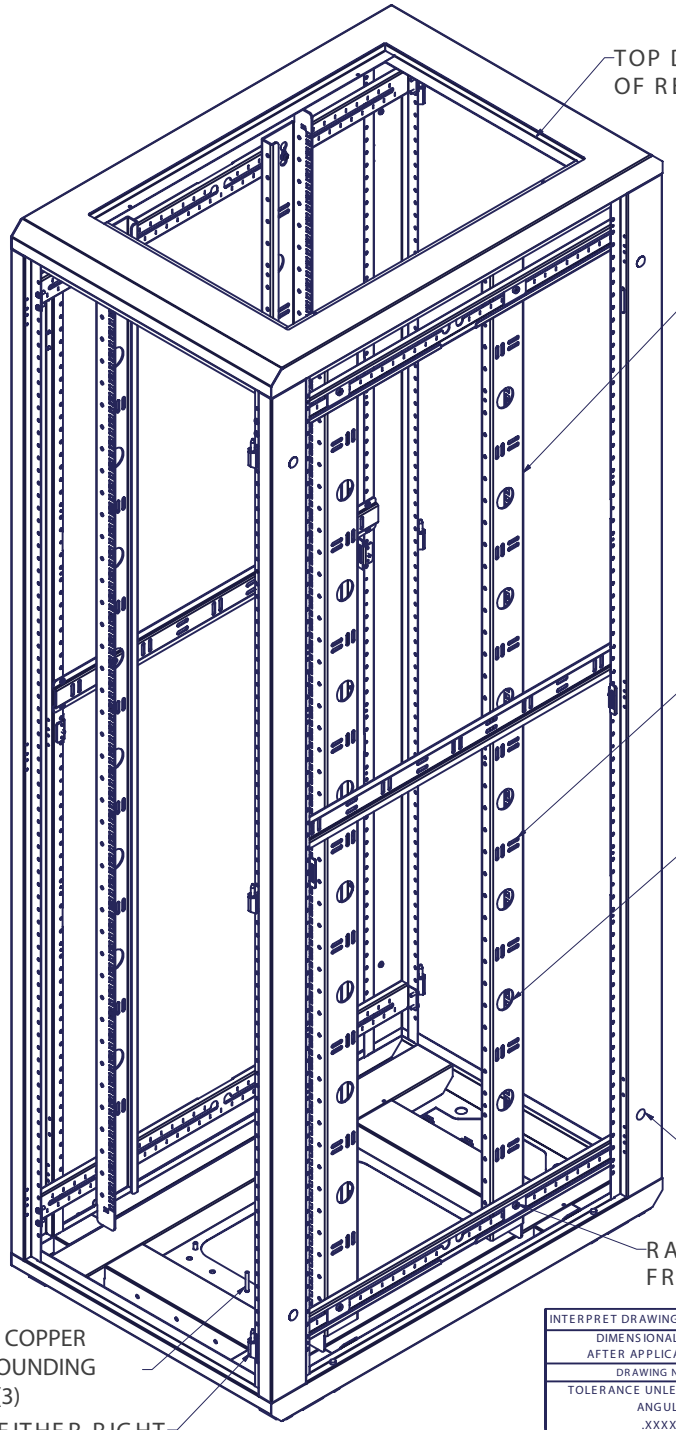

Enhanced Series Enclosure Features

- 44 RMU, 19" EIA 310-E Compliant
- Fully Welded Steel Construction
  #16 Gauge Steel
- Universal M6 Cage Nut Rails Standard
  (10/32 Tapped Rails Available)
  #12 Gauge Steel
- Rack Mounting Hardware Included
- Rails are Infinitely Adjustable, Front to Rear (Max. Rail Spacing is Cabinet Depth minus 2 inches)
- Rails with RMU Markings
- TRC (True Rail Count) Rails
  This certifies that the number of RMU are true and all accessible within the door opening.
- Total of Three 10/32 x 1.5" Copper Plated Grounding Studs
  (One in bottom, two in top)
- Weight Capacity: 1500 lbs. on levelers, bolted to floor, or on heavy duty casters
- Durable Powder Coat Finish
- Field Reversible Door Hinges
  (No Additional Hardware Required)
- Optional Features:
  - Cable Lacing Bars
  - Ganging Hardware (No Tools Required)
  - Anti-tip Legs
  - Variety of Top, Bottom, & Side Panels

INTERPRET DRAWING PER ASME Y14.5M-1994
DIMENSIONAL LIMITS APPLY AFTER APPLICATION OF FINISH
DRAWING NOT TO SCALE
TOLERANCE UNLESS OTHERWISE NOTED:
ANGULAR +/- 1~
.XXXX +/- .010
.XXX +/- .015
.XX +/- .030
.X FOR REF. ONLY

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES

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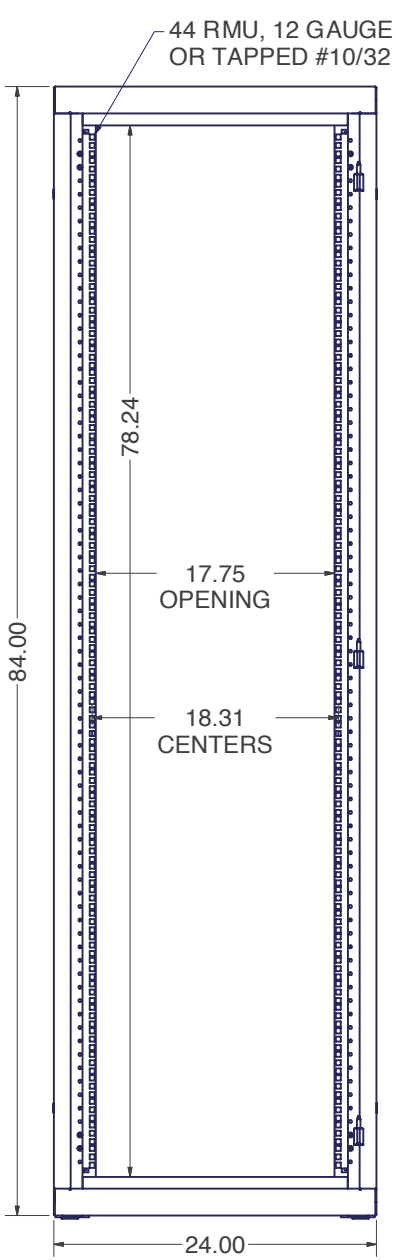
PART NUMBER:	8401E2436
QTY PER UNIT:	1
MATERIAL TYPE:	-
MATERIAL GAUGE:	-
FINISH:	-
DRAWN	CA
DATE	6/27/2002
CHECKED & APP.	WSS
DATE	5-25-05

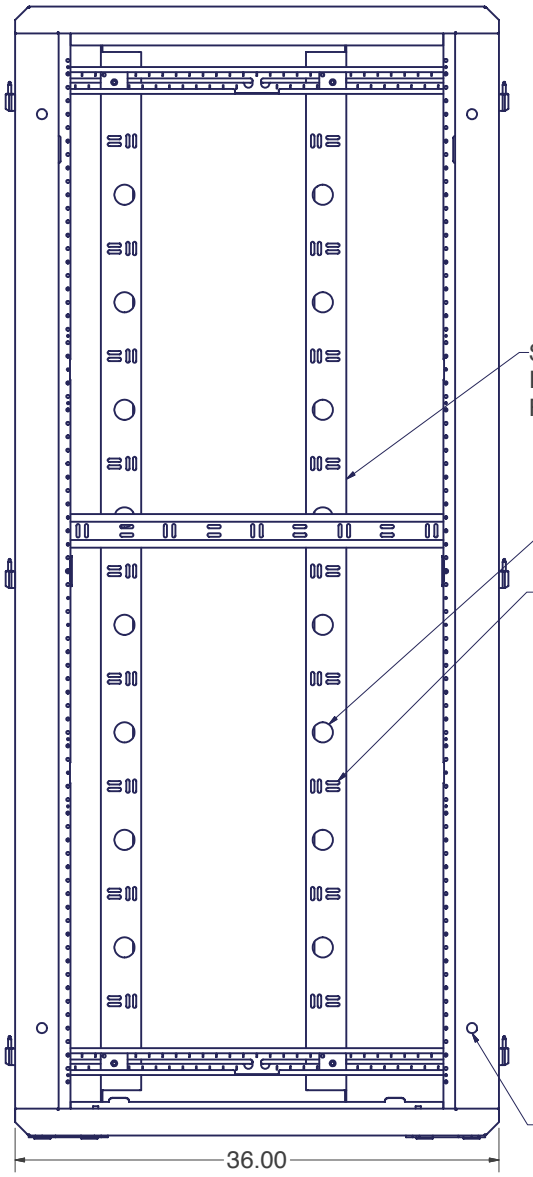
TITLE: BASE UNIT ASSEMBLY - 84" H X 24" W X 36" D E CABINET

GREAT LAKES CASE & CABINET CO., INC.
P.O. BOX 551 EDINBORO, PA 16412
PHONE (814) 734-7303 FAX (814) 734-3907
E-MAIL glcc@ greatcabinets.com

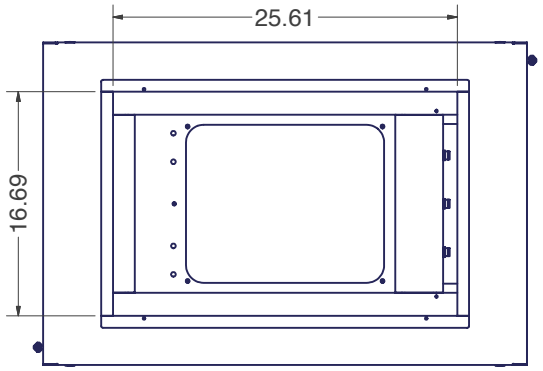
DWG NO:	REV	SHEET
8401E2436	14	SHEET: 1 OF 2



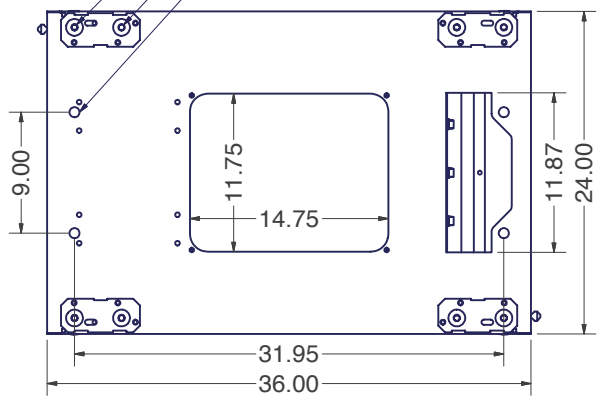
FRONT VIEW



RIGHT SIDE VIEW



TOP VIEW



BOTTOM VIEW

INTERPRET DRAWING PER ASME Y14.5M-1994 DIMENSIONAL LIMITS APPLY AFTER APPLICATION OF FINISH DRAWING NOT TO SCALE TOLERANCE UNLESS OTHERWISE NOTED: ANGULAR +/- 1~ .XXXX +/- .010 .XXX +/- .015 .XX +/- .030 .X FOR REF. ONLY UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES	THIRD ANGLE PROJECTION	**NOTICE:** Use of this document is subject to a confidentiality and nondisclosure agreement with Great Lakes Case & Cabinet Co., Inc. (GLCC) and may not be reproduced, disclosed or utilized in whole or in part without prior written authorization from GLCC.	PART NUMBER: **8401E2436** QTY PER UNIT: 1 MATERIAL TYPE: - MATERIAL GAUGE: - FINISH: - DRAWN CA DATE 6/27/2002 CHECKED & APP. WSS DATE 5-25-05

TITLE: **BASE UNIT ASSEMBLY - 84" H X 24" W X 36" D E CABINET**

GREAT LAKES CASE & CABINET CO., INC.
P.O. BOX 551 EDINBORO, PA 16412
PHONE (814) 734-7303 FAX (814) 734-3907
E-MAIL glcc@greatcabinets.com

