EtherWAN

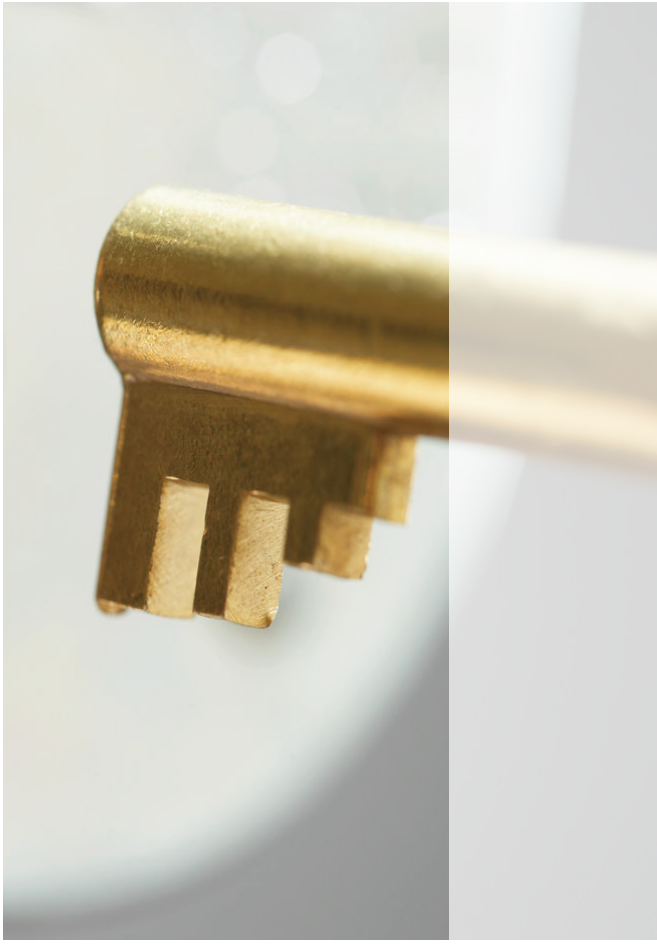
Ethernet Connectivity

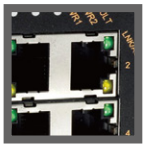
for IP Security

Technology | Application | Product

- *PoE Switches*
- *SFP Gigabit Ethernet Switches*
- *Ethernet Extenders*
- *Media Converters*

EtherWAN Systems, founded in 1996 in Irvine CA, has become a leader in Ethernet connectivity for applications in various markets including intersection traffic monitoring & surveillance, building automation & surveillance, transportation, utility, oil & mining, field automation, etc. EtherWAN specializes in designing and manufacturing fiber optic Ethernet products and Ethernet equipments for harsh environments and pampered rooms. The available products are Ethernet over telephone line/coaxial equipments, media converters from serial/Ethernet to fiber or wireless, high-power PoE switches, EN50155 based Ethernet products for railway and train networking applications, and ISA 12.12.01 (UL1604) based network equipments for hazardous locations. EtherWAN's US headquarters is located in California USA with Pacific Rim headquarters and manufacturing facility in Taipei, Taiwan. With engineering expertise at both sides of the Pacific Ocean and its own production lines in Taiwan, EtherWAN continues to provide professional support bridging analog to IP surveillance solutions with the most advanced Ethernet gears at very affordable prices.





Managed / Unmanaged Layer 2 Ethernet Switches

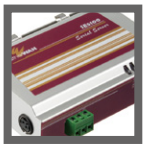
Hardened Ethernet switches
Fiber intelligent Ethernet switches
Fiber optic modularized Ethernet switches
Gigabit Ethernet switches
Ethernet switches with SFP
PoE Ethernet switches

Managed / Unmanaged Media Converters

Hardened media converters
WDM media converters
PoE media converters
OAM media converters
Media converters with SFP
Gigabit media converters
Serial to Fast Ethernet media converters
Media converter chassis

Ethernet Extenders

Ethernet Extenders over copper pair
Ethernet Extenders over coaxial cable
Ethernet Extenders with management features
Ethernet Extenders with PoE
Ethernet Extenders with α-ring



Serial Servers

Serial to Ethernet
Serial to Wireless
Fiber Modem

Others

Ethernet adapter cards
Industrial power supplies
Hardened power supplies
Hardened SFP fiber transceivers
TransRack (DIN-mount on Rack)

8 Features
make us different to IP security

Extended Ethernet Distance

Long distance Ethernet over copper pair or coaxial up to 2.6km without pulling fiber cables

Technology to Industry

Complete PoE products and continuous dedication to high-power development

Hardened Design Know-how

-40ºC ~ 85ºC up to 72 hours non-stop test to guarantee flawless data transmission in extreme environments

Efficient Bandwidth Control

IGMP snooping for multicast stream IP camera connections, data priority control

Redundancy Management

Unique α-Ring topology guarantees recovery time < 15ms, multiple power inputs design, relay contact design for alarm connections

