer network covering a local area, like a home, office or small group of buildings.

**DSL DSL** (Digital Subscriber Line) is a technology for bringing high-bandwidth information to homes and small businesses over ordinary copper telephone lines.

# HeiTel™ CamDisc+ E



Digital video transmission system with recording for 4/10 IP cameras or up to 10 analogue cameras (optional video card needed).

## XOh

The camera can be programmed with 254 preset positions and 4 auto-learning touring patterns allowing for virtually hands-free operation and can integrate with intruder alarm systems through 8 alarm inputs and 4 outputs which are easily accessible in the backbox of the unit.

## HLI-Interface

Thanks to the High Level Integration (HLI) ADPRO passive infrared detectors can be comfortably accessed for parameterisation and diagnostics either locally or by remote access.

## Available Devices

- CamDisc+ E 10 10ch (IP)
- VideoGateway with removable hard disk (optional) for stationary and mobile applications
- CamDisc+ E 10MH 10ch (IP) VideoGateway with removable hard disk (optional) and internal heater for mobile applications

## Approvals

- CE (EN 61000-6-3, EN 55022, KI.B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-4-2, -3, -4, -5, -6, EN 50204, EN 50130-4)
- FIDUCIA (starting from CamControl LITE 3.90)
- BS 8418
- UVV Kassen
- EN50155 (for CamDisc EM)

## Features:

### Options

- 10 channel analogue video cards
- 3G / 4G module including GPS data
- WLAN-capability by external USB WLAN adapter
- IntrusionTrace license; outdoor perimeter detection for sterile zone monitoring (e.g. car dealerships, solar parks, power generation facilities, and warehouses); pay-as-you-grow license model with max. 4 licenses
- Passive/active GPS antenna must be purchased separately
- Mounting kit for base unit and external hard disk kits

## Ordering Information

4310

CamDisc +E 10 way, IP cameras only (requires separate hard disk)

### Accessories

4682

2TB Hard disk drive for CamDisc +E & VG series

4683

4TB Hard disk drive for CamDisc +E & VG series

- Recording, transmission and display of GPS data with serial GPS receiver or with optional 3G/4G module
- Integration into existing WLAN networks by means of selected USB WLAN adapters
- Longterm recording onto removable hard disk with adaptive track management for schedule-controlled permanent and motion recording, or contact-triggered event recording
- Suitable for stationary and mobile applications
- Real-time video recording
- Hybrid functionality with manufacturer-neutral compatibility for analogue and IP cameras
- ONVIF compatible with selected IP cameras
- Optional video analytics for greater detection and visual verification are available via Xtralis Xchange
- IntrusionTrace: intrusion detection for sterile zone monitoring; approved as a primary detection system for operational alert use in sterile zone monitoring applications
- Image resolutions up to 720 x 288 pixels and megapixel resolution with IP-cameras
- Integrated Multi-Unicast server supporting multiple IP connections
- Integrated Web server for video transmission and camera remote control via PC/Tablet and Smartphone browser
- HTconnect enables unrestricted, but safe access over the Internet to Firewall protected video systems (also with dynamic IP-addresses) in private nets. Additionally HTconnect controls permanently the availability of the entire system from public net over private net to VideoGateways
- Camera position authentication and camera specific alarming of video loss
- Integrated e-mail client for alarming up to two email addresses
- Definition of up to 5 privacy zones<sup>1</sup> with the options live images or live and recorded images
- Precise recording (exact to the second) of pre- and post-alarm images, individually adjustable to camera and event
- Event-triggered connections by alarm contact, motion detection (depending on type of IP cameras), serial command, technical alarm, and routine call
- Perfected for alarm verification and conformity with control centre applications
- Integrated interfaces for network, camera remote control, data transmission, and system integration
- High-Level Integration (HLI) of ADPRO PRO/PRO E Passive Infrared Detectors (PIR) via serial interface
- Extensive remote control functions to control lighting, barriers, alarms, doors, or any relay-controlled devices
- Multi-criteria evaluation of recordings
- Live video transmission and simultaneous archive evaluation and recording (Triplex)
- Bidirectional audio transmission and recording onto integrated storage medium
- Remote playback of pre-recorded audio tracks (e.g. to address intruder on premises)
- Resistance-monitored alarm inputs
- BS 8418 compliant
- Compact design, suitable for desk and wall mounting

| <b>Video</b>                                   |  |
|--|--|
| Video standard                                 | Analogue: CCIR/PAL and EIA/NTSC, Digital: dependent on IP camera (see HeiTel IP camera compatibility list)   |
| Video Compression                              | Device internal using HTcompress1 (M-JPEG differential compression with adjustable compression factor per camera) or H.264 (with selected cameras)   |
| Picture formats                                | With IP camera dependant on model: standard to megapixel resolution;<br><ul style="list-style-type: none"> <li>• With analogue cameras: Transmission: 720 x 288, 512 x 256, 256 x 128, 128 x 80 pixels and 16 Bit colour depth,</li> <li>• Recording: 720 x 288, 512 x 256 pixels and 16 Bit colour depth</li> </ul> |
| Video inputs                                   | Analogue Video: Optional 4/10 x BNC, 1 Vss/75 Ohm (optional video card needed) IP cameras: Up to 4/10 IP cameras, simultaneous use of different models and resolutions   |
| Motion Detection                               | With adjustable detection zones for alarm transmission and event-triggered recording <sup>1</sup> or depending on type of IP cameras   |
| Video signal monitoring                        | Video signal monitoring (sync. and picture content)  |
| <b>Audio</b>                                   |  |
| General  | Bidirectional audio transmission and recording   |
| Audio compression                              | SPEEX Codec, 16Bit, 80-8000 Hz   |
| Audio inputs                                   | 1 x line in (0-2 Vpp, nominal 0.775 Vpp) or Mic in (electret or electroacoustic Micro-phone)   |
| Audio output                                   | 1 x line out (0-2 Vpp, nominal 0.775 Vpp) and 1 speaker out (1W/8 Ohm)   |
| <b>Transmission and Recording</b>              |  |
| General  | Video and audio transmission, recording and playback at the same time; online evaluation via local and remote receiver station or offline via removable HDD  |
| Multi-Unicast                                  | Up to 6 IP- or 5 IP- and 1 dial-up connection simultaneously   |
| Web server                                     | Up to 4 IP connections via PC, Smartphone, PDA browser (additional to 5 standard connections)  |
| Video transmission of live and recorded images | Up to real-time via IP (LAN/WLAN, Internet, DSL, GPRS, HSDPA, CDMA, UMTS, EDGE)  |
| Recording speed                                | Up to 25 fps respectively real-time recording in total depending on compression mode, image content and Bit rate   |
| Recording media                                | Removable SATA drive (1 TB, 2 TB, 4 TB) with adaptive track management (4 or 10 tracks)  |
| Trigger to initiate transmission/recording     | Dry contact, built-in motion detection <sup>1</sup> , serial command and timer based calender  |
| Privacy Zones <sup>1</sup>                     | Up to 5 privacy zones per camera; options for each camera: live or live and recorded images  |
| Recording modes                                | Image sequence, up to 50,000 events per camera with pre- and post alarm, continuous recording, all modes in conjunction with built-in timer based calender   |
| Recording interval                             | Event recording: intervall=0-999s and duration=1-999s separately adjustable for pre- and post alarm; Continious recording: intervall=0-999s timer controlled (event optimised recording possible) (value "0" = as fast as possible)  |
| Callback                                       | Automatic callback to pre-programmed receiver stations with CamControl software  |

| <b>Remote Access and Evaluation</b>        |   |
|--|---|
| General features                           | Remote access to live images, recorded images and remote setup-/maintenance and recording via receiver software                                   |
| Search criteria                            | Site list and camera selection with support camera, time, date, event (contact, motion1) and graphical analysis of event and permanent recordings |
| Motion Smart Search1                       | In offline mode considering camera, detection zones, sensitivity and date/time  |
| Reference images                           | Transmitter list and camera selection supported by object specific reference images   |
| Access protection                          | Multiple password levels and sophisticated user management  |
| <b>Interfaces</b>                          |   |
| eSATA                                      | eSATA interface for external storage based on HDD   |
| LAN interface                              | 1 GBit/s built-in network adapter, RJ45 connector, DHCP, auto detection within LAN  |
| 3G/4G Module                               | Optional 3G/4G module for self installation   |
| 2x USB Interface                           | USB 2.0 for configuration of device USB 2.0 for WIFI-stick  |
| HLI Interface                              | HLI Interface for ADPRO PRO / PRO-E detectors   |
| PTZ Control                                | Via onboard RS-232/485 (422) interface (screw/clamp)  |
| Transparent data channel/control interface | Via onboard RS-232 interface (9 pin Sub-D)  |
| Resistancemonitored alarm inputs           | 4 or 10 alarm inputs (camera related), 1 general alarm input, 1 arm/disarm and 1 tamper input (all on screw terminals)                            |
| Control outputs                            | 2 relays- system error and/or remote control purposes(changeover contact on screw/clamp scrimp), max. 30 V DC/1 A, 60 V DC/0.3 A, 125 V AC/0.5 A  |
| <b>General</b>                             |   |
| Operating system/system design             | Embedded Linux/dedicated hardware (no PC)   |
| Control and display element                | On-Off Switch, push button for manual camera selection and status LED   |
| Set-up and Firmware update                 | Via local and/or remote receiver station via IP, WAN and/or LAN connections   |
| Logging                                    | Transmitter-side event logging of essential basic functionalities and device status   |
| Operating voltage/ Power consumption       | 12-24 V DC, max. 25 W   |
| Operating voltage range                    | 8-30 V DC   |
| Ambient temperature                        | +5°C ... +40°C  |
| Housing/ Enclosure                         | Desktop and wall mounting: 221 x 88 x 270 mm (WxHxD), 19" mounting: 1/2 19" x 2 RU x 275 mm   |
| Weight                                     | 3.8 kg with hard disks  |
| Protection class                           | IP 30 according to IEC 60529, DIN EN 60529  |
| Warranty                                   | 24 months   |
| IntrusionTrace.h licenses                  | 4 channels  |

## Ordering Information

### Accessories for Heitel Transmission Equipment

4682                      2TB Hard Disk for CamDisc  
VG and CamDisc +E range

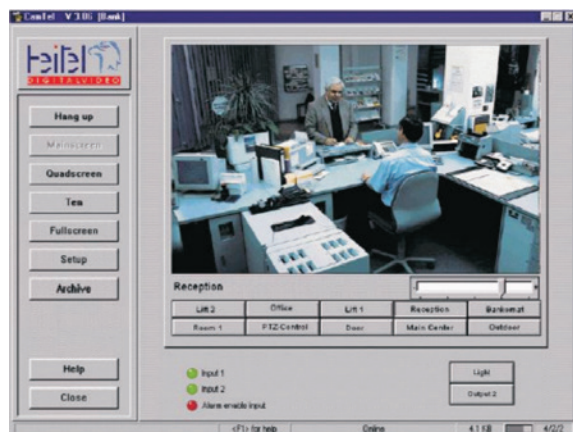
**Notes on HDD:** Every hard disk is extensively tested for performance and functionality before release. Particular attention is given to the factors low power consumption and low heat development. These contribute to extended product life. To ensure that all CamDisc hard disks meet these criteria, every hard disk is coded, formatted, mounted in a CamDisc specific removable frame, and subsequently tested again. The local evaluation of CamDisc image archives up from 320 GB hard disks requires a suitable PC or USB PC kit. Removable disks up from 320 GB can be used with the following devices:

CamDisc svr series and CamDisc V.24/ISDN/TCP/IP, starting with serial number CDxxx, and firmware release 2.04 or higher.

### PC Kit CamDisc USB

603.015.020            External housing with USB  
connection for device  
independent evaluation of  
CamDisc removable hard  
disks(i.e. for use with laptop  
computers) **(UK only)**

# CamTel® Windows Software



## Features:

- One license included with purchase of either CamTel® or CamDisc®
- Customer friendly user interfaces
- Runs under Windows 95/98/ 2000/ NT4.0

## Technical Specifications:

### Hardware Requirements

|                  |  |
|------------------|--|
| PC               | IBM-compatible PC  |
| CPU              | min. Pentium 200 MHz   |
| Memory           | min. 32 MB RAM   |
| COM interface    | UART 16550 recommended with ext. ISDN-TA/modem or ISDN Card: e.g. AVM-Fritz            |
| Graphics         | VGA-card min. 32,768 colours or 65,536 colours, resolution 1024x768 pixels recommended |
| Operation system | Windows® 95B/98/ME/NT4.0/2000/XP   |
| Includes         | CD-ROM CamTel® Windows Software Manual English   |

## Order Code:

One of these is supplied with each CamLine/CamTel and CamDisc product.

Universal receiver software for simple programming (configuration) of all transmitters, CamTel®, CamDisc® and CamLine, provides image transmission and operation of the connected systems. The receiver software runs under Windows® 95B/98/2000/NT4.0.

The receiver software transmits video images over public or private networks. Upon establishment of a connection, the software automatically determines which transmitter has been activated (CamTel® with 10 video inputs, CamDisc® with 4 video inputs or CamLine with 2 video inputs). The image transmission function can be started manually at any time by the receiver computer, or automatically upon activation of an alarm contact or initiation of security tours.

Received images are saved on to the hard disk drive of the receiving PC.

The software has a password-protected user administration and supports audible (via PC sound card) and visual alarm signalling. Customer-friendly user interfaces make operation of the software simple and intuitive. To connect with the same transmitter unit from multiple PC work stations, one Cam-Tel® Windows software license is required for each work station.

One license is included with the purchase of CamTel®, CamDisc® or CamLine.

# Audio Over ISDN



These products allow a monitoring operator to broadcast live one way audio to a remote site. There is a choice of 30,60 or 120 W amplifiers dependent on the area to be covered and a choice of 15 w, 20 w or 30 w horn speakers.

Connect the amplifier of your choice to your telephone system by simply plugging into a telephone socket where a conventional telephone would be used (two-wire system).

When the extension is called, the ringing current is detected and the BT5 will loop the line. An acknowledged tone, followed by a chime is sent to the caller indicating that an announcement can now be conveyed to the Public Address system.

After the announcement has finished, the BT5 will disconnect from the PA system and release the telephone extension ready to accept another paging call.

## Features:

- Use indoor and outdoor
- Simple to use
- Ideal for Marine and Industrial applications

## Horn Speakers

This range of lightweight plastic weatherproof re-entrant horns has been designed for high quality sound reinforcement. Manufactured in a strengthened ABS moulded compound with UVL (ultra violet light) protection and supplied with a high grade stainless steel epoxy coated U bracket.

Offering clarity of speech and high efficiency, these horns are suitable for communications or signal warnings. Being non-corrosive and resistant to salt laden air, they are suitable for use indoors and out. In addition they are also ideal for marine and industrial applications as they are unaffected by most chemicals.

## Amplifiers

The A-2030, A-2060 & A-2120 series mixer power amplifiers are designed for PA system applications such as paging, announcements, intercommunications and background music in offices, schools, shops, and recreation areas.

These amplifiers come with three microphone inputs, two auxiliary inputs and one auxiliary out.

## Order Codes:

|             |  |
|-------------|--|
| 603.015.036 | BT5 BT ADAPTOR - A free standing self powered unit |
| 603.015.055 | TT15/H 15 W Horn Speaker                           |
| 603.015.056 | TT20/H 20 W Horn Speaker                           |
| 603.015.051 | TT30/H 30 W Horn Speaker                           |
| A-2030      | A-2030 30 W Amplifier                              |
| A-2060      | A-2060 60 W Amplifier                              |
| A-2120      | A-2120 120 W Amplifier                             |



# ADPRO<sup>®</sup> ADSL 1202 Router



## Certifications:

- Safety: EN60950-1
- EMI: CE, FCC

Cost-Effective Ultra High-Speed ADSL2+ Gateway for SOHO Networks

- ADSL2+ High Speed Internet Access
- SPI Firewall with Denial of Service Attack Prevention
- Pre-configured for optimal ADPRO<sup>®</sup> connectivity

## Benefits

**Higher Speed Internet Access** The ADPRO<sup>®</sup> ADSL 1202 Router by Xtralis is an all-in-one router, compatible with high-speed ADSL, ADSL2, and ADSL2+ interfaces over existing copper lines. With speeds up to 12 Mbps (ADSL2) or 24 Mbps (ADSL2+), the unit offers high data transfers rates and excellent bandwidth. It also supports RE ADSL and Annex L/M for higher speed and longer distance. With excellent performance and upward compatibility, the unit comes with default configurations to communicate effectively with ADPRO<sup>®</sup> FastTrace, V3100 HYBRID, FastTrace 2 Series, and iFT Series systems.

## Robust Firewall Security

Based on Stateful Packet Inspection (SPI), Denial of Service (DoS), and Distributed DoS (DDoS) features, the router provides the first line of defence against hackers, network intruders, and other harmful threats.

## Media Bandwidth Management

The ADPRO<sup>®</sup> ADSL Router enables network administrators to allocate network resources and to guarantee Quality of Service (QoS). It prioritises media services, and increases productivity and efficiency in daily operations by tailoring a system to specific demands, such as VoIP or video streaming.

## Order Code:

225268-3

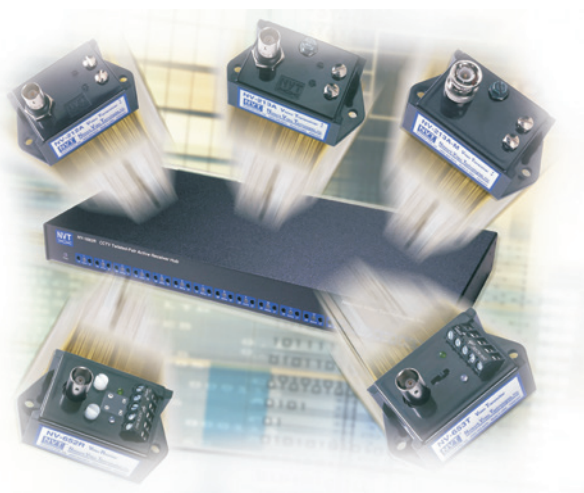
Xtralis ADPRO<sup>®</sup> ADSL 1202 Router

## Technical Specifications:

|                       |  |
|-----------------------|--|
| ADSL Compliance       | <ul style="list-style-type: none"> <li>• ITU 992.1 (G.dmt )</li> <li>• ITU 992.3 ADSL2 (G.dmt.bis)</li> <li>• ITU 992.5 ADSL2+</li> <li>• Reach-Extended ADSL (RE ADSL)</li> <li>• Annex L/M support</li> </ul>  |
| Router                | <ul style="list-style-type: none"> <li>• NAT</li> <li>• Port forwarding</li> <li>• SIP ALG pass-through</li> <li>• PPPoE pass-through</li> <li>• Dynamic DNS</li> <li>• IP alias</li> <li>• DHCP server/client/relay</li> <li>• RIP I/RIP II support</li> <li>• IGMPv1 and v2 support</li> <li>• IGMP proxy/snooping</li> <li>• UPnP support</li> <li>• 802.1Q/1P</li> <li>• IPv6 support</li> </ul> |
| Firewall              | <ul style="list-style-type: none"> <li>• Stateful Packet Inspection (SPI)</li> <li>• Denial of Service (DoS) prevention</li> </ul>   |
| Security              | <ul style="list-style-type: none"> <li>• Multiple VPN (IPSec, PPTP) pass-through</li> <li>• Packet filtering</li> <li>• URL keyword blocking</li> </ul>  |
| Management            | <ul style="list-style-type: none"> <li>• Embedded Web configuration</li> <li>• TR-069 HTTPS support</li> <li>• Logs and statistics</li> <li>• SNMP v1 and v2 with MIB II</li> <li>• Remote management control: Telnet, FTP, Web, SNMP and DNS</li> <li>• CLI command via telnet/console</li> </ul>   |
| Hardware              | <ul style="list-style-type: none"> <li>• ADSL port: 1 x RJ-11</li> <li>• Ethernet port: 4 x RJ-45</li> <li>• Power input: 9 V DC</li> <li>• Power on/off button</li> <li>• Reset button</li> <li>• LED displays: Power, Ethernet (1–4), DSL, Internet</li> </ul>   |
| Dimensions (WxDxH)    | • 164 x 115 x 28 mm  |
| Weight                | • 201 g  |
| Operating Environment | <ul style="list-style-type: none"> <li>• Temperature: 0°C to 45°C</li> <li>• Humidity: 10% to 90% RH (Non-condensing)</li> </ul>   |
| Storage Environment   | <ul style="list-style-type: none"> <li>• Temperature: -20°C to 80°C</li> <li>• Humidity: 10% to 95% RH (Non-condensing)</li> </ul>   |

## Video Transmission Using UTP Cable

### Passive - Video and Data



#### Features:

- UTP Transmission Compared to Coax Video:
- Total interference immunity
- Most models have built-in Surge Suppression
- Active models have Ground Lifting
- Active models have built-in Distance Equalisation control for crisp video at all distances
- Transmission distances up to one mile or more compared to fibre
- Simple termination and installation
- Installation tools, test equipment, and labour are less expensive voltage power circuits. Perfect for larger CCTV installations where port density and camera number growth are common

UTP Video transmission systems transmit real time high quality interference free video over ordinary unshielded twisted pair cable. (Cat5 UTP) For at least 20 years products have been available capable of transmitting video using UTP wire. For much of that time however, UTP balun manufacturers did little more than convert an unbalanced coax signal to a balanced signal for use on the twisted pair.

Some companies added gain to extend the distance. Unfortunately, these devices provided inadequate noise immunity, no ground loop isolation, and no surge protection.

The security market viewed this older technology as "last resort" until companies developed their own range of high performance UTP|CCTV products.

A technique has been developed for rejecting noise and interference. This allows the video signals to reside in the same wire bundle with ringing telephones, Ethernet, 24VAC, RS-422 or RS-485 data, multiple video signals, etc.

Unlike coax, it can also reside in high-noise environments, such as lift travelling cables, or near fluorescent lights, radio transmitters, motors or generators.

## Video Transmission Using UTP Cable

# Haydon Passive Single Channel POC and HD Baluns



This video balun is a passive (non-amplified) device that allows the transmission of real-time CCTV HD video, power and data signal via cost-effective Unshielded Twisted Paired (UTP) cable for application of Power Over Coax cameras and POC DVRs.

This is also compatible with all HD-TVI, HD-CVI, AHD cameras up to 4K and CVBS analogue cameras.

The Male BNC end allows connection directly to the camera and DVR. The Push-pin terminal block allows a one button press tool-less connection of UTP cable output. Used in pairs, this eliminates costly and bulky coaxial cable.

The Single Channel POC & HD Video Balun can carry Power and video signals over one UTP cat5e/6 cable twisted pair cable. It has a built in Cable Strain Relief.

The distances that this unit can operate at are shown below:

Transmission Distance Chart (With Power)

| Input Power                                | Distance | Output Voltage | Output Current | Load Capacity |
|--|----------|----------------|----------------|---------------|
| DC48V<br>500mA                             | 10m      | 47.45V         | 200mA          | 9.49W         |
|  | 30m      | 46.81V         | 200mA          | 9.36W         |
|  | 50m      | 45.57V         | 200mA          | 9.1W          |
|  | 100m     | 44.33V         | 200mA          | 8.87W         |
|  | 150m     | 41.81V         | 200mA          | 8.36W         |
| Peak Current > 200mA and Peak Power > 8.5W |          |                |                |               |

### Features:

- Built in Cable Strain Relief
- Easy Cable install one button press
- Real-time transmission over UTP cat5e/6
- Compatible with all HD-TVI/CVI/AHD/CVBS and POC analogue cameras
- Low crosstalk and noise suppression
- Surge Protection : 2KV
- Wave Filter Design, Anti-Static Design
- Power and video signals transmit over one twist pair cable
- 60 dB crosstalk and noise immunity
- Exceptional interference rejection
- ABS engineering plastic housing

### Order Code:

HAY-HDVB01POC-PT Passive single channel POC and HD baluns

The superior interference rejection and low emissions of this unit allow video signals to coexist in the same wire bundle as telephone, datacom. This allows the use of a shared or existing cable plant. There is a built-in surge suppressor to protect video equipment against damaging voltage spikes. Its crosstalk and noise immunity ensure quality video signals.