DWG NO: 8401E2436 | REV: 14 | SHEET: 2 OF 2

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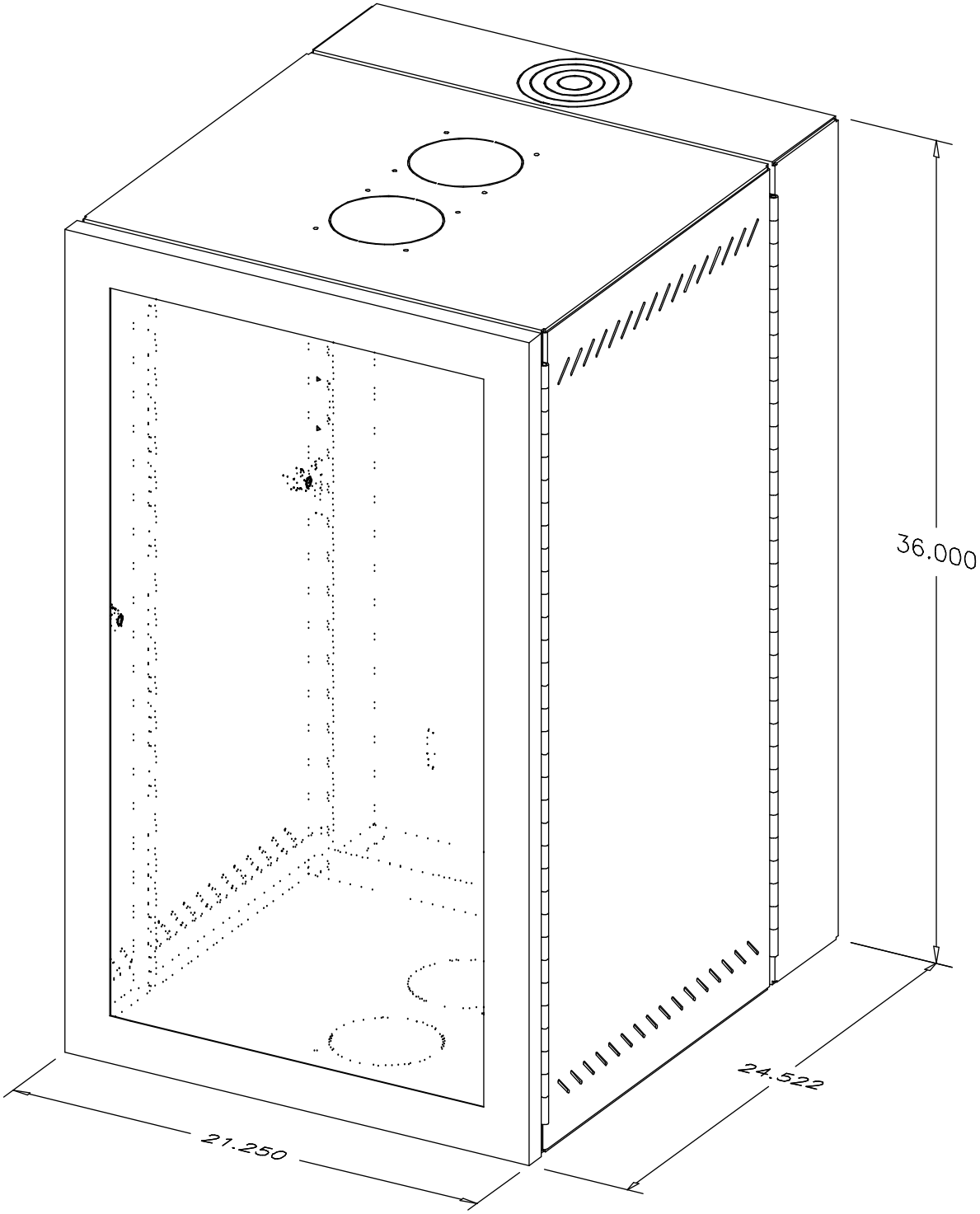
FILE LOCATION: E:\1-DWGS\1\STANDARD\WALL MOUNTS\GL36WM\SK-1.dwg

REV	DESCRIPTION

FOR REFERENCE ONLY



CUSTOMER#	QTY PER UNIT:	DRAWN BY: JAYE	REV. DATE:	
SCALE: N.T.S.	MATERIAL:	ISSUE DATE: 5-4-99	PART DESCRIPTION: GL36WM WALL MOUNT/SWING OUT ENCLOSURE	
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED DECIMAL .XXX ± .010 .XX ± .015 .X ± .020 ANGULAR ± 1/2° DIMENSIONS IN INCHES DO NOT SCALE		DESIGN CHG#		
		SHEET: 1 OF 4		

Great Lakes Case & Cabinet Co.
P.O. Box 551 / Edinboro, PA 16412
PHONE:(814)734-7303 FAX:(814)734-3907 EMAIL:glcc@greatcabinets.com

Great Lakes case & cabinet co., Inc.

REV.	DRAWING NO.
0	GL36WM

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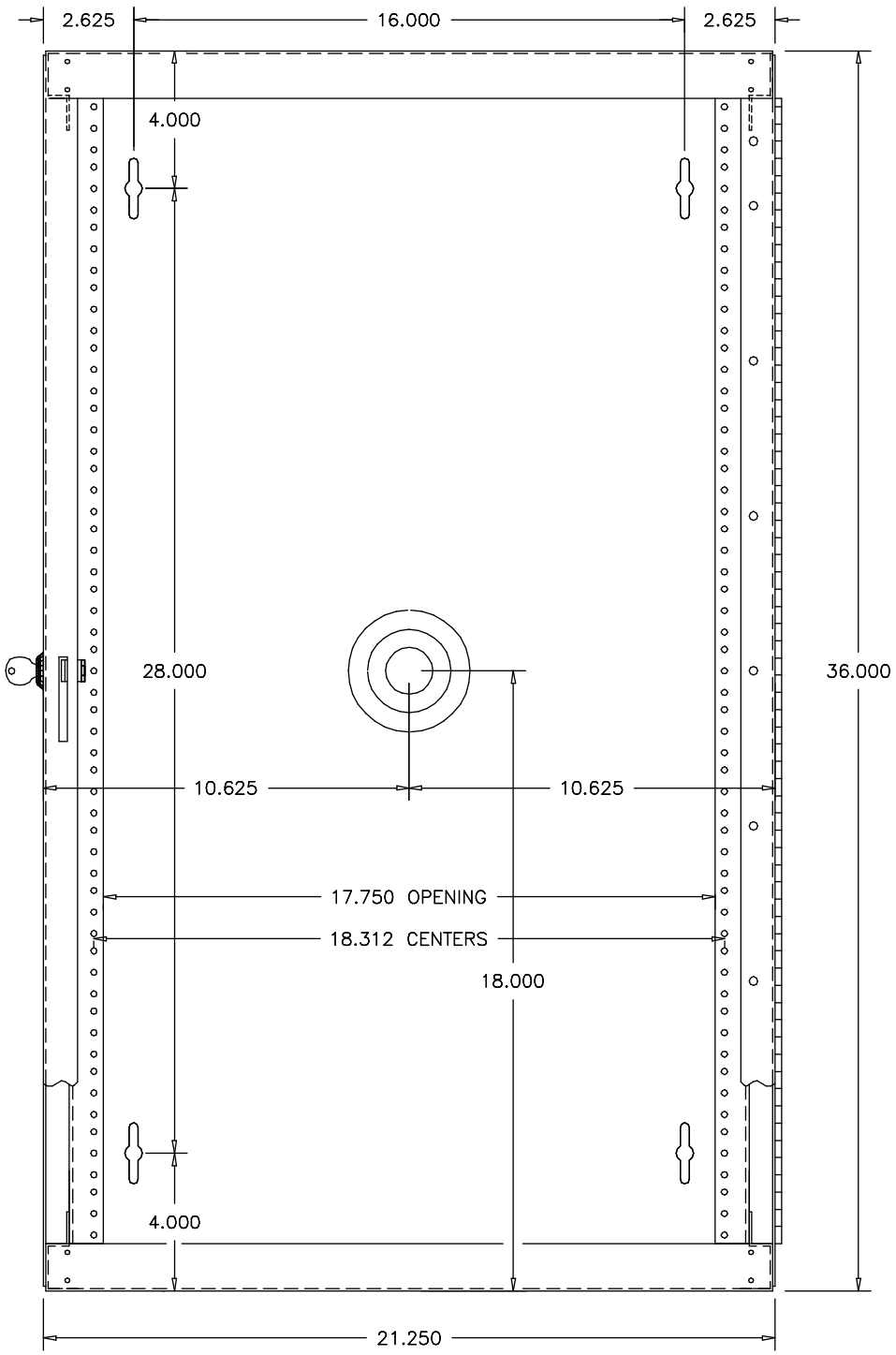
FILE LOCATION: E:\1-DWGS\1\STANDARD\WALL MOUNTS\GL36WM\SK-2.dwg

REV	DESCRIPTION

FOR REFERENCE ONLY

FRONT VIEW
(DOOR REMOVED FOR CLARITY)



CUSTOMER#	QTY PER UNIT:	DRAWN BY: JAYE	REV. DATE:	
SCALE: N.T.S.	MATERIAL:	ISSUE DATE: 5-4-99	PART DESCRIPTION: GL36WM WALL MOUNT/SWINGOUT ENCLOSURE	
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED DECIMAL .XXX ± .010 .XX ± .015 .X ± .020 ANGULAR ± 1/2° DIMENSIONS IN INCHES DO NOT SCALE		DESIGN CHG#		
		SHEET: 2 OF 4		

Great Lakes Case & Cabinet Co.
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REV.	DRAWING NO.
0	GL36WM

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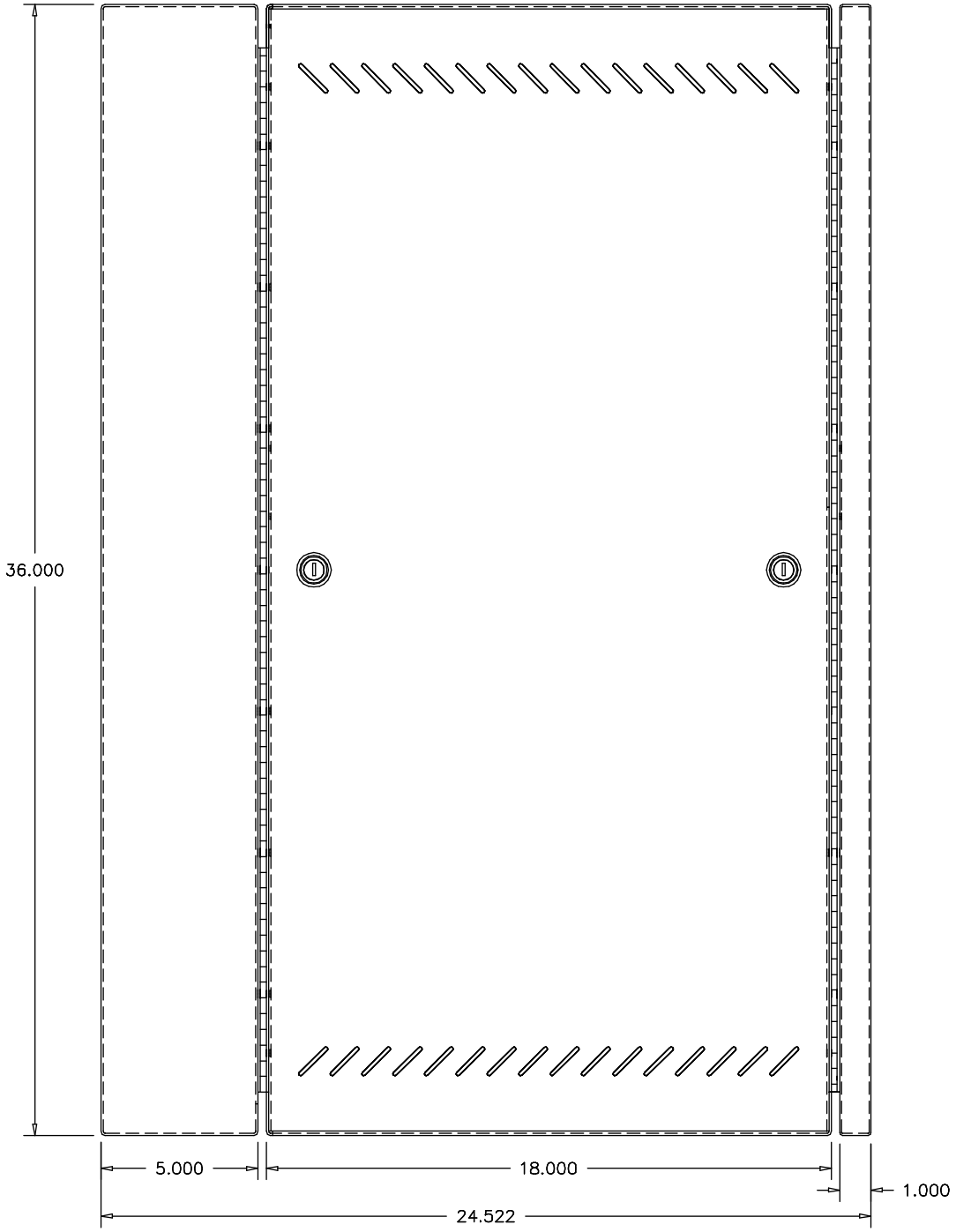
FILE LOCATION: E:\1-DWGS\1\STANDARD\WALL MOUNTS\GL36WM\SK-4.dwg