Wise Mounting Design

Rack mount, Din Rail mount, Wall mount, Panel mount and Desktop

Access Control

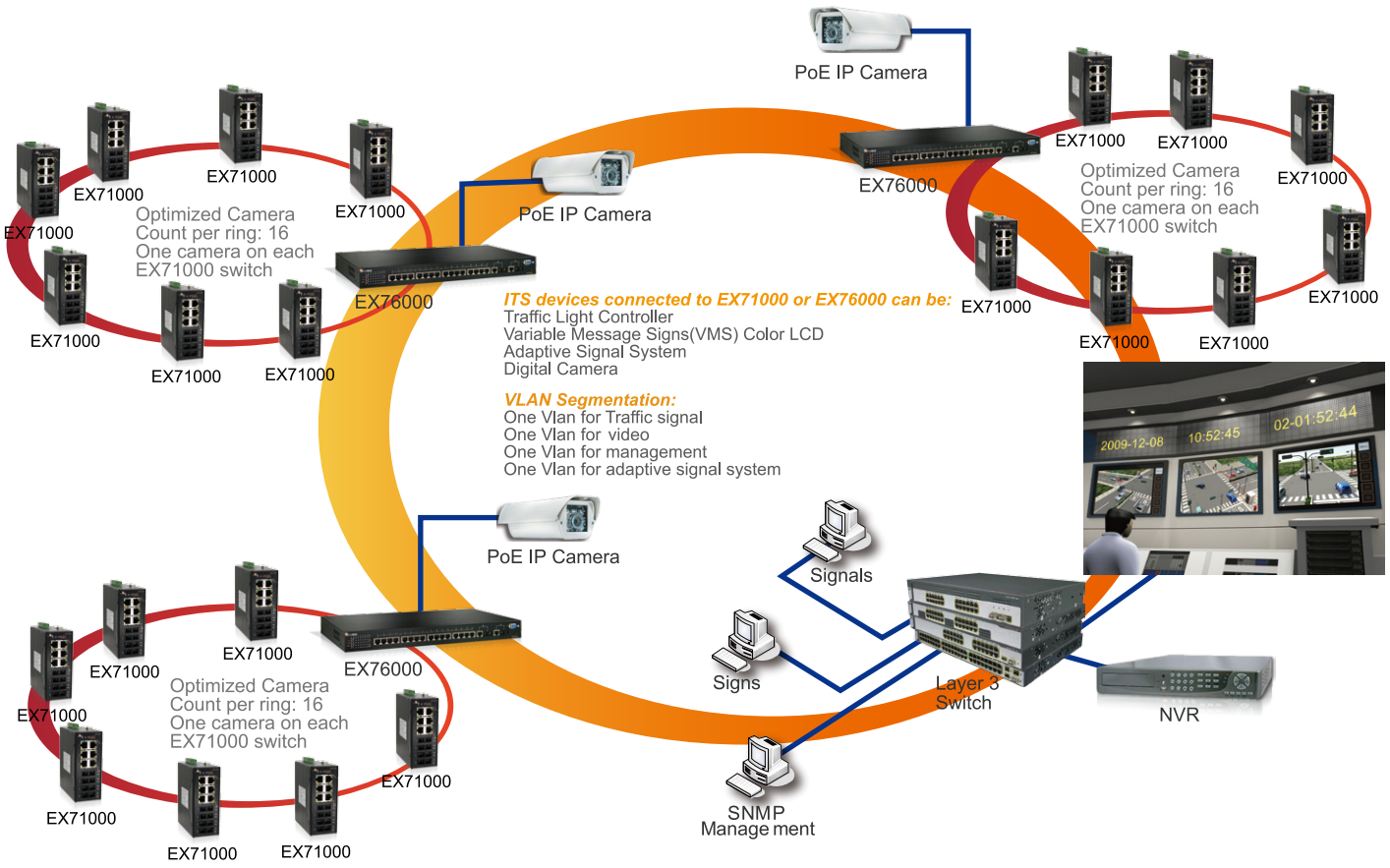
MAC address filter, IEEE802.1x PNAC, VLAN, Port mirror

Network Management

Fully managed, console, web, SNMP, Telnet

Intersection Surveillances

Traffic management systems, today, include traffic light controllers, video surveillance, dynamic message signs and other systems to measure traffic flow and congestion and to inform the driving public about hot spots. EtherWAN's robust networking products are suitable for outdoor or extreme environments. The serial device servers converts traffic light signals from serial mode to Ethernet. The hardened managed switches are featured with α-ring topology guaranteed recovery time less than 15ms. These switches in the field and central site create a redundant network system that is critical to traffic control city wide.



EN50121-4 | Wide Temp | PoE | ITS | α-RING <15mS | UL508

>> EX71000

Managed Hardened 8-port 10/100BASE and 2 Gigabit ports Ethernet Switch

- DIN Rail Mount full Layer 2 Ethernet switch with 8 FE and 2 GE uplinks
- Supports α-ring topology for network redundancy with recovery time <15ms
- IEEE802.1w RSTP, IEEE802.1S MSTP and IEEE802.1D STP compatible
- Telnet, SSL/SSH, SNMP V1, V2c & V3, RMON, Web Browser, Console and TFTP Management
- -40°C to 75°C (tested at 85°C) operating temperature range

