



# Ethernet Connectivity

## For IP Security

Technology

Application

Product



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

# Core Competencies of EtherWAN in IP Security

- » Fully managed, console, web, SNMP and Telnet
- » Rack mount, DIN-Rail mount, wall mount, panel mount and desktop
- » Unique Alpha-ring topology guarantees recovery time <15ms
- » MAC address filter, IEEE 802.1x PNAC, VLAN, and port mirroring
- » Multiple power inputs design, relay contact design for alarm connections
- » Complete PoE products and continuous dedication to high-power development
- » IGMP snooping for multicast stream IP camera connections, data priority control
- » Long distance Ethernet over copper pair up to 2.6 km without pulling fiber cables
- » -40 to 85°C up to 72 hours non-top test to guarantee flawless data transmission in extreme environments

## Range of Applications





# Ethernet Switches



## Featured Products

<b>EX42005/EX32008</b>	Industrial Unmanaged 5/8-port 10/100BASE Ethernet Switch	<b>(D)</b>
<b>EX43000</b>	Industrial Unmanaged 8-port 10/100BASE Ethernet Switch	<b>(D)</b>
<b>EX42008</b>	Hardened Unmanaged 8-port 10/100BASE Ethernet Switch	<b>(D)</b>
<b>EX16900</b>	Unmanaged 5/8-port Gigabit Ethernet Switch	<b>(K)</b>
<b>EX32900</b>	Industrial Unmanaged 5/8-port Gigabit Ethernet Switch	<b>(D)</b>
<b>EX42900</b>	Hardened Unmanaged 5/8-port Gigabit Ethernet Switch <b>ISA12.12.01/ATEX</b>	<b>(D)</b>
<b>EX94000</b>	Hardened Unmanaged 8-port 10/100BASE Ethernet Switch <b>ISA12.12.01/ATEX</b>	<b>(D) (P)</b>
<b>EX70900</b>	Hardened Managed 8-port Gigabit Ethernet Switch <b>IEC61850-3</b> <b>EN50121-4</b>	<b>(D) (W)</b>
<b>EX71000</b>	Hardened Managed 8-port 10/100BASE and 2-port Gigabit Ethernet Switch with SFP options <b>EN50121-4</b>	<b>(D) (W)</b>
<b>EX73000</b>	Hardened Managed 16-port 10/100BASE with 2-port Gigabit combo Ethernet Switch <b>ISA12.12.01</b>	<b>(D) (W)</b>
<b>EX73900</b>	Hardened Managed 16-port Gigabit Ethernet Switch <b>IEC61850-3</b> <b>EN50121-4</b>	<b>(D) (W) (R)</b>
<b>EX25611</b>	Managed 24-port 10/100/1000BASE-T and 4-port 1G/10G SFP+ Ethernet Switch	<b>(R)</b>
<b>EX27000</b>	Managed 24-port 10/100BASE and 4-port Gigabit Ethernet Switch with SFP options <b>IEC61850-3</b> <b>EN50121-4</b>	<b>(R)</b>
<b>LL3</b> <b>EX77900</b>	Lite L3 Hardened Managed 24-port 10/100/1000BASE-T and 4-port 1G/10G SFP+ Ethernet Switch <b>IEC61850-3</b>	<b>(R)</b>
<b>L3</b> <b>EG99000</b>	Hardened Managed 24-port 10/100/1000BASE-T and 4-port 10G SFP+ Layer 3 Switch	<b>(R)</b>