REV	DESCRIPTION

FOR REFERENCE ONLY

RIGHT SIDE VIEW



CUSTOMER#	QTY PER UNIT:	DRAWN BY: JAYE	REV. DATE:	
SCALE: N.T.S.	MATERIAL:	ISSUE DATE: 5-4-99	PART DESCRIPTION: GL36WM WALL MOUNT/SWINGOUT ENCLOSURE	
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED DECIMAL .XXX ± .010 .XX ± .015 .X ± .020 ANGULAR ± 1/2° DIMENSIONS IN INCHES DO NOT SCALE		DESIGN CHG#:		
		SHEET: 3 OF 4		

Great Lakes Case & Cabinet Co.
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REV.	DRAWING NO.
0	GL36WM

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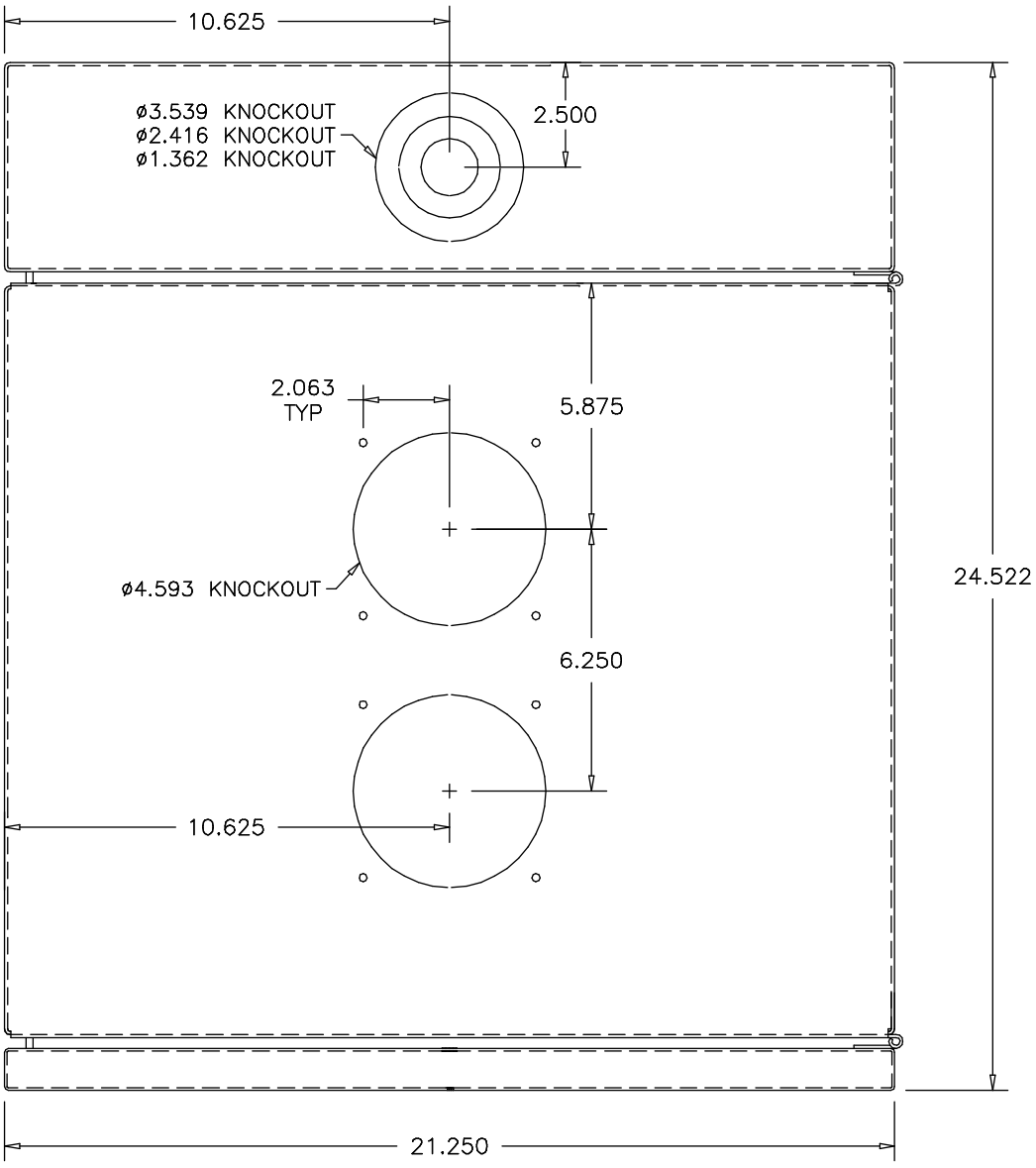
FILE LOCATION: E:\1-DWGS\1\STANDARD\WALL MOUNTS\GL36WM\SK-4.dwg

REV	DESCRIPTION

FOR REFERENCE ONLY

TOP VIEW

(TYPICAL BOTTOM VIEW)

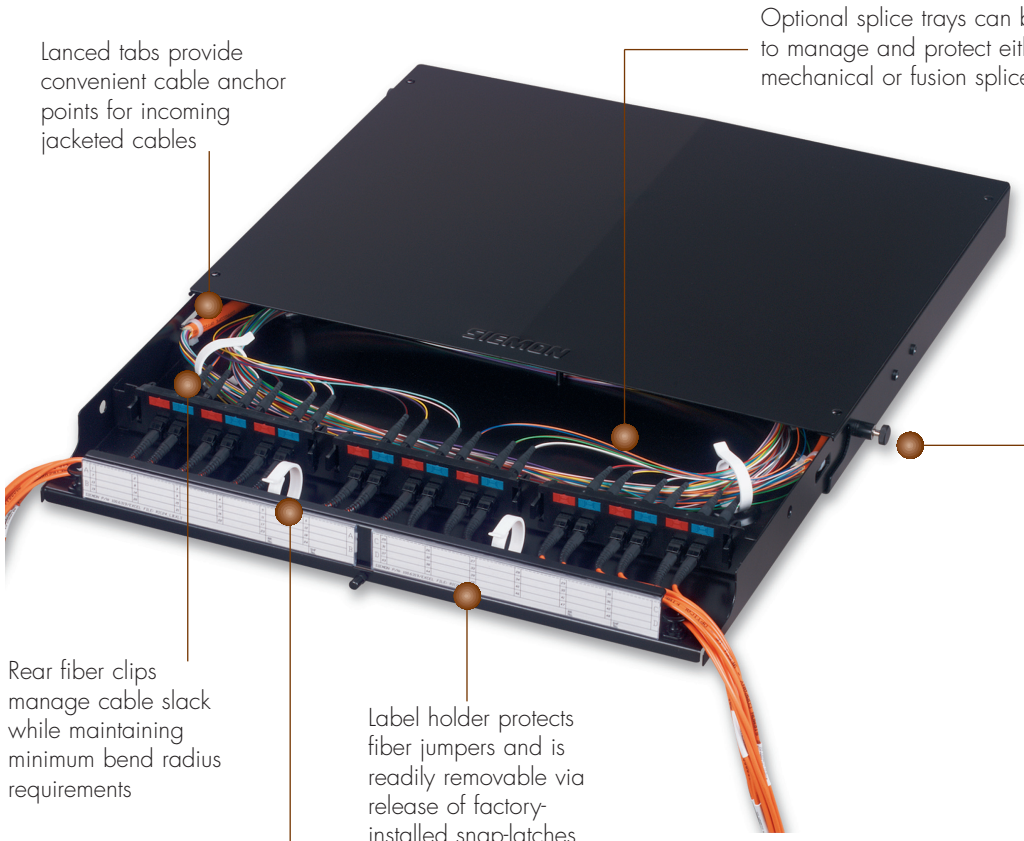


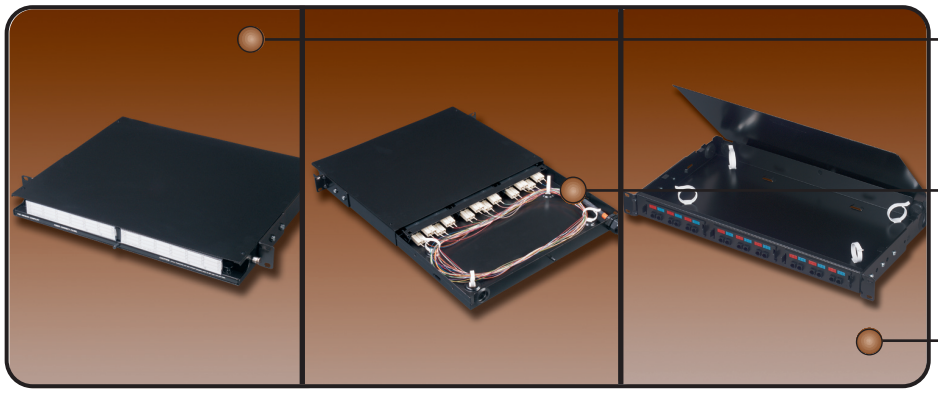
CUSTOMER#	QTY PER UNIT:	DRAWN BY: JAYE	REV. DATE:	Great Lakes case & cabinet co., Inc.	Great Lakes Case & Cabinet Co. P.O. Box 551 / Edinboro, PA 16412 PHONE-(814)734-7303 FAX-(814)734-3907 EMAIL-glcc@greatcabinets.com
SCALE: N.T.S.	MATERIAL:	ISSUE DATE: 5-4-99	PART DESCRIPTION: GL36WM WALL MOUNT/SWINGOUT ENCLOSURE		REV. 0 / DRAWING NO. GL36WM
TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED DECIMAL .XXX ± .010 .XX ± .015 .X ± .020 ANGULAR ± 1/2° DIMENSIONS IN INCHES DO NOT SCALE		DESIGN CHG# SHEET: 4 OF 4			

FIBER CONNECT PANEL (FCP3)

The Fiber Connect Panel (FCP3-DWR & FCP3-RACK) rack-mounted enclosures economically connect, protect, and manage up to 72 fibers within one Rack Mount Space (RMS). It accepts Siemon's Quick-Pack™ adapter plates with patented single-finger access. The FCP3-DWR makes access to the connections easy via a tray that slides out the front or the rear.