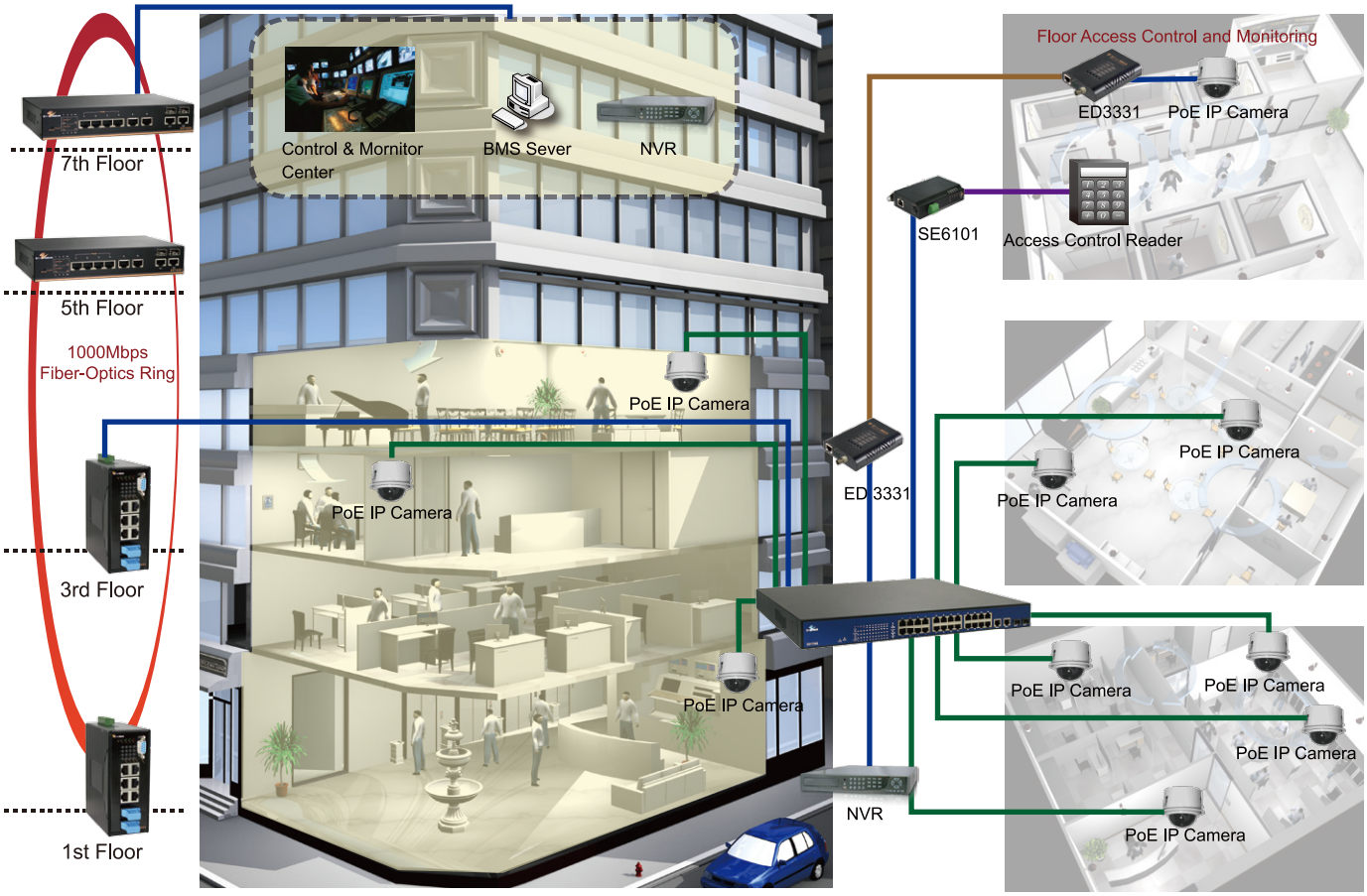
>> EX76000

Managed Hardened 16-port 10/100BASE PoE with 2 Gigabit combo ports Ethernet Switch

- Fan-less Rack-mount full Layer 2 Ethernet switch with 16 FE PoE and 2 GE uplinks
- IEEE802.3af Power over Ethernet (PSE) on each FE port
- Supports α-ring topology for network redundancy with recovery time <15ms
- IEEE802.1w RSTP, IEEE802.1S MSTP and IEEE802.1D STP compatible
- Telnet, SSL/SSH, SNMP V1, V2c & V3, RMON, Web Browser, Console and TFTP Management
- -40°C to 75°C (tested at 85°C) operating temperature range

Building Automation

It is based on TCP/IP technology to form a variety of functions to ensure comfortable and secure living or working environment. Building automation is the way of the future and may involve in access control from one to many doors to a fully integrated system. All include door access, security alarm system, VoIP and full automation for any electrical device such as air conditioning, lighting, signs, lift control, irrigation, temperature control, for the home or commercial applications.



Coaxial-Cable · Fiber-optic · PoE Ethernet · Cat.5 Ethernet · Serial-Cable · Telephone Wire

Wide Temp · PoE · ITS · α-RING · UL508

>> EX65000

Managed Industrial 8-port Gigabit Ethernet Switch

- DIN Rail Mount full Layer 2 Ethernet switch with 8 GE
- Supports α-ring topology for network redundancy with recovery time <15ms
- IEEE802.1w RSTP, IEEE802.1S MSTP and IEEE802.1D STP compatible
- Telnet, SSL/SSH, SNMP V1, V2c & V3, RMON, Web Browser, Console and TFTP Management
- -20°C to 60°C operating temperature range