**(D)**DIN-Rail **(K)**Desktop **(P)**Panel Mount **(R)**Rack mount **(W)**Wall mount

## Product Highlights

Model	Max. 100BASE Ports			Max. 1000BASE Ports			Max. 10G Ports	Management	Power Input	Operating Temp.
	RJ45	Fixed Fiber	SFP	RJ45	Fixed Fiber	SFP	SFP+			
<b>EX42005</b> <b>EX32008</b>	5/8	1/1	-	-	-	-	-	Unmanaged	12-48VDC	-10 ~ 60°C
<b>EX43000</b>	8	2	2	-	-	-	-	Unmanaged	12-48VDC	-20 ~ 60°C
<b>EX42008</b>	8	1	-	-	-	-	-	Unmanaged	12-48VDC	-40 ~ 75°C
<b>EX16900</b>	-	-	-	5/8	1	1	-	Unmanaged	5VDC	0 ~ 45°C
<b>EX32900</b>	-	-	-	5/8	1	-	-	Unmanaged	12-48VDC	-10 ~ 60°C
<b>EX42900</b>	-	-	-	5/8	1	-	-	Unmanaged	12-48VDC	-40 ~ 75°C
<b>EX94000</b>	8	2	2	-	-	-	-	Unmanaged	12-48VDC	-40 ~ 75°C
<b>EX70900</b>	-	-	-	8	2	2	-	Managed	12-48VDC	-40 ~ 75°C
<b>EX71000</b>	8	4	4	2	2	2	-	Managed	12-48VDC	-40 ~ 75°C
<b>EX73000</b>	16	4	-	2	2	-	-	Managed	12-48VDC	-40 ~ 75°C
<b>EX73900</b>	-	-	-	12	4	4	-	Managed	12-48VDC	-40 ~ 75°C
<b>EX25611</b>	-	-	-	24	-	4	4	Managed	50/60Hz, 100-240VAC	0 ~ 40°C
<b>EX27000</b>	24	24	24	4	4	4	-	Managed	50/60Hz, 100-240VAC	-10 ~ 60°C
<b>EX77900</b>	-	-	-	24	8	8	4	Managed	50/60Hz, 100-240VAC	-40 ~ 75°C
<b>EG99000</b>	-	-	-	24	-	8	4	Managed	50/60Hz, 100-240VAC	-40 ~ 75°C



# PoE Ethernet Switches

## Hardened Grade



### Featured Products

<b>EX42300</b>	Hardened Unmanaged 5/6 port Ethernet Switch (4 x PoE +1-port 10/100/1000BASE-T +1-port 1000BASE-X)	<b>(D)</b>
<b>EX45900</b>	Hardened Unmanaged 5-port Gigabit (4 x PoE) +1-port 1000BASE-X Gigabit Ethernet Switch	<b>(D)</b>
<b>EX46900A</b>	Hardened Unmanaged 8-port Gigabit (8 x PoE) +2-port 1000BASE-X Gigabit Ethernet Switch <b>E-Mark</b>	<b>(D) (R)</b>
<b>EX48000A</b>	Hardened Unmanaged 5-port 10/100BASE PoE Ethernet Switch	<b>(K) (W)</b>
<b>EX48000</b>	Hardened Web-smart 5-port 10/100BASE PoE Ethernet Switch	<b>(K) (W)</b>
<b>EX46100</b>	Hardened Web-Smart 8-port 10/100BASE High Power PoE Ethernet Switch	<b>(D) (P) (R)</b>
<b>60W EX78000</b>	Hardened Managed 10-port 10/100BASE (8 x PoE) and 2-port Gigabit Ethernet Switch	<b>(D) (P)</b>
<b>LL3 60W EX78900</b>	Lite L3 Hardened Managed 16-port (8 x PoE) Gigabit Ethernet Switch	<b>(D) (P)</b>
<b>EX78162</b>	Hardened Managed 16-port 10/100BASE PoE and 2-port Gigabit Ethernet Switch	<b>(D)</b>
<b>ER52000</b>	Hardened Unmanaged 8-port 10/100BASE M12 (8 x PoE) +2-port 10/100/1000BASE M12 Ethernet Switch <b>EN50155</b>	<b>(W)</b>

**(D)** DIN-Rail **(K)** Desktop **(P)** Panel Mount **(R)** Rack mount **(W)** Wall mount



### Product Highlights

Model	Max. 100BASE Ports			Max. 1000BASE Ports			PoE Ports	PoE Power Budget	Management	Power Input	Operating Temp.
	RJ45	Fixed Fiber	SFP	RJ45	Fixed Fiber	SFP					
<b>EX42300</b>	4	-	-	1	1	1	4	120W	Unmanaged	18-57VDC	-40 ~ 75°C
<b>EX45900</b>	-	-	-	5	1	1	4	120W	Unmanaged	18-57VDC	
<b>EX46900A</b>	-	-	-	8	2	2	8	120W	Unmanaged	18-57VDC	
<b>EX48000A</b> <b>EX48000</b>	5	1	-	-	-	-	4	62W 120W	Unmanaged Web-smart	47-57VDC	
<b>EX46100</b>	8	2	-	-	-	-	4	120W	Web-smart	47-57VDC	
<b>EX78000</b>	8	4	4	2	2	2	8	240W	Managed	52-57VDC	
<b>EX78900</b>	-	-	-	12	4	4	8	240W	Managed	52-57VDC	
<b>EX78162</b>	16	-	-	-	-	2	16	240W	Managed	52-57VDC	
<b>ER52000</b>	8 (M12)	-	-	2 (M12)	-	-	8	120W	Unmanaged	72-110VDC	