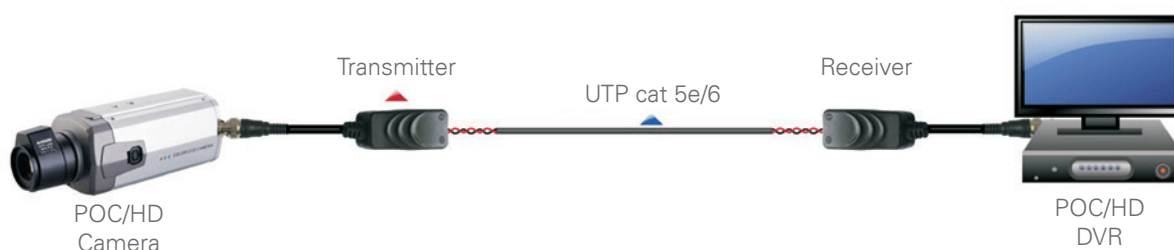
Transmission Distance Chart (Without Power)

| Camera Type  | HD-TVI     | HD-CVI     | HD-AHD     |
|--------------|------------|------------|------------|
| 720p camera  | 400m       | 450m       | 450m       |
| 960p camera  | Not tested | Not tested | Not tested |
| 1080p camera | 250m       | 250m       | 250m       |
| 3MP camera   | 250m       | Not tested | 250m       |
| 4MP camera   | 180m       | 200m       | 200m       |
| 5MP camera   | 180m       | Not tested | 180m       |
| 4K camera    | 150m       | 150m       | 150m       |
| CVBS camera  | 400m       |            |            |

## Video Transmission Using UTP Cable

### Technical Specifications

| Model           |   | HAY-HDVB01POC-PT   |
|-----------------|---|--|
| Product Name    |   | Single Channel POC & HD Passive Video Balun                                |
| Applied Devices |   | CCTV POC/HD cameras, monitors, POC/HD DVR, and other CCTV equipment        |
| Video           | Video Format                                | HD-TVI/CVI/AHD/CVBS  |
|                 | Operating Frequency                         | DC to 71MHz  |
|                 | Common-mode/<br>Differential-mode rejection | 15KHz to 71MHz 60 dB typ   |
|                 | Impedance                                   | Coax: Male BNC 75Ω unbalanced  |
|                 |   | UTP, push-pin terminal block 100Ω balanced                                 |
| Attenuation     | 1.5 dB typ Max                              |  |
| Wire Type       | Network Wiring                              | One Unshielded Twisted Pair (for each video signal) 24-16 AWG (0.5-1.31mm) |
|                 | Category Type                               | UTP cat 5e/6   |
|                 | Impedance                                   | 100 ± 20 ohms  |
|                 | DC Loop Resistance                          | 52 ohms per 1,000ft (18 ohms per 100m)                                     |
|                 | Differential Capacitance                    | 19 pF/ft max (62 pF/m max)   |
| Power           |   |  |
| Connector       | Video input/output                          | Male BNC connector   |
|                 | Video input/output                          | Tool-less push-pin terminal block  |
| Protection      | Surge Protection                            | Renewable solid state surge protection                                     |
|                 | Video Input                                 | 2KV(common mode), 10/700us IEC61000-4-5                                    |
|                 | Video Output                                | 2KV(differential mode), 10/700us IEC61000-4-5                              |
| Mechanical      | Housing                                     | ABS engineering plastic  |
|                 | Body Colour                                 | Black  |
|                 | Dimensions(LxWxH)                           | 40.7x18.7x17mm (BNC connector & cable excluded)                            |
|                 | Net Weight                                  | 22g  |
| Environmental   | Operating Temperature                       | -20°C ~ 55°C   |
|                 | Relative Humidity                           | 0~95% (non-condensing)   |
|                 | Storage Temperature                         | -40° ~ 150° C  |



## SNT Duo-Link Transmitter

# VA2500 Two Video with Alarm Signals Transmission Set



By using the inter carrier technology concept, the Video Modem System (VDS) Two Video with Two Alarm unit is designed as to transmit two video signals and two alarm signals from two remote surveillance cameras with two alarm devices to local receiving units. The system includes a remote Sender unit connects to two cameras and two alarm devices, and a local Viewer unit connects to monitor system, DVR equipment and two alarm receiving devices.

The Sender and Viewer are linked by only one existed RG-6/U(or better RG-11/U...) Coaxial cable for transmitting signals and supply DC (1Amp Rating, Maximum) from Viewer to Sender to power up the camera. The transmitting distance can up to 500 Meter without losing signal.

### Remote unit-Sender

The remote unit connects two video cameras and two alarm devices.

In the front panel of the unit, two separate BNC plugs are provided for two cameras input. Two sets of alarm terminal board of 3.5 mm screwdriver sockets are provided for alarm signals connections with one signal-in and one-Grounding.

Two sets of 12 V DC power are provided for cameras from two sets of terminal boards, with one 12 VDC out and one grounding in each set. In the back panel of the unit, a BNC plug is provided for +40 V DC power in(max.), And link out of two videos signals and two alarm signals. Two alarm switching selector with NC, NO and TERM types. Each determine an different alarm input type.

### Features:

- Two Video signals (cameras) transmission channel.
- Two Alarm signals (Alarm devices) transmission channel.
- Capable of sending DC power at 1 Amp from Viewer to Sender within 500 m. (see note. 1)
- Alternative Alarm signal types of Normally Open(N.O.),
- Normally Closed(N.C.) and Impedance (TERM) are provided within the unit.
- Auto DC Power supply system provide stable and sufficient camera DC power.
- Powerful circuitry Protection, as any wrongful link to the system, the system will not provide power

When alarm system is used as TERM (external connected 390 Ohms) type, the unit will constantly check the linking status, any disconnection or short circuit will trigger the alarm.

An light indicator shows the current status of the Sender unit. Different colours indicated different status: Red- unit standby, Green- unit in operation, Yellow- DC power low, Flash- power

### Local unit-Viewer

The local unit connects to a monitor and an alarm-receiving equipment.

In the back panel of the unit, a BNC plug link-in the remote video and alarm signal, and sending +38 V DC(max.) To Sender. An On/Off power switch. A 5.0 mm Screwdriver socket with one 40 V port and grounding port for DC power-in from power adaptor.

A light indicator show the currents status of the Viewer unit. Different colours indicated different status: Red- unit standby, Green- unit in operation, Yellow- link initial. In the front panel of the local unit, two BNC plugs for link out video signals to monitors. Two sets of alarm terminal board of 3.5 mm screwdriver sockets are provided for alarm signals

### Order Code:

VA-2500

Viewer & Sender

# Network Accessories

This chapter contains information about Network CCTV Systems

- Introduction
- Network Switchers
- Hard Disk Drives
- Network Transmission
- Patch Panels
- Network Tools
- RJ45 Modules

## Introduction

A range of products to assist with the design of IP/Network solutions including Network Switches offering a choice of inputs and Power over Ethernet ports, and a range of devices to allow transmission of IP Video data over Cat 5E or Co-axial cables over extended distance.



## DGS-1008D Network Switches



### Features:

- Inexpensive Gigabit solution for SOHO & SMB
- 8 10/100/1000Mbps Gigabit ports on Cat. 5 cable
- 16Gbps switching fabric
- Auto MDI/MDIX cross over for all ports
- Secure store-and-forward switching scheme
- Full/half-duplex for Ethernet/Fast Ethernet speeds
- Blazing 2000Mbps full duplex for Gigabit speed
- IEEE 802.3x Flow Control
- Plug-and-play installation
- Easily installable on desktop

This desktop switch offers an economical way for the SOHO and small and medium business (SMB) to benefit from the increased bandwidth of Gigabit Ethernet. It provides 8 Gigabit ports for fast server deployment to meet increasing network load. With plug-and-play installation and copper Gigabit ports capable of connecting to your existing Cat. 5 twisted-pair cable, this device instantly enhances your workgroup's performance without requiring you to install expensive fiber cables or to go through complex re-configuration.

### 8 Copper Gigabit Ports

8 Gigabit ports provide an inexpensive alternative solution to fiber-optic. Using your existing low-cost Cat. 5 copper twisted-pair wires as the transmission media, these ports allow you to instantly upgrade your servers to Gigabit capability without requiring you to install new, expensive fiber cables. All ports support 10/100/1000Mbps network speed auto-sensing and full/half duplex auto-negotiation.

### Full-duplex Gigabit Server Access

The Gigabit ports provide dedicated bandwidths for your servers running at 2000Mbps full-duplex. This gives workstations bottleneck-free paths to simultaneously access server data.

### IEEE 802.3x Flow Control

This function support allows your servers to directly connect to the switch for fast, reliable data transfer. At 2000Mbps full duplex, the switch provides high-speed data pipes to your servers with minimum data transfer loss.

### Auto-negotiation of MDI/MDIX Cross Over

All ports support auto-negotiation of MDI/MDIX cross over. This eliminates the need for cross over cables or uplink ports. Any port can simply plug to a server, a hub or a switch, using the usual straight-through twisted-pair cable.

### Seamless Integration

The switch integrates seamlessly with your existing network equipment, be it Ethernet, Fast Ethernet or Gigabit Ethernet, dispensing you of the need to replace any hardware or software.

### Plug-and-Play Installation

With 10/100/1000Mbps auto-sensing, auto-negotiation for every port, plus the ability to exist with your Cat. 5 wall wiring, network installation is a breeze. All you need to do is plug the cables to the switch, and your network is up and running in a matter of minutes.

### Order Code:

DGS-1008D-B

8 port Network Switch  
10/100MB / 1Gb  
unmanaged switch

## Technical Specifications:

### Standards

- IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)
- IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)
- IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)
- ANSI/IEEE 802.3 NWay auto-negotiation
- IEEE 802.3x Flow Control

### Number of Ports

8 10BASE-T/100BASE-TX/1000BASE-T ports

### Protocol

CSMA/CD

Data Transfer Rates

- Ethernet:
  - 10Mbps (half duplex)
  - 20Mbps (full duplex)
- Fast Ethernet:
  - 100Mbps (half duplex)
  - 200Mbps (full duplex)
- Gigabit Ethernet:
  - 2000Mbps (full duplex)

### Topology

Star

### Network Cables

- 10BASE-T:
  - UTP Cat. 3, 4, 5 (100 m max.)
  - EIA/TIA-586 100-ohm STP (100 m max.)
- 100BASE-TX, 1000BASE-T:
  - UTP Cat. 5, Cat. 5e (100 m max.)
  - EIA/TIA-568 100-ohm STP (100 m max.)

### Full/half Duplex

- Full/half duplex for 10/100Mbps speeds
- Full duplex for Gigabit speed
- Media Interface Exchange
- Auto MDI/MDIX adjustment for all ports
- LED Indicators
  - Per port: 100 Mbps speed, 1000Mbps speed, Link/Act
  - Per device: Power

### Performance

Transmission Method  
Store-and-forward  
MAC Address Table  
8K entries per device  
MAC Address Learning  
Automatic update  
Packet Filtering/Forwarding Rates (half duplex)

- Ethernet: 14,880 pps per port
- Fast Ethernet: 148,810 pps per port
- Gigabit Ethernet: 1,488,100 pps per port

RAM Buffer  
256KBytes per device

### Physical & Environmental

DC Input

- 5 V 2.5 A
- Through external power adapter

Power Consumption  
11 watts (max.)  
Operating Temperature  
0° - 50° C  
Storage Temperature  
-10° - 70° C

# DGS-1210 Series Gigabit Smart+Switch with Fibre Uplinks



D-Link's DGS-1210 Series Gigabit Smart+ Switch with Fibre Uplinks integrates advanced management as well as security functions that provide performance and scalability. Management options for the switch include SNMP, Web Management, D-Link Network Assistant Utility, and compact command lines. The DGS-1210-10P features a fanless design that allows for quieter operation and helps to extend the device's lifetime.

The DGS-1210 Series includes a range of high power budget PoE-enable switches for businesses looking to power VoIP phones, wireless access points or network cameras. The DGS-1210-10P is a 8-port Smart PoE+ Switch that provides 8 PoE-enabled ports that can supply power of up to 30 W each.

The design allows more flexibility in power allocation for a variety of powered devices with affordable installation costs.

Features:

## Green Technology

Power saving via the following features:

- Link Status detection
- LED Shut-Off
- Port Shut-Off
- System Hibernation

## Security Features

- Access Control List secures network
- D-Link Safeguard Engine protects CPU from Broadcast/Multicast/Unicast Flooding
- Port Security supports 64 MACs per port
- ARP Spoofing Prevention

## Intuitive Management

- D-Link Network Assistant Utility or Web-based GUI
- Built-in SNMP MIB for remote NMS (D-View 6.0)
- Compact CLI through Telnet

## Advanced Features

- Auto Surveillance VLAN
- Loopback Detection automatically disables a port when a loop is detected
- Cable Diagnostics allows administrators to determine cable status
- SFP ports for flexibility
- Auto MDI/MDIX

Order Code:

0765280

DGS-1210-10P 10 Port  
switch: 8 Ports  
10/100/1000Mbps PoE & 2  
SFP (Small Form pluggable)

## Extensive Management and Layer 2 Features

Equipped with a complete line-up of L2 features, the DGS-1210 Series includes IGMP snooping, port mirroring, spanning tree protocol and Link Aggregation Control Protocol (LACP). The IEEE 802.3x flow control function allows servers to directly connect to the switch for fast, reliable data transfers. At 2000 Mbps full duplex, the Gigabit ports provide high-speed data pipes to servers with minimum impact to data transfer fidelity. Network maintenance features include loopback detection and cable diagnostics. Loopback detection is used to detect loops created by a specific port and automatically shut down the affected port. The cable diagnostic feature, designed primarily for administrators and customer service representatives, can rapidly discover errors and determine the cable quality, allowing hassle free diagnostics and maintenance.

## QoS, Bandwidth Control

The DGS-1210 Series supports Auto Surveillance VLAN (ASV), and Auto Voice VLAN, which are best suited for VoIP and video surveillance deployments. Auto Surveillance VLAN is a new, industry-leading technology that the DGS-1210 Series Gigabit Smart+ Switch with Fibre Uplinks provides. This technology consolidates data and surveillance video transmission through a single DGS-1210 Series, thus sparing businesses the expense of dedicated hardware and facilities. ASV also ensures the quality of real-time video for monitoring and control without compromising the transmission of conventional network data. The Auto Voice VLAN technology enhances the VoIP service by automatically placing voice traffic from an IP phone to an assigned VLAN. With higher priority and individual VLAN, these features guarantee the quality and security of VoIP traffic. The DSCP markings on Ethernet packets enable different levels of service to be assigned to network traffic.

As a result, these voice and video packets take precedence over other packets. In addition, with bandwidth control, network administrators can reserve bandwidth for important functions that are higher priority or require a larger bandwidth.

## Secure your Network

D-Link's innovative Safeguard Engine protects the switches against traffic flooding caused by virus attacks. The DGS-1210 Series supports 802.1X port based authentication, allowing the network to be authenticated through external RADIUS servers. In addition, the Access Control List (ACL) feature enhances network security and helps to protect the internal IT network. The DGS-1210 Series includes ARP spoofing prevention, which protects from attacks on the network that may allow an intruder to sniff data frames, modify traffic, or bring traffic to a halt altogether by sending fake ARP messages. To prevent ARP spoofing attacks, the switch uses packet control ACLs to block invalid packets that contain fake ARP messages. For added security, the DHCP server screening feature routes DHCP server packets from user ports to prevent unauthorised IP assignment.

## Versatile Management

The DGS-1210 Series provides a D-Link Network Assistant Utility that enables administrators to remotely control their network down to the port level. The D-Link network assistant utility allows customers to easily discover multiple D-Link Web Smart Switches within the same L2 network segment. With this utility, users do not need to change the IP address of their PC. It also simplifies the initial setup by taking switches, within the same L2 network segment, that are connected to the user's PC, and displaying them on screen for instant access.

This allows extensive switch configuration and basic setup of discovered devices, including password changes and firmware upgrades. The DGS-1210 Series also supports D-View 6.0 and Compact Command Line Interface (CLI) through Telnet. D-View 6.0 is a network management system that allows for the central management of critical network characteristics such as availability, reliability, resilience, and security.

## Network Switches

### Technical Specifications:

| General                                 |   |
|---|---|
| Model                                   | DGS-1210-10   |
| Interfaces                              | 8 Ports 10/100/1000 Mbps<br>2 SFP   |
| Port Standards & Functions              | IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)<br>IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)<br>IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)<br>IEEE 802.3az compliance<br>Auto-negotiation<br>IEEE 802.3x Flow Control |
| Network Cables                          | UTP Cat. 5, Cat. 5e (100 m max.)  |
| Full/Half Duplex                        | Full/half duplex for 10/100 Mbps speeds<br>Full duplex for Gigabit speed  |
| Media Interface Exchange                | Auto MDI/MDIX adjustment for all twisted-pair ports   |
| Performance                             |   |
| Switching Capacity                      | 20 Gbps   |
| Transmission Method                     | Store-and-forward   |
| MAC Address Table                       | 16,000 entries per device   |
| Maximum 64 bytes packet forwarding rate | 14.88 Mpps  |
| Packet Buffer Memory                    | 1.5 MB  |
| Physical/Environmental                  |   |
| AC Input                                | 100 to 240 VAC 50/60 Hz internal universal power supply   |
| Maximum Power Consumption               | 13.59 watts   |
| Standby Power Consumption               | 9.4 W/240 V   |
| Acoustics                               | 0 dBA   |
| Heat Dissipation                        | 46.37 Btu/hr  |
| Operating Temperature                   | -5 to 50°C  |
| Storage Temperature                     | -20 to 70°C   |
| Operating Humidity                      | 0% to 95% non-condensing  |
| Storage Humidity                        | 0% to 95% non-condensing  |
| Dimensions (L x W x H)                  | 280 mm x 126 mm x 44 mm   |
| Weight                                  | 1.54 kg   |
| Diagnostic LEDs                         | Link/Activity/Speed (Per 10/100/1000 Mbps port)   |
| Certifications                          | <ul style="list-style-type: none"> <li>• CE Class A • VCCI Class A • FCC Class A • cUL • CE (LVD)</li> <li>• BSMI • CCC • C-Tick</li> </ul>   |
| MTBF                                    | 360,844 hours   |

## Network Switches

| General                                 |  |
|---|--|
| Model                                   | DGS-1210-10P   |
| Interfaces                              | 8 Ports 10/100/1000Mbps PoE<br>2 SFP   |
| Port Standards & Functions              | 8 Ports compliant with 802.3at   |
| PoE Budget                              | 78 watts   |
| Other Port Standards & Functions        | IEEE 802.3 10BASE-T Ethernet (twisted-pair copper) <ul style="list-style-type: none"> <li>• IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)</li> <li>• IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)               <ul style="list-style-type: none"> <li>• IEEE 802.3az compliance</li> <li>• Auto-negotiation</li> <li>• IEEE 802.3x Flow Control</li> </ul> </li> </ul> |
| Network Cables                          | UTP Cat. 5, Cat. 5e (100 m max.)   |
| Full/Half Duplex                        | Full/half duplex for 10/100 Mbps speeds<br>Full duplex for Gigabit speed   |
| Media Interface Exchange                | Auto MDI/MDIX adjustment for all twisted-pair ports  |
| Performance                             |  |
| Switching Capacity                      | 20 Gbps  |
| Transmission Method                     | Store-and-forward  |
| MAC Address Table                       | 16 ,000 entries per device   |
| MAC Address Update                      | Up to 256 static MAC entries   |
| Maximum 64 bytes packet forwarding rate | 14.88 Mpps   |
| Packet Buffer Memory                    | 1.5 MB   |
| Physical/Environmental                  |  |
| AC Input                                | 100 to 240 VAC 50/60 Hz internal universal power supply  |
| Maximum Power Consumption               | 103.4 Watts (PoE on) 17.9 Watts (PoE off)  |
| Standby Power Consumption               | 11.1 W/240 V   |
| Acoustics                               | 0 dBA  |
| Heat Dissipation                        | 352.63 Btu/hr  |
| Operating Temperature                   | -5 to 50°C   |
| Storage Temperature                     | -20 to 70°C  |
| Operating Humidity                      | <ul style="list-style-type: none"> <li>• 0% to 95% non-condensing</li> </ul>   |
| Storage Humidity                        | <ul style="list-style-type: none"> <li>• 0% to 95% non-condensing</li> </ul>   |
| Dimensions (L x W x H)                  | 280 x 180 x 44 mm  |
| Weight                                  | 1.41 kg  |
| Diagnostic LEDs                         | Link/Activity/Speed (Per 10/100/1000 Mbps port)  |

## Network Switches

|                           |   |
|---------------------------|---|
| Certifications            | <ul style="list-style-type: none"> <li>• CE Class A • VCCI Class A • FCC Class A</li> <li>• BSMI • CCC • C-Tick • cUL • CE (LVD)</li> </ul>   |
| MTBF                      | 315,336 hours   |
| Software                  |   |
| L2 Features               | <ul style="list-style-type: none"> <li>• MAC Address Table • 16K entries • IGMP Snooping</li> <li>• IGMP v1/v2 Snooping • Supports 256 IGMP groups</li> <li>• Supports at least 64 static multicast addresses • IGMP per VLAN <ul style="list-style-type: none"> <li>• Supports IGMP Snooping Querier • Loopback Detection</li> <li>• 802.3ad Link Aggregation: <ul style="list-style-type: none"> <li>• DGS-1210 28/28P: Maximum of 14 groups/8 ports per group</li> </ul> </li> </ul> </li> <li>• DGS-1210 52/52MP/52P: Maximum of 26 groups/8 ports per group <ul style="list-style-type: none"> <li>• DGS-1210 -10/10P: Maximum of 5 groups/8 ports per group</li> </ul> </li> <li>• LLDP • LLDP-MED • Jumbo Frame • Up to 9,216 bytes</li> <li>• Spanning Tree Protocol • 802.1D STP • 802.1w RSTP</li> <li>• Flow Control • 802.3x Flow Control • HOL Blocking Prevention <ul style="list-style-type: none"> <li>• Port Mirroring • One-to-One • Many-to-One</li> <li>• Supports Mirroring for Tx/Rx/Both • Multicast Filtering</li> </ul> </li> <li>• Forwards all unregistered groups • Filters all unregistered groups</li> <li>• Configurable MDI/MDIX • MLD snooping v1/v2 (256 groups)</li> </ul> |
| VLAN                      | <ul style="list-style-type: none"> <li>• 802.1Q • VLAN Group • Max. 256 static VLAN groups</li> <li>• Configurable VID from 1 - 4094 • Asymmetric VLAN <ul style="list-style-type: none"> <li>• Auto Voice VLAN • Max. 10 user-defined OUI</li> <li>• Max. 8 default OUI • Auto Surveillance VLAN</li> </ul> </li> </ul>  |
| Quality of Service (QoS)  | <ul style="list-style-type: none"> <li>• 802.1p Quality of Service • 8 queues per port • Queue Handling <ul style="list-style-type: none"> <li>• Strict • Weighted Round Robin (WRR) • Bandwidth Control</li> </ul> </li> <li>• Port-based (Ingress/Egress, min granularity 10/100/1000 is 64 Kbps) • QoS based on: <ul style="list-style-type: none"> <li>• 802.1p Priority Queues</li> <li>• DSCP • ToS • IPv6 Traffic Class • TCP/UDP port</li> </ul> </li> </ul>  |
| L3 Features               | <ul style="list-style-type: none"> <li>• IP Interface • Supports 1 interface • IPv6 Neighbor Discovery (ND)</li> </ul>  |
| Access Control List (ACL) | <ul style="list-style-type: none"> <li>• Max. 50 access list • Max. 768 rules shared by IPv4, MAC and IPv6</li> <li>• Each rule can only be associated with a single port • ACL based on <ul style="list-style-type: none"> <li>• 802.1p priority • VLAN • MAC address • Ether type • IP address</li> <li>• DSCP • Protocol type • TCP/UDP port number • IPv6 Traffic Class</li> </ul> </li> </ul>  |
| Security                  | <ul style="list-style-type: none"> <li>• Broadcast/Multicast/Unicast Storm Control • D-Link Safeguard Engine • DHCP Server Screening • IP-MAC-Port Binding (Smart Binding) • Supports 512 address binding entries • ARP Inspection</li> <li>• ARP + IP Inspection • Supports DHCP Snooping • 802.1X Port-based Access Control • ARP Spoofing Prevention • Max. 64 entries</li> <li>• Traffic Segmentation • SSH v2 • SSL • Supports v1/v2/v3 • Port Security • Supports up to 64 MAC addresses per port • Duplicate address detection</li> </ul>  |
| AAA                       | <ul style="list-style-type: none"> <li>• 802.1X Authentication • Supports local/RADIUS database</li> <li>• Supports port-based access control • Supports EAP, OTP, TLS, TTLS, PEAP • IPv6 RADIUS Server • Support MD5 authentication</li> </ul>   |

## Network Switches

|                       |  |
|-----------------------|--|
| MIB/RFC Standards     | <ul style="list-style-type: none"> <li>• RFC 783 TFTP • RFC 951 BootP/DHCP Client • RFC 1157 SNMP v1, v2, v3 • RFC 1213 MIB II • RFC 1215 MIB Traps Convention • RFC 1350 TFTP • RFC 1493 Bridge MIB • RFC 1769 SNTP • RFC 1542 BootP/DHCP Client</li> <li>• RFC 1901 SNMP v1, v2, v3 • RFC 1907 SNMP v2 MIB</li> <li>• RFC 1908 SNMP v1, v2, v3 • RFC 2131 BootP/DHCP Client</li> <li>• RFC 2138 RADIUS Authentication • RFC 2139 RADIUS Authentication • RFC 2233 Interface Group MIB • RFC-2246 SSL</li> <li>• RFC 2475 • RFC 2570 SNMP v1, v2, v3 • RFC 2575 SNMP v1, v2, v3 • RFC 2598 CoS • RFC 2618 RADIUS Authentication</li> <li>• RFC 2819 RMON v1 • RFC 2865 RADIUS Authentication</li> <li>• RFC 3164 System Log • RFC 3195 System Log • RFC 3411-17 SNMP • D-Link Private MIB • LLDP MIB • Zone Defense MIB • 2233 Interface Group MIB</li> </ul> |
| OAM                   | <ul style="list-style-type: none"> <li>• Cable Diagnostics • Factory Reset</li> </ul>  |
| Management            | <ul style="list-style-type: none"> <li>• Web-based GUI • D-Link Network Assistant Utility</li> <li>• Compact CLI • Telnet Server • TFTP Client • Configurable MDI/MDIX • SNMP • Supports v1/v2c/v3 • SNMP Trap • Backup/Upgrade firmware • Smart Wizard • Upload/Download Configuration file • System Log • Max. 500 log entries • BootP/DHCP Client • SNTP</li> <li>• ICMP v6 • IPv4/v6 Dual Stack • DHCP Auto Configuration</li> <li>• Time Setting • SNTP • RMONv1 • Trusted Host</li> </ul>  |
| Green V3.0 Technology | <ul style="list-style-type: none"> <li>• Power Saving by: • Link Status • Time-based PoE: PoE ports can be turned on/off by port or system through schedule • LED Shutoff • System Hibernation • Port Shutoff</li> </ul>   |



## DES-1210 Smart Switch Series



### Features:

- Quality of Service
- Port Trunking
- Spanning Tree

Network monitoring and maintenance features including

- Port Mirroring
- Loopback Detection
- Cable Diagnostics

### 24 Port Smart Switches

The DES-1210 Series is the latest generation of Smart Switches. Equipped with 24 Fast Ethernet ports, 2 Gigabit ports<sup>3</sup> and 2 combo Gigabit/SFP ports<sup>3</sup>, this series offers all the features needed in a small and medium business, without the complexity or cost involved. The built-in web interface and PC based SmartConsole Utility make these switches easy to deploy, configure and troubleshoot. Its complete set of features allows for seamless integration in every environment.