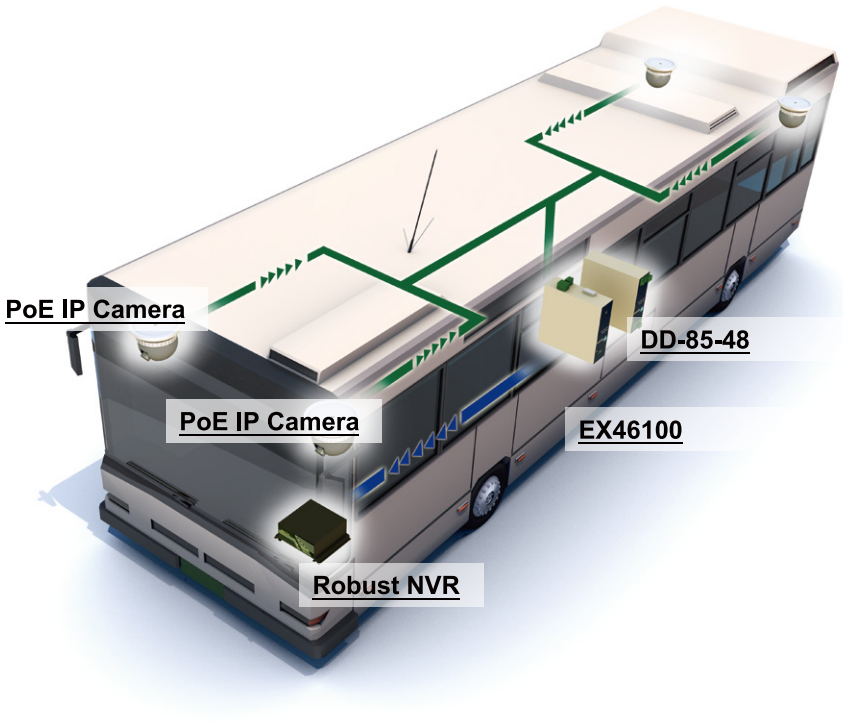
>> EX74000

Managed Hardened 6-port 10/100BASE (4 x High Power PoE) with 2 Gigabit SFP (DDM) combo ports Ethernet Switch

- Compact full Layer 2 Ethernet switch with 6 FE and 2 GE DDM-support SFP
- IEEE802.3af high-power over Ethernet (PSE) through 4 FE ports
- Supports α-ring topology for network redundancy with recovery time <15ms
- IEEE802.1w RSTP, IEEE802.1S MSTP and IEEE802.1D STP compatible
- Telnet, SSL/SSH, SNMP V1, V2c & V3, RMON, Web Browser, Console and TFTP Management
- -40°C to 75°C (tested at 85°C) operating temperature range

Robust Mobile Surveillances

Mobile video surveillance is becoming more common, as more police departments, ambulance services, and transportation companies see the benefits it can bring. With PoE switches installed in a vehicle, it eliminates the need for an electrician to install an outlet near a powered device. PoE brings efficiency to Ethernet-based communications in mobility by providing power to the Cat-5 LAN cable. A series of EtherWAN's hardened-grade 8-port Power-over-Ethernet (PoE) Ethernet switch, and the DD-85-48 power converter have received E-Mark certification.



Control Room Monitoring


Accident Recording

E Mark E4 | Wide Temp | ITS | UL508 | PoE

>> *EX46100*

Web-Smart Hardened 8-port 10/100BASE-TX High Power PoE Ethernet Switch

- Web-smart Ethernet switch with 8 FE
- IEEE802.3af high-power over Ethernet (PSE) through 4 FE ports
- PoE control, IP Configuration, Port-based VLAN, QoS Mode, QoS Priority, and Load Default setting through the Web browser Interface
- -40°C to 75°C (tested at 85°C) operating temperature range