PATENTED



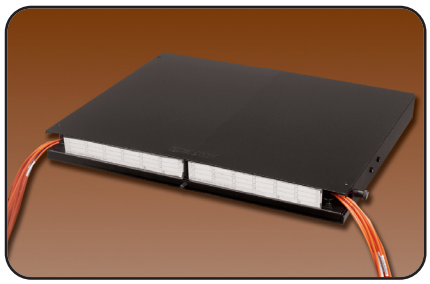


FCP3 enclosures accommodate up to 72 fibers in only 1 RMS on a 19 in. rack

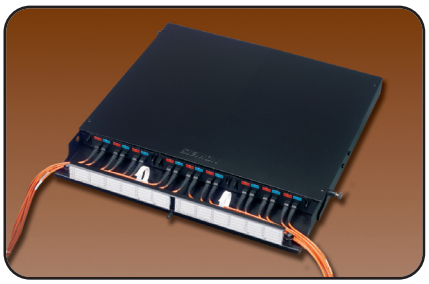
The FCP3-DWR (drawer version) features a tray that slides out from the front or rear, providing easy access to fiber connections and allowing removal of the entire tray to be placed on a worktable for more convenient termination

The FCP3-RACK has a fixed tray and can be mounted to a rack in a protruding, flush or recessed position

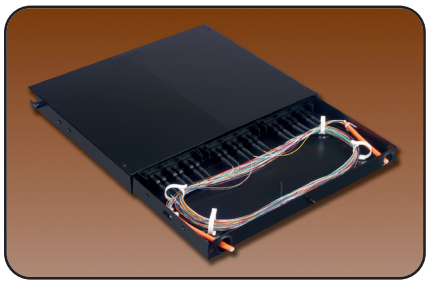
FCP3-DWR



Front (closed)



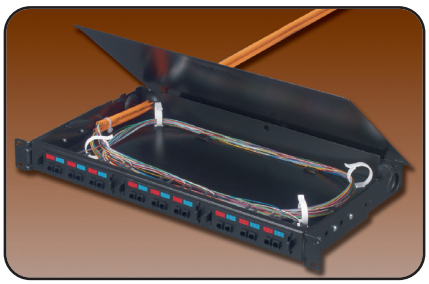
Front (open to 1st stop)



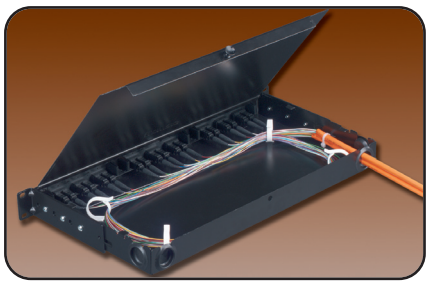
Rear (open to 2nd stop)

FCP3-RACK

Front (closed)



Front (open)



Rear (open)

FCP3-DWR.....6- to 72-port Fiber Connect Panel with sliding tray. Includes mounting brackets, housing/tray, fiber managers and grommets label holders, and labels, black

FCP3-RACK.....6- to 72-port Fiber Connect Panel with fixed tray. Includes mounting brackets, housing/cover, fiber managers and grommets, black

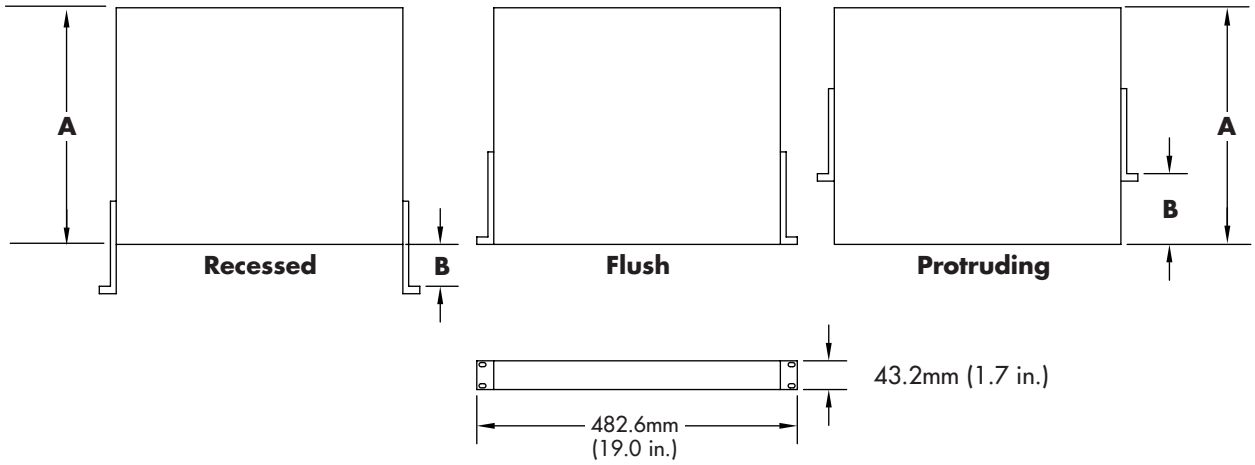
Splice trays available separately. See page 4.

FCP3-DWR

Dimension A	Position Options Relative to Front of Rack	
	Dimension B	
	Protruding	Protruding
355.6mm (14.0 in.)	71.1mm (2.8 in.)	106.7mm (4.2 in.)

FCP3-RACK

Dimension A	Position Options Relative to Front of Rack		
	Dimension B		
	Recessed	Flush	Protruding
241.3mm (9.5 in.)	38.1mm (1.5 in.)	0	38.1mm (1.5 in.)



Flat Quick-Pack™ Adapter Plates:

Siemon Quick-Pack adapter plates feature a patented integrated latch, which provides single-finger access to fiber even in fully populated enclosures. Choose from our wide variety of singlemode and multimode plate options.

RIC-F-SC6-01 . . . . . .
3 duplex SC adapters (6 fibers)

RIC-F-SC8-01 . . . . . .
4 duplex SC adapters (8 fibers)

RIC-F-SC12-01 . . . . . .
6 duplex SC adapters (12 fibers)

RIC-F-SA6-01 . . . . . .
3 duplex ST adapters (6 fibers)

RIC-F-SA8-01 . . . . . .
4 duplex ST adapters (8 fibers)

RIC-F-SA12-01 . . . . . .
6 duplex ST adapters (12 fibers)
Only recommended for push-pull design connectors due to access constraints

RIC-F-LC12-01 . . . . . .
6 duplex LC adapters (12 fibers), beige adapters
RIC-F-LCU12-01 . . . . . .
6 duplex LC adapters (12 fibers), blue adapters *(not shown)*

RIC-F-LC16-01 . . . . . .
4 quad LC adapters (16 fibers), beige adapters
RIC-F-LCU16-01 . . . . . .
4 quad LC adapters (16 fibers), blue adapters *(not shown)*

RIC-F-LC24-01 . . . . . .
6 quad LC adapters (24 fibers), beige adapters
RIC-F-LCU24-01 . . . . . .
6 quad LC adapters (24 fibers), blue adapters *(not shown)*

RIC-F-MT12-01 . . . . . .
6 duplex MT-RJ adapters (12 fibers)

RIC-F-MT16-01 . . . . . .
8 duplex MT-RJ adapters (16 fibers)

RIC-F-MT24-01 . . . . . .
12 duplex MT-RJ adapters (24 fibers)

RIC-F-AC6-01 . . . . . .
3 duplex ST-SC adapters (6 fibers, front side = SC)
RIC-F-AC8-01 . . . . . .
4 duplex ST-SC adapters (8 fibers, front side = SC) *(not shown)*

RIC-F-FC6-01 . . . . . .
6 FC adapters (6 fibers)
RIC-F-FC8-01 . . . . . .
8 FC adapters (8 fibers) *(not shown)*

RIC-F-BLNK-01 . . . . . .
Blank adapter plate

Each adapter plate with icon pockets includes red, blue, black, and clear icons with paper labels.
All SC and ST adapters are "universal" to support multimode and singlemode

Maximum Fiber Capacity		
# Fibers per Quick-Pack	Adapter Options	FCP3
6	ST, SC	18
8	ST, SC	24
12	ST, SC, MT-RJ, LC	36
16	MT-RJ, LC	48
24	MT-RJ, LC	72

Maximum Splicing Capacity	
Splice Type	FCP3
Fusion	72

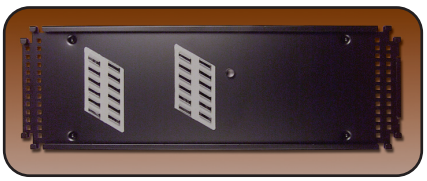
ORDERING INFORMATION

Fiber Splice Trays:

These aluminum trays can be ordered with either fusion, mechanical or fusion with sleeve splice holders and come with a clear, snap-on polycarbonate cover. The standard tray holds up to 24 splices. For tight area, a mini-tray is available which accommodates up to 12 splices. Trays can be stacked for high-density applications.

TRAY-1 .....Standard fiber splice tray for up to 24 bare fusion splices
TRAY-3 .....Standard fiber splice tray for up to 24 fusion splices with sleeve protection
TRAY-M-1 .....Mini fiber splice tray for up to 12 bare fusion splices
TRAY-M-3 .....Mini splice tray for up to 12 fusion splices with sleeve protection

Fusion with sleeve splice holders can accommodate sleeve diameters from 1.5mm (0.059 in.) to 3mm (0.117 in.).
Standard fusion splice holders are designed for 900 micron buffered fibers or 250 micron coated fibers



TRAY-3
height: 103mm (4.07 in.), width: 298mm (11.75 in.), depth: 8.13mm (032 in.)

Compression Fittings:

Compression fittings are utilized as an enhanced method for securing cables to FCP3 fiber enclosures. Acme threads on the body prevent skipping allowing for faster installations of lock-nuts.

CF-(XX) .....Compression Fitting
Use (XX) to specify size:
40 = 5.8 - 13.9mm (0.23 - 0.55 in.),
51 = 11.4 - 18mm (0.45 - 0.71 in.),
60 = 15.0 - 25.4mm (0.59 - 1.00 in.)

For related product information request Spec Sheet(s):
SC and ST Fiber Connectors (PROD-SS-SFC)
LightSystem® Fiber Jumpers & Pigtails (PROD-SS-FJ1)
XGLO™ Fiber Jumper & Pigtails (PROD-SS-LOF)
LC Connectors Products (PROD-SS-LCC)
MT-RJ connectors (PROD-SS-MTR)
LightSpeed® Fiber Termination Kit (PROD-SS-FTK)

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

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PROD-SS-FC3 Rev. D 11/07

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Surrey, England
Phone (44) 0 1932 571771

Asia/Pacific
Shanghai, P.R. China
Phone (86) 21 5385 0303

Japan
Tokyo, Japan
Phone (03) 5405 7650

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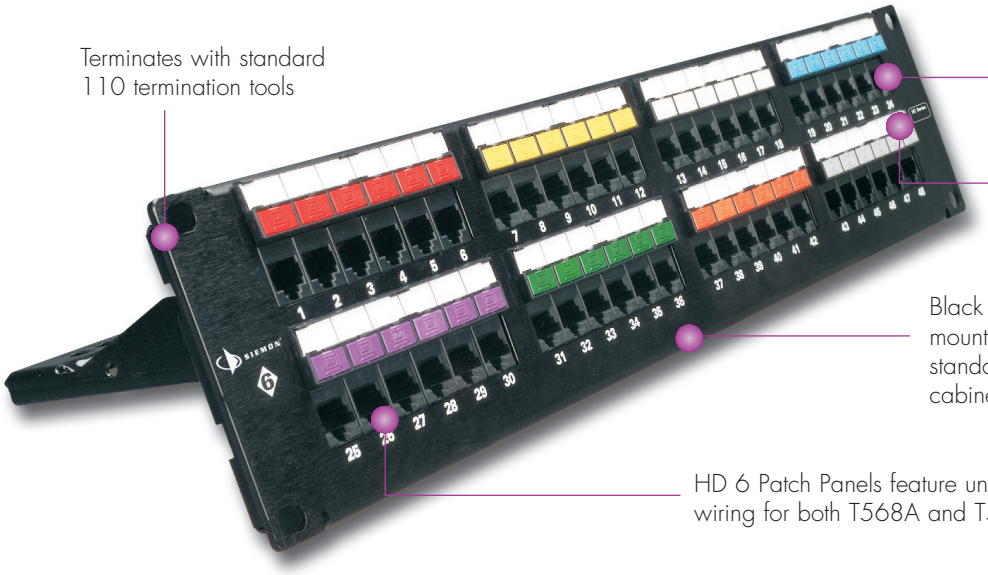
HD® 6 PATCH PANELS

A breakthrough in patch panel performance. Siemon's HD 6 was the industry's first patch panel to exceed category 6 connecting hardware specifications for all pair combinations up to 250 MHz. Get revolutionary performance and user-friendly termination, labeling, and cable management features with Siemon's popular HD 6 patch panel.