The PoE versions in this series is the 24 port which integrate power-saving technologies such as time-based PoE which allows the power to be shut off at a predetermined time, saving power on VoIP phones, Wireless Access Points or any other PoE equipment. The DES-1210-28P integrates the Smart Fan feature which automatically turns on the built in fans only when a certain temperature is reached, providing continuous operation, increasing the switch's lifespan.

The DES-1210-28P is also compliant with the new PoE+ standard, enabling it to feed up to 30 Watts to connected devices..

### Extensive set of Features

Equipped with a complete line-up of features, these switches include Quality of Service, Port Trunking, Spanning Tree and IGMP snooping. Network monitoring and maintenance features include Port Mirroring, Loopback Detection and the innovative Cable Diagnostics. With Cable diagnostics, the switch will flag a faulty Ethernet cable connected to any of its ports, detailing the type of error detected.

### Ready for network convergence

These switches are ideal for converged networks, where IP telephony, traditional LAN and Surveillance systems are integrated in the data flow. The Auto Voice and Auto Surveillance<sup>2</sup> VLAN features will automatically place these types of traffic on separate VLANs, thus guaranteeing the confidentiality, prioritisation and quality of these services on the network.

### Order Code:

0568350

24 port Ethernet Switch,  
managed Layer 2, 24 POE  
ports, max 193 watts

## Technical Specifications:

| General                        |   |
|--------------------------------|---|
| Size                           | 19" rack mountable, 1U  |
| Interface                      | 24 10/100BASE-TX PoE 2 1000BASE-T<br>2 Combo 1000BASE-T/ SFP  |
| Port Standards                 | IEEE 802.3 Ethernet<br>IEEE 802.3u Fast Ethernet<br>IEEE 802.3ab Gigabit Ethernet<br>IEEE 802.3z Gigabit Ethernet (fiber) |
| Auto negotiation               | Yes   |
| IEEE 802.3x Flow Control       | Yes   |
| Auto MDI/MDIX                  | Yes   |
| Performance                    |   |
| Switching Capacity             | 12.8 Gbps   |
| 64-Byte Packet Forwarding Rate | 9.5 Mpps  |
| MAC Address Table Size         | 8K Entries  |
| Packet Buffer Memory           | 512 KB  |
| Flash Memory                   | 16 MB   |
| Transmission Method            | Store-and-forward   |
| PoE                            |   |
| PoE Capable Ports              | Port 1-4 upto 15.4 or 30 watts per port Port 5-24 upto 15.4 watts per port  |
| PoE Power Budget               | 193 watts   |
| LEDs                           |   |
| Power (Per Device)             | Yes   |
| Console (Per Device)           | Yes   |
| Link/Activity/Speed (Per Port) | Yes   |
| MTBF (Hours)                   | 197,343 hours   |
| Acoustics                      | 53.9 dB   |
| Heat Dissipation               | 866.65 BTU per hour   |

## Network Switches

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|   |   |
|---|---|
| Power Input   | 100 to 240 VAC, 50 to 60 Hz Internal Universal Power Supply |
| Max Power Consumption   | 254 watts (PoE on),<br>26.4 watts (PoE off)                 |
| Dimensions (W x D x H)  | 440 x 250 x 44 mm   |
| Fan Quality   | 3 Smart Fans <sup>2</sup>                                   |
| Operating Temperature   | 0 to 40° C  |
| Storage Temperature   | -10 to 70° C  |
| Operating Humidity  | 5% to 95% non-condensing                                    |
| Emission (EMI)  | FCC Class A, CE Class A, VCCI Class A, IC, C-Tick           |
| Safety  | cUL, LVD  |
| 2 Default fan speed is low. Fan switches to high speed automatically at 33° C ambient temperature |   |

## Network Switches

# FGP-2412 24 FE PoE Plus + 2 GE with 2 Combo SFP Switch



### Features:

- 24 Port POE power 15.4 w
- 10/100 switch unmanaged
- 2 x SFP ports
- POE Power budget 480 watts (240 w : port 1-8) (240 w : port 9-24 up to 30 w per port)
- Includes Power cord, Rubber feet, Quick Installation Guide

LevelOne FGP-2412 provides 24 10/100Mbps ports with IEEE 802.3at/af PoE supported and plus 2 Gigabit Combo SFP ports. It supports MDI / MDI-X convertible on 24-10/100Mbps ports and provides PoE inject function on PoE ports.

The FGP-2412 also provides a simple, cost-effective, and highly reliable network connection for data and power transmission.

With its 8.8Gbps non-blocking switch fabric, 4K MAC Address table, and IEEE 802.3x, full-duplex flow control, the FGP-2412 offers wire-speed packet transfer performance without risks of packet loss.

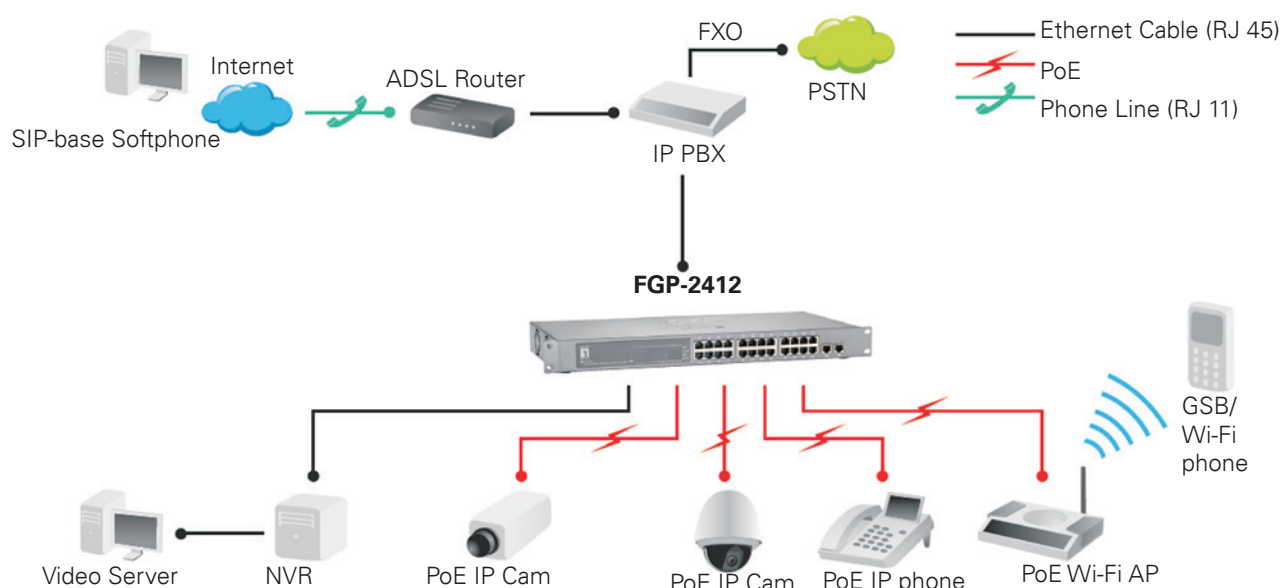
Furthermore, it is the ideal device for bridging among Ethernet, Fast Ethernet workgroups and networks. It fits all kind of Ethernet installations such as campus, workgroup, department, enterprise, telecom or industrial applications.

### Order Code:

FGP-2412

24 port Unmanaged 10/100 Network Switch + 2 x SFP+2 x Gig copper ports (combo)

All 24 Fast Ethernet RJ-45 copper interfaces support 10/100Mbps and 2 Gigabit Ethernet RJ-45 copper interfaces support 10/100/1000Mbps autonegotiation for optimal speed detection through RJ-45 Category 6, 5 or 5e cables. MDI/MDI-X auto detection is provided for direct wire connection to any Ethernet devices like switches, hubs, or workstations without requiring a crossover cables. Through the front panel LED indicators, users can easily tell the network connection status directly from the indicators.



## Technical Specifications:

### Standards

IEEE 802.3 10-BASE-T (Ethernet)  
IEEE 802.3u 100-BASE-TX (Fast Ethernet)  
IEEE 802.3ab 1000BASE-T (Gigabit Ethernet)  
IEEE 802.3x Flow Control (full-duplex flow control)  
IEEE 802.3af Power over Ethernet  
IEEE 802.3at Power over Ethernet Plus

### Features

MAC Address: 4K  
Buffer Memory: 352KB  
Transmission Method: Store and Forward  
Backplane: 8.8Gbps  
Filtering/Forwarding Rates  
1000Mbps port-1,488,000pps  
100Mbps port-148,000pps  
10Mbps port-14,880pps

### Filtering/Forwarding Rates

1000Mbps port-1,488,000pps  
100Mbps port-148,000pps  
10Mbps port-14,880pps  
Transmission Media  
10Base T Cat. 3, 4, 5 UTP/STP  
100Base TX Cat. 5 UTP/STP  
1000Base TX Cat. 5e/6/7 UTP/STP  
Network Interface  
24 x 10/100Mbps RJ-45 PoE Ports  
2x 10/100/1000Base-T RJ-45 combo 1000Base-FX  
SFP Uplink Slots

### PoE Spec

PoE Standard: IEEE 802.3af/at Power over Ethernet / PSE  
PD classification identity  
PoE over current protection  
PoE circuit sorting protection  
PoE Power Output: Per Port 56V DC, Max. 15.4 watts (802.3af )  
or 30 watts (802.3at)  
Power Budget: Max. 480 W  
Power Pin Assignment: 1/2(+), 3/6(-)

### LED Indicators

Power, Active, 10/100 M, PoE

### Power Input

100-240 V AC, 50-60 Hz, 5 A Internal Power Supply

### Power Consumption

500 W

Dimensions (L x W x H)

480 x 200 x 44 mm

### Weight

3.8 kg

### Temperature

Operating: 0~45 Degree °C

Storage: -40~70 Degree °C

### Humidity

Operating: 10~90% (Non-condensing)

Storage: 10~90% (Non-condensing)

### Certifications

FCC, CE

# GEP-0520 4GE PoE + 1GE Switch



## Features:

- 4 Port standard POE Power 15.4 w
- Unmanaged
- 1 Gigabit uplink port
- POE Power budget 61.6 watts, up to 15.4 w per port
- Includes Power adapter & Quick Installation guide

Order Code:  
GEP-0520

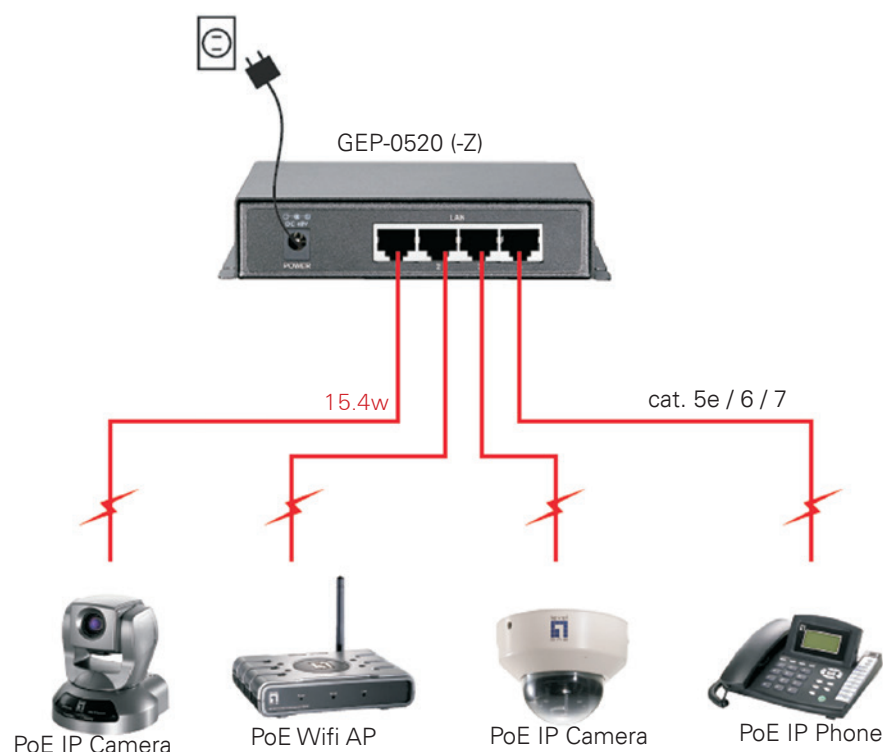
4 Ports of standard POE  
+ 1 x gigabit uplink port,  
unmanaged

The LevelOne GEP-0520 provides 5 x 10/100/1000Mbps ports with IEEE 802.3af PoE supported. This switch is IEEE 802.3af compliant, and provides power and data over a single Ethernet cable to any PoE device, with total power budget of 61.6W, up to 15.4W per port. Together with Energy Efficient Ethernet (IEEE 802.3az) standard compliant, it substantially lower power consumption during periods of low-link utilization.

Moreover, supports Gigabit Ethernet connectivity with 9K jumbo frames for network performing enhancement. Ideal for small businesses that prefer an inexpensive solution for PoE deploying infrastructure.



POE



## Technical Specifications:

### Standards

IEEE 802.3: 10 BASE-T  
IEEE 802.3u: 100 BASE-TX  
IEEE 802.3ab: 1000 BASE-T  
IEEE 802.3af: Power over Ethernet  
IEEE 802.3az: Energy Efficient Ethernet

### Features

MAC Address: 2K  
Buffer Memory: 128KB  
Transmission Method: Store-and-Forward  
Backplane: 10Gbps  
Jumbo Frame: 9K

### Filtering/Forwarding Rates

1000Mbps port-1488,000pps  
100Mbps port-148,000pps  
10Mbps port-14,880pps

### Transmission Media

4 x 10/100/1000Mbps RJ-45 PoE Ports  
1 x 10/100/1000Mbps RJ-45 Uplink Port

### PoE Spec

PoE Standard: IEEE 802.3af Power over Ethernet  
PD classification identity  
PoE over current protection  
PoE circuit sorting protection  
PoE Power Output: Per Port 48V DC, Max. 15.4 watts (802.3af )  
PoE Power Budget 61.6 W  
Power Pin Assignment: 1/2(+), 3/6(-)

### Power Consumption

65 W

### LED Indicators

Power, Uplink, LAN 1~4 port, PoE 1~4 port

### Power Input

100-240 VAC / 50-60Hz External Power Adapter

### Power Consumption

500 W

### Dimensions (L x W x H)

120 x 90 x 28 mm

### Weight

0.8 kg

### Temperature

Operating: 0~45 Degree °C  
Storage: -40~70 Degree °C

### Humidity

Operating: 10~90% (Non-condensing)  
Storage: 10~90% (Non-condensing)

### Certifications

FCC, CE

## GEP-0823 8-Port Gigabit PoE Plus Switch



### Features:

- IEEE 802.3af/at PoE compliant to simplify deployment and installation
- 10/100/1000Mbps wire speed transmission and reception
- Auto-detection and protection of non-standard PoE devices
- IEEE 802.3x Flow Control protects against lost packets for reliable data transmission
- Total PoE power budget: 120W, up to 30W per port

### Order Code:

**GEP-0823** 8-port Gigabit Ethernet PoE

The LevelOne GEP-0823 is an 8-port Gigabit Ethernet PoE switch that provides Power over Ethernet on all eight of its ports. Per PoE port a power supply of up to 30W is possible. The total PoE power budget is 120W. It is the ideal solution when office and home users are using a combination of PoE and non-PoE devices.

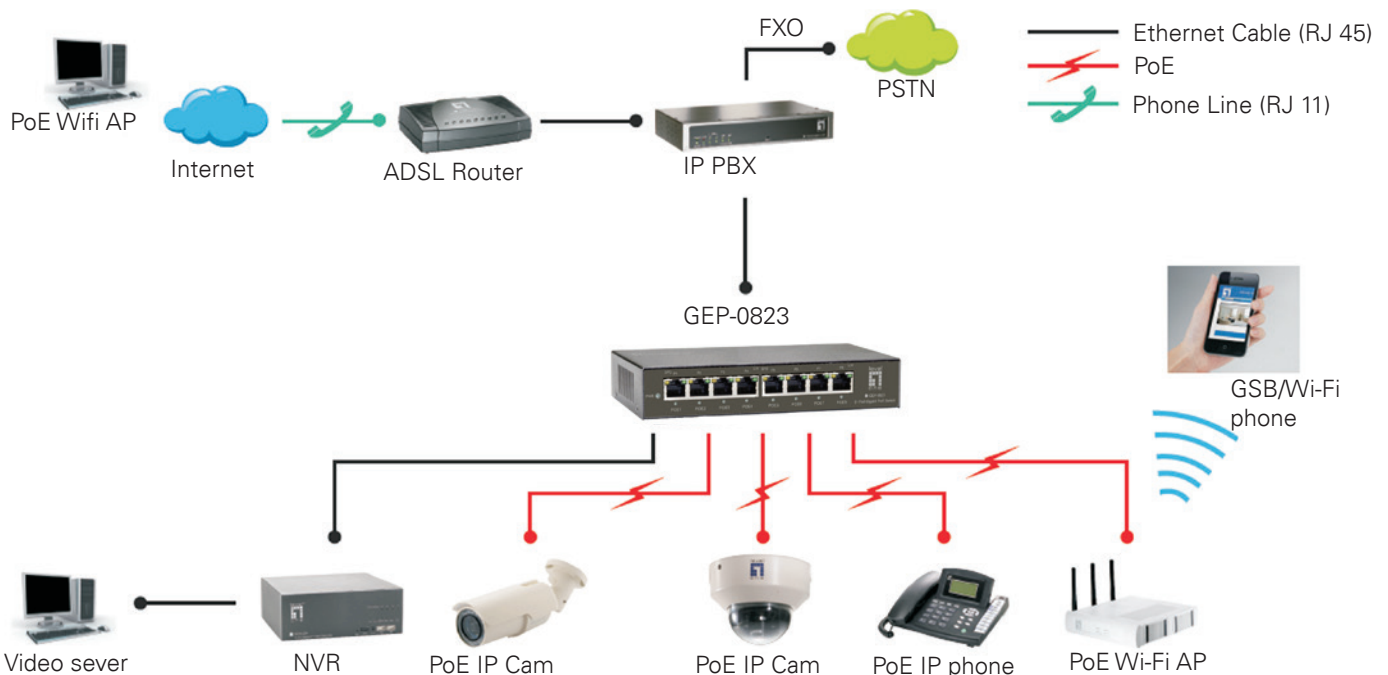
The GEP-0823's eight PoE-enabled ports make it an ideal solution for office users who use PoE-enabled devices and already want to power a larger number of PoE devices. These products can be a mix of PoE IP phones, PoE Wifi APs and PoE IP cams.

It is the perfect solution for offices that want to upgrade their office equipment and LAN infrastructure to PoE capability or upgrade their existing PoE infrastructure to Gigabit speed. The switch automatically detects the connected IEEE 802.3at/af standard device and provides these devices with power and data over a single cable.

The GEP-0823 enables users to provide a stable and reliable high-speed LAN environment with store and forward switching architecture, packet error filtering and blockade-free packet forwarding. The 802.3x flow control mechanisms operate in both full and half duplex modes.

This switch also supports the N-Way auto negotiation protocol, which automatically detects network speed and duplex mode.

For instant fault detection, the GEP-0823 is equipped with a complete set of LEDs to help monitor and troubleshoot the network.