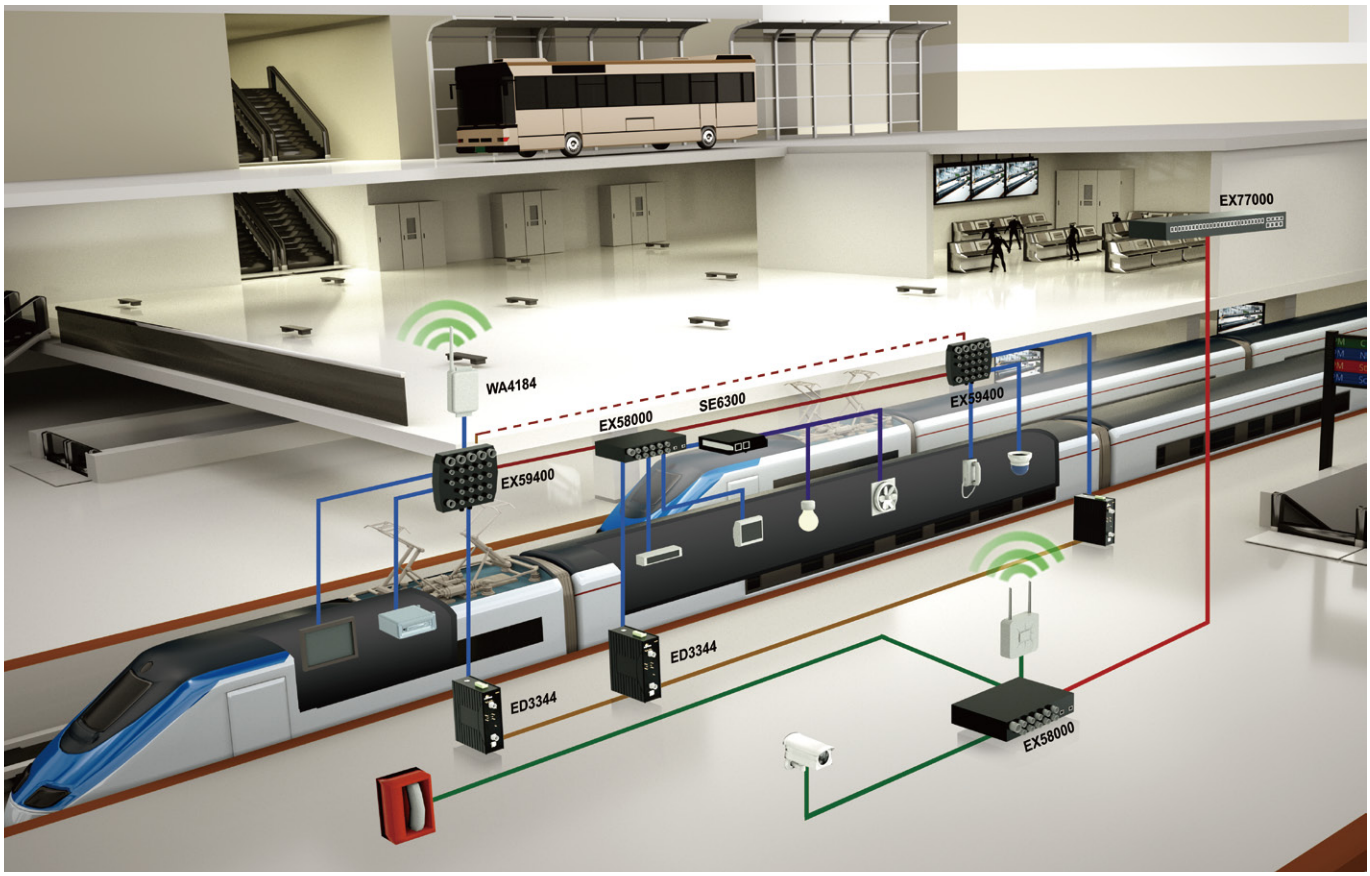
>> *DD-85-48*

85W/1.77A 48VDC Industrial Power Supply

- DIN Rail Mount 85W industrial power supply certified E Mark
- 12-36VDC input
- 48VDC output @ 1.77A (optional 55VDC @ 1.55A)
- -10°C to 60°C operating temperature range

Ethernet Connectivity on Rolling Stock

The series of EN50155 certified products from EtherWAN is absolutely robust for rolling stock applications in compliance of humidity, shock and vibration. It allows networking deployed inside the cabinet for communications such as voice, data, audio, video, etc. The EN50155 hardened-grade Ethernet Extenders ED3344 offers full-duplex up to 85Mbps communication link over existing coaxial cable. The built-in M12 Ethernet port can stand up to the continued vibrations, rain, and dust found in trains. It is the best long-distance Ethernet connectivity alternative when regular CAT-5 cable and fiber are not feasible to install yet data transmission bandwidth is a must.



Coaxial-Cable | Fiber-optic | PoE Ethernet | Cat.5 Ethernet | Serial-Cable | Telephone Wire

EN50155 | Wide Temp | ITS | α-RING <15mS | UL508

>> *ED3344*

Hardened 10/100BASE-TX M12 Ethernet Extender Over Coaxial Cable

- Certified to EN50155, EN50121-3-2 and EN50121-4 Railway application requirements
- Built-in M12 Ethernet port connector
- Built-in DIP switch for Local or Remote setting
- Ten LED's indicate speed on each distance (85Mbps @ 200meters; 1Mbps @ 2.6KM)
- -40°C to 75°C (tested at 85°C) operating temperature range

>> *EX59400*

IP67 M12 Managed Hardened 16-port 10/100BASE-TX + 2-port Gigabit Ethernet Switch (EN50155/50121-3-2)