Combine the MC® 6 modular cords with the MAX® 6 modules and HD 6 patch panels for a complete category 6 channel solution.

PATENTED



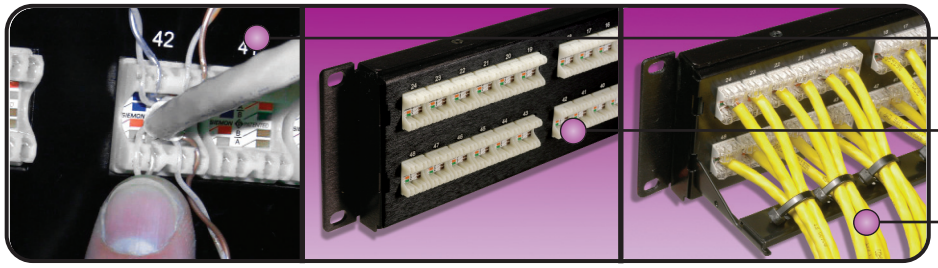
Terminates with standard 110 termination tools

Front surface is uninterrupted by screw heads for a clean appearance

Icon label holders and designation labels included

Black anodized panels can be mounted directly to an EIA standard 19 inch relay rack or cabinet

HD 6 Patch Panels feature universal wiring for both T568A and T568B



Pyramid wire entry system on S310® blocks separates paired conductors when lacing cables to simplify and reduce installation time

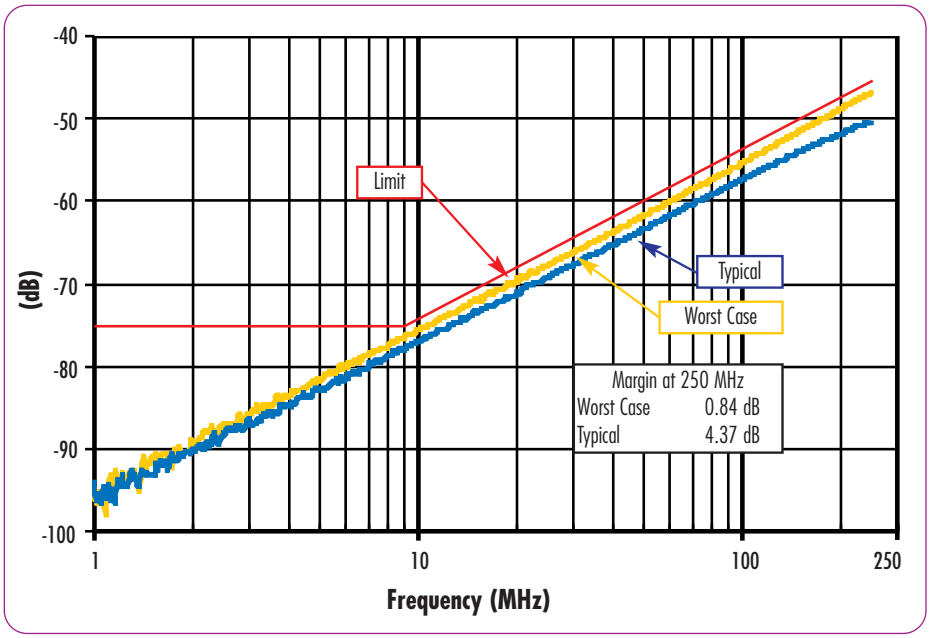
Rear metal enclosure protects printed circuitry

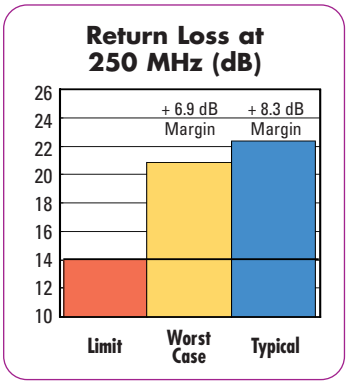
Includes rear cable manager to properly guide cables to point of termination

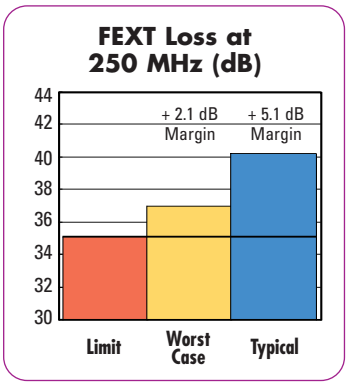
MODULAR PATCHING

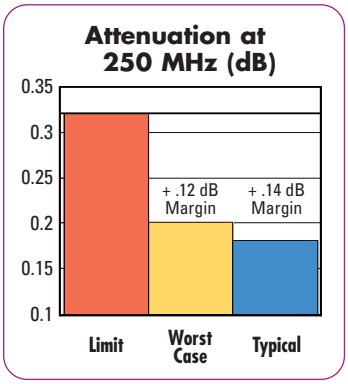
Category 6 Test Data:

Near-End Crosstalk Performance:



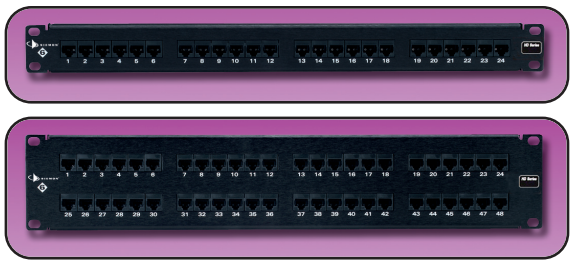






HD® 6 Patch Panels:

HD6-16.....16-port panel, T568A/B wiring, 1 RMS
HD6-24.....24-port panel, T568A/B wiring, 2 RMS
HD6-32.....32-port panel, T568A/B wiring, 2 RMS
HD6-48.....48-port panel, T568A/B wiring, 4 RMS
HD6-96.....96-port panel, T568A/B wiring, 4 RMS



Panels include rear cable manager, icon label holders, designation labels, cable ties, and mounting hardware.

Add "B" to end of part number for bulk project pack of 5 panels (rear cable managers and icon label holders not included but can be ordered separately).

Note: 1 RMS = 44.5mm (1.75 in.)
S310® termination blocks are not compatible with S110® termination tools

Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.

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For related product information request Spec Sheet(s):
MC® 6 Patch Cords (PROD-SS-MC6)
MAX® 6 Modules (PROD-SS-MX6)

The Americas
Watertown, CT USA
Phone (1) 860 945 4200

Europe/Middle East/Africa
Surrey, England
Phone (44) 0 1932 571771

Asia Pacific
Shanghai, P.R. China
Phone (86) 21 6390 6778

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YOUR NETWORK. OUR CONNECTION.

SM48TAF4DPA

44-port 10/100/1000Base-T + (4) 100/1000 SFP ports Layer 2 Managed PoE Switch

(48) 10/100/1000Base-T PoE ports

This switch is a high performance Layer 2 managed switch with 44 10/100/1000 copper ports and 4 dual speed 100/1000BASE-X SFP/RJ-45 Combo ports. It can provide Power over Ethernet capability over 48-port copper ports.

Software Features

➢**Management** : Web Management, SNMP V1/V2c/V3, Telnet, CLI

➢**Port Trunk** : Supports IEEE 802.3ad port trunk with link aggregation control protocol (LACP), it support up to 24 groups and up to 8 ports per group.

➢**IGMP** : Support IGMP Snooping V1/V2/V3, IGMP Proxy and GVRP

➢**Quality of Service**: Supports 8 hardware queues with Strict priority and WRR . Per port, per VLAN bandwidth management

➢**Spanning Tree**: Supports IEEE 802.1s MSTP,IEEE802.1w RSTP and IEEE802.1d STP Compliant

➢VLAN: Port Based VLAN, IEEE 802.1Q tag-based, 4096 VLAN entries, MAC-based VLAN, Private VLAN Edge， Priority VLAN override

➢Firmware Update, configure backup/restore through Web GUI and TFTP

➢**IP V6:** Support IPV4/IPV6 dual protocol stack

➢*** Static Routing, RIP V2

Features

Support Jumbo Frame up to 9K bytes

Authentication – RADIUS 802.1x, TACACS+

Security - Support SSH/SSL

Port based or tagged (802.1Q) VLAN, MAC based VLAN, Management VLAN and Private VLAN Edge

Bandwidth Allocation

DHCP Snooping including option 82

ACLs Support for up to 256 entries, drop or rate limitation based on source and destination MAC, VLAN ID or IP address, protocol, port, DSCP/IP precedence, TCP/IP source and destination ports, 802.1p priority, Ethernet Type / ICMP / IGMP packets, TCP flag

LLDP (Link Layer Discovery Protocol)

IEEE802.3az Energy Efficiency

Ordering Information

MODEL	DESCRIPTION
SM48TAF4DPA	Managed PoE switch, (44) 10/100/1000BASE-T + (4) 100/1000BASE-X SFP/RJ-45 Combo ports

Transition Networks, Inc.
10900 Red Circle Drive
Minnetonka, MN 55343
USA

Transition Networks Inc. offers networking connectivity solutions that make networks perform better, faster and more reliably while helping companies leverage their existing networking infrastructure.

SM48TAF4DPA

YOUR NETWORK. OUR CONNECTION.

Power over Ethernet Features

Compliant with IEEE 802.3at PoE+

Compliant with IEEE 802.3af PoE

802.1AB LLDP-MED Configuration

Specifications

Standards	IEEE 802.3™, IEEE 802.3u, IEEE 802.3z, IEEE 802.3x, IEEE 802.3ad, IEEE 802.1D, IEEE 802.1w, IEEE802.1s IEEE 802.1Q, IEEE 802.1p, IEEE 802.1ad, IEEE 802.1AB, IEEE802.3af, IEEE802.3at
Protocols	CSMA/CD
Technology	Store and Forward switching architecture
Connectors	**1 RS-232 Serial Port** 48 10/100/1000 RJ-45 4 100/1000 SFP ports
MAC Address	32K MAC address table
Back Plane	96 Gbps
Dimensions	44(H)*442(W)*385(D) mm
Input Power	Internal power: 100-240VAC
Environment	0 to +40° C operating temp. 5%– 90% humidity non-condensing .
Power over Ethernet	Maximum output power 380 Watts 30 w for 12 ports simultaneously 15.4w for 24 ports simultaneously 7.5w for 48-ports simultaneously
Safety	UL listed,
EMI	FCC Class A; CE
Technical Support & Warranty	Free technical support and lifetime warranty Includes free telephone support, 24-hour support via web and FTP.

*** Will be supported in future firmware version

Transition Networks, Inc.
10900 Red Circle Drive
Minnetonka, MN 55343
USA

Transition Networks Inc. offers networking connectivity solutions that make networks perform better, faster and more reliably while helping companies leverage their existing networking infrastructure.

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Cisco Aironet 1200 Series Access Points

Product Overview

Cisco® Aironet® 1200 Series access points deliver the investment protection, versatility, and enterprise-class features demanded by wireless LAN customers. It is designed specifically for challenging environments like factories, warehouses, and large retail establishments that require the antenna versatility associated with connectorized antennas, as well as a rugged metal enclosure and a broad operating temperature range.

The Cisco Aironet 1200 Series meets the needs of today's applications and protects future network infrastructure investments. The modular design of the 1200 Series provides a high-performance 802.11g configured access point that allows for either single- or dual-radio configuration. While the 802.11g-configured access point meets the needs of most customers and applications that may not have a current need for 802.11a, an easy 802.11a upgrade kit is available, to increase scalability and performance with complete backward compatibility for legacy clients.

The Cisco Aironet 1200 Series is a component of the Cisco Unified Wireless Network, a comprehensive solution that delivers an integrated, end-to-end wired and wireless network. Using the radio and network management features of the Cisco Unified Wireless Network for simplified deployment, the Cisco Aironet 1200 Series extends the security, scalability, reliability, ease of deployment, and manageability available in wired networks to the wireless LAN.