## Technical Specifications:

### Standards

IEEE 802.3 10-BASE-T, Ethernet  
IEEE 802.3u 100-BASE-TX, Fast Ethernet  
IEEE 802.3ab 1000BASE-T, Gigabit Ethernet  
IEEE 802.3x Full-duplex Flow Control  
IEEE 802.3af Power over Ethernet (PoE)  
IEEE 802.3at Power over Ethernet Plus (PoE+)

### Features

Power Budget: Max. 120W  
PoE Standard: IEEE 802.3af/at Power over Ethernet / PSE  
PD classification identity  
PoE over current protection  
PoE circuit sorting protection  
PoE Power Output: Per Port 56V DC, Max. 15.4 watts (IEEE 802.3af) or 30 watts (IEEE 802.3at)

### Memory

1Mb

### Buffer Memory

8k

### Port

8 x 10/100/1000Base-TX RJ45 PoE port

### Indicator

Power, Active, 10/100/1000M

### Pin Assignment and Polarity:

1/2(+), 3/6(-) Mode A  
4/5(+), 7/8(-) Mode B (Optional)

### Transmission Method

Store-and-Forward

### Power Input

52VDC @ 2.5A 130W

### Power Output

<120W

### Power Consumption:

<10W

### Data Rate:

10/100/1000Mbps

### Performance

Jumbo Frame (K): 9126 bytes

### Environmental

Operating Temperature: -20~70°C  
Operating Humidity (Non-condensing): 5%~90%  
Storage Temperature: -20~70°C  
Storage Humidity (Non-condensing): 5%~90%

### Physical Specifications

Dimensions (WxDxH): 170.5 × 80.5 × 30mm  
Weight: 900g

### Reliability

MTBF: 30,000 hours

### Approval and Compliance

EMI/EMS: CE,FCC

## Network Switches

# GEP-1020 8 GE PoE-Plus + 2 GE SFP Switch, 150 W



### Features:

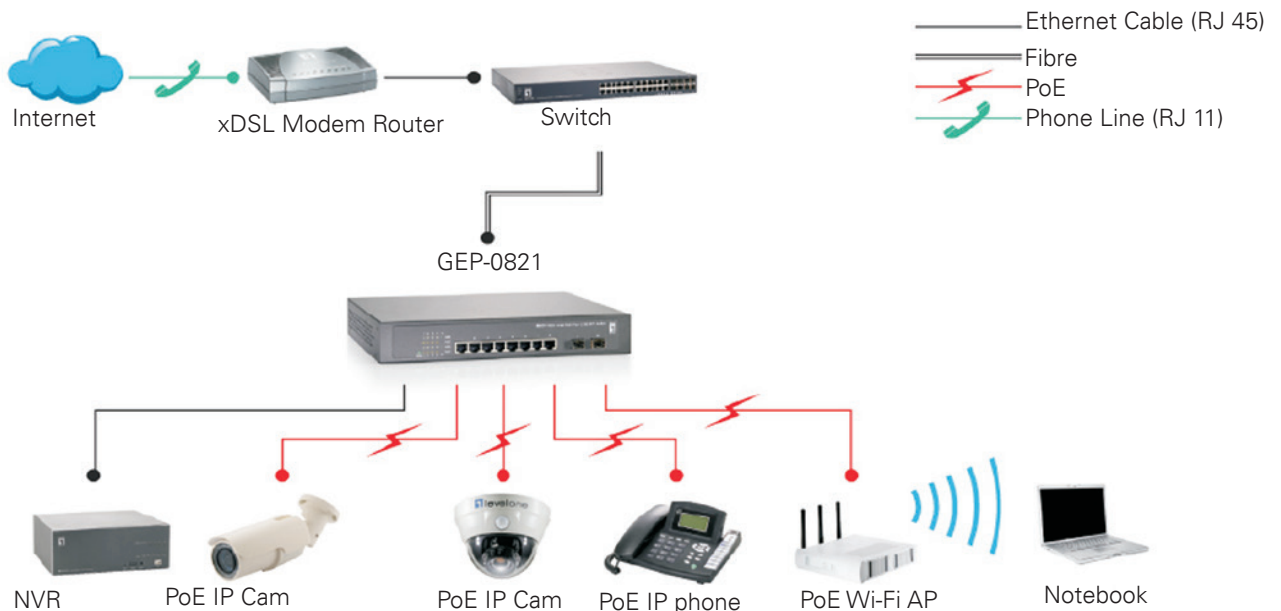
- 8 Port POE + Power 30 w
- Unmanaged
- 2 x Gigabit Uplink SFP ports
- POE Power budget 150 watts, up to 30 w per port
- Includes Power cord, 19" rackmount kit, Quick Installation Guide

### Order Code:

GEP-1020

8 port Gigabit PoE Plus Network Switch including 2 x Gig SFP ports

LevelOne GEP-1020 provides 8 x 10/100/1000Base-T PoE-Plus ports and 2 x 1000Base-X SFP (Small Form Factor Pluggable) slots. This switch is IEEE 802.3af/at compliant, providing power and data over a single Ethernet cable to any PoE device, with total power budget of 150W, up to 30W per port. Together with Energy Efficient Ethernet (IEEE 802.3az) standard compliant, it substantially lower power consumption during periods of low-link utilization. Moreover, supports Gigabit Ethernet connectivity with 9K jumbo frames for network performing enhancement. Ideal for small businesses that prefers an affordable solution for PoE deploying infrastructure.



## Technical Specifications:

**Buffer Memory (KB):**

512KB

**Connectors and Cabling:**

8 x 10/100/1000Base-T RJ-45 PoE-Plus Ports  
- 2 x 100/1000Base-X SFP Slots

**Indicator:**

Power; Link/Active; PoE

**Transmission Method:**

Store-and-Forward

**Power:**

Power Consumption: < 150W  
Power Input: 100-240V AC, 50-60 Hz, Internal Power Supply

**Standards & Protocols:**

IEEE 802.3 10-BASE-T, Ethernet  
IEEE 802.3u 100-BASE-TX, Fast Ethernet  
IEEE 802.3ab 1000BASE-T, Gigabit Ethernet  
IEEE 802.3x Flow Control (full-duplex flow control)  
IEEE 802.3af Power over Ethernet (PoE)  
IEEE 802.3at Power over Ethernet Plus (PoE+)  
IEEE 802.3az Energy-Efficient Ethernet

**General:**

Flow Control: Half Duplex - Backpressure; Full Duplex - Pause frame

**PoE:**

Power Budget: Max. 140W  
Power Output: Up to 30W per port  
Protection: Circuit protection to prevent power interference between ports  
Pin Assignment: 1/2(+), 3/6(-)

**Backplane (Gbps):**

16Gbps

**MAC Address Table:**

8K

**Data Transfer Rate:**

10/100/1000Mbps

**Packet Forwarding Rate:**

1000Mbps port - 1,488,000pps  
100Mbps port - 148,000pps  
10Mbps port - 14,880pps

**Temperature**

Operating: 0~45 Degree °C  
Storage: -40~70 Degree °C

**Jumbo Frame (K):**

9KB

**Power Saving:**

IEEE 802.3az Energy Efficient Ethernet:  
- Automatically turns power off on RJ-45 port when detecting link down or Idle of client  
- Cable length detection: Adjusts the signal strength based on the cable length  
- Reduces the power consumption for cables shorter

**Temperature (°C):**

Operating: 0°C ~ 40°C  
Storage: -40°C ~ 70°C

**Humidity (Non-condensing):**

Storage: 5% ~ 90%  
Operating: 5% ~ 90%

**Dimensions (W x D x H mm):**

280 x 215 x 44 mm

**Weight (g):**

2300 g

**Approval and Compliance:**

FCC Part 15 Class A, CE

**Deployment:**

19-inch rack-mountable

# GEP-2652 26-Port Web Smart Gigabit PoE Switch



The LevelOne GEP-2652 is equipped with 24 PoE ports and 2 Gigabit SFP ports. It offers powerful Layer2 capabilities, enhanced PoE functionality and a total PoE budget of 370W. The switch also supports advanced IPv6 management, IPv6 security and IPv6 multicast control to accommodate the growth of IPv6 deployment at an exceptional price/performance ratio.

The PoE-enabled GEP-2652 has IEEE 802.3af/at certification, eliminating the challenges associated with standardised devices. It is therefore ideal for companies that want to operate VoIP telephones, wireless access points or network cameras.

The GEP-2652 supports up to 30W output power per PoE port, giving power distribution flexibility for a wide range of PoE PD devices.

## L2 Features:

- Spanning Tree Protocol
- 802.1D Spanning Tree Protocol (STP)
- 802.1w Rapid Spanning Tree Protocol (RSTP)
- 802.1s Multiple Spanning Tree Protocol (MSTP), 16 instances
- MAC Address Table
- Up to 8K entries
- Virtual Local Area Network (VLAN)
- 802.1Q tag-based VLAN-up to 4096 VLAN IDs; Port-based VLAN; MAC-based VLAN
- Supports 4K VLAN
- Port-based VLAN
- GVRP
- IEEE 802.1v protocol-based VLAN IP Subnet-based VLAN MAC-based VLAN
- Traffic Segmentation
- L2 Virtual Private Network (Q-in-Q)
- Selective Q-in-Q
- VLAN Translation
- L2 Protocol tunneling (xSTP, LLDP)
- Link Aggregation

## Features:

- 24 Gigabit PoE ports and 2 Gigabit SFP slots
- IEEE 802.3af/at PoE compliant to simplify deployment and installation
- Total PoE power budget: 370W, up to 30W per port
- Supports port-based VLAN, IEEE 802.1Q VLAN Tagging and GVRP
- IEEE 802.1d/w/s Spanning Tree Protocol (STP) and port mirroring
- Supports IPv4/IPv6 network operation
- Supports unknown unicast / broadcast / multicast storm control
- MLD, Telnet, SNMP V1, V2c & V3, RMON, Web Browser, and TFTP Management
- IP Multicast Filtering through IGMP Snooping V1 / V2 / V3
- Dynamic ARP Inspection (DAI) protects switches against ARP spoofing

## Order Code:

GEP-2652

24-port Gigabit Ethernet PoE, total PoE power budget 370W, up to 30W per port.

- IEEE 802.3ad Link Aggregation Control Protocol Trunk groups: 8, up to 8 GE ports per group
- Load Balancing: SA+DA, SA, DA, SIP+DIP, SIP, DIP
- Quality of Service (QoS): Priority Queues: 8 hardware queues per port Traffic classification:
- Weighted Round Robin Strict + WRR
- Diffserv: Ingress policy map (police rate, remark CoS)
- Egress policy map (police rate, remark CoS/DSCP)
- Rate Limiting (Ingress and Egress, per port base)
- GE: Resolution 16 Kbps ~ 1,000 Mbps

## L2 Multicast Features:

- IGMP Snooping
- IGMP v1/v2/v3 Snooping
- IGMP Proxy Reporting
- IGMP Filtering
- IGMP Throttling
- IGMP Immediate Leave
- IGMP Querier
- MLD Snooping v1/v2

## Technical Specifications:

### IPv6 Features:

- Native IPv6
- IPv4/IPv6 Dual Protocol stack
- IPv6 Address Types Stack: Unicast
- IPv4/IPv6 Dual Protocol stack
- Duplicate address
- Remote IPv6 ping
- IPv6 Telnet support
- HTTP over IPv6
- SNMP over IPv6
- IPv6 MLD filter and throttling
- MLD Snooping v1/v2
- DHCPv6 snooping

### Security:

- Port Security (MAC Flooding Attack / MAC Spoofing Attack Prevention)
- DoS Attack Protection
- Login Security
- RADIUS authentication
- RADIUS accounting
- TACACS + authentication
- TACACS + accounting
- TACACS + authorization
- Management Interface Access Filtering (SNMP, Web, Telnet)
- SSH (v1.5/v2.0) for security Telnet
- SSL for HTTPS SNMPv3

### Network Security:

- IPv6 ACL
- Port security
- Dynamic ARP Inspection
- CPU guard
- echo-charge smurf tcp-flooding tcp-null-scan tcp-syn-fin-scan tcp-xmas-scan udp-flooding win-uke
- Storm Control: Prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on a port
- ACLs: Supporter L2/L3/L4 MAC Access control list

### User Security for Enterprise:

- IEEE 802.1X port based and MAC based authentication Dynamic VLAN Assignment, Dynamic QoS assignment MAC authentication
- Web authentication
- Voice VLAN
- Guest VLAN

### User Security for ISP/MSO:

- L2/L3/L4 Access Control List
- MAC Access control list (Source/Destination MAC, Ether type,
- Priority ID/VLAN ID)
- IP standard access control list (Source IP)
- IP extended access control list (Source/Destination IP, Protocol, TCP/UDP port number)
- DHCP Snooping
- DHCP Option 82
- DHCP Option 82 Relay IP Source Guard

### Management:

- Web-based GUI
- CLI
- Telnet
- SNMP v1, v2c, v3
- Firmware upgrade via TFTP/HTTP server
- Multiple configuration files
- Configuration file upload/download via TFTP/HTTP server Firmware auto upgrade
- RMON (groups 1, 2, 3 and 9)
- BOOTP, DHCP client for IP address assignment
- SNTP/NTP
- DNS client
- Event/Error Log
- Syslog
- SMTP
- Supports LLDP (802.1ab)
- Cable diagnostics

### PoE:

Power Budget: Max. 370W

Power Output: Up to 30W per port

Pin Assignment: 1/2(+), 3/6(-)

### Performance:

Packet Forwarding Rate: 38.69 Mpps

Jumbo Frame: 9 K

### Physical Specifications:

Dimensions (WxDxH): 440 x 208 x 44 mm

Weight: 3875 g

### Approval and Compliance:

EMI/EMS: CE

Environmental Test: RoHS

# POI-2002 PoE Injector



## Features:

- Single port 10/100 Power injector
- Standard POE 15.4 w
- Light weight and compact size
- High safety with surge protection
- Remote power feeding up to 100 meters
- Input Power AC Input Voltage: 100~240 VAC

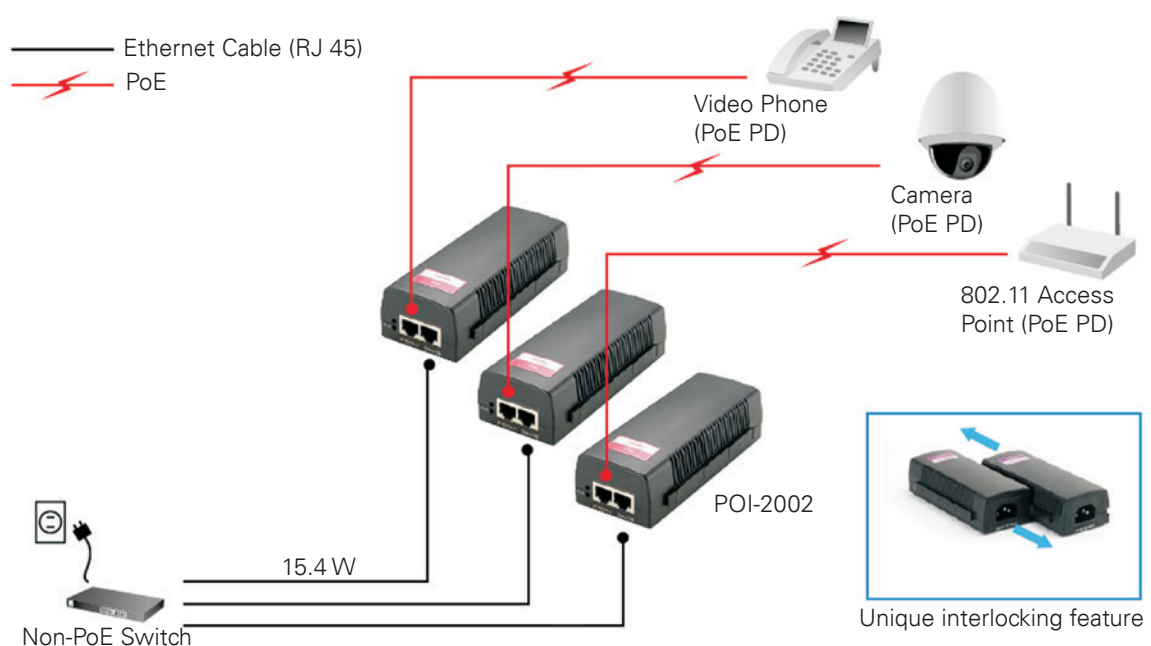
The POI-2002 is a Power over Ethernet Injector with one Ethernet Input (data only) port and one Output (data +power) port that is designed for small or medium network environments. This product can convert standard 100~240 V/AC power into lowvoltage DC that runs over existing LAN cable to power up IEEE 802.3af compliant network accessories. It also features PoE awareness to verify whether the network device receiving power or only the data will be sent through LAN cable. By adding a PoE Splitter (POS-1002) to existing non-PoE networking equipment, installing networking products such as Access Points and IP cameras can easily be performed.

Wireless device deployments are easily located without the need for power outlets and network administrators don't need to use AC power adapters anymore.

## Order Code:

POI-2002

10/100 POE injector 15.4 w



## Technical Specifications:

### Standards Compliance

IEEE 802.3 10BaseT  
IEEE 802.3u 100BaseTx  
RJ-45 10/100 Mbps

### PoE Power Output

Pin Assignment and Polarity: 4/5 (+), 7/8 (-)  
Output Power Voltage: 52 VDC Maximal  
Power: 15.4 WattsMaximum  
Input Power AC Input Voltage: 100~240 VAC  
Requirements AC Input Current: 0.3A @  
100~240 VAC  
AC Frequency: 50~60 Hz

### Dimensions (L x W x H)/ Weight

87.9 x 51.3 x 166 mm/ 350 g

### Indicators:

PoE (Orange)

### Environmental Conditions

Operating Temperature: 0~45°C  
Storage Humidity: Maximum 95%, Non-condensing

### Regulatory

RoHS Compliant, CE/FCC

### Safety Approvals

EN 60950:2006

# POI-3000 Gigabit PoE Plus Injector



### Features:

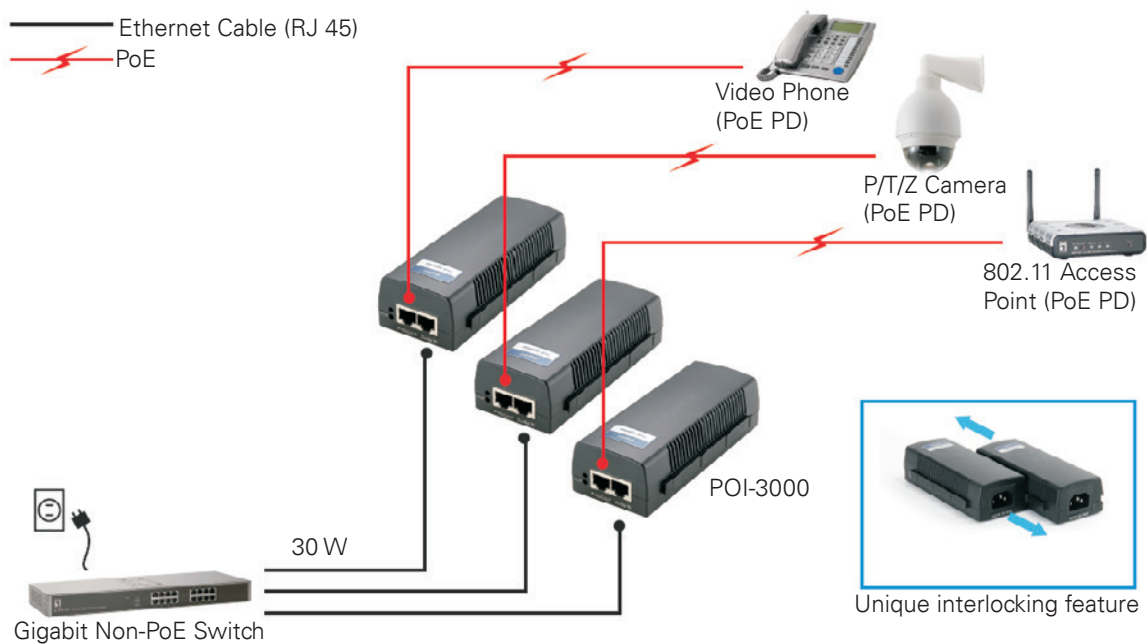
- 10/100 Power injector
- POE+ up to 30 w power feeding on 2 pairs
- Automatic detection and Protection of Non-standard Ethernet equipment
- Input Power AC Input Voltage: 100-240 VAC

### Order Code:

POI-3000

Gigabit PoE-Plus Injector  
30 w

The LevelOne POI-3000 is a single port, highpower PoE PSE solution for remote PoE PD devices. Generating up to 30 W, POI-3000 supplies remote power for new applications such as wireless access points, pan-tilt-zoom (PTZ) IP cameras and videophones. It complies with IEEE 802.3at PoE standard and is backwards to IEEE802.3af. It can work with 10/100Base-T networking devices and emerging 1000Base-T devices such as Wi-MAX and wireless IEEE 802.11n access points. For all the function featured in POI-3000, people can get the benefit of flexible network installation at lower cost, less downtime. It also provides a high-bandwidth pipe to the network.





## Technical Specifications:

### Standards Compliance

IEEE 802.3 10Base-T Ethernet  
IEEE 802.3u 100Base-Tx Fast Ethernet  
IEEE 802.3af Power over Ethernet  
IEEE 802.3at Power over Ethernet  
Connector  
RJ-45 10/100/1000 Mbps

### PoE Power Output

Pin Assignment and Polarity: 1/2(+), 3/6 (-)  
Output Power Voltage: 52 Vdc Maximal  
Power: 30 Watts Maximal  
Input Power AC Input Voltage: 100~240 VAC  
Requirements AC Input Current: 0.8A@ 100-240 VAC  
AC Frequency: 50~60 Hz

### Dimensions (L x W x H)/ Weight

143 mm x 51 mm x 38 mm  
350 g

### Indicators:

AC Power (Orange) / PoE (Green)

### Environmental Conditions

Operating Temperature: 0~45°C  
Storage Humidity: Maximum 95%, Non-condensing

### Regulatory

RoHS Compliant, CE/FCC

### Safety Approvals

EN 60950:2006

# Ultrastar DC HA210 Internal 2TB Western Digital Hard disk



## Features:

- Hard drive
- 2 TB
- For internal usage
- 3.5"
- SATA-6 Gb/s
- 7200 rpm

Performance-optimized high-capacity storage for high-intensity applications.

Advanced drive technology that delivers consistent high performance in a multitude of applications, and with up to ten times the workload capability of desktop drives, the WD Re drive is the workhorse of WD's datacenter portfolio.

The WD Re drive is perfect for highavailability storage arrays that demand a robust storage device, and this drive's high performance, capacity, and reliability make it ideal for data warehousing/ mining and high-performance computing. The WD Re uses a SATA interface to provide maximum flexibility and compatibility.

## Product Benefits

High capacity nearline drive Multiple capacities to suit even the most demanding datacenter, enterprise server, or cloud storage needs.

## Designed for high-intensity applications

Designed to handle workloads up to 550TB per year – among the highest workload capability of any 3.5-inch hard drive – delivering both performance and reliability to any datacenter environment.

## Vibration Protection

Enhanced RAFF™ technology includes sophisticated electronics to monitor the drive and correct both linear and rotational vibration in real time.

The result is a significant performance improvement in high vibration environments over desktop drives.

## Dual actuator technology

A head positioning system with two actuators that improves positional accuracy over the data track(s).

The primary actuator provides coarse displacement using conventional electromagnetic actuator principles. The secondary actuator uses piezoelectric motion to fine tune the head positioning to a higher degree of accuracy.

**1** Not all products may be available in all regions of the world. **2** As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit [www.sata-io.org](http://www.sata-io.org) for details. **3** WVD hard drive products manufactured and sold worldwide after June 8, 2011, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the RoHS Directive 2011/65/EU. **4** Controlled unload at ambient condition. **5** Product MTBF and AFR specifications are based upon a 40°C base casting temperature and typical system workload of 240TB/year. Workload is defined as the amount of user data transferred to or from the hard drive. Product is designed for workloads up to 550TB/year. **6** Product MTBF and AFR specifications are based upon a 40°C base casting temperature and typical system workload of 300TB/year. Workload is defined as the amount of user data transferred to or from the hard drive. Product is designed for workloads up to 550TB/year. **7** See <http://support.wd.com/warranty> for regional specific warranty details. **8** No non-recoverable errors during operating tests or after non-operating tests. **9** Sound power level.

## Order Code:

1W10002

3.5" Internal 2TB Western Digital Hard Disk

## Hard Disk Drives

| <b>Specifications</b>   |  | 2TB                    |
|---|--|------------------------|
| 512 native model number <sup>1</sup>  |  | WD2004FBYZ             |
| 512 emulation model number <sup>1</sup>   |  | —                      |
| 4K native model number <sup>1</sup>   |  | —                      |
| Interface   |  | SATA 6 Gb/s            |
| Formatted capacity <sup>2</sup>   |  | 2TB                    |
| 512n/512e user sectors per drive  |  | 3,907,029,168          |
| 4Kn user sectors per drive  |  | —                      |
| Native command queuing  |  | Yes                    |
| Form factor   |  | 3.5-inch               |
| RoHS compliant <sup>3</sup>   |  | Yes                    |
| <b>Performance</b>  |  |                        |
| Data transfer rate (max) <sup>2</sup> Buffer to host Host to/from drive (sustained) |  | 6 Gb/s 200 MB/s        |
| Cache (MB)  |  | 128                    |
| Rotational speed (RPM)  |  | 7200                   |
| <b>Reliability/Data Integrity</b>   |  |                        |
| Load/unload cycles <sup>4</sup>   |  | 600,000                |
| Non-recoverable read errors per bits read   |  | <1 in 10 <sup>15</sup> |
| MTBF (hours)  |  | 2,000,000 <sup>6</sup> |
| AFR (%)   |  | 0.44 <sup>6</sup>      |
| Limited warranty (years) <sup>7</sup>   |  | 5                      |
| <b>Power Management</b>   |  |                        |
| Average power requirements (W)  |  | 7.4                    |
| Sequential read   |  | 7.4                    |
| Sequential write Random read/write  |  | 8.1                    |
| Idle  |  | 5.9                    |
| <b>Environmental Specifications<sup>8</sup></b>                                     |  |                        |
| Temperature (°C)  |  |                        |
| Operating   |  | 5 to 60                |
| Non-operating   |  | -40 to 70              |
| Shock (Gs)  |  |                        |
| Operating (2 ms, read/write)  |  | 30                     |
| Operating (2 ms, read)  |  | 65                     |
| Non-operating (2 ms)  |  | 300                    |
| Acoustics (dBA) <sup>9</sup>  |  |                        |
| Idle  |  | 25                     |
| Seek (average)  |  | 28                     |
| <b>Physical Dimensions</b>  |  |                        |
| Height (in./mm, max)  |  | 1.028/26.1             |
| Length (in./mm, max)  |  | 5.787/147              |
| Width (in./mm, ± .01 in.)   |  | 4/101.6                |
| Weight (lb/kg, ± 10%)   |  | 1.41/0.64              |

# HIGHWIRE™ Ethernet Over Coax Adaptor



## Features:

- Simple retro-fit of IP cameras in place of analogue
- Full 100 Base-T Ethernet performance
- Supports multiple IP cameras (with switch)
- Fully automatic - no configuration required
- Up to 300 m on RG59, 500 m on RG6
- Powered by legacy PSU at camera end
- Rack mount option for control room end

HIGHWIRE supports mega-pixel cameras, uses legacy cables and cuts your installation costs. It is highly reliable and very easy to install.