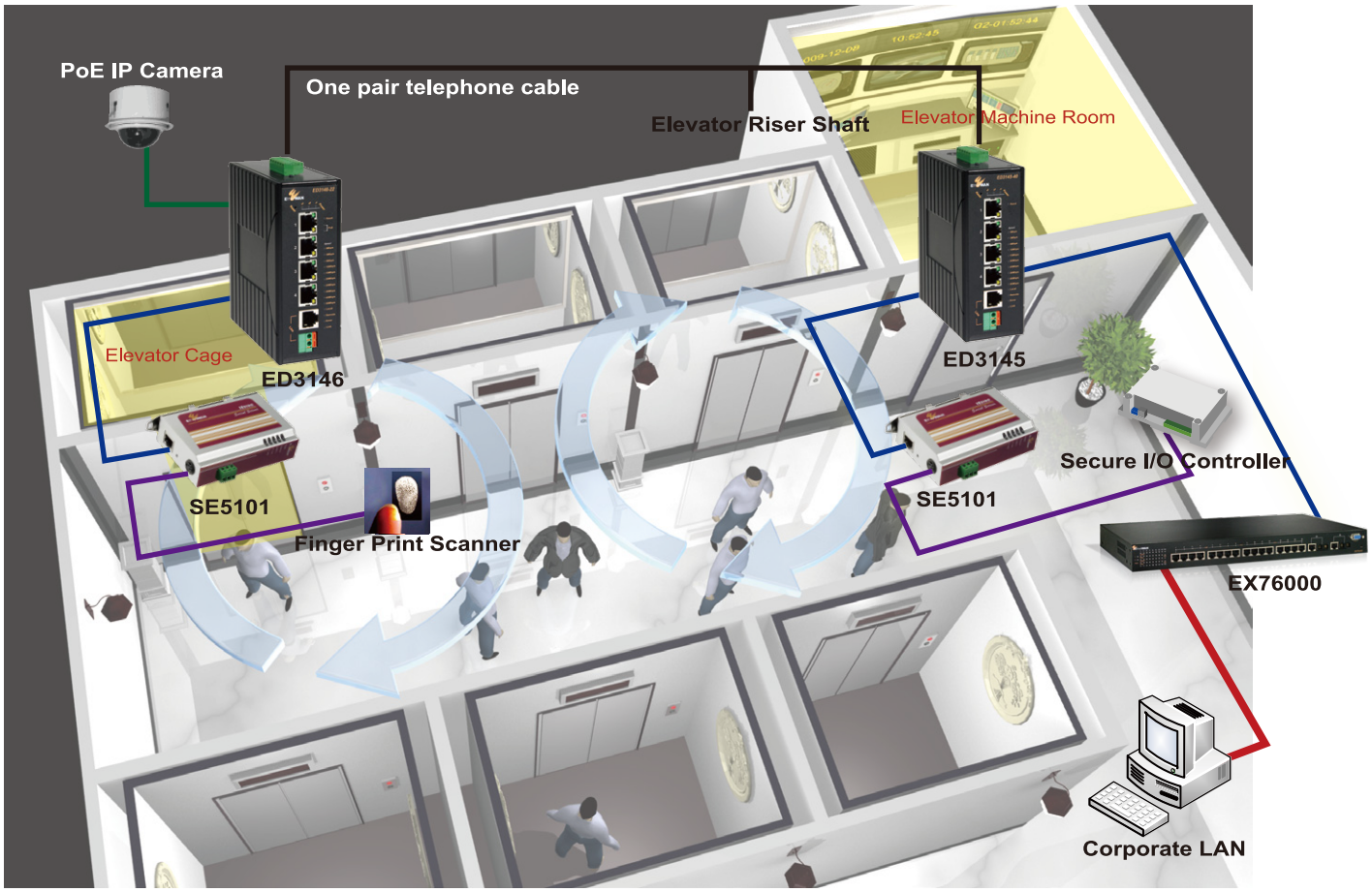
- EN50155/50121-3-2/50121-4 compliant
- Supports α-ring topology for network redundancy with recovery time <15ms
- IEEE802.1w RSTP, IEEE802.1S MSTP and IEEE802.1D STP compatible
- Telnet, SSL/SSH, SNMP V1, V2c & V3, RMON, Web Browser, Console and TFTP Management
- -40°C to 75°C (tested at 85°C) operating temperature range

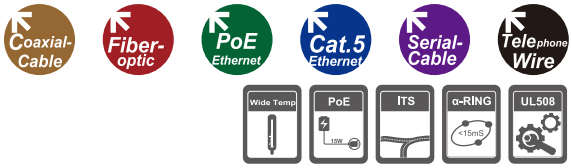
Gore-Tex Vent design for pressure & humidity balance

M12 connectors on each port

Elevator Monitoring & Communications

Many modern buildings are adopting modern vertical transportation management systems to ensure elevators are working safely, properly and effectively. The integrated network IP communication technology, migrated from analog connectivity, provides some form of automated monitoring systems operational 7/24/365. EtherWAN's Ethernet Extenders provides an alternative to long-distance Ethernet over regular copper pair (telephone line). It makes cost-effective transition to network-centric systems with the least disruption.





>> *ED3146*

Hardened 4-port 10/100BASE-TX IEEE802.3at PoE Ethernet Extender

- 4 FE Ethernet Ports with optional 2 PoE (IEEE802.3at) connections
- 1 Ethernet Extender Port up to 1.9KM over copper pair
- Built-in DIP switch for Local or Remote setting
- Ten LED's indicate speed on each distance (50Mbps @ 300meters; 1Mbps @ 1.9KM)
- -40°C to 75°C (tested at 85°C) operating temperature range

>> *SE5101*

Industrial 1-port Serial Device Server

- Supports RS-232/422/485 serial communication
- Supports RJ45 and single-mode/multi-mode fiber optics through SC or ST fiber connector
- 15KV ESD surge protection on serial interfaces
- Supports Virtual COM, TCP server, TCP client, UDP, Pair Connection operation modes
- Multiple configuration interfaces of Web, Telnet console, SNMP and windows-based utility

Best-selling Unmanaged Switches

Model Name	EX17242	EX17016	EX17008	EX48000	EX34000	EX46100	EX49000A	EX35000
Interface								
Max. 100Base Ports	24	16	8	5	8	8	16	–
Max. 1000Base Ports	2	2 (EX17162)	2 (EX17082)	–	–	–	2	8
Max. PoE Ports	24 (15.4W/ea)	16 (15.4W/ea)	8 (15.4W/ea) for EX17008 8 (30W/ea) for EX17082	4 (15.4W/ea)	4 (15.4W/ea)	4 (30W/ea)	16 (30W/ea)	–
Performance								
MAC Address Table Size	4096	1024	1024	1024	1024	1024	4096	8192
Packet Buffer Memory (bits)	2.75M	512K	512K	512K	1M	1M	2.25M	1.125M
Mechanical								
Installation*	R	R	D, R	W, D	D, R, P	D, R, P	R	D, P
Dimensions (W x D x H mm)	440 x 330 x 44	440 x 220 x 44	266 x 160 x 44	220 x 134 x 35	62 x 110 x 135	68 x 110 x 135	442 x 205 x 44	68 x 110 x 135
Power Input								
No. of Power Input	1	1	1	3	3	3	1	3
Terminal Block	–	–	–	55VDC	48VDC	48 to 50VDC	55VDC	12 to 32VDC
DC Jack	–	–	–	55VDC	48VDC	55VDC	–	12VDC
AC Inlet	100 to 240VAC	100 to 240VAC	100 to 240VAC	–	–	–	–	–
Operating Temperature								
0°C to 45°C	✓	✓	✓	–	–	–	–	–
-10°C to 60°C	–	–	–	(EX38000)	✓	(EX36100)	–	–
-20°C to 60°C	–	–	–	–	–	–	–	✓
-40°C to 75°C	–	–	–	✓	(EX45000)	✓	✓	–
Smart Network Management								
VLAN	✓	✓	✓	✓	–	✓	–	–
QoS	✓	✓	✓	✓	–	✓	–	–
Port Trunking	✓	✓	✓	–	–	–	–	–
Web Management	✓	✓	✓	✓	–	✓	–	–
Regulatory Approvals								
CE/FCC	✓	✓	✓	✓	✓	✓	✓	✓
VCCI	–	–	–	–	–	✓	–	–
UL/cUL 60950-1	–	✓	✓	–	–	–	–	–
UL508	–	–	–	–	✓	–	✓	–
E Mark	–	–	–	–	✓	✓	–	–