The Cisco Aironet 1200 Series is available in two versions: unified or autonomous. Unified access points operate with the Lightweight Access Point Protocol (LWAPP) and work in conjunction with Cisco wireless LAN controllers and the Cisco Wireless Control System (WCS). When configured with LWAPP, the Cisco Aironet 1200 Series can automatically detect the best-available Cisco wireless LAN controller and download appropriate policies and configuration information with no manual intervention. Autonomous access points are based on Cisco IOS® Software and may optionally operate with the CiscoWorks Wireless LAN Solution Engine (WLSE). Autonomous access points, along with the CiscoWorks WLSE, deliver a core set of features and may be field-

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upgraded to take advantage of the full benefits of the Cisco Unified Wireless Network as requirements evolve.

The Cisco Aironet 1200AG Series has achieved National Institute of Standards and Technology (NIST) FIPS 140-2 level 2 validation and is in process for Common Criteria validation under the National Information Assurance Partnership (NIAP) program. The Cisco Aironet 1200 Series supports 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA, and numerous Extensible Authentication Protocol (EAP) types. WPA and WPA2 are the Wi-Fi Alliance certifications for interoperable, standards-based wireless LAN security. These certifications support IEEE 802.1X for user-based authentication, Temporal Key Integrity Protocol (TKIP) for WPA encryption, and Advanced Encryption Standard (AES) for WPA2 encryption. These certifications help to ensure interoperability between Wi-Fi-certified wireless LAN devices from different manufacturers.

The Cisco Aironet 1200 Series hardware-accelerated AES encryption supports enterprise-class, government-grade secure encryption over the wireless LAN without compromising performance. IEEE 802.1X authentication helps to ensure that only authorized users are allowed on the network. The series also provides backward compatibility and support for WPA client devices running TKIP, the RC4 encryption algorithm.

Cisco Aironet 1200 Series Access Points operating with LWAPP support Cisco Unified Intrusion Detection System/Intrusion Prevention System (IDS/IPS), a software feature that is part of the Cisco Self-Defending Network and is the industry's first integrated wired and wireless security solution. Cisco Unified IDS/IPS takes a comprehensive approach to security—at the wireless edge, wired edge, WAN edge, and through the data center. When an associated client sends malicious traffic through the Cisco Unified Wireless Network, a Cisco wired IDS device detects the attack and sends shun requests to Cisco wireless LAN controllers, which will then disassociate the client device.

Autonomous or unified Cisco Aironet 1200 Series Access Points support management frame protection for the authentication of 802.11 management frames by the wireless network infrastructure. This allows the network to detect spoofed frames from access points or malicious users impersonating infrastructure access points. If an access point detects a malicious attack, an incident will be generated by the access point and reports will be gathered on the Cisco wireless LAN controller, Cisco WCS, or CiscoWorks WLSE.

Benefits and Features

Investment Protection for Future Network Needs

With large storage capacity and support for Cisco management tools, the Cisco Aironet 1200 Series provides the capacity and the means to upgrade firmware and deliver new features as they become available. For additional investment protection, the Cisco Aironet 1200 Series comes complete with an integrated mounting system that secures the device using the customer's choice of laptop security cables or standard padlocks. The reliability of the 802.11g solution makes the Cisco Aironet 1200 Series a wise investment for enterprise customers. It provides field-proven reliability, featuring a Cisco Aironet fifth-generation 2.4 GHz radio. An available 802.11a radio module upgrade maximizes capacity and performance, delivering up to 54 Mbps data rates on all 12 available channels and allowing the wireless network to scale to accommodate a large number of users. With the Cisco Aironet 1200 Series, a single access point can operate one radio for 802.11b/g clients, while supporting new users by adding a second 802.11a radio to scale network performance and capacity.

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Installation Options Increase Flexibility

The Cisco Aironet 1200 Series access point and integrated mounting system are designed for installation on walls, below ceilings, and, with its plenum ratable metal case, above suspended ceilings. With its broad operating temperature range and cast-aluminum housing, this device provides the ruggedness required in factories, warehouses, and the most challenging environments. Support for inline power over Ethernet (PoE) and local power maximizes powering option flexibility.

Figure 1. Cisco Aironet 1200 Series Access Points 802.11a Radio Modules

All available radios (802.11a, 802.11b, and 802.11g) provide a variety of transmit power settings to adjust coverage area size. To extend the flexibility of deployments, the 802.11a radio module is available in two versions (Figure 1). Both versions provide up to 12 nonoverlapping channels in the 5 GHz band (subject to local regulations); an additional 11 will become available in 2005 with a field firmware upgrade. One version offers dual antenna connectors for use with a wide variety of Cisco antennas to achieve extended range and application-specific coverage. The second has an integrated antenna design that incorporates diversity omnidirectional (5 dBi) and patch antennas (9 dBi). For ceiling, desktop, or other horizontal installations, the integrated omnidirectional antenna provides an optimal coverage pattern and maximum range. For wall-mount installations, the patch antenna provides a hemispherical coverage pattern that uniformly directs the radio energy from the wall and across the room. Both the omnidirectional and patch antennas provide diversity for maximum reliability, even in high-multipath environments such as offices and other indoor environments. Coupled with the broadest selection of 2.4 GHz and 5 GHz antennas in the industry, this provides users with unparalleled flexibility in cell size and coverage patterns.

Table 1. Features and Benefits of Cisco Aironet 1200 Series Access Points

Feature	Benefit
Modular Platform	Allows single or dual radio configuration. Provides numerous configuration and upgrade options.
Field-Upgradeable to Dual 802.11a/g Operation	Offers great flexibility and investment protection, allowing network administrators to deploy a wireless network optimized to their particular applications, even as their needs evolve.

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Feature	Benefit
Link-role Flexibility	Autonomous access points can function as an access point or bridge, whether set up as a single-band or dual-band platform, allowing each radio to be individually configured as an access point repeater, root bridge, non-root bridge, or workgroup bridge, enabling a broad array of applications.
Cisco Unified IDS/IPS	This integrated software feature is part of the Cisco Self-Defending Network and is the industry's first integrated wired and wireless security solution. When a trusted client acts maliciously, the wired IDS detects the attack and sends shun requests to Cisco WLAN controllers, which will then disassociate the client device.
Management Frame Protection	This feature provides for the authentication of 802.11 management frames by the wireless network infrastructure. This allows the network to detect spoofed frames from access points or malicious users impersonating infrastructure access points. If an access point detects a malicious attack, an incident will be generated by the access points and reports will be gathered on the Cisco wireless LAN controller, Cisco WCS, or CiscoWorks WLSE.
Rugged Metal Housing	Supports deployment in factories, warehouses, the outdoors (in a NEMA enclosure), and other industrial environments.
UL 2043 Plenum Rating and Extended Operating Temperature	Supports installation in environmental air spaces, such as areas above suspended ceilings.
Multipurpose and Lockable Mounting Bracket	Provides greater flexibility in installation options for site-specific options, as well as theft deterrence.
Both Local and Inline Power Support	Power can be supplied using the Ethernet cable, eliminating the need for costly electrical power line runs to remotely installed access points. Can be powered by Cisco inline power switches, single port power injectors, or local power.
Hardware-Assisted AES Encryption	Provides high security without performance degradation.
IEEE 802.11i-Compliant; WPA2-Certified and WPA-Certified	Helps to ensure interoperable security with wireless LAN client devices from other manufacturers.

Summary/Conclusion

Cisco Aironet 1200 Series modular access points feature antenna connectors for greater range or coverage versatility using a broad selection of available Cisco antennas, as well as a rugged, metal housing for operation over extended temperature ranges typical of demanding environments. The 802.11g radio delivers industry-leading range and throughput, meeting the performance requirements of industrial and enterprise applications, while hardware-assisted AES encryption provides uncompromised support for interoperable IEEE 802.11i and WPA2 security. While the 802.11g-configured Cisco Aironet 1200 Series meets the needs of many industrial applications, its modular design allows dual radio configuration and field upgradeability so administrators can deploy a wireless network optimized for their evolving requirements.

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Product Specifications

Table 2 lists product specifications for Cisco Aironet 1200 Series access points.

Table 2. Product Specifications for Cisco Aironet 1200 Series

Item	Specification	
Part Number	• AIR-AP1231G-x-K9 Cisco IOS Software • AIR-LAP1231G-x-K9 Cisco Unified Wireless Network Software **NOTE:** The Cisco Aironet 1200 Series may be ordered with Cisco IOS Software to operate as an autonomous AP or with Cisco Unified Wireless Network Software using LWAPP. When the 1200 Series is operating as a lightweight AP a WLAN controller is required. • Regulatory Domains: (x=Regulatory Domain) • A=FCC • E=ETSI • I=Israel • J=TELEC (Japan) Customers are responsible for verifying approval for use in their individual countries. To verify approval and to identify the regulatory domain that corresponds to a particular country please visit http://www.cisco.com/go/aironet/compliance. • Not all regulatory domains have been approved. As they are approved, the part numbers will be available on the Global Price List.	
Software	• Cisco IOS Software Release 12.3(8)JA or later (autonomous). • Cisco IOS Software Release 12.3(11)JX or later (Lightweight Mode). • Cisco Unified Wireless Network Software Release 4.0 or later.	
Security	**Authentication** **Security Standards** • WPA • WPA2 (802.11i) • Cisco TKIP • Cisco message integrity check (MIC) • IEEE 802.11 WEP keys of 40 bits and 128 bits **802.1X EAP types:** • EAP-Flexible Authentication via Secure Tunneling (EAP-FAST) • Protected EAP-Generic Token Card (PEAP-GTC) • PEAP-Microsoft Challenge Authentication Protocol Version 2 (PEAP-MSCHAP) • EAP-Transport Layer Security (EAP-TLS) • EAP-Tunneled TLS (EAP-TTLS) • EAP-Subscriber Identity Module (EAP-SIM) • Cisco LEAP **Encryption** • AES-CCMP encryption (WPA2) • TKIP (WPA) • Cisco TKIP • WPA TKIP • IEEE 802.11 WEP keys of 40 bits and 128 bits	
Data Rates Supported	802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps	
Network Standard	IEEE 802.11b and IEEE 802.11g	
Uplink	Autosensing 802.3 10/100BASE-T Ethernet	
Radio Module Form Factor	802.11a: CardBus (32-bit)	802.11b or 802.11g: Mini-PCI (32-bit)
Frequency Band and Operating Channels	**Americas (FCC)** 2.412 to 2.462 GHz; 11 channels **ETSI** 2.412 to 2.472 GHz; 13 channels **Israel** 2.432 to 2.472 GHz; 9 channels	**Japan (TELEC)** • 2.412 to 2.472 GHz; 13 channels Orthogonal Frequency Division Multiplexing (OFDM) • 2.412 to 2.484 GHz; 14 channels Complementary Code Keying (CCK)
Nonoverlapping Channels	802.11g: 3	