Simple retro-fit of IP cameras in place of analogue  
 Full 100 Base-T Ethernet performance  
 Supports multiple IP cameras (with switch)  
 Fully automatic - no configuration required  
 Up to 300m on RG59, 500 m on RG6  
 Powered by legacy PSU at camera end  
 Rack mount option for control room end.

## Signal Converter

HIGHWIRE turns any existing analogue video cable (coax) into a high-speed Ethernet connection.

This allows a networked IP camera to replace an analogue CCTV camera, without installation of any new cabling. Thus the investment in the original cabling (usually around 30% of any system installation cost) can be retained and exploited for new-generation networked IP camera systems. HIGHWIRE is especially suited to mega-pixel IP camera applications or even multiple IP cameras as it supports high data rates.

## Simple Installation

HIGHWIREs are used in pairs and installing them is extremely simple. One HIGHWIRE unit is connected to each end of the coaxial cable with the BNC connectors, thus providing a straight RJ45 to RJ45 network connection from end to end across the existing cabling.

A HIGHWIRE to HIGHWIRE connection instantly operates as a full-duplex 100Base-T Ethernet connection and is completely transparent to any network device. HIGHWIRE has no MAC address or IP address and requires no set-up at all.

## Order Code:

VHW-HW

Highwire Ethernet over video cable converter

## Network Transmission

| Highwire Interface     |  |
|------------------------|--|
| Connector type         | BNC 75ohm  |
| Cable type             | 75ohm (RG59 or similar)  |
| Range                  | Up to 300 m on RG59, 500 m on RG11 at full rate                |
| Bandwith               | 200Mbps (total up + down)                                      |
| Ethernet Interface     |  |
| Connector type         | RJ45   |
| Cable type             | Straight through or cross-over, auto detected                  |
| Rate                   | 100Base-T, full duplex with auto negotiation                   |
| LED Indicators         |  |
| Green – Constant       | Power OK, full HIGHWIRE data link                              |
| Green – Blink          | Power OK, no HIGHWIRE link                                     |
| Green – Off            | No power   |
| Amber – Constant       | Ethernet link On   |
| Amber – Blink          | Network traffic  |
| Power                  |  |
| Unit power             | 1.5 watts  |
| Connector type         | Screw terminals with detachable plug                           |
| Power supply type      | IEC Class II isolated only                                     |
| Operating voltage      | 8-57 V DC or 20-28 V AC (type and polarity auto detected)      |
| Supply current         | 120 mA (12 V), 60 mA (24 V)                                    |
| Physical/Environmental |  |
| Dimensions             | L 104 mm (83 mm excluding connectors) W 54 mm H 24 mm          |
| Weight                 | 110 g  |
| Operating temperature  | -10°C to 50°C  |
| Relative humidity      | 85% non-condensing   |
| Grounding              | Chassis should be grounded and is connected to the BNC shield. |
| Compliance             | CE, FCC, RoHS  |

## Network Transmission

# HIGHWIRE™ POWERSTAR - Ethernet & POE-over-coax



### Features:

- Re-use existing coax cable for IP cameras
- Eliminate power cabling with POEover-Coax™
- Reliably power POE Plus cameras (25watts)
- Instantly check connection and power status with SafeView™
- Fully automatic - no configuration required
- Simple fast, cost-effective installation
- Full 100Base-T Ethernet performance

Ethernet and POE-over-coax to IP cameras without the need to re-cable HIGHWIRE Powerstar uses existing coax cable to connect and power IP cameras without cabling costs. Easy to use and fast to install.

A true plug-and-play solution for connecting and powering IP cameras over legacy coaxial cabling. Our unique ultra low-power design and reliable power delivery enables long range extension even over the lowest-grade cable, such as the high-resistance copper-clad steel (CCS) types found in many legacy installations.

### Order Codes:

VHW-HWPS-B

HIGHWIRE Powerstar™ Base unit, for installation at the switch side. Features 802.3af/802.3at POE or 57 V DC power input & POE-over-coax™ output.

VHW-HWPS-C

HIGHWIRE Powerstar™ Camera unit, for installation at the camera side. Features POE-over-Coax™ or 57 V DC power input & 02.3af/802.3at POE output. Optional 57V DC 800 mA power supply.

VPSU-57V-800-O

Recommended for maximum range and POE-over-coax™, or as a convenient alternative to a POE switch or injector.

VHW-WMB

Wall mounting bracket for a single HIGHWIRE unit.

## Reliability assured

HIGHWIRE Powerstar's unique ultra low-power design and efficient power delivery enables long range extension even over the lowest-grade cable, such as the high-resistance copper-clad steel (CCS) types found in many legacy installations. This means that legacy coax upgrades can be planned with confidence, while a quick check of the SafeView™ power display reaffirms that the devices' connection will continue to be reliable, whatever the cable used. Reliable power delivery is also ensured at the source, where either dependable screw-terminal connections or a UPSbacked POE supply can be used. And for predictable network operation with no restrictions, HIGHWIRE delivers a full 200 Mbit/s of bandwidth at 300 m of RG-59 or 500 m of RG-11 coax.

If a custom application demands a greater range, HIGHWIRE coax sections can be connected in series to deliver network connections up to 4km, at full bandwidth and with no extra power wiring.

## POE-over-Coax™ Range

HIGHWIRE Powerstar delivers reliable power at long range, even over low-grade CCS cable, and Safeview™ confirms it automatically on installation. In most cases the full 25 watts required by the most powerful POE Plus cameras is available. The table below shows the range achievable by cable type, power source, and camera wattage.

Once HIGHWIRE Powerstar is connected SafeView™ will automatically indicate POE power. HIGHWIRE Powerstar adds the convenience of POE-over-Coax™ technology and gives you the reassurance of SafeView™ monitoring which displays the power available at the base unit without access the remote equipment.

## Simply add power

With no need to configure IP addresses, set DIP switches, or make awkward measurements and calculations, installing HIGHWIRE Powerstar is so straight forward, all you need to do is plug it in.

In the most simple implementation, the BASE unit receives POE power from a standard POE switch or injector and transmits it down the coax. The CAMERA unit receives this power and forwards it on to the IP camera. No external power cabling is required, and all detection and setup occurs automatically.

If POE is not available, or for an extra power boost at either end of the cable, just connect the optional power supply.

## Installer friendly

HIGHWIRE Powerstar features Veracity's unique SafeView™ display, to provide IP camera installers with an instant and very easy-to-understand confirmation of correct operation from either end of the cable. For example, the network link/activity and POE status of the IP camera can be viewed from the BASE unit, saving the time of accessing remote equipment.

Cable length and quality can be hard to predict or measure, especially in legacy upgrade scenarios, which is why SafeView™ includes a reassuring bar - graph display of the POE power available, and a warning if the camera's requirement approaches it. True POE Plus detection means that all POE (IEEE 802.3af) and POE Plus (IEEE 802.3at) cameras are fully supported, and non-POE equipment can be safely connected as well.

Careful POE-over-coax™ detection and management is also employed, to prevent accidental damage to legacy equipment and allow operation with other HIGHWIRE models.

## Network Transmission

### Technical Specifications:

| <b>Power</b>                            |   |
|---|---|
| Unit power<br>BASE POE In IEEE          | 1.5 watts<br>IEEE 802.3af (POE) or IEEE 802.3at (POE Plus), 2-event, power class  |
| Camera POE Out IEEE<br>DC Power input   | IEEE 802.3af (POE) or IEEE 802.3at (POE Plus)<br>40-57 volts, 0.7 amps maximum, class 2 isolated, detachable screw terminal                       |
| <b>Highwire Interface</b>               |   |
| Connector type<br>Cable type A<br>Range | BNC 75 Ohm<br>Any 75 Ohm coaxial (other impedances supported)<br>Up to 300 m on RG59 or 500 metres on RG11 at full rate.                          |
| Bandwidth                               | 200 Mbps (total up + down)  |
| <b>Ethernet Interface</b>               |   |
| Connector type<br>Cable type<br>Rate    | RJ45<br>Patch or crossover, auto-detected<br>100Base-T full-duplex with auto-negotiation  |
| <b>LEDS</b>                             |   |
| Status indicators                       | HWIRE coax link Ethernet link/activity (BASE)<br>Ethernet link/activity (CAMERA)<br>POE-over-coax POE to camera Power available (5/10/15/20/25 W) |
| Colours                                 | Off - Disabled. Green - Enabled. Red - Fault.   |
| <b>Physical/Environmental</b>           |   |
| Dimensions                              | L104 mm W 54 mm H24 mm (84 mm excluding connector)  |
| Weight                                  | 140 g   |
| Operating Temperature                   | -10°C to 50°C (delivering POE <15 w)<br>-10°C to 40°C (delivering POE Plus >15 w)   |
| Relative Humidity                       | 85% non-condensing  |
| Compliance                              | FCC, CE, RoHS   |



# OUTREACH MAX - Universal Ethernet & PoE Extender



OUTREACH Max enables network installers to overcome the distance limitations of Ethernet and Power over Ethernet (POE) easily, meaning that IP cameras, wireless access points, and other POE-powered network devices can be located right where they are needed.

Simply connect OUTREACH Max in-line with the Cat5 or Cat6 network cable for every extra 100 metres (328 feet) of length required. No configuration or electrical supply is needed, and full-rate network throughput is maintained.

Note: OUTREACH Max extends network connections to POE-enabled devices only. To extend the range of Ethernet without POE, see Veracity's OUTREACH Lite Ethernet extenders.

OUTREACH Max frees you from the distance limits of PoE networks. Power over Ethernet (PoE) greatly simplifies the deployment of IP cameras, wireless access points, and other equipment whose location is critical for performance.

However, cable lengths in Ethernet networks are limited to 100 metres, which is a serious restriction in many installations.

## Features:

- Instantly doubles cable range
- Extends up to 800 metres with multiple units
- No local power required
- Full unrestricted network bandwidth
- Universal 10/100 compatibility
- Extends PoE and PoE Plus

OUTREACH Max enables installers to overcome this limitation. Simply connecting an OUTREACH Max in line with the network cable instantly boosts its range from 100 to 200 metres.

Power over Ethernet (PoE) greatly simplifies the deployment of IP cameras, wireless access points, and other equipment whose location is critical for performance. However, cable lengths in Ethernet networks are limited to 100 metres which is a serious restriction in many installations.

OUTREACH Max enables installers to overcome this limitation. Simply connecting an OUTREACH Max in line with the network cable instantly boosts its range from 100 to 200 metres.

## Order Code:

VOR-ORM

OUTREACH Max Ethernet & PoE Extender

## Technical Specifications:

|                     |   |
|---------------------|---|
| Device power        | 1.3 watts   |
| Forwarded PoE power | Up to 70 watts depending on standard<br>Maximum current 0.7 amps on data pairs<br>Maximum current 1.5 amps on spare pairs         |
| PoE standards       | IEEE 802.3af PoE<br>IEEE 802.3at PoE Plus (2-event signature)<br>Custom PoE (incl. "always-on 48V" and "4-pair")                  |
| Ethernet            | Two independently auto-configuring 10/100 ports<br>(10BASE-T/100BASE-TX, half/full duplex)<br>Patch or crossover cables supported |
| LED indicators      | Power good, network link/activity (both ports)  |
| Dimensions          | 105 x 40 x 22 mm LxWxH<br>Weight 45 g   |
| Mounting            | Two 7 mm (0.28") diameter mounting holes Centres 89 mm<br>(3.5") apart  |
| Environmental       | Operating temp. -10° to 50°C<br>Humidity up to 85%, non-condensing  |

# OUTREACH LITE - Universal Ethernet Extender



## Features:

- Instantly doubles cable range to 200 metres
- No local power required
- Full unrestricted network bandwidth
- Universal 10/100 compatibility
- POE powered device

## Universal Ethernet network range extender

An easy way to double your network cable range without having to install power cables to an intermediate switch OUTREACH Lite overcomes the distance limits of Ethernet, instantly. Simply connect an OUTREACH Lite in line with the network cable and instantly double its range to 200 metres. No set-up or network configuration is required.

Ethernet is the ubiquitous technology for Local Area Network (LAN) installation, and the majority of networks in place use the 100BASE-T network standards. However, many security installations demand network connections that exceed the maximum 100 metres distance limit for wired Ethernet. OUTREACH Lite provides an instant solution to this restriction. Simply connect an OUTREACH Lite in line with the network cable - adding a Power over Ethernet (POE) injector if required - to double the available range to 200 metres.

## Order Code:

VOR-ORL

OUTREACH LITE Ethernet Extender

## Technical Specifications:

|                               |  |
|-------------------------------|--|
| Power consumption             | 1.3 watts via POE  |
| POE standards                 | IEEE 802.3af POE<br>Class 2 powered device<br>No POE forwarding  |
| Ethernet INTERFACE            | Two independently auto-configuring 10/100 ports (10BASE-T/100BASE-TX, half/full duplex)<br>Patch or crossover cables supported |
| LEDS Status Indicators        | Power good, network link/activity (both ports)   |
| <b>Physical/Environmental</b> |  |
| Dimensions                    | L 105 mm W 40 mm H 22 mm   |
| Weight                        | 45 g   |
| Mounting                      | Two 7 mm diameter mounting holes. Centres 89 mm apart  |
| Operating temperature         | -10°C to 50°C  |
| Relative humidity             | Up to 85%, non-condensing  |
| Compliance                    | CE FCC, RoHS   |

# LONGSPAN™ Long Range Ethernet and POE



Deliver the power and bandwidth your IP camera needs over exceptional distances LONGSPAN delivers unprecedented power and bandwidth over extreme lengths of regular Cat 5e or Cat 6 network cable. Full speed, long-range, point-to-point Ethernet link with POE over Cat 5e and Cat 6 cable LONGSPAN delivers unrestricted 100Base-T with 802.3af and 802.3at POE at distances way beyond the normal Ethernet limits for problem-free IP camera installation.

## Unrivalled range and power

IP cameras can demand peak network bandwidth of several times their average data rate while transmitting high-activity or low-light scenes. LONGSPAN has been designed to run IP cameras over 800 metres (2600 feet) of normal network cable, supporting the full 200Mbps required for 100Base-T Ethernet. The full-speed Ethernet provided by LONGSPAN ensures perfect image quality at critical moments, even at the longest cable ranges.

## Order Codes:

VLS -1N-L

LONGSPAN LITE Single Non POE LONGSPAN converter, 1 port, no POE. (2 required per link) 12 V power supply for non-POE models, universal AC input. LONGSPAN BASE Single POE

VPSU-12V-U

VLS -1P-B

LONGSPAN converter with POE in, extended POE out, and SafeView™ display, for base side (switch) installation.

## Features:

- Long range point-to-point Ethernet over regular Cat 5 or Cat 6 cable
- Unrestricted 100Base-T with POE at over 800 metres
- POE version delivers full POE Plus power at 600 metres
- Ruggedised for high performance over extreme temperature range
- Smart power and diagnostic display for reliable installation
- Fully automatic, simple to install and maintenance-free

For even more extreme distances, LONGSPAN can automatically drop to 10Base-T operation, supporting a range of over 1000 metres. POE equipped models allow all of the power for the link to be sourced from a single POE switch or power supply, for simple installation and reliable UPS-backed power delivery. LONGSPAN's unique power transmission technology can deliver the full 25.5 watts required for POE Plus equipment at up to 600 metres (2000 feet), or standard 15 watt POE up to 820 metres.

## Upgrade legacy UTP cable

LONGSPAN also supports 1-pair and 2-pair cable with extended range, so analogue cameras in UTP installations can now be upgraded to IP with no need to replace the installed cabling infrastructure. Veracity LONGSPAN's unique technology automatically adapts to the number of pairs available, and delivers the same unrestricted 10 or 100Mbps full-duplex network connection, assuring predictable IP video quality each and every time.

VLS -1P-C

LONGSPAN CAMERA Single POE LONGSPAN converter with POE out, extended POE in, and SafeView™ display, for camera side (remote device) installation.

VPSU-57V-800-UK

57 V power supply for POE models (optional: for maximum power or as an alternative to POE input).

## Network Transmission

### Technical Specifications:

|  |  |
|--|--|
| POWER (Non-POE models)<br>Unit power<br>DC Power input   | 1.0 watts<br>Detachable screw terminal for class II isolated external supply<br>8-57 volts DC or 20-28 volts AC, max 100 mA  |
| POWER (POE models)<br>POE in (base)<br>POE out (camera)<br>DC power in (base)                              | IEEE 802.3af (POE) or IEEE 802.3at (POE Plus), 2-event, power class 4<br>IEEE 802.3af (POE) or IEEE 802.3at (POE Plus)<br>Detachable screw terminal for optional Veracity 57 V supply                |
| Longspan Interface<br>Connector<br>Cable<br>Rate   | RJ45<br>Cat 6, Cat 5e, Cat 3, other 1/2/4-pair UTP<br>Patch wiring recommended, other wiring auto-corrected<br>200Mbit/s up to 600 metres (CAT 6)<br>20Mbit/s up to 1000 metres (CAT 6), auto-adapts |
| Ethernet Interface<br>Connector<br>Cable<br>Rate   | RJ45<br>Patch or crossover, auto detected<br>100Base-TX or 10Base-T, full-duplex with auto-negotiation   |
| LED Indicators<br>Ethernet<br>LONGSPAN<br>Safeview™<br>(POE models only)                                   | Link/activity, power good<br>Link/activity, rate<br>Power available (5/10/15/20/25 watts)<br>POE and link status (green/amber), diagnostic codes (red)   |
| Physical/Environmental<br>Dimensions<br>Weight<br>Operating temperature<br>Relative humidity<br>Compliance | L 120 mm (inc. brackets), W 36 mm H 23 mm<br>100 g<br>-40°C to 70°C<br>85% non-condensing<br>FCC, CE, RoHS   |

# OUTSOURCE™ 30W Power over Ethernet Midspan Injector



## Features:

- Delivers reliable remote power to IP cameras and POE devices
- Compatible with gigabit Ethernet
- Safety assured as POE is only enabled to compliant devices
- 30W Power output
- Compact, wall-mountable unit
- Integrated overload protection
- Sealed, fanless design for reliability

These devices deliver enhanced 30W POE to all 802.8af and 802.3at standard devices. OUTSOURCE 30 is GigE compatible and automatically detects compatible devices.

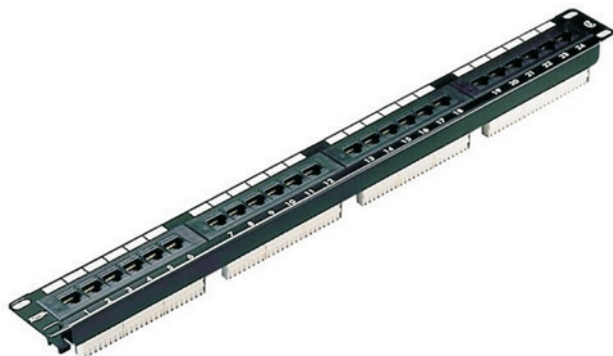
Order Code:  
VOR-OS-30-UK

30W Power injector  
Outsource 30, with UK  
power cord

## Technical Specifications:

|   |   |  |
|---|---|--|
| Power<br>Input Voltage<br>Maximum current   | 100 to 240V AC, 50 to 60Hz<br>0.67A   |  |
| Forwarded Poe Power<br>Outsource 30   | 30 watts (Output voltage 55V)<br>Overload and short circuit protection<br>Pin Assignment and Polarity, POE output on spare pairs 7/8 (-), 4/5 (+)   |  |
| Poe Standards<br>Outsource 30   | IEEE 802.3af, IEEE 802.3at POE  |  |
| Ethernet Interface  | RJ45 Data IN port<br>RJ45 Data & POE OUT port<br>10/100/1000 Base-T compatible  |  |
| Leds<br>Status Indicators   | Yellow On<br>Green On<br>Green Blinking   | Power is on<br>A remote device is connected<br>Overload state or short-circuit |
| Physical/Environmental<br>Dimensions (LxWxH)<br>Weight<br>Mounting<br>Input connector<br>Operating Temperature<br>Relative Humidity<br>Compliance | 161 (inc mounting holes) x 52 x 35mm<br>200g<br>Integral wall-mount lugs<br>C14 Input connector<br>-20°C to +40°C at 30W<br>-20°C to +55°C at 22.5W<br>10% to 90% non-condensing<br>CE, FCC, RoHS, EN 55032 Class B, EN55024, VCCI, UL/EN/IEC 60950-1 (Ed2) |  |

## 24 Port Patch Panel



### Product

Excel Category 5e Patch Panels comply with the current standards for enhanced Category 5. Each panel offers a choice of labelling with the option to use the screen printed fields on the panel facia or the slide label system or pre printed 1-96 labelling scheme which is enclosed with each panel. Ease of installation is assured with ample rear cable management positions and LSA IDC blocks. A choice of port density – 16 & 24 Port 1U, 48 Port 2U or 3U – is available to suit all applications. Each panel is available in a choice of colours to allow identification of either applications, departments or services. Cage nuts and mini cable ties are included with each panel.

### Technical Specifications:

|                              |  |
|------------------------------|--|
| Specification:               | Category 5e  |
| Wiring Specification:        | T568A & T568B  |
| Port Density:                | 16 Ports or 24Ports Per 1U                             |
| Dimensions:                  | 480 mm wide x 33 mm deep x<br>44 mm (1U) or 88 mm (2U) |
| RJ45 Jack:                   | Min life 700 insertions                                |
| RJ45 Jack:                   | 50 Micro inch Gold Plated<br>contact pins              |
| Contact compatibility:       | 22 to 26AWG Solid & 24AWG<br>Stranded wires            |
| Operating Temperature Range: | -10°C to 60°C  |
| Storage Temperature Range:   | -40°C to 68°C  |

### Features:

- 25 Year System Warranty
- Supports Gigabit Ethernet
- Category 5e compliant
- Power Sum Compliant
- Choice of Port Density
- Choice of Labelling System
- Choice of Colour
- LSA Style Termination Blocks
- Pre Printed 1-96 Self Adhesive Labelling included
- No.2 cabling system by market share, as reported by BSRIA

### Performance

Excel Category 5e Patch Panels are manufactured to and tested to the current Category 5 enhanced standards as defined by the TIA and ISO standards' bodies. Swept frequency tests are applied to each critical performance characteristic, such as near end cross talk (NEXT) and far end cross talk (FEXT). Both Worst Case and Power Sum Test methods are applied. Actual performance exceeds the required standard by a considerable margin ensuring sufficient headroom for even the most demanding applications.

|                        |   |
|------------------------|---|
| Relative Humidity 10%: | - 90% RH  |
| Panel Material:        | SPCC - Black Powder Painting<br>Coat Finish                         |
| Plastic Frame:         | ABS High Impact UL94V-0<br>Thermoplastic                            |
| Jack Housing           | PBT High Impact UL94V-0<br>Thermoplastic, 30% Glass<br>Fibre Filled |
| IDC Plastic            | Polycarbonate High Impact<br>UL94V-0 Thermoplastic                  |
| NEXT at 100MHz         | Category 5e Specification<br>43dB @100MHz (Worst Pair)              |
| FEXT at 100MHz         | Category 5e Specification<br>35dB @100MHz (Worst Pair)              |

### Order Code:

100-726

24 Port Patch panel Black

# Pinpoint™ IP Camera Set-up Focusing Adaptor



## Features:

- Allows local viewing of IP camera images on laptop/netbook close to camera
- Enables rapid and precise adjustment of lens focus and viewing angle
- Uses Power over Ethernet from the network – no local power is required
- Increases installation speed and efficiency – reduces time on site
- Low cost re-useable device – an essential installation tool
- Installs in seconds – removes in seconds

PINPOINT makes POE IP camera installation easy by powering the camera from POE, yet allowing direct connection of a laptop or netbook for local image display.