* D: DIN Rail Mounting, R: Rack Mounting, P: Panel Mounting, W: Wall Mounting

Best-selling Managed Switches

Model Name	EX76000	EX71000	EX74000	EX78000	EX65000	EX26604L	EX59400
Interface							
Max. 100Base Ports	16	8	6	10	–	24	16 (M12)
Max. 1000Base Ports	2	2	2	2	8	4	2
PoE Ports	16, 12 or 8 (15.4W/ea)	–	4 (30W/ea)	8 (15.4W/ea) 4(30W/ea)	–	12 (15.4W/ea) 24 (7.5W/ea)	–
RS-232 Console Port	✓	✓	✓	✓	✓	✓	✓
Performance							
MAC Address Table Size	8192	8192	8192	8192	4096	8192	8K
Packet Buffer Memory (bits)	2M	2M	2M	2M	1M	4M	2M
Mechanical							
Installation*	R	D, R, P	P	D	P, R, D	R	W
Dimensions (WxDxH mm)	442 x 205 x 44	60 x 125 x 145	200 x 134 x 50	65 x 145 x 165	60 x 125 x 145	440 x 325 x 43	258 x 228 x 117
Power Input							
No. of Power Input	2	3	1	3	3	1	2
Terminal Block	48VDC	12 to 48VDC	48 to 55VDC	48 to 55VDC	12 to 32VDC	–	–
DC Jack	–	12VDC	–	48VDC	12VDC	–	–
AC Inlet	–	–	–	–	–	100 to 240VAC	–
M23	–	–	–	–	–	–	12 to 48VDC 18 to 30 VDC
Operating Temperature							
0°C to 45°C	–	–	–	–	–	✓	–
-10°C to 60°C	–	(EX61000A)	–	–	–	–	–
-20°C to 60°C	–	–	–	–	✓	–	–
-40°C to 75°C	✓	✓	✓	✓	–	–	✓
Network Redundancy							
α-Ring / α-Chain	✓	✓	✓	✓	✓	–	✓
STP / RSTP / MSTP	✓	✓	✓	✓	✓	✓	✓
Network Management & Control							
Features	VLAN, QoS, IGMP, GMRP, Bandwidth Rate Control, LACP, Port Trunking, Port Mirroring, Packet Filtering, IEEE802.1x Security, SNMP (v1, v2c, v3), RMON, Web Management, Telnet Management, RS-232 Console Management						
Regulatory Approvals							
CE/FCC	✓	✓	✓	✓	✓	✓	✓
VCCI	✓	✓	✓	✓	✓	✓	–
UL508	✓	–	–	✓	✓	✓	✓
EN50121-4	–	✓	–	–	–	–	✓
EN50155	–	–	–	–	–	–	✓

* D: DIN Rail Mounting, R: Rack Mounting, P: Panel Mounting

Best-selling Media Converters + Serial Device Servers





Model Name	EL9100	EL9020	EL900
Interface			
10/100Base-TX	–	–	1
100Base-FX	–	–	1
10/100/1000Base-TX	1	1	–
1000Base-T	(EL9000)	–	–
1000Base-SX/LX	1	–	–
1000Base SFP	–	1	–
Mode of Operations			
Auto-negotiation, Auto-MDI/MDI-X	✓	✓	✓
Flow Control	✓	✓	✓
Store & Forward	✓	✓	✓
Link Fault Pass Through	✓	✓	✓
Mechanical			
Installation*	D, R, P	D, R, P	D, R, P
Dimensions (WxDxH mm)	50x110x135	50x110x135	50x110x135
Power Input			
No. of Power Input	3	3	2 (TB Only)
Terminal Block	12 to 48VDC	12 to 48VDC	12 to 48VDC
DC Jack	12VDC	12VDC	12VDC
Operating Temperature			
0°C to 45°C	(EM1100)	(EM1020)	(EL100)
-10°C to 60°C	–	–	(EX42011)
-40°C to 75°C	✓	✓	✓
Regulatory Approvals			
CE/FCC	✓	✓	✓
VCCI	✓	✓	✓
UL/cUL 60950-1	–	–	✓
UL508	✓	✓	–
UL1604 / IS A 12.12.01	–	–	✓