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Item	Specification		
Wireless Modulation	802.11g: Direct sequence spread spectrum (DSSS); OFDM		
Receive Sensitivity (Typical)	**802.11a:** • 6 Mbps: –87 dBm • 9 Mbps: –87 dBm • 12 Mbps: –85 dBm • 18 Mbps: –84 dBm • 24 Mbps: –81 dBm • 36 Mbps: –78 dBm • 48 Mbps: –73 dBm • 54 Mbps: –72 dBm	**802.11b:** • 1 Mbps: –94 dBm • 2 Mbps: –91 dBm • 5.5 Mbps: –89 dBm • 11 Mbps: –85 dBm **802.11g:** • 6 Mbps: –90 dBm • 9 Mbps: –84 dBm • 12 Mbps: –82 dBm • 18 Mbps: –80 dBm • 24 Mbps: –77 dBm • 36 Mbps: –73 dBm • 48 Mbps: –72 dBm • 54 Mbps: –72 dBm	
Available Transmit Power Settings **(Maximum power setting will vary by channel and according to individual country regulations)**	**802.11a:** OFDM: • 17 dBm (50 mW) • 15 dBm (30 mW) • 14 dBm (25 mW) • 11 dBm (12 mW) • 8 dBm (6 mW) • 5 dBm (3 mW) • 2 dBm (2 mW) • –1 dBm (1 mW)	**802.11b** CCK: • 100 mW (20 dBm) • 50 mW (17 dBm) • 30 mW (15 dBm) • 20 mW (13 dBm) • 10 mW (10 dBm) • 5 mW (7 dBm) • 1 mW (0 dBm)	**802.11g:** OFDM: • 30 mW (15 dBm) • 20 mW (13 dBm) • 10 mW (10 dBm) • 5 mW (7 dBm) • 1 mW (–1 dBm)
Range	**802.11g: Outdoor** • 110 ft (34m) @ 54 Mbps • 200 ft (61 m)@ 48 Mbps • 225 ft (69 m) @ 36 Mbps • 325 ft (99 m) @ 24 Mbps • 400 ft (122 m) @ 18 Mbps • 475 ft (145 m) @ 12 Mbps • 490 ft (149 m) @ 11 Mbps • 550 ft (168 m) @ 9 Mbps • 650 ft (198 m) @ 6 Mbps • 660 ft (201 m) @ 5.5 Mbps • 690 ft (210 m) @ 2 Mbps • 700 ft (213 m) @ 1 Mbps	**802.11g: Indoor** • 90 ft (27 m) @ 54 Mbps • 95 ft (29 m) @ 48 Mbps • 100 ft (30 m) @ 36 Mbps • 140 ft (43 m) @ 24 Mbps • 180 ft (55 m) @ 18 Mbps • 210 ft (64 m) @ 12 Mbps • 220 ft (67 m) @ 11 Mbps • 250 ft (76 m) @ 9 Mbps • 300 ft (91 m) @ 6 Mbps • 310 ft (94 m) @ 5.5 Mbps • 350 ft (107 m) @ 2 Mbps • 410 ft (125 m) @ 1 Mbps	

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Item	Specification
Ranges and actual throughput vary based upon numerous environmental factors so individual performance may differ.	
Compliance	**Standards** **Safety** • UL 60950 • CAN/CSA C22.2 No. 60950 • IEC 60950 • UL 2043 **Radio Approvals** • FCC Part 15.247 • RSS-210 (Canada) • EN 300.328 • ARIB-STD 33 (Japan) • ARIB-STD 66 (Japan) • AS/NZS 4268:2003 (Australia and New Zealand) **EMI and Susceptibility (Class B)** • FCC Part 15.107 and 15.109 • ICES-003 (Canada) • VCCI (Japan) • EN 301.489-1 and -17 (Europe) • EN 60601-1-2 EMC requirements for the Medical Directive 93/42/EEC **Security** • NIST FIPS 140-2 level 2 validation • 802.11i, WPA2, WPA • 802.1X • AES, TKIP **Other** • IEEE 802.11g • FCC Bulletin OET-65C • RSS-102
Antenna	• 2.4 GHz • Dual RP-TNC connectors
LEDs	Three indicators on the top panel report Ethernet activity and status, device operating status, and radio activity and status.
Housing	Die-cast aluminum
Dimensions (H x W x D)	1.660 x 6.562 x 7.232 in. (4.22 x 16.67 x 18.37 cm); add 0.517 in. (1.31 cm) height for mounting bracket
Weight	1.725 lb (0.783 kg); add 0.4 lb (0.181 kg) for mounting bracket
Environmental	• Non-operating (storage) temperature: -40 to 185°F (- 40 to 85°C) • Operating temperature: –4 to 122°F (–20 to 50°C) • Operating humidity: 10 to 90 percent (non-condensing)
Memory and Processor	• IBM PowerPC405 (200 MHz) • 16 MB RAM; 8 MB Flash memory
Input Power Requirements	• 90 to 240 VAC ±10 percent (power supply) • 48 VDC ±10 percent
Power Draw	13W maximum
Warranty	One year
Wi-Fi Certification	

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For More Information

For more information about the Cisco Aironet 1200 Series, visit http://www.cisco.com/go/wireless or contact your local account representative.

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AC Power
For *Business-Critical Continuity*™

Liebert® *PSI-XR*

High Performance Rack-Mount UPS For Network Power Protection

Liebert PSI-XR is a compact, line-interactive UPS system designed especially for IT applications such as network closets and small data centers. It provides reliable power protection for servers, critical nodes, network workstations, large network peripherals, network routers, bridges, hubs and other electronic equipment. Matching battery cabinets are available to extend the on-battery operating time.

Liebert PSI-XR allows you to get more from your UPS and your protected equipment, with features normally found only on more expensive systems:

- Greater than five minutes of internal battery backup time at full load provides ample time for an orderly shutdown of connected equipment.
- Optional matching external battery cabinets offer more backup time — add up to 6 additional cabinets to extend battery runtime to meet equipment needs.
- Liebert PSI-XR operates at a higher output power factor — meaning less power consumption. This results in your network running at lower power levels and lower heat levels, and ultimately provides a longer network service life.
- Remote communications and shutdown options provide remote monitoring and power management — serial and contact closure, USB, SNMP

Ideally suited for:

- PCs
- Network workstations
- Servers
- Network closets
- Large network peripherals
- VoIP

EMERSON™
Network Power

Reliable UPS Protection And Extended Battery Time To Keep Your Network Up And Running

The flexible design of Liebert PSI-XR allows the unit to be configured as a self-standing tower or to be rack-mounted within a 2U space. It is available in four capacities, and both 120V or 230V models.

The UPS features an innovative line-interactive design incorporating buck/boost automatic voltage regulation technology. This protects against utility voltage fluctuation by raising and lowering utility power to the level needed by the connected equipment. It also allows the UPS to prolong battery life by maximizing its time on utility power before going to battery.

Liebert PSI-XR Standard Features:

Flexibility:

Six to seven battery-backed outlets
Allows the Liebert PSI-XR to be more flexible in accommodating additional equipment to be connected to the UPS via the 15, 20 or 30 Amp receptacles.

Configurable input voltage window
Allows the UPS to be properly matched to the incoming utility power and adjusts its input window and transfer points to supply precisely regulated power to connected loads within the selected range. Also enables the UPS to meet the required input voltage when transferring to battery.

Rotatable Display Panel
90 degrees rotatable LED display panel rotates 90° to make the readout of the LED display easy to see in rack or tower position.

Automatic Frequency Sensing
The UPS automatically adjusts to the input frequency, 50Hz or 60Hz.

Rack Rail Kit
These telescoping rails mount to the sides of the UPS to facilitate installation into a rackmount enclosure.

Battery Runtime Chart

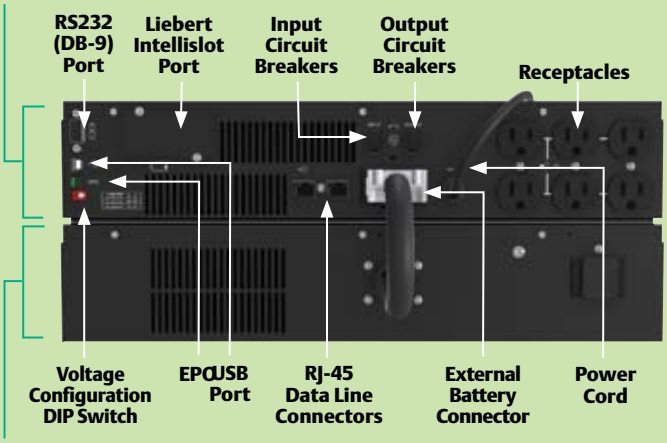
(Runtimes are in minutes, assuming fully charged batteries at 25°C)

Number of batteries	Load %	1000VA	1500VA	2200VA	3000VA
Internal battery	50	15	13	14	13
	100	6	5	5	5
Internal Battery +1 External Battery Cabinet	50	73	55	45	31
	100	31	18	15	12
Internal Battery + 2 External Battery Cabinets	50	129	95	67	56
	100	65	46	29	18
Internal Battery + 3 External Battery Cabinets	50	181	131	95	73
	100	96	64	48	31
Internal Battery + 4 External Battery Cabinets	50	233	167	143	95
	100	124	82	72	47
Internal Battery + 5 External Battery Cabinets	50	285	203	167	113
	100	151	106	84	56
Internal Battery + 6 External Battery Cabinets	50	336	239	191	131
	100	179	124	102	65

Optional external battery cabinets

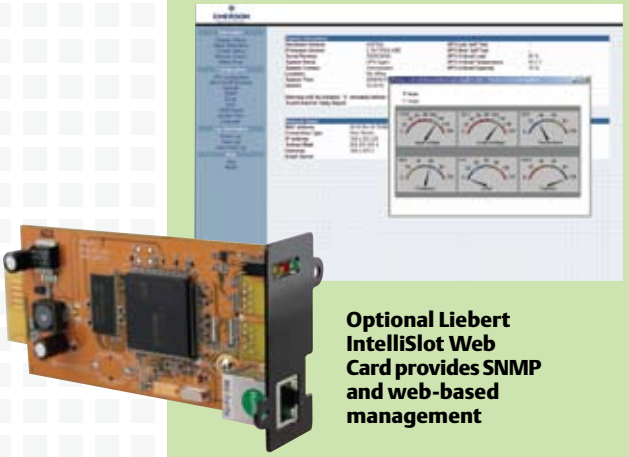
Provide extended runtime for applications that require longer backup time.

UPS with internal battery



Optional External Battery Cabinet

Add up to 6 cabinets for additional runtime



Optional Liebert IntelliSlot Web Card provides SNMP and web-based management

Higher Availability:

Data line surge protection
Network surge protection for equipment connected to the UPS via the RJ-45.

Advance early warning of UPS system status
The Liebert PSI-XR offers multiple audible and visual alarms to immediately alert you to an input voltage fluctuation (buck/boost), output overload, low battery or replace battery condition.

Greater than five minutes of battery backup time at full load when utility fails
Provides ample time for an orderly shutdown of connected equipment. Optional matching external battery cabinets offer more backup time.

Full sequenced battery testing
The Liebert PSI-XR provides a manual self-diagnostic test feature. This provides a comprehensive analysis of the condition of the batteries within the UPS and will notify you when the internal batteries need to be replaced. The battery test feature can also be programmed for automatic operation using Liebert shutdown software.

Lightning and surge protection
The transient voltage surge suppression (TVSS) circuitry inside the Liebert PSI-XR provides protection for the connected equipment from incoming spikes, surges, and other power anomalies present on the incoming utility power source.

Remote emergency power off
Allows the UPS to be remotely shut down during an emergency.

User replaceable hot swappable batteries
Increase product life and provide prolonged UPS reliability. Batteries are conveniently located behind the front bezel of the unit.

Lowest Total Cost Of Ownership:

0.9 Output Power Factor
Liebert PSI operates at a higher output power factor -- meaning less power consumption. This results in your network running at lower power levels and lower heat levels, and ultimately provides a longer network service life.

Wider input voltage window
Prolongs battery life by allowing the UPS to maximize the use of utility power before transferring to battery when input voltage exceeds specified limits.

Reduced installation time and costs
UPS is shipped with batteries connected and charged.

Warranty Protection
Standard two-year warranty ensures UPS replacement if problems occur during the warranty period. Optional one-year and three-year extensions also available.

Multiple Choices For Communication, Shutdown And Reporting:

Serial and Contact Closure Communication Option
Automated shutdown software allows you to monitor communication between the UPS and a server. It also ensures a graceful unattended shutdown in the event of an extended power failure.

USB Communications
Windows (98 and later) built-in power management functions provide monitoring of UPS status and manage the automatic orderly shutdown of the computer if a power outage ever exceeds the battery capacity of the UPS. Liebert USB shutdown and monitoring software is provided.

SNMP Communication Option
Liebert IntelliSlot® Web Card provides SNMP and web-based management to your Liebert PSI-XR. Provides SNMP MIB to monitor and control your UPS from your network management station or any PC running Microsoft Internet Explorer.

- Network shutdown
- Sends both SNMP traps and emails for event notification, and automatically emails a daily UPS history.
- Auto-senses 10M/100M Ethernet
- Compatible with shutdown software to ensure graceful computer shutdown

Liebert PSI-XRW Network Solution Package With Built-In Communications

Liebert PSI-XRW is the standard Liebert PSI-XR made network–ready with a factory-installed Liebert IntelliSlot Web Card for SNMP communications. This totally integrated, cost-efficient solution allows remote monitoring, start-up or restart for connected equipment.