### Easy to use

Veracity's PINPOINT adaptor allows IP video installers to easily set up and focus Power over Ethernet (POE) enabled IP cameras. No temporary local power source for the camera is required, as PINPOINT enables the camera to draw its power from the installed POE network cabling, whilst redirecting the actual Ethernet network connection to a local laptop, netbook or even PDA. The IP camera image and set-up parameters can be viewed on a browser (or specific camera software) running on the local computer device. With the camera image in close proximity to the camera itself, it allows precise adjustment of all of the variables with immediate feedback via the actual camera image.

This means that the lens field of view, focus and camera viewing angle/direction can be very rapidly optimised and locked in position.

### Connects in seconds

A flying lead connection to the camera and a clear connection diagram means PINPOINT insertion can be done in seconds. PINPOINT features integrated network crossover, so a standard network cable can be used to link the laptop or netbook. A "POE Enabled" LED provides visual confirmation that the camera is receiving power. Veracity's PINPOINT is compatible with standard POE, and also most POE Plus and nonstandard POE up to 30 watts.

### PINPOINT is so compact - it fits in your pocket

PINPOINT is very compact in size and is of a tough moulded construction, ideal for stowing in a toolbox, pocket or engineer's laptop bag.

PINPOINT is designed for temporary installation during setup of IP cameras. Whilst PINPOINT is in place, the camera network connection is redirected to the local network port, and there will be no network connection to the main network. Connection to the main network is restored immediately when setup is complete and PINPOINT is extracted.

### Order Code:

VAD-PP

PINPOINT IP Camera set-up adaptor



## Technical Specifications:

| <b>Power</b>                  |  |
|-------------------------------|--|
|                               | <b>Device is powered via pass-through POE</b>  |
| Network Connections           | 1 POE in (RJ45 socket)<br>2 POE out + Ethernet (RJ45 plug on flying lead)<br>3 Ethernet (RJ45 socket - crossover incorporated) |
| Ethernet Interface            | 10 Base-T or 100Base-TX  |
| Poe Standards                 | Standard POE - IEEE 802.3af<br>POE Plus - IEEE 802.3at and most non-standard POE up to 30 watts                                |
| Leds<br>Poe Indicators        | GREEN LED Indicates POE present  |
| <b>Physical/Environmental</b> |  |
| Enclosure type                | Solid moulded unit   |
| Dimensions                    | L 65 mm W 32 mm H 20 mm (plus 100 mm flying lead)  |
| Flying lead                   | Ethernet cable L 100 mm  |
| Weight                        | 58 g   |
| Operating temperature         | -10°C to 70°C  |
| Relative humidity             | Up to 85%, non-condensing  |
| Compliance                    | CE and FCC exempt, RoHS compliant  |

# POINTSOURCE™ PLUS Portable Battery Powered POE Injector



## Features:

- Allows local viewing of IP camera on laptop close to camera
- Enables rapid, precise adjustment of camera alignment, focus and field of view
- Includes USB power port for charging phones and tablets
- Removable, rechargeable battery with sufficient power for a full day's installation work
- Supports all classes of 802.3af and 802.3at POE devices
- Installs and removes in seconds and reduces on-site time
- Additional spare batteries available for rapid swap over

## Install, configure, focus and align IP cameras without network or POE

POINTSOURCE Plus™ is a rechargeable, portable, battery powered POE injector for IP cameras specifically designed to make installation, site surveys, demonstration and test work simple and fast.

## Portable POE battery pack for installation site work, site surveys and demonstrations

POINTSOURCE Plus is ideal for powering POE IP cameras in-situ, when in-line POE is not yet available. It permits complete camera alignment, focus, configuration and test from a locally-connected laptop.

## Portable, Rechargeable, Power Where You Need It

Veracity's POINTSOURCE Plus is a portable, rechargeable battery - powered POE (Power over Ethernet) injector. It is designed for field use, being compact, easy to handle, with a useful shoulder strap, which leaves your hands free. It can deliver enough power to support a full day's IP camera installation work.

POINTSOURCE Plus provides a similar functionality to Veracity's PINPOINT, but includes a built-in POE power source to allow installation and set-up of IP cameras before POE power is available through the network.

POINTSOURCE Plus can be used with all IEEE 802.3af and IEEE 802.3at POE compatible equipment, (commonly known as POE and POE Plus) including IP cameras, Wireless Access Points, VOIP phones and POE-powered Access Control devices.

## On Site Configuration

The most common application for POINTSOURCE Plus is the in-situ configuration, set-up and fine adjustment of IP cameras on an installation site. By simply connecting a laptop to the IP camera through POINTSOURCE Plus, all aspects of the camera image (focus, direction, aperture, zoom, resolution, compression etc.) can easily be viewed and adjusted.

## Order Code:

VAD-PSP

POINTSOURCE Plus, Portable POE Injector. Includes carry strap, battery module, universal charger (UK, US, EU, AU ) and Quick Start Guide.

## Technical Specifications:

| <b>Power</b>                           |  | <b>Connection</b> |  |
|--|--|-------------------|--|
| POE output                             | 48 V DC, IEEE 802.3af and 802.3at compliant (POE and POE Plus)   |                   |  |
| USB output                             | 5 V DC 2.1 A, power only, no data  |                   |  |
| Battery type                           | Maintenance-free, sealed lead-acid battery 12 V, 3.4 Ah  |                   |  |
| Battery module                         | Removable, rechargeable battery module   |                   |  |
| Discharge life                         | 6 hours continuous for a 5 watt camera (typical)   |                   |  |
| Charger                                | Three-stage intelligent (14.4 V / 1 A / 13.8 V float)  |                   |  |
| <b>NETWORK</b>                         |  |                   |  |
| 'Camera' Port                          | 10/100BaseTX with POE  |                   |  |
| 'Network' Port                         | 10/100BaseTX with data only (laptop connection)  |                   |  |
| <b>LED INDICATORS &amp; CONNECTORS</b> |  |                   |  |
| POE status indicator                   | Red LED shows ON, flash indicates error, off indicates no POE  |                   |  |
| Battery status indicator               | Green four-bar display indicates charge level : 100% - 75% - 50% - 25%   |                   |  |
| Network port LEDs                      | Green: Link speed Orange: Network activity   |                   |  |
| Network connectors                     | 2 x RJ45, one with POE   |                   |  |
| USB connector                          | 1 x USB Type A (power only)  |                   |  |
| Charging connector                     | 2.1 mm jack, centre positive (on battery module – remove unit to charge)   |                   |  |
| <b>PHYSICAL/ENVIRONMENTAL</b>          |  |                   |  |
| Dimensions                             | L 205 mm W 100 mm H 150 mm   |                   |  |
| Weight                                 | Unit including battery module: 2.2 kg Battery module: 1.6 kg   |                   |  |
| Operating temperature                  | 0°C to 50°C  |                   |  |
| Storage temperature                    | -30°C to 70°C  |                   |  |
| Charge temperature                     | Module 0°C to 35°C   |                   |  |
| Relative humidity                      | 20% to 85%, non-condensing   |                   |  |
| <b>COMPLIANCE</b>                      |  |                   |  |
| Main unit                              | EN 55022 Class B, FCC Part 15 Subpart B Class A + B, ICES-003 Class B, VCCI Class B, C-tick S/NZS CISPR 22 Class B, IEC/EN/UL 60950-1, CE, RoHS, REACH, WEEE |                   |  |
| Battery Module                         | UL, IMDG, IATA (non-restricted, OK to transport by air), CE, RoHS, WEEE Compliant*, ADR, ECHA, DoT   |                   |  |
| <b>WARRANTY</b>                        |  |                   |  |
|  | Veracity 2-year warranty   |                   |  |

\* The Battery Module is WEEE Compliant. When the battery has reached end-of-life it must be disposed of either at a lead-acid battery collection facility, or via Veracity's defined RMA process. Please contact [rma@veracityuk.com](mailto:rma@veracityuk.com) or [support@veracityusa.com](mailto:support@veracityusa.com) for further details.

# TIMENET™ PRO Master NTP Time Server



Accurate, low cost, extremely compact universal atomic clock reference for network time synchronisation.

TIMENET Pro is a Master NTP reference clock for Ethernet networks with POE capability.

## **TIMENET Pro is a low-cost solution for accurately synchronising computer system clocks**

TIMENET Pro offers a universal solution by providing accurate, reference time signals for any Ethernet network, especially in closed networks.

### **Time Synchronisation**

Most network installations require a reference time signal for synchronising system clocks to ensure they are always set precisely to the correct time. It is crucial that all CCTV recordings are accurately time-stamped, especially for evidential purposes. Most Digital Video Recorder (DVR) products - especially those which are PC-based - have inaccurate internal clocks which can drift by many seconds per week. Considering that DVR and NVR systems should run unattended for months or years, the time settings can end up being in error by many minutes, or even hours. Further, multiple recorders and devices will drift apart time-wise, reducing the veracity of evidential data.

### **Features:**

- TIMENET Pro supports all NTP compatible devices
- Ideal for synchronising VMS + ACS servers & clients
- Ideal for closed or secure networks
- Ideal for mobile or vehicle-based applications
- Class 1 POE compatible (or 12 V DC input)
- Simple browser interface allows fast installation
- Wide operating temperature range.

Further, multiple recorders and devices will drift apart timewise, reducing the veracity of evidential data.

### **Compact Solution**

Whilst traditional solutions involve atomic clock radio receivers or GPS sensors linked to an expensive rackmounted master clock server, TIMENET Pro integrates the GPS receiver and NTP clock server into a compact device for direct connection to the network.

TIMENET Pro can be wall-mounted, uses very little power and is less than half the cost of competing solutions. TIMENET Pro can be powered over the network by POE, or locally by a low voltage power supply.

### **Order Codes:**

VTN-TN-PRO  
VTN-EXTEND

TIMENET Pro Device  
Antenna Extension 10  
metre

## Technical Specifications:

| <b>TIME SERVER</b>            |  |
|-------------------------------|--|
| Time source                   | GPS Satellite  |
| Protocol                      | NTP Stratum 1 Time Server  |
| Accuracy                      | Ethernet NTP $\pm$ 1ms overall<br>GPS source $\pm$ 0.1 $\mu$ S                     |
| <b>ANTENNA</b>                |  |
| Connector                     | SMA Male   |
| Cable                         | 5 metre cable, ( optional 10 metre extension )                                     |
| Antenna head                  | GPS sensor, in externally rated magnetic housing ( + adhesive pad/window fixing )  |
| <b>POWER</b>                  |  |
| Unit power                    | 1.5 W  |
| POE type                      | Class 1  |
| Alternative power input       | 10-40 V DC (max current 150 mA at 12 V)  |
| <b>ETHERNET INTERFACE</b>     |  |
| Connector type                | RJ45   |
| Rate                          | 10/100Base-T full-duplex with auto-negotiation                                     |
| Data security                 | Shared Keys system ( server authentication )                                       |
| <b>LEDS</b>                   |  |
| Status indicators             | Green LED : long pulse: OK short pulse: no GPS lock<br>Amber LED : heartbeat pulse |
| <b>PHYSICAL/ENVIRONMENTAL</b> |  |
| Dimensions                    | L 87 mm W 75 mm H 22 mm ( W 97 mm with wall mounting brackets                      |
| Weight                        | 123 g (with mounting brackets) 121 g (without brackets)                            |
| Operating temperature         | -15°C to 75°C  |
| Relative humidity             | 95% non-condensing   |
| Compliance                    | CE, FCC, RoHS  |






# Telemaster RJ45 Crimp Tool & Ancillaries

## Features:





- For RJ-11/12/14 (6 position-1,2,3 pair) and RJ-45 (8 position-4 pair) modular plugs
- Multi-function tool for round voice/data cables cuts, strips and crimps for easy on-the-job, one-tool application
- NEW- round cable stripping chamber for CAT5e/6 cables
- Designed for professional use in data and voice applications
- Rounded edge, textured handle grips
- Steel frame for long-term durability
- Provides crimping of the primary RJ45 modular plug strain relief and plug pins
- Locking tab keeps tool in closed position when not in use
- Back Boxes Part numbers 100-620, 450-660, 100-614 , 450 665
- Choices of single or double gang
- Variety of Depths available
- Available singly or in Pack of 10

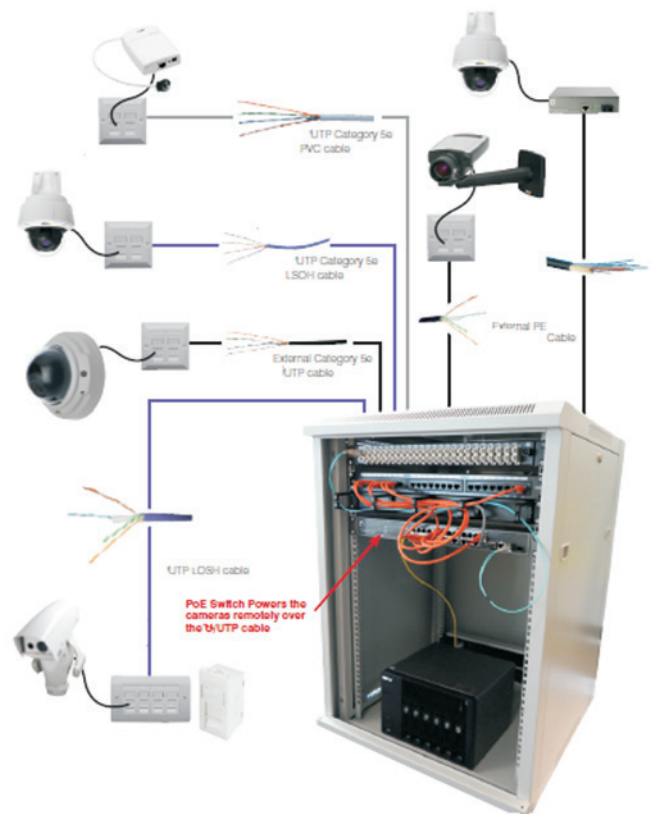
## Order Code:

Telemaster RJ45 Crimp Tool

|   | Item   | Order Codes |
|---|--|-------------|
|  | Telemaster RJ45 Crimp tool   | 30-496      |
|  | AMP RJ45 Plug UTP-Solid-pack of 100  | RJ45CP-100  |
|  | Single Gang 32 mm Deep Back Box  | 100-614     |
|  | 2 gang 37 mm deep Back Box surface   | 100-620     |
|  | Half width Blanking plate for use with single or double ganged Bevelled plates (part numbers 100-712 or 100-716) | 100-715     |

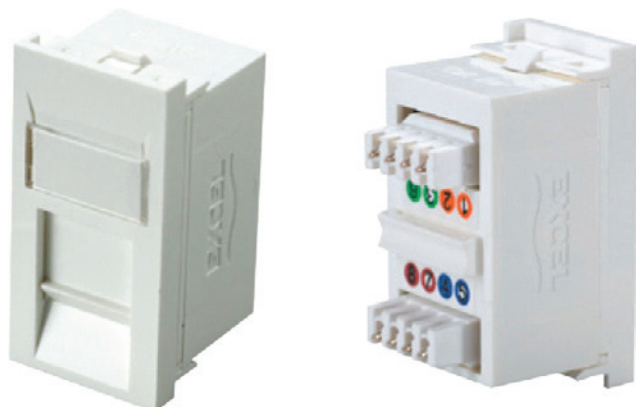
# Punchdown Tools, Bevelled Plates & Blanking Plates

|   | Item  | Order Codes             |
|---|---|-------------------------|
|    | Excel Single Gang Bevelled Plate without Blanks<br>· Supplied with fixing screws<br>· Bevelled style<br>· Choice of blanking plates (order separately)<br>· Lifetime product warranty | <a href="#">100-712</a> |
|    | Excel Double Gang Bevelled Plate without Blanks<br>· Supplied with fixing screws<br>· Bevelled style<br>· Choice of blanking plates (order separately)<br>· Lifetime product warranty | <a href="#">100-716</a> |
|   | Half width Blanking plate for use with single or double ganged Bevelled plates (part numbers 100-712 or 100-716)  | <a href="#">100-715</a> |
|  | Punchdown tools are used to terminate cable into IDC Blocks in Patch Panels or work outlets   | <a href="#">35-480</a>  |



An Example Of How These Components Can Be Used To Create A Professional Networked System

# Excel Category 5e Unscreened Twisted Pair (UTP) Module - Euromod



## Features:

- 25 Year System Warranty
- Supports Gigabit Ethernet
- Choice of Colours
- Category 5e
- Power Sum Compliant
- One Piece, Snap-in Design
- Built in Slide Label System
- Integral Cable Tie Position
- LSA Style Termination Blocks
- Pre-assembled Faceplate Option
- No.2 cabling system by market share, as reported by BSRIA
- 25 x 50 mm Euromod Size

## Product

Excel Category 5e RJ45 modules comply with the standards for enhanced Category 5. Each shuttered module is supplied with a slide label field and space above which is allowed for use of self adhesive or further labelling if required. Termination can be made using LSA compatible tooling, a cable tie base is positioned between the IDC blocks to relieve cable stress. Pre assembled faceplates can be ordered to save installation time.

## Technical Specifications:

|                              |  |
|------------------------------|--|
| Specification Category       | 5e   |
| Wiring Specification:        | T568B  |
| Dimensions:                  | 25 mm wide x 50 mm high x 33 mm deep                                     |
| Slide Label Dimensions:      | 17 mm wide x 12 mm high  |
| Installation Recommendation: | Suits minimum of 27 mm Back Boxes when installed with Bevelled Faceplate |
| RJ45 Jack:                   | Min. life 750 insertions   |
| RJ45 Jack                    | 50 Micron Gold Plated contact pins                                       |
| SIP Housing:                 | ABS 80% + AS 20% High-Impact UL94HB                                      |
| Jack Housing:                | PBT High-Impact UL94V-0 Thermoplastic, 30% Glass Fibre Filled            |
| IDC Plastic:                 | Polycarbonate Resin High-Impact UL94V-0 Thermoplastic                    |
| IDC Contacts                 | Suitable for LSA compatible tooling. Maximum 200 re-terminations         |

## Performance

Excel Category 5e RJ45 modules comply with the standards for enhanced Category 5. Each shuttered module is supplied with a slide label field and space above which is allowed for use of self adhesive or further labelling if required. Termination can be made using LSA compatible tooling, a cable tie base is positioned between the IDC blocks to relieve cable stress. Pre assembled faceplates can be ordered to save installation time.

|                              |   |
|------------------------------|---|
| IDC Compatibility:           | 22 to 26AWG Solid / 24AWG Stranded wire |
| NEXT at 100MHz               | Category 5e 45.3dB @100MHz (Power Sum)  |
| FEXT at 100MHz               | Category 5e 30dB @100MHz (Power Sum)    |
| Operating temperature range: | -10°C to 60°C                           |
| Storage temperature range:   | -40°C to 70°C                           |
| Humidity:                    | 10 - 90% Relative Humidity              |

## Typical Applications

- 10Base-T Ethernet
- 622 Mbps ATM
- 100BASE-TX Fast Ethernet
- 155 Mbps ATM
- 1000 Base-TX Gigabit Ethernet
- Token Ring

## Order Code:

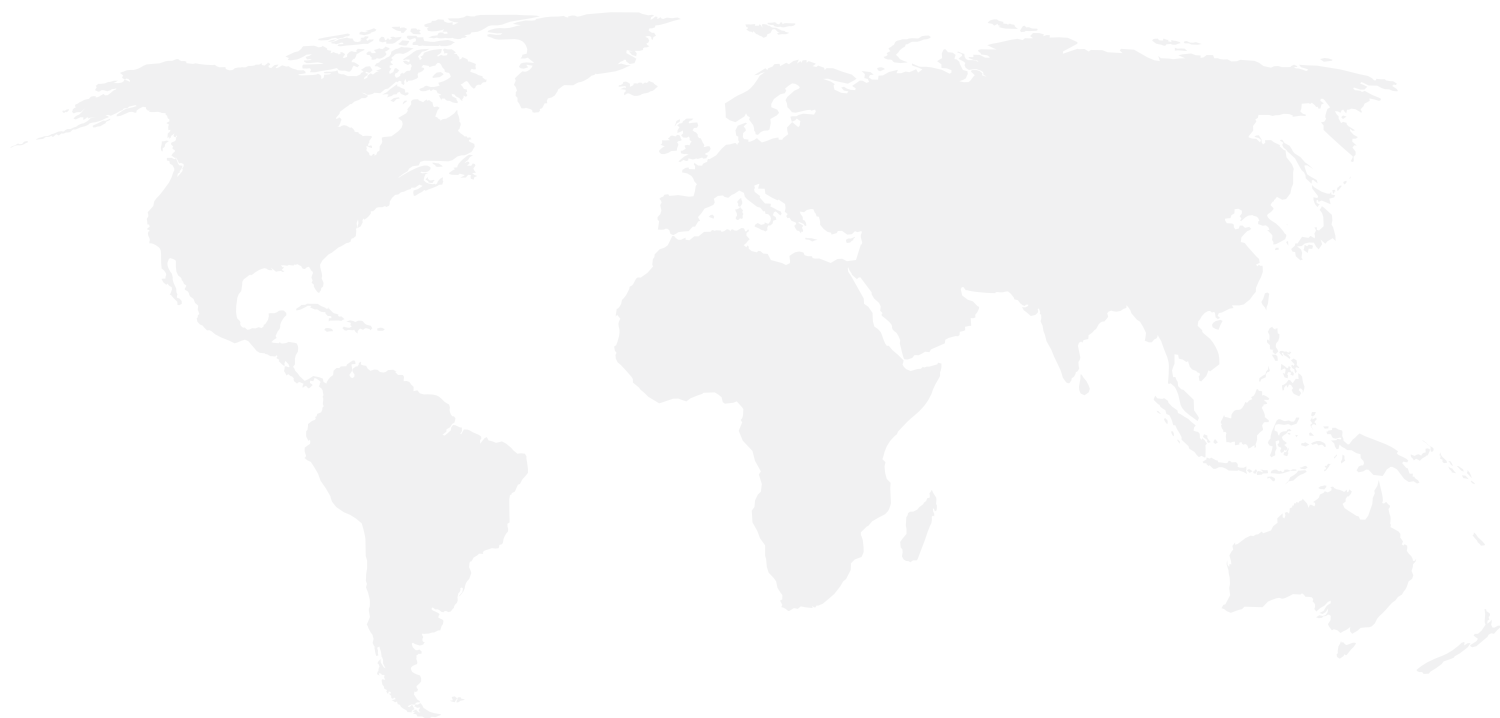
100-700 RJ45 UTP module white



# Global Strength

Local Expertise. At your service.

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CCTV Catalogue Issue 13.7 / December 2020

# Service Equipment & Accessories

This chapter contains information about Service Equipment & Accessories

- Introduction
- Test Monitors
- Data Protection Compliancy Accessories
- Lightning Protection
- Ground Loop Isolator
- Coaxial Cables & Connectors
- Power Supply Units

## Introduction

A range of products to allow the professional installation of analogue and IP Network Video solutions.

# VLEDTM-TS7 All-in-One Multifunction CCTV Tester



The 7 inch touch screen IP camera tester is designed for maintenance and installation of IP, analogue, HD coaxial cameras as well as other security equipment.

The 1920x1200 resolution enables it to display network HD cameras and analogue cameras in high resolution. The unit supports many ONVIF PTZ and analogue PTZ control protocols.

Additional features include TDR cable test, digital multi-meter, UTP cable test and cable scan. CCTV installers often need to carry a variety of testing tools to complete their work. With the all-in-one camera tester, installers can increase productivity and operate in safer working conditions.

## HDMI

The product has 5-in-1 platform support alongside HDMI in, making it unique amongst test monitors.

## Compatible with all Platforms

The VLEDTM-TS7 is compatible with every major CCTV platform (AHD, IP, Analogue TVI and CVI) found on the market. This includes all Videcon and Concept Pro apps are preloaded to reduce installation time and check connections.

## Built in POE Output

The monitor offers a 48 volt POE output allowing engineers to power cameras remotely to help assist in setting up cameras.

## Features:

- 7 inch retina touch screen, 1920x1200 resolution
- H.265/H.264 video display via main stream
- Generate WiFi hotspot from LAN connection
- HDMI Input @ 1080p for easier installs
- Supports IP camera search and testing functions
- Supports and displays AHD, TVI, CVI and analogue cameras.
- Up to 4MP AHD, 5MP TVI and 4MP CVI
- UTP cable tester

## Other features

- Dual Window Feature - to display 2 video inputs at once
- HDMI input & output, 1080p
- DC12 V 2 A, DC48 V PoE power output - For local power to cameras for testing purposes w Polaris Office (Excel, Word, Powerpoint format) - to create documents from remote locations
- Download and Install your own apps (via APK)
- USB power output (5 V 2 A)

## Complete with Cable Tester

With the cable tester you can search for a specific cable found in a complicated cabling layout or trace a cable through a building. The cable tester can also test Ethernet cables to make sure they are wired up correctly.