Model Name	SE5100	SE5300
Ethernet Interface		
10/100Base-TX	1 or 0	2 , 1 or 0
100Base-FX	0 or 1	0 , 1 or 2
1.5KV Magnetic Isolation	✓	✓
Serial Interface		
RS-232/422/485	1	2/4
Connector	DB9/TB	DB9/TB/RJ50
2KV Serial Line Isolation	SE5110	SE5320
ESD Protection	15KV	15KV
Speed	50 bps to 460.8 Kbps	
Communication Parameters	Parity: None, Even, Odd, Space, Mark; Data Bits: 5, 6, 7, 8; Stop Bit: 1, 1.5, 2	
Flow Control	None, RTS/CTS, Xon/Xoff	
Software		
Network Protocols	ICMP, IP, TCP, UDP, DHCP client, BOOTP, Telnet, DNS, SNMPv2, HTTP, SSH, SMTP, SNTP, ARP, RARP, RFC2217	
Operation Modes	Virtual COM, TCP server, TCP client, UDP, Pair Connection	
COM Driver Support	Windows 2000/XP/2003	
Configuration Options	Web, Telnet Console, SNMP	
Mechanical		
Installation*	D, P	D, P
Dimensions (WxDxH mm)	70x110x30	100x125x30
Power Input		
No. of Power Input	2	3
Terminal Block	12 to 32VDC	12 to 32VDC
DC Jack	12VDC	12VDC
Operating Temperature		
-10°C to 60°C	✓	✓
-25°C to 70°C	–	(SE6300)
-25°C to 75°C	(SE6100 Fiber)	–
-34°C to 75°C	(SE6100 Copper)	–
Regulatory Approvals		
CE/FCC	✓	✓
VCCI	✓	✓

* D: DIN Rail Mounting, R: Rack Mounting, P: Panel Mounting

Best-selling Ethernet Extenders




Model Name	ED3175	ED3146	ED3344	ED3341	ED3331
Ethernet Interface					
10/100Base-TX	8	2 or 4	1 (M12)	1	1
PoE	–	2 (30W/ea)	–	–	–
Extension Interface					
RJ11/Terminal Block	2	1	–	(ED3141)	(ED3101)
BNC	–	–	1	1	1
Mode of Operations					
Auto-negotiation, Auto-MDI/MDI-X	✓	✓	✓	✓	✓
Store & Forward	✓	✓	✓	✓	✓
Mechanical					
Installation*	D, R, P	D, R, P	D, R, P	D, R, P	D, W, C
Dimensions (W x D x H mm)	60 x 125 x 145	50 x 110 x135	50 x 110 x 135	50 x 110 x 135	80.3 x 109.2 x 23.8
Power Input					
No. of Power Input	3	3	3	3	1
Terminal Block	12 to 48VDC	12 to 48VDC	12 to 48VDC	12 to 48VDC	–
DC Jack	12VDC	12VDC	12VDC	12VDC	12VDC
Operating Temperature					
-10°C to 60°C	–	–	–	–	✓
-40°C to 70°C	–	–	–	✓	–
-40°C to 75°C	✓	✓	✓	–	–
Management Function					
α-Ring / α-Chain	✓	–	–	–	–
STP / RSTP / MSTP	✓	–	–	–	–
Layer 2 Features**	✓	–	–	–	–
Regulatory Approvals					
CE/FCC	✓	✓	✓	✓	✓
VCCI	✓	✓	✓	✓	✓
UL508	✓	✓	✓	✓	✓
EN50155	–	–	✓	✓	–
EN50121-3-2	–	–	✓	✓	–
EN50121-4	–	–	✓	✓	–

* D: DIN Rail Mounting, R: Rack Mounting, P: Panel Mounting, W: Wall Mounting, C: Chassis System Support

** Layer 2 Features include VLAN, QoS, IGMP, GMRP, Bandwidth Rate Control, LACP, Port Trunking, Port Mirroring, Packet Filtering, IEEE802.1x Security, SNMP (v1, v2c, v3), RMON, Web Management, Telnet Management, RS-232 Console Management

Best-selling Power Supply




Model Name	DD-85-48	DR-75-24	DR-75-48	SDR-480-48
Output				
DC Voltage	48VDC	24VDC	48 to 53VDC	48 to 55VDC
Current Range	0 to 1.77A	0 to 3.2 A	0 to 1.6A	10A
Rated Power	85W	76.8W	76.8W	480W
Input				
12~36VDC	✓	–	–	–
85~264VAC (47~63Hz) / 120~370VDC	–	✓	✓	–
88~264VAC (47~63Hz) / 120~370VDC	–	–	–	✓
Protection				
Over Voltage Protection	58V	29 to 34V	58 to 65V	56 to 65V
Overload Protection	110 to 160%	105 to 150%	105 to 150%	110 to 150%
Constant Current Limiting	–	✓	✓	✓
Recovers Automatically	–	✓	✓	✓
Mechanical				
Installation*	D, P	D	D	D
Dimensions (W x D x H mm)	50x148x165	55.5x100x125.2	55.5x100x125.2	85x124x125.2
Environment				
Operating Temperature: -10°C to 60°C	✓	✓	✓	–
Operating Temperature: -25°C to 70°C	–	–	–	✓
Regulatory Approvals				
CE	✓	✓	✓	✓
UL60950-1	–	–	–	✓
UL508	–	✓	✓	✓

* D: DIN Rail Mounting

TransRack

- One clip to convert DIN Rail Mount devices to Rack Mount
- One standard 35mm DIN rail track included
- Adjustable in depth from 50mm to 210mm
- Dimensions (W x H x D) : 464 x 105 x 285mm

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