Optional Liebert MicroPOD Output Distribution And Maintenance Bypass Module

When your computer system can't be without power, even for scheduled UPS maintenance, the Liebert MicroPOD Maintenance Bypass and Output Distribution Unit ensures continuous uptime. It allows you to manually transfer connected equipment to utility power via a maintenance bypass switch, permitting scheduled service or UPS replacement without the need to shut down connected equipment. Features include:

- 2U height minimizes rack space requirements
- Installs with plug-and-play ease
- Two-year, no-hassle replacement warranty

Liebert PSI XR Specifications				
Model Number	PS1000RT3-120XR	PS1500RT3-120XR	PS2200RT3-120XR	PS3000RT3-120XR
Network Solutions Package Number	PS1000RT3-120XRW	PS1500RT3-120XRW	PS2200RT3-120XRW	PS3000RT3-120XRW
Power Rating, VA/W	1000VA/900W	1500VA/1350W	1920VA/1920W	3000VA/2700W
Dimensions, W x D x H, in (mm)				
Unit	17.3 x 19.3 x 3.5 (440 x 490.5 x 88)	17.3 x 19.3 x 3.5 (440 x 490.5 x 88)	17.3 x 27.6 x 3.5 (440 x 700.5 x 88)	17.3 x 27.6 x 3.5 (440 x 700.5 x 88)
Shipping	22 x 24.1 x 9 (560 x 612 x 228)	22 x 24.1 x 9 (560 x 612 x 228)	22 x 34.8 x 9.0 (560 x 884 x 228)	22 x 34.8 x 9.0 (560 x 884 x 228)
Weight, lb (kg)				
Unit	56 (25)	62 (28)	92 (42)	105 (48)
Shipping	64 (29)	70 (32)	101 (46)	115 (52)
Input AC Parameters				
Surge Protection	570J			
Voltage Range Without Battery Operation	83 to 159 VAC (configurable)			
Frequency Range	45~65Hz, (0.5Hz)			
Input Power Cord, 10ft (3m) attached	NEMA 5-15P plug	NEMA 5-15P plug	NEMA 5-20P plug	NEMA L5-30P plug
Output Receptacles	(6) NEMA 5-15R	(6) NEMA 5-15R	(4) NEMA 5-15R (2) NEMA 5-20R T-Slot, accepts 15A Plug	(4) NEMA 5-15R (2) NEMA 5-20R T-Slot, accepts 15A Plug (1) NEMA L5-30R
Voltage (Normal Mode)	110/120/127 VAC (configurable)			
Voltage (Battery Mode)	110/120/127 VAC; 5% before low-battery warning			
Transfer Time	4-6 ms typical			
Battery Waveform	Sinewave			
Battery Parameters				
Type	Valve-regulated, non-spillable, lead acid			
Recharge Time	5 hours to 90% of rated capacity, after full discharge into resistive load			
Battery Backup Time				
Full Load	5 minutes			
Half Load	> 10 minutes. 13-14 minutes typical.			
Environmental				
Operating Temperature, ˚F (˚C)	32 to 104 (0 to 40)			
Storage Temperature, ˚F (˚C)	5 to 104 (-15 to 40)			
Relative Humidity	0% to 90%, non-condensing			
Operating Altitude	Up to 3000m (10,000 ft) at 35˚C (95˚F) without derating			
Audible Noise	<40 dBA, internal fan(s) Off; <45 dBA, internal fan(s) On			
Agency				
Safety	UL 1778, c-UL Listed			
Emissions	FCC Part 15, Class A			
Network Surge	UL 497 B			
Transportation	ISTA Procedure 1A Certification			
Rail Kit (included)				
Rail Kit	RAILKITPS3G-AEC			

NEC limits the input current rating of the 2200VA model to 80% of the input plug's rating. If 1920 or more is required, contact a certified electrician to change the input plug to 30A plug. Emerson Network Power assumes no liability for damage caused by miswiring or misapplication of the input plug.

Battery cabinet specifications		
Model Number	PSRT3-24VBXR	PSRT3-48VBXR
Used w/UPS Model	PS1000RT3-120XR, PS1500RT3-120XR	PS2200RT3-120XR, PS3000RT3-120XR
Dimensions, W x D x H, in (mm)		
Unit	17.3 x 19.3 x 3.5 (440 x 490.5 x 88)	
Shipping	22 x 26.6 x 9 (560 x 675 x 228)	
Weight, lb (kg)		
Unit	64 (29)	
Shipping	73 (33)	
Batteries		
Type	Valve-regulated, nonspillable, lead acid	
Manufacturer	CSB, YUASA or Equivalent	
Environmental		
Operating Temperature, ˚F (˚C)	32 to 104 (0 to 40)	
Storage Temperature, ˚F (˚C)	5 to 104 (-15 to 40)	
Relative Humidity	0% to 90%, non-condensing	
Maximum Operating Altitude	10,000 ft. (3000m) at 95˚F (35˚C) without derating	
Agency		
Safety	UL 1778, c-UL Listed	
Emissions	FCC Part 15, Class A	
Transportation	ISTA Procedure 1A Certification	

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PRODUCT BULLETIN NO. 2476

CISCO 2610XM-16TS TERMINAL SERVER ROUTER BUNDLE

PRODUCT OVERVIEW

Cisco Systems® announces the availability of a new Cisco® 2600 Series Terminal Server Router Bundle. Based on the award-winning Cisco 2600 Series modular multiservice router platform, the new terminal server router bundle is an easy-to-order solution that meets customers' terminal server networking needs. These bundles help enable customers to order a Cisco router with all the necessary components at a reduced price compared to ordering each component separately—using one part number. Each terminal server bundle can also be configured with additional WAN or advanced integration modules (AIMs) to enable further services.

CISCO 2610XM-16TS OVERVIEW

By selecting the Cisco 2600 Series for their terminal server needs, customers protect their investments and gain flexibility. Traditional terminal servers are single-purpose, nonmodular, dedicated devices. The Cisco 2600 Series is different because it can adapt through the addition of over 80 different modules as the network requirements change over time and therefore provide the foundation for the deployment of more advanced technologies concurrently with your traditional equipment requirements.

The Cisco 2610XM-16TS includes:

- Cisco 2610XM
- Cisco IOS® Software IP Base
- Cisco 16 port Asynchronous Network Module (part number NM-16A)
- 2x 8 Lead Octal Cable and 8 Male DB-25 Modem Connectors (part number CAB-OCTAL-KIT)

AVAILABILITY

The Cisco 2610XM-16TS is currently available.

ORDERING INFORMATION

Table 1 gives ordering information for the Cisco 2600 Series Terminal Server Bundle.

Table 1
Ordering Information for Cisco 2600 Series Terminal Server Bundle

Part Number	Description
CISCO2610XM-16TS	Cisco 2610XM Terminal Server Bundle

FOR MORE INFORMATION

For more information about the Cisco 2610XM-16TS, visit:

http://www.cisco.com/en/US/products/hw/routers/ps259/index.html

or contact your local account representative.

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upgraded to take advantage of the full benefits of the Cisco Unified Wireless Network as requirements evolve.

The Cisco Aironet 1200AG Series has achieved National Institute of Standards and Technology (NIST) FIPS 140-2 level 2 validation and is in process for Common Criteria validation under the National Information Assurance Partnership (NIAP) program. The Cisco Aironet 1200 Series supports 802.11i, Wi-Fi Protected Access 2 (WPA2), WPA, and numerous Extensible Authentication Protocol (EAP) types. WPA and WPA2 are the Wi-Fi Alliance certifications for interoperable, standards-based wireless LAN security. These certifications support IEEE 802.1X for user-based authentication, Temporal Key Integrity Protocol (TKIP) for WPA encryption, and Advanced Encryption Standard (AES) for WPA2 encryption. These certifications help to ensure interoperability between Wi-Fi-certified wireless LAN devices from different manufacturers.

The Cisco Aironet 1200 Series hardware-accelerated AES encryption supports enterprise-class, government-grade secure encryption over the wireless LAN without compromising performance. IEEE 802.1X authentication helps to ensure that only authorized users are allowed on the network. The series also provides backward compatibility and support for WPA client devices running TKIP, the RC4 encryption algorithm.

Cisco Aironet 1200 Series Access Points operating with LWAPP support Cisco Unified Intrusion Detection System/Intrusion Prevention System (IDS/IPS), a software feature that is part of the Cisco Self-Defending Network and is the industry's first integrated wired and wireless security solution. Cisco Unified IDS/IPS takes a comprehensive approach to security—at the wireless edge, wired edge, WAN edge, and through the data center. When an associated client sends malicious traffic through the Cisco Unified Wireless Network, a Cisco wired IDS device detects the attack and sends shun requests to Cisco wireless LAN controllers, which will then disassociate the client device.

Autonomous or unified Cisco Aironet 1200 Series Access Points support management frame protection for the authentication of 802.11 management frames by the wireless network infrastructure. This allows the network to detect spoofed frames from access points or malicious users impersonating infrastructure access points. If an access point detects a malicious attack, an incident will be generated by the access point and reports will be gathered on the Cisco wireless LAN controller, Cisco WCS, or CiscoWorks WLSE.

Benefits and Features

Investment Protection for Future Network Needs

With large storage capacity and support for Cisco management tools, the Cisco Aironet 1200 Series provides the capacity and the means to upgrade firmware and deliver new features as they become available. For additional investment protection, the Cisco Aironet 1200 Series comes complete with an integrated mounting system that secures the device using the customer's choice of laptop security cables or standard padlocks. The reliability of the 802.11g solution makes the Cisco Aironet 1200 Series a wise investment for enterprise customers. It provides field-proven reliability, featuring a Cisco Aironet fifth-generation 2.4 GHz radio. An available 802.11a radio module upgrade maximizes capacity and performance, delivering up to 54 Mbps data rates on all 12 available channels and allowing the wireless network to scale to accommodate a large number of users. With the Cisco Aironet 1200 Series, a single access point can operate one radio for 802.11b/g clients, while supporting new users by adding a second 802.11a radio to scale network performance and capacity.

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Installation Options Increase Flexibility

The Cisco Aironet 1200 Series access point and integrated mounting system are designed for installation on walls, below ceilings, and, with its plenum ratable metal case, above suspended ceilings. With its broad operating temperature range and cast-aluminum housing, this device provides the ruggedness required in factories, warehouses, and the most challenging environments. Support for inline power over Ethernet (PoE) and local power maximizes powering option flexibility.

Figure 1. Cisco Aironet 1200 Series Access Points 802.11a Radio Modules

All available radios (802.11a, 802.11b, and 802.11g) provide a variety of transmit power settings to adjust coverage area size. To extend the flexibility of deployments, the 802.11a radio module is available in two versions (Figure 1). Both versions provide up to 12 nonoverlapping channels in the 5 GHz band (subject to local regulations); an additional 11 will become available in 2005 with a field firmware upgrade. One version offers dual antenna connectors for use with a wide variety of Cisco antennas to achieve extended range and application-specific coverage. The second has an integrated antenna design that incorporates diversity omnidirectional (5 dBi) and patch antennas (9 dBi). For ceiling, desktop, or other horizontal installations, the integrated omnidirectional antenna provides an optimal coverage pattern and maximum range. For wall-mount installations, the patch antenna provides a hemispherical coverage pattern that uniformly directs the radio energy from the wall and across the room. Both the omnidirectional and patch antennas provide diversity for maximum reliability, even in high-multipath environments such as offices and other indoor environments. Coupled with the broadest selection of 2.4 GHz and 5 GHz antennas in the industry, this provides users with unparalleled flexibility in cell size and coverage patterns.

Table 1. Features and Benefits of Cisco Aironet 1200 Series Access Points

Feature	Benefit
Modular Platform	Allows single or dual radio configuration. Provides numerous configuration and upgrade options.
Field-Upgradeable to Dual 802.11a/g Operation	Offers great flexibility and investment protection, allowing network administrators to deploy a wireless network optimized to their particular applications, even as their needs evolve.

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