## Pre-loaded Concept Pro Apps

The VLEDTM-TS7 is pre-loaded with Videcon apps allowing easy configuration of any of the recording solutions sold by Videcon; Concept Pro, Concept Pro Lite, TAP CMS

## Order Code:

VLEDTM-TS7

7 inch IP Test Monitor, supports IP, AHD, TVI, CVI and Analogue systems

**Technical Specification**

|                      |  |
|----------------------|--|
| Display Size         | 7 inch touch screen with retina display  |
| Display Resolution   | 1920*1200 resolution   |
| CVBS                 | 1 channel BNC input & 1 channel BNC looped output, NTSC/PAL (Auto detect)<br>Analogue video level meter, peak video signal level, SYNC signal level, Colour bar<br>chroma level measurement PTZ control, RS485 control, Baudrate 600-115200bps   |
| CVBS loop test       | Send and receive colour bar generator signal, check BNC cable  |
| IP camera test       | Apps: IPC test / IPC viewer / Rapid Video / RTSP Player / ONVIF  |
| Rapid Video          | Can create testing report  |
| IP & CVBS test       | Test IP & CVBS video simultaneously, utilising dual test window feature  |
| Coaxial HD test      | 5MP TVI camera test: 2560 x 1944P 12.5FPS, Coaxitron control / call OSD menu<br>4MP CVI camera test: 2560 x 1440P 25FPS/30FPS, Coaxitron control / call OSD menu<br>4MP AHD test, 2560 x 1440P 15FPS/25FPS/30FPS, Coaxitron control / call OSD menu                                    |
| HDMI input           | 1 channel HDMI input, supports up to 1080P   |
| Zoom Image           | 4x zoom to enlarge on screen image, Screen snapshot, screen record, save, view and<br>record and play back video   |
| Colour bar generator | Output one channel PAL/NTSC colour bar video signal for testing BNC monitor or<br>video cable  |
| HDMI output          | 1 channel HDMI output, supports up to 1080P for testing HDMI input of monitor  |
| Power output         | 12 V/2 A Power                      Output Output DC12 V/2 A power out, supply temporary<br>power for the camera<br>PoE Power Output                48 V PoE power output, max power 24 W<br>USB Power Output                5 V 2 A power output, for charging smart phone or PDA etc |
| TDR cable test       | BNC cable, network cable, telephone cable, RVV cable and elevator cable, cat 5/6<br>cable's length and short circuit. measurement range 1.2 KM   |
| Cable tracer         | Search BNC cable, network cable and telephone cable from the mess cables   |
| UTP cable test       | Test UTP cable connection status and display on the screen. Read the number on the<br>screen   |
| RJ45 cable TDR test  | Test cable pair status, length, attenuation, reflectivity, impedance, skew etc   |
| Network Test         | Trace route, Link monitor, DHCP server, port flashing, ping test   |
| Wi-Fi                | Built in WiFi, 150M speeds, display network camera image   |
| Audio Test           | 1 channel audio signal input, test whether sound is normal, 1 channel audio signal to<br>connect headphone   |
| Data Monitor         | Captures and analyses the command data from controlling device; can also send<br>hexadecimal data  |
| PoE test             | Measurement POE switch or PSE power supply voltage and cable connection status   |
| Drop-down menu       | User can customise drop down menu: select PoE power, IP setting, WLAN switch,<br>HDMI IN functions etc from anywhere in test monitor   |
| External PSU         | DC 12 V 2 A  |
| Battery              | Built-in 7.4 V Lithium polymer battery, 6500 mAh   |
| Rechargeable         | 7~8 hours charge, achieves up to 16 hours operation  |
| Operation setting    | OSD menu, select your desired language: English, Chinese, Korean, Russian, Italian,<br>French, Polish, Spanish etc   |
| Working Temp         | -10°C- +50°C   |
| Working Humidity     | 30%-90%  |
| Dimension/Weight     | 231 mm x 172 mm x 52 mm / 1.26 Kg  |

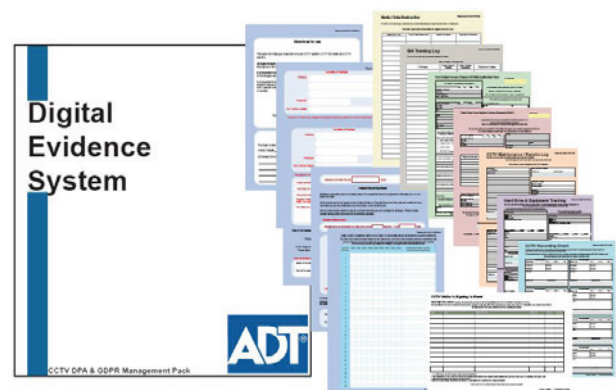
# Data Protection Compliancy Accessories

## Data Protection Compliancy Accessories

### Order Codes:

- 604.002.232 A4 Foamex wall sign - Text as per photo **(UK only)**
- 604.002.233 A3 Foamex wall sign - Text as per photo **(UK only)**
- 604.002.234 Window/surface sticker (qty x2) self adhesive vinyl - text as photo (also includes permanent marker pen) **(UK only)**
- 604.002.238 Digital Evidence Kit DVD-R contains ADT Branded Digital Download kit containing the following 12x Pairs of DVD-R's, Colour Coded - Red Archive Copy and Green Viewing Copy. Code of Practice form for completion by the user, to aid compliance. Printed discs with pre defined fields and serial numbers. Triplicate Incident Download NCR report book - copy for each disc and a file copy. See- through plastic disc wallets for Master and Working copy discs. 12 x See-through Media Evidence bags. ( CPS approved).
- 604.002.239 Data Protection Act log book containing:  
 1 x ring binder  
 1 x triplicate NCR receipt book with 12 sets  
 3 x code of practice pages to be completed by the operator  
 12 x evidence bags for sealing the recorded evidence

**CCTV SURVEILLANCE IN OPERATION**  
 Images are being monitored for the purposes of Public Safety, Crime Prevention and Prosecution of Offenders.  
 This scheme is controlled by:  
 For further information contact:  
 Secured by ADT

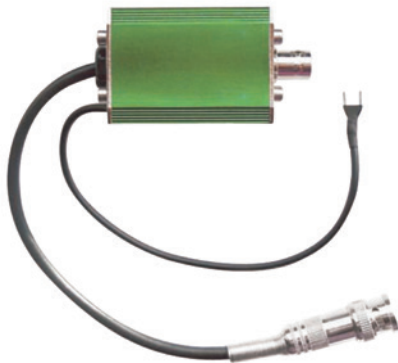


**DPA.GDPR.PACK** Video Surveillance Data Admin Pack.

The pack consists of:

- 4 page code of practice forms
- 3 part NCR pad for logging CCTV incidents as evidence
- Evidence Media Bags for securing your incident recordings before handing over
- CCTV Visitor sign in sheets
- CCTV Camera check logs
- Data Subject Access Requests (DSAR) forms
- CCTV Recording check logs
- Hard Drive & Equipment tracking logs
- Maintenance & Repairs logs
- SIA training log
- Media / Data Destruction log

## CLVIEW1 Lightning Protection - Single Channel



The CLVIEW1 lightning suppressor is designed to IEC standard to prevent damage to CCTV camera equipment during an electrical storm.

The CLVIEW1 is simply installed in line with the coaxial cable from the vulnerable camera (Cameras situated high up on buildings or on metal towers) and the CCTV control equipment.

An earth strap is provided to suppress lightning induced voltage, electric network voltage undulation disturbance, static discharge, and impact surge voltages down to ground.

### Order Code:

CLVIEW1

Single channel Lightning suppressor

### Features:

- Uses multilevel protection circuit components.
- Easy to install and maintain

### Technical Specifications:

|  |   |
|--|---|
| Continuous operating voltage $U_n$ :               | 5 V   |
| Maximum working voltage $U_c$ :                    | 10 V  |
| Nominal discharging current $I_n(8/20\mu s)$ :     | 5 KA  |
| Maximum discharging voltage $I_{maX}(8/20\mu s)$ : | 10 KA   |
| Limit voltage $U_p$ :                              | 15 V  |
| Data transmission rate $V_s$ :                     | 10Mbps  |
| Insert loss $A_e$ :                                | 0.2 dB  |
| Corresponsive time $T_a$                           | 1nS:  |
| Joint form:  | BNC, F, N   |
| Protection form:                                   | Line to line, line to earth                           |
| Product specification:                             | 38 mm x 28 mm x 52 mm<br>(does not include the joint) |
| Working conditions Temperature:                    | -25—+65°C   |
| Humidity:  | ≤95% (25-30°C)  |
| Test standard:                                     | IEC61643-21 : 2000                                    |

# CLSU3 Ground Loop Isolator - Single Channel



## Solving Ground Loop Problems:

A ground loop is an electrical problem that happens when an AC current interferes with the ground reference level of the video signal. It occurs on the conductive path formed by the shield of the video cable and the chassis of the video equipment.

A loop results from the difference between the voltage potential of the shield at one end of the cable, versus the voltage potential of the shield at the other end. The electrical level of the shield is usually zero volts. When a ground loop is present, this level fluctuates above and below zero volts. The greater the difference, the more severe the distortion or tearing. If the potential is too great it can destroy the equipment.

## Additional Features

- Input Resistance: 75 ohm
- Output Resistance: 75 ohm
- Insulation Resistance: 100 m ohm
- Build in internal passive isolation circuit with isolation transformer DC video input signal saturation rejection, line termination for 'Hum Bar' rejection, perfect to DVR to immunity interference, for extra interference rejection
- Two 165 mm mini cable with BNC-Female Output for 'CABLE' and BNC-Male Input for 'EQUIPMENT' connectors, passive, and no power required.
- Prevents video-signal distortion caused by video ground loops.
- Eliminates picture tearing, cross talk and rolling.
- Built in TVS (Transient Voltage Suppressors) for surge protection: 12 V rms
- Working Temperature Range: -20°C to +65°C.
- Humidity (non-condensing): 0 to 95%.
- Transient Immunity Per ANSI/IEEE 587 C62.41
- 63 mm x 36 mm x 21 mm with two 185 mm mini cable RCA male and female or screw terminal connectors
- Material: PVC Black

## Features:

- Insertion Loss: less 0.3 dB
- Frequency Response: 0-3 dB range in 20 Hz to 12 MHz
- CMRR: 50dB @ 1 MHz
- Differential phase: less than 2 degrees
- Differential gain: less than 2%
- S/N ratio: >55 dB
- Ground loop circuit isolation: >90dB and >50 Hz
- DC loop resistance: 18 ohms/100 m
- Isolation Voltage: 1500 VDC (Min)

Ground loops are an after-the-fact type of problem in which the end-user blames the installer, the installer blames the manufacturer, and actually nobody is at fault. Neither the manufacturer nor the installer can predict where a loop will occur. Only after the system is installed can it is determined if a problem will exist.

Ground loop problems can be corrected. It is important for both the dealer and the end-user to be aware that this problem can occur. A ground loop problem may occur at several points in the system, and each occurrence of the problem must be corrected individually. Loops can occur between a camera and monitor, from a camera to a switch, or one of many other possibilities.

## Dual Video Ground Loop Isolator with Filter Features

Dual Video Ground Loop Isolator with Filter product could reduce "Ground Loop Interference" with CCTV signals and can easily install in a new or added to existing systems. It is useful where a video signal is transmitted via cable between points with different ground potentials, differences in ground potentials are typically caused by unbalanced power line loads, and also eliminate common mode noise by internal video filter with up to 58dB noise rejection. The 'CABLE' terminals have DC block and TVS transient clamp to compliance DC output camera or DC input DVR/NVR devices during signal transmission.

## Order Code:

CLSU3

Single channel Ground Loop Isolator



# HAY-HDGLI HD Coaxial Video Ground Loop Isolator



HAY-HDGLI is a high performance and highly reliable HD coaxial video ground loop isolator that is used for solving the signal interference problems caused by potential sources of interference. It features two BNCs, male and female, with superior lightning protection.

The ground loop isolator can only be used on the DVR side, and if used on the HD camera side then there will be no video.

Once the signal passed the isolator, it will become a clear video picture, without any ghost. It is widely used in various security monitoring system. No power, easy and convenient installation, and high performance.

The video ground loop isolator should be installed where video cable runs are known to have ground loops. It must be installed on the video cable at the DVR end that has come directly from the camera, but before the cable has been connected to the DVR.

If several video cameras come from the same area, fix a video ground loop isolator in every cable, or a grounded loop will remain.

## Features:

- Compatible with all HD-TVI, HD-CVI, AHD & CVBS analog cameras
- BNC male to BNC female with mini 20cm RG 59 coaxial pigtail lead on both sides.
- Passive, No power supply required
- Prevents video-signal distortion caused by video ground loops
- Eliminates picture tearing, cross talk and rolling
- Prevents power cables laid by others interfering with the CCTV system
- Built in TVS (Transient Voltage Suppressors) for surge protection
- Ground Loop Circuit Isolation: >90dB >50Hz
- Insert Loss: ≤0.5 dB
- Dimensions: 50x28x28mm (LxWxH BNC connector included)

## Order Code:

HAY-HDGLI

HD Coaxial Video Ground Loop Isolator, Compatible with all HD-TVI, HD-CVI, AHD & CVBS analogue cameras





# Ground Loop Isolator

## HAY-HDGLI Technical Specifications:

|                 |                       |   |
|-----------------|-----------------------|---|
| Product Name    |                       | HAY-HDGLI   |
| Applied Devices |                       | HD TVI, CVI, AHD & CVBS CoaxialVideo Ground Loop Isolator   |
| Power           | Insertion Loss        | CCTV/CATV system, Antenna of Television, FM receivers, video camera, monitors, multiplexers & Quad processor, VCR. VOD.... etc. |
|                 | Frequency Response    | ≤0.5dB  |
|                 | Input Impedance       | 75Ω   |
|                 | Output Impedance      | 75Ω   |
|                 | Isolated Voltage      | 800V DC (MIN)   |
|                 | Insulation Resistance | ≥100MΩ  |
| Protection      | ESD Protection        | 1a contact discharge 3 degree<br>1b air discharge 3 degree<br>IEC61000-4-2  |
|                 | Surge Protection      | 4kV 10/700us<br>IEC61000 - 4 - 5  |
| Stability       | MTBF                  | >20000H   |
| Mechanical      | Dimensions (LxWxH)    | 50 x 28 x 28mm (BNC connector included)   |
|                 | Housing               | ABS plastic   |
|                 | Body Colour           | Black   |
|                 | Net Weight            | 57g   |
| Environmental   | Operating Temperature | -20° ~ 60° C  |
|                 | Storage Temperature   | -30° ~ 80° C  |
|                 | Relative Humidity     | 0-95% (non-condensing)  |




## Coaxial Cables &amp; Connectors

| Product Code   | Cable         | Outside Diameter mm | Colour |   |   |   |   |   |   |   |   |   |   |   | Sheath | Core @5MHz | Loss dB | MOQ M | Max Dist M | External Use |
|----------------|---------------|---------------------|--------|---|---|---|---|---|---|---|---|---|---|---|--------|------------|---------|-------|------------|--------------|
| 490004-WHT-100 | RG59B/U       | 6                   | White  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | PVC    | 1/0.58     | 2.25    | 100   | 260        | No           |
| 490004-WHT-250 | RG59B/U       | 6                   | White  |   |   |   |   |   |   |   |   |   |   |   | PVC    | 1/0.58     | 2.25    | 250   | 260        | No           |
| 490021-WHT-100 | URM70         | 5.8                 | White  |   |   |   |   |   |   |   |   |   |   |   | PVC    | 7/0.19     | 3.31    | 100   | 180        | No           |
| 490002-WHT-100 | RG11          | 10.2                | Black  |   |   |   |   |   |   |   |   |   |   |   | PVC    | 7/0.4      | 1.4     | 100   | 420        | No           |
| 450072-WHT-500 | CC125         | 7.8                 | White  |   |   |   |   |   |   |   |   |   |   |   | PVC    | 1/1.25     | 1.1     | 500   | 540        | No           |
| 450071-BLK-200 | CT125UG       | U/G                 | Black  |   |   |   |   |   |   |   |   |   |   |   | PE     | 1/1.25     | 1.1     | 200   | 540        | Yes          |
| 510088-WHT-100 | URM70 Shotgun | 5.8 x 12.2          | White  |   |   |   |   |   |   |   |   |   |   |   | PVC    | 7/0.19     | 3.31    | 100   | 180        | No           |
| 510089-WHT-100 | URM70 Shotgun | 5.8 x 12.2          | White  |   |   |   |   |   |   |   |   |   |   |   | PVC    | 7/0.19     | 3.31    | 100   | 180        | No           |
| Non Stock      | CC167         | 10.2                | Black  |   |   |   |   |   |   |   |   |   |   |   | PVC    | 1/1.62     | 0.9     | 100   | 660        | No           |
| Non Stock      | CC167UG       | 11.5                | Green  |   |   |   |   |   |   |   |   |   |   |   | PE     | 1/1.62     | 0.9     | 500   | 660        | Yes          |

|   | Item   | Order Codes  |
|---|--|--|
|  | Twist-On Connector Suitable for Cable RG59B/U Twist on No tools required   | <a href="#">55T1022</a>                            |
|  | Coaxial BNC Crimp Jack for RG59B/U and URM70 Cable Tools Required<br>Pin Tool<br>Ferrule Tool A  | <a href="#">55T1021</a>                            |
|  | 10 Off BNC Crimp connector and strain relief turned crimp plug suitable for cables RG59B/U, URM70<br>Tools Required<br>Pin Tool A<br>Ferrule Tool A  | <a href="#">55T1018</a>                            |
|  | BNC Crimp Connector with Strain Relief suitable for RG59B/U URM70<br>10 Off BNC Crimp Connectors with Strain Relief suitable for RG59B/U URM70<br>Tools Required<br>Pin Tool A<br>Ferrule Tool A | <a href="#">55T1024</a><br><a href="#">55T1007</a> |

|   | <b>Item</b>  | <b>Order Codes</b> |
|---|--|--------------------|
|    | Right Angled BNC Crimp Connector with Strain Relief suitable for RG59B/U URM70<br>Tools Required<br>Pin Tool A<br>Ferrule Tool A | 55T1015            |
|    | BNC Crimp Connector for RG11 Coaxial Cable<br>Tools Required<br>Pin Tool B<br>Ferrule Tool B                                     | 55T1008            |
|    | BNC Crimp Plug For CC125RBS (Coax Connectors 504-5-CT125RBS)<br>Tools Required<br>Pins Tool<br>Ferrules Tool F                   | 55T1010            |
|  | BNC Crimp Plug for CC125 (Coax Connectors 504-5-CT125)<br>Tool required<br>Pins Crimp Tool C<br>Ferrule Crimp Tool C             | 55T1009            |
|  | BNC Secure Fit Plug for CC100/125 (Coax Connectors 504-083)<br>Tools Required<br>Pin Solder Iron<br>Body Spanner                 | 55T1023            |
|  | BNC Goalpost Y adapter<br>BNC Goalpost Y adapter (Coax connectors 504-051)   | 55T1016            |
|  | BNC/BNC Cable Connector<br>BNC/BNC Cable Connector Jack to Jack  | 55T1019            |
|  | Coaxial BNC 'T' Adapter<br>Coaxial BNC 'T' Adapter two Jacks one BNC   | 55T1020            |

## Coaxial Connector Tools

|   | Item   | Order Codes  |
|---|--|--|
|  | A Type Ratchet BNC Crimp tool<br>A Type Ratchet BNC Crimp tool is suitable for crimping pins and Ferrules for RG59 and URM70 | <a href="#">55T1017</a>                            |
|  | Rotary Cable Stripper<br>Rotary Cable Stripper Suitable for use with Crimp Connectors  | <a href="#">55T1005</a>                            |
|  | Coaxial BNC 'T' Adapter<br>C type Crimp Tool for CT 125 Ferrules and all Pins<br>F Type Crimp Tool for CT125RBS Ferrules     | <a href="#">55T1013</a><br><a href="#">55T1014</a> |

## Coaxial Cable

### Order Codes:

#### Cabling

|                   |  |                 |  |
|-------------------|--|-----------------|--|
| 55T1006           | One Metre Coaxial Hook Up Lead   | 120451F-BLK-100 | Cat 6 duct grade UTP, 4 pair cable, 100 metre length, black outer sheath |
| 428723-WHT-100    | Belden 8723 Style Cable (2 Screened Pairs)   | 120452CVLT305   | Cat 6 UTP LSOH Violet CPR  |
| 428723-WHT-500    | Belden 8723 Style Cable (2 Screened Pairs). Supplied on 500 m Reel   |                 | Cca  |
| 604.003.056       | URM70 Coaxial Cable for Internal CCTV applications, 5.8 mm Overall Diameter, White PVC, 7/0.19 mm Inner Conductor, Loss per 100M @ 5Mhz 3.31 dB , Priced Per Meter MOQ 100 Metre Drum combined with a 0.75 mm CSA twin power cable Shotgun |                 |  |
| 428442-WHT-250    | Belden style 8442 white cable 250 m reel   |                 |  |
| 610.001.043       | 305 m reel of UTP CAT5 Grey Cable  |                 |  |
| 428442-PE         | Duct grade 8442 style single twisted pair cable for use with Sensornet protocol, 100 metre reel  |                 |  |
| CAT5E-PE          | Duct grade CAT5E UTP 4 pair cable, 500 m reel  |                 |  |
| CAT-5E-PE-100     | 100 m of CAT-5E PE (polyethylene sheathed) cable 4pr   |                 |  |
| 350401-GRY-100    | 100 m reel of Cat 5E cable   |                 |  |
| 374002            | 1 m Patch lead Cat 5E, terminated with RJ45  |                 |  |
| 374003            | 2 Metre Patch lead. Cat 5E terminated with RJ45  |                 |  |
| 110401CVLT305     | Cat 5 UTP LSOH Violet CPR Cca  |                 |  |
| 610.001.041       | 3 m RJ45 CAT 5 Patch cable   |                 |  |
| 610.001.040       | 0.5 m RJ45 Cat 5 Patch cable   |                 |  |
| 110401-WHT-UV-100 | Cat 5e UTP UV WHITE PVC 100 m  |                 |  |
| 428723UG-100      | Beldon style 8723 UG EQ 100 m  |                 |  |

# VRS121000EB 12V DC 1A Encapsulated PSU



## Features:

- Encapsulated PSU
- 12V DC1A output
- Provided with a UK plug
- Includes standard 2.1mm dc output connector

## Technical Specifications:

### Input

|                                |                  |
|--------------------------------|------------------|
| Voltage (rated):               | 100-240V ac      |
| Voltage (Operating):           | 90-264V ac       |
| Frequency:                     | 50-60Hz          |
| Max Current:                   | 400mA            |
| Mains Input Fuse<br>(UK plug): | 3.0A 250V ac HRC |

### Output

|                       |                                     |
|-----------------------|-------------------------------------|
| Voltage:              | 11.4 – 12.6V dc<br>(12V dc nominal) |
| Maximum Load Current: | 1A                                  |
| Ripple:               | 120mV pk-pk (max)                   |
| Overload:             | Electronic & Thermal<br>shutdown    |

### Mechanical

|                  |                 |
|------------------|-----------------|
| Dimensions (mm): | 65L x 45W x 25D |
| Weight:          | 200g            |
| Colour:          | Black           |
| Material:        | Plastic         |

### Environmental

|                        |                       |
|------------------------|-----------------------|
| Environmental Rating:  | Indoor use only       |
| Operating Temperature: | -10°C to +40°C        |
| Storage Temperature:   | -20°C to +50°C        |
| Humidity:              | 95% RH Non Condensing |

### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |

A switch mode encapsulated (inline) power supply providing a regulated 12V dc output designed for CCTV applications.

the unit comes fitted with a UK plug for the mains input and a standard 2.1mm dc output connector.

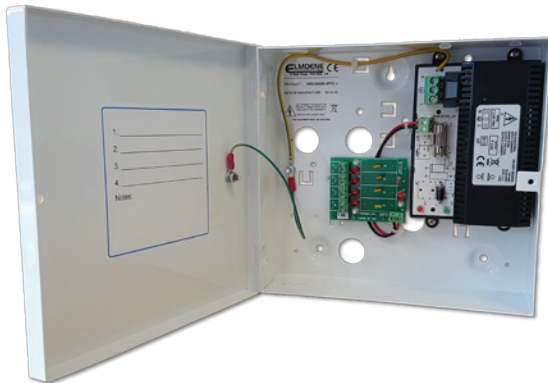
The unit continuously supplies full rated current to load, while the universal mains input voltage enables the power supply to be used across a wide geographical area.

The highly efficient switch mode design generates less heat and ensures low operating costs.

## Order Codes:

|             |  |
|-------------|--|
| VRS121000EB | 12V DC (nominal) PSU 1A output, encapsulated. Supplied with UK plug. |
|-------------|--|

## VRS124000-4PTC-J 12V DC 4A 4-Way PSU



A switch mode power supply unit providing 12V dc @ 4A (4 x 1A) housed in a low-profile metal enclosure, ideal for CCTV applications.

Featuring a regulated 12V dc SMPSU module, continuously supplying full rated current to load, while its universal mains input voltage enables the power supply to be used across a wide geographical area.

The highly efficient switch mode design generates less heat and ensures low operating costs.

Utilising PTC (self-resetting) load fuses alleviates the need to change fuses if a fault was to occur on any of the outputs.

### Order Codes:

VRS124000-4PTC-J 12V DC (nominal) PSU 4A (4x 1A) output

### Features:

- 12V DC4A output (4 x 1A)
- Metal enclosure
- PTC (self-resetting) fuses (x 4)

### Technical Specifications:

#### Input

|                      |             |
|----------------------|-------------|
| Voltage (rated):     | 100-240V ac |
| Voltage (Operating): | 90-264V ac  |
| Frequency:           | 50-60Hz     |
| Max Current:         | 1.5A        |
| Mains Input Fuse     | T2.0A HRC   |

#### Output

|                       |                                     |
|-----------------------|-------------------------------------|
| Voltage:              | 11.4 - 12.6V dc<br>(12V dc nominal) |
| Maximum Load Current: | 4A                                  |
| Ripple:               | 150mV pk-pk (max)                   |
| Module Output Fuse:   | F4.0A                               |
| FOM Fuses (PTC x 4)   |                                     |
| Holding Current:      | 0.9A @ 20°C                         |
| Trip Current:         | 1.8A @ 20°C                         |

#### Load Indicators

|                                |  |
|--------------------------------|--|
| Mains LED (Green):             | Mains Present                                    |
| Fault LED (Red):               | Output Fuse Failure<br>(requires load connected) |
| Fuse Output Health LED's (Red) | Yes: Illuminated when healthy                    |

#### Mechanical

|                  |                                   |
|------------------|-----------------------------------|
| Dimensions (mm): | 188H x 205W x 60D                 |
| Weight:          | 1.5Kg                             |
| Material:        | 1.2mm Powder Coated<br>Mild Steel |
| Colour:          | White                             |

#### Environmental

|                        |                       |
|------------------------|-----------------------|
| Environmental Rating:  | Indoor use only       |
| Operating Temperature: | -10°C to +40°C        |
| Storage Temperature:   | -20°C to +50°C        |
| Humidity:              | 95% RH Non Condensing |

#### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |



## Power Supply Units - Elmdene

## VRS124000-8PTC-J 12V DC 4A 8-Way PSU



A switch mode power supply unit providing 12V dc @ 4A (8 x 500mA) housed in a low-profile metal enclosure, ideal for CCTV applications.

Featuring a regulated 12V dc SMPSU module, continuously supplying full rated current to load, while its universal mains input voltage enables the power supply to be used across a wide geographical area.

The highly efficient switch mode design generates less heat and ensures low operating costs.

Utilising PTC (self-resetting) load fuses alleviates the need to change fuses if a fault was to occur on any of the outputs.

### Order Codes:

VRS128000-8PTC-T 12V DC (nominal) PSU 8A output (8 x 1A), housed in a metal enclosure

### Features:

- 12V DC 4A output (8 x 500mA)
- Metal enclosure
- PTC (self-resetting) fuses (x8)

### Technical Specifications:

#### Input

|                      |             |
|----------------------|-------------|
| Voltage (rated):     | 100-240V ac |
| Voltage (Operating): | 90-264V ac  |
| Frequency:           | 50-60Hz     |
| Max Current:         | 1.5A        |
| Mains Input Fuse:    | T2.0A HRC   |

#### Output

|                       |                                     |
|-----------------------|-------------------------------------|
| Voltage:              | 11.4 - 12.6V dc<br>(12V dc nominal) |
| Maximum Load Current: | 4A                                  |
| Ripple:               | 150mV pk-pk (max)                   |
| Module Output Fuse:   | F4.0A                               |
| FOM Fuses (PTC x 8)   |                                     |
| Holding Current:      | 0.5A @ 20°C                         |
| Trip Current:         | 0.9A @ 20°C                         |

#### Load Indicators

|                                 |  |
|---------------------------------|--|
| Mains LED (Green):              | Mains Present                                    |
| Fault LED (Red):                | Output Fuse Failure<br>(requires load connected) |
| Fuse Output Health LED's (Red): | Yes: Illuminated when healthy                    |

#### Mechanical

|                  |                                   |
|------------------|-----------------------------------|
| Dimensions (mm): | 188H x 205W x 60D                 |
| Weight:          | 1.5Kg                             |
| Material:        | 1.2mm Powder Coated<br>Mild Steel |
| Colour:          | White                             |

#### Environmental

|                        |                       |
|------------------------|-----------------------|
| Environmental Rating:  | Indoor use only       |
| Operating Temperature: | -10°C to +40°C        |
| Storage Temperature:   | -20°C to +50°C        |
| Humidity:              | 95% RH Non Condensing |

#### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |

## VRS128000-4PTC-T 12V DC 8A 8-Way PSU



A switch mode power supply unit providing 12V dc @ 8A (8 x 1A) housed in a low-profile metal enclosure, ideal for CCTV applications.

Featuring regulated 12V dc SMPSU modules, they continuously supply full rated current to load, while their universal mains input voltage enables the power supply to be used across a wide geographical area.

The highly efficient switch mode design generates less heat and ensures low operating costs.

Utilising PTC (self-resetting) load fuses alleviates the need to change fuses if a fault was to occur on any of the outputs.

### Order Codes:

VRS128000-4PTC-T 12V DC (nominal) PSU 8A (4 x 2A)

### Features:

- 12V DC 8A output (4 x 2A)
- Metal enclosure
- PTC (self-resetting) fuses (x4)

### Technical Specifications:

#### Input

|                      |             |
|----------------------|-------------|
| Voltage (rated):     | 100-240V ac |
| Voltage (Operating): | 90-264V ac  |
| Frequency:           | 50-60Hz     |
| Max Current:         | 3.0A        |
| Mains Input Fuse:    | T3.15A HRC  |

#### Output

|                          |                                     |
|--------------------------|-------------------------------------|
| Voltage:                 | 11.4 - 12.6V dc<br>(12V dc nominal) |
| Maximum Load Current:    | 8A Total                            |
| Ripple:                  | 150mV pk-pk (max)                   |
| Module Output Fuse (x2): | F4.0A                               |
| FOM Fuses (PTC x 8)      |                                     |
| Holding Current:         | 0.9A @ 20°C                         |
| Trip Current:            | 1.8A @ 20°C                         |

#### Load Indicators

|                                |  |
|--------------------------------|--|
| Mains LED (Green):             | Mains Present                                    |
| Fault LED (Red):               | Output Fuse Failure<br>(requires load connected) |
| Fuse Output Health LED's (Red) | Yes: Illuminated when healthy                    |

#### Mechanical

|                  |                                   |
|------------------|-----------------------------------|
| Dimensions (mm): | 310H x 245W x 50D                 |
| Weight:          | 2.7Kg                             |
| Material:        | 1.2mm Powder Coated<br>Mild Steel |
| Colour:          | White                             |

#### Environmental

|                        |                       |
|------------------------|-----------------------|
| Environmental Rating:  | Indoor use only       |
| Operating Temperature: | -10°C to +40°C        |
| Storage Temperature:   | -20°C to +50°C        |
| Humidity:              | 95% RH Non Condensing |

#### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |

# VRS128000-16PTCT 12V DC 8A 16-Way PSU



A switch mode power supply unit providing 12V dc @ 8A (16 x 500mA) housed in a low-profile metal enclosure, ideal for CCTV applications.

Featuring regulated 12V dc SMPSU modules, they continuously supply full rated current to load, while their universal mains input voltage enables the power supply to be used across a wide geographical area.

The highly efficient switch mode design generates less heat and ensures low operating costs.

Utilising PTC (self-resetting) load fuses alleviates the need to change fuses if a fault was to occur on any of the outputs.

## Order Codes:

**VRS128000-16PTCT** 12V DC (nominal) PSU 8A (16 x 500mA) housed in a metal enclosure

## Features:

- 12V DC 8A output (16 x 500mA)
- Metal enclosure
- PTC (self-resetting) fuses (x16)

## Technical Specifications:

### Input

|                      |             |
|----------------------|-------------|
| Voltage (rated):     | 100-240V ac |
| Voltage (Operating): | 90-264V ac  |
| Frequency:           | 50-60Hz     |
| Max Current:         | 3.0A        |
| Mains Input Fuse:    | T3.15A HRC  |

### Output

|                          |                                     |
|--------------------------|-------------------------------------|
| Voltage:                 | 11.4 - 12.6V dc<br>(12V dc nominal) |
| Maximum Load Current:    | 8A Total                            |
| Ripple:                  | 150mV pk-pk (max)                   |
| Module Output Fuse (x2): | F4.0A                               |
| FOM Fuses (PTC x 8)      |                                     |
| Holding Current:         | 0.5A @ 20°C                         |
| Trip Current:            | 0.9A @ 20°C                         |

### Load Indicators

|                                |  |
|--------------------------------|--|
| Mains LED (Green):             | Mains Present                                    |
| Fault LED (Red):               | Output Fuse Failure<br>(requires load connected) |
| Fuse Output Health LED's (Red) | Yes: Illuminated when healthy                    |

### Mechanical

|                  |                                   |
|------------------|-----------------------------------|
| Dimensions (mm): | 310H x 245W x 50D                 |
| Weight:          | 2.7Kg                             |
| Material:        | 1.2mm Powder Coated<br>Mild Steel |
| Colour:          | White                             |

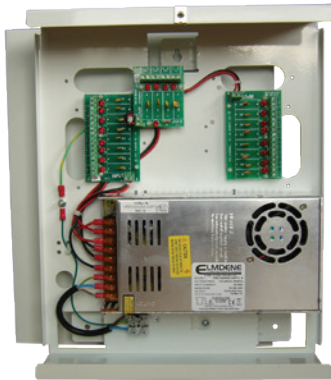
### Environmental

|                        |                       |
|------------------------|-----------------------|
| Environmental Rating:  | Indoor use only       |
| Operating Temperature: | -10°C to +40°C        |
| Storage Temperature:   | -20°C to +50°C        |
| Humidity:              | 95% RH Non Condensing |

### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |

# VRS122000-PTC-P 12V DC 20A Single Output PSU



A boxed switch mode power supply unit providing 12V dc @ 20A (20 x 1A), ideal for CCTV applications.

Featuring a regulated 12V dc SMPS module it can continuously supply full rated current to load via 20 x 1A fused outputs, while the mains input voltage switch enables the power supply to be used across a wide geographical area. The highly efficient switch mode design generates less heat and ensures low operating costs.

The unit's output voltage can be adjusted between 11.5V and 15V dc via an on-board potentiometer if required. Utilising PTC (self-resetting) load fuses alleviates the need to change fuses if a fault was to occur on any of the outputs.

## Order Codes:

VRS122000-PTC-P 12V DC (nominal) PSU 2A output, in an IP66 rated enclosure.

## Features:

- 12V DC 2A output
- Suitable for Single camera
- IP66 rated enclosure
- PTC Output fuse

## Technical Specifications:

### Input

|                      |             |
|----------------------|-------------|
| Voltage (rated):     | 100-240V ac |
| Voltage (Operating): | 90-264V ac  |
| Frequency:           | 50-60Hz     |
| Max Current:         | 2A          |
| Mains Input Fuse     | T3.15 HRC   |

### Output

|                        |                                     |
|------------------------|-------------------------------------|
| Voltage (adjustable):  | 11.4 – 15.0V dc<br>(12V dc nominal) |
| Maximum Load Current:  | 20A (Total)                         |
| Ripple:                | 150mV pk-pk (max)                   |
| Output Fuses (PTC x20) |                                     |
| Holding Current:       | 0.9A @ 20°C                         |
| Trip Current:          | 1.8A @ 20°C                         |

### Local Indicators

|  |                               |
|--|-------------------------------|
| Mains LED Indicator on module (Green): | Mains Present                 |
| Fuse Output Health LED's (Red)         | Yes: Illuminated when healthy |

### Mechanical

|                  |                                     |
|------------------|-------------------------------------|
| Dimensions (mm): | 345HW x 288W x 90D                  |
| Weight:          | 3.5Kg                               |
| Colour:          | White                               |
| Material:        | 1.5mm Mild Steel<br>(powder coated) |

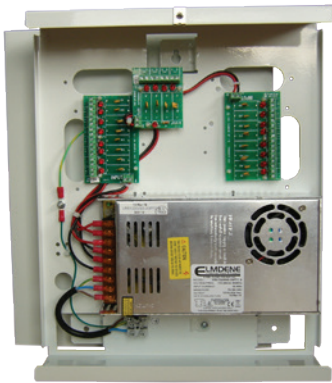
### Environmental

|                        |                       |
|------------------------|-----------------------|
| Environmental Rating:  | Indoor use only       |
| Operating Temperature: | -10°C to +40°C        |
| Storage Temperature:   | -20°C to +80°C        |
| Humidity:              | 95% RH Non Condensing |

### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |

# VRS1220000-20PTC-S 12V DC 20A 20-Way PSU



A boxed switch mode power supply unit providing 12V dc @ 20A (20 x 1A), ideal for CCTV applications.

Featuring a regulated 12V dc SMPS module it can continuously supply full rated current to load via 20 x 1A fused outputs, while the mains input voltage switch enables the power supply to be used across a wide geographical area.

The highly efficient switch mode design generates less heat and ensures low operating costs. Output voltage can be adjusted between 11.5V and 15V dc via an on-board potentiometer if required.

Utilising PTC (self-resetting) load fuses alleviates the need to change fuses if a fault was to occur on any of the outputs.

## Order Codes:

VRS1220000-20PTS-S 24V AC (nominal) PSU 4A output, housed in an IP66 rated enclosure

## Features:

- 12V DC 20A output (20 x 1A)
- Metal enclosure
- PTC (self-resetting) fuses (x 20)

## Technical Specifications:

### Input

|                      |             |
|----------------------|-------------|
| Voltage (rated):     | 100-240V ac |
| Voltage (Operating): | 90-264V ac  |
| Frequency:           | 50-60Hz     |
| Max Current:         | 2A          |
| Mains Input Fuse:    | T3.15 HRC   |

### Output

|                        |                                     |
|------------------------|-------------------------------------|
| Voltage (adjustable):  | 11.4 – 15.0V dc<br>(12V dc nominal) |
| Maximum Load Current:  | 20A (Total)                         |
| Ripple:                | 150mV pk-pk (max)                   |
| Output Fuses (PTC x20) |                                     |
| Holding Current:       | 0.9A @ 20°C                         |
| Trip Current:          | 1.8A @ 20°C                         |

### Load Indicators

|                                       |                               |
|---------------------------------------|-------------------------------|
| Mains LED Indicator on module (Green) | Mains Present                 |
| Fuse Output Health LED's (Red)        | Yes: Illuminated when healthy |

### Mechanical

|                  |                                  |
|------------------|----------------------------------|
| Dimensions (mm): | 345HW x 288W x 90D               |
| Weight:          | 3.5Kg                            |
| Material:        | 1.5mm Mild Steel (powder coated) |
| Colour:          | White                            |

### Environmental

|                        |                       |
|------------------------|-----------------------|
| Environmental Rating:  | Indoor use only       |
| Operating Temperature: | -10°C to +40°C        |
| Storage Temperature:   | -20°C to +80°C        |
| Humidity:              | 95% RH Non Condensing |

### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |

## VR2440-8PTC 24V DC 4A 8-Way PSU



A power supply unit providing 24V ac @ 4A with an 8-way Fuse Output Module allowing up to 500mA per channel, ideal for CCTV applications.

Featuring a single 24V ac transformer design, it can continuously supply full rated current to load.

Utilising PTC (self-resetting) load fuses alleviates the need to change fuses if a fault was to occur on any of the outputs.

Mains input voltage is 230V ac (nominal).

### Order Codes:

VR2440-8PTC      24V AC 4A 8-way Low Profile PSU

### Features:

- 24V DC 4A output
- 8 way Fuse Output module allowing up to 500mA per channel
- Indoor use only
- 8x PTC (self-resetting) fuses

### Technical Specifications:

#### Input

|                   |                       |
|-------------------|-----------------------|
| Voltage:          | 230V ac (+10% / -15%) |
| Frequency:        | 50Hz                  |
| Max Current:      | 520mA                 |
| Mains Input Fuse: | T2.0A HRC             |

#### Output

|                        |  |
|------------------------|--|
| Voltage:               | 23V – 28V ac<br>(24V ac nominal)<br>Full load to off load @<br>230V ac |
| Maximum Load Current:  | 4A   |
| Output Fuses (PTC x 8) |  |
| Holding Current:       | 0.5A @ 25°C  |
| Trip Current:          | 0.9A @ 25°C  |

#### Load Indicators

|                           |                               |
|---------------------------|-------------------------------|
| Mains LED (Green):        | N/A                           |
| Fault LED (Red):          | N/A                           |
| Output Health LED's (Red) | Yes: Illuminated when healthy |

#### Mechanical

|                  |                                |
|------------------|--------------------------------|
| Dimensions (mm): | 85H x 200W x 55D               |
| Weight:          | 1.6Kg                          |
| Material:        | 1.2mm Powder Coated Mild Steel |
| Colour:          | White                          |

#### Environmental

|                        |                       |
|------------------------|-----------------------|
| Environmental Rating:  | Indoor use only       |
| Operating Temperature: | 0°C to +40°C          |
| Storage Temperature:   | -20°C to +50°C        |
| Humidity:              | 75% RH Non Condensing |

#### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |

# VR2410-PTC-P 24V AC 1A Single Output IP66 PSU



A power supply unit providing 24V ac @ 1A housed in IP66 rated enclosure, ideal for external CCTV applications.

It features a single 24V ac transformer design, continuously supplying full rated current to load, with a single 1A output, with health LED indication.

Utilising a PTC (self-resetting) load fuse, it alleviates the need to change a fuse if a fault was to occur on the output. Mains input voltage is 230V ac (nominal).

## Order Codes:

VR2410-PTC-P      24V AC (nominal) PSU 1A output, in IP66 rated enclosure

## Features:

- 24V DC 1A output
- IP66 rated enclosure
- PTC (self-resetting) fuse

## Technical Specifications:

### Input

|                   |                       |
|-------------------|-----------------------|
| Voltage:          | 230V ac (+10% / -15%) |
| Frequency:        | 50Hz                  |
| Max Current:      | 1A                    |
| Mains Input Fuse: | T2.0A HRC             |

### Output

|                       |  |
|-----------------------|--|
| Voltage:              | 23V – 28V ac<br>(24V ac nominal)<br>Full load to off load @<br>230V ac |
| Maximum Load Current: | 1A   |
| Output Fuse (PTC)     |  |
| Holding Current:      | 1.1A @ 20°C  |
| Trip Current:         | 2.2A @ 20°C  |

### Load Indicators

|                          |                               |
|--------------------------|-------------------------------|
| Mains LED (Green):       | No                            |
| Fault LED (Red):         | No                            |
| Output Health LED (Red): | Yes: Illuminated when healthy |

### Mechanical

|                  |                    |
|------------------|--------------------|
| Dimensions (mm): | 200H x 150W x 100D |
| Weight:          | 1.3Kg              |
| Material:        | Plastic            |
| Colour:          | Grey               |

### Environmental

|                          |                |
|--------------------------|----------------|
| IP Environmental Rating: | IP66           |
| Operating Temperature:   | 0°C to +40°C   |
| Storage Temperature:     | -20°C to +50°C |

### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |

# VR2440-PTC-P 24V AC 4A Single Output PSU



A power supply unit providing 24V ac @ 4A housed in IP66 rated enclosure, ideal for external CCTV applications.

It features a single 24V ac transformer design, continuously supplying full rated current to load, with a single 4A output, with health LED indication.

Utilising a PTC (self-resetting) load fuse, it alleviates the need to change a fuse if a fault was to occur on the output.

Mains input voltage is 230V ac (nominal).

## Order Codes:

VR2440-PTC-P      24V AC (nominal) PSU 4A output, housed in an IP66 rated enclosure

## Features:

- 24V DC 4A single output
- IP66 rated enclosure
- PTC (self-resetting) fuse

## Technical Specifications:

### Input

|                   |                       |
|-------------------|-----------------------|
| Voltage:          | 230V ac (+10% / -15%) |
| Frequency:        | 50Hz                  |
| Max Current:      | 520mA                 |
| Mains Input Fuse: | T2.0A HRC             |

### Output

|                       |  |
|-----------------------|--|
| Voltage:              | 23V – 28V ac<br>(24V ac nominal)<br>Full load to off load @<br>230V ac |
| Maximum Load Current: | 4A   |
| Output Fuse (PTC)     |  |
| Holding Current:      | 3.75A @ 20°C   |
| Trip Current:         | 7.5A @ 20°C  |

### Load Indicators

|                          |                               |
|--------------------------|-------------------------------|
| Mains LED (Green):       | No                            |
| Fault LED (Red):         | No                            |
| Output Health LED (Red): | Yes: Illuminated when healthy |

### Mechanical

|                  |                    |
|------------------|--------------------|
| Dimensions (mm): | 200H x 150W x 100D |
| Weight:          | 2.2Kg              |
| Material:        | Plastic            |
| Colour:          | Grey               |

### Environmental

|                          |                |
|--------------------------|----------------|
| IP Environmental Rating: | IP66           |
| Operating Temperature:   | 0°C to +40°C   |
| Storage Temperature:     | -20°C to +50°C |

### Compliance

|                |     |
|----------------|-----|
| CE Approved    | Yes |
| RoHS Compliant | Yes |



## 24 V AC to 12 DC Power Converter



### Features:

- High current DC output
- Heavily filtered low noise output
- Terminal block and DC jack output

This converter will allow to power any 12 VDC camera & mini domes from a 24 VAC source and subsequently increase the distance between the image device and its power supply

### Order Code:

15-AC24-1A

Converts 24 V AC to 12 V DC providing a 800 mA rating.

### Technical Specifications:

|                 |                  |
|-----------------|------------------|
| Input power:    | AC 24-28 V       |
| Output power:   | 12 VDC regulated |
| Output current: | 800 mA ( Max )   |
| Dimensions:     | 73 x 29 x 25 mm  |

## Sensormatic Universal Transformer



This transformer can be used to power single Sensormatic Ultra or Optima Domes internally.

N.B. This should NOT be used for Domes contained within an external housing. This unit should

### Technical Specifications:

Input: 220/230-240 V ~ 0.3 A,  
50-60Hz  
Output: 12/17/20/24 V ~ 45 vA (Total)

### Order Code:

0300-0914-03

Universal Transformer

## Camera Fixing Kits



### Order Codes:

36-A28023

External Fixed Camera Fixing kit comprised of  
2 Metre 20 mm Flexible conduit C/W 2 x 20 mm Connectors & 2 x 20 mm Locknuts  
3 mtr 0.75 mm 3183Y Cable White  
2 x BNC Crimp Connectors  
1 x BNC in Line Connector  
1 x Adapter Box  
1 x 5 amp Fuse  
1 x 5 amp Connector Strip

36-A28024

External Functional Camera Fixing kit comprised of  
2 Metre 25 mm Flex Tube FS01080 C/W Glands  
2 x 25 mm Galv Locknuts  
3 Metre 0.75 mm 3183Y Cable  
2 x BNC Crimp Connector  
1 x BNC in line Connector  
4 x M10 Loose Anchors  
1 x Adaptable Box IP55  
1 x 5 amp Fuse  
1 x 5 amp Connector Strip

|   | Item   | Order Codes   |
|---|--|---------------|
|  | 12 v dc DC Power Jack Female<br>(pack of 10) | HAY-DC-JACK-F |
|  | 12 v dc DC Power Jack Male<br>(pack of 10)   | HAY-DC-JACK-M |

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