# PoE Ethernet Switches

## Commercial Grade



### Featured Products

<b>EX17008A/EX17008</b>	Unmanaged/Web-smart 8-port 10/100BASE-TX PoE Ethernet Switch	(K) (R)
<b>EX17908A/EX17908</b>	Unmanaged/Web-smart 8-port Gigabit PoE (IEEE 802.3at) Ethernet Switch	(R)
<b>EX17016</b>	Web-smart 16-port 10/100BASE-TX PoE Ethernet Switch	(R)
<b>EX17082A/EX17082</b>	Unmanaged/Web-smart 8-port 10/100BASE-TX PoE and 2-port combo Gigabit SFP Ethernet Switch	(R)
<b>EX17162A/EX17162</b>	Unmanaged/Web-smart 16-port 10/100BASE-TX PoE and 2-port combo Gigabit SFP Ethernet Switch	(R)
<b>EX17242</b>	Web-smart 24-port 10/100BASE-TX PoE and 2-port combo Gigabit SFP Ethernet Switch	(R)
<b>EX26262F</b>	Managed 24-port Gigabit PoE (IEEE 802.3at) and 2-port Gigabit SFP Combo Ethernet Switch	(R)

(K) Desktop (R) Rack mount

### Product Highlights

Model	Max. 100BASE Ports			Max. 1000BASE Ports			PoE Ports	PoE Power Budget	Management	Power Input	Operating Temp.
	RJ45	Fixed Fiber	SFP	RJ45	Fixed Fiber	SFP					
<b>EX17008A EX17008</b>	8	-	-	-	-	-	8	120W	Unmanaged Web-smart	50/60Hz, 100–240VAC	0 ~ 45°C
<b>EX17908A EX17908</b>	-	-	-	8	-	-	8	240W	Unmanaged Web-smart		
<b>EX17016</b>	16	-	-	-	-	-	16	240W	Web-smart		
<b>EX17082A EX17082</b>	8	-	-	2	-	2	8	240W	Unmanaged Web-smart		
<b>EX17162A EX17162</b>	16	-	-	2	-	2	16	240W	Unmanaged Web-smart		
<b>EX17242</b>	24	-	-	2	-	2	24	370W	Web-smart		
<b>EX26262F</b>	-	-	-	24	-	2	24	370W	Managed		

EtherWAN's Power over Link technology delivers power and data over one single cable between two remote locations. This cable may be a coaxial cable or a twisted pair i.e. a phone cable. EtherWAN's Power over Link extender system consists a pair of devices, allowing the user to connect any PoE powered device to an Ethernet network without worrying about power source at the PD side.

## Featured Products

<b>ED3538</b>	Hardened 10/100BASE-TX PoL/PoE Ethernet Extender over Copper Wires	<b>D</b>
<b>ED3638</b>	Hardened 10/100BASE-TX PoL/PoE Ethernet Extender over Coaxial Cable	<b>D</b>
<b>ED3238</b>	10/100BASE-TX IEEE 802.3af PoE Ethernet Extender over Coaxial Cable	<b>P R W</b>

**D**DIN-Rail **P**Panel Mount **R**Rack mount **W**Wall mount

## Product Highlights

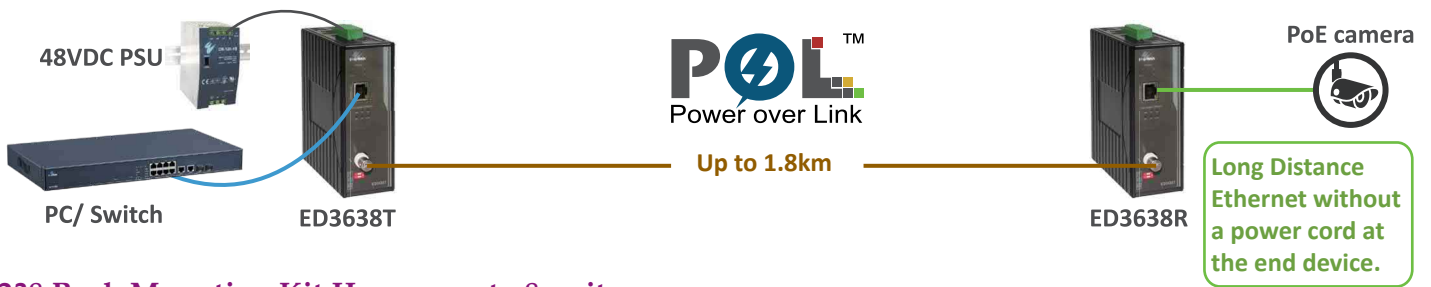
Model	RJ45 Interface		Extender Interface		Max. Distance	Max. Bandwidth	PoE	Operating Temp.
	100BASE	RJ11	Terminal Block	BNC				
<b>ED3538</b>	1	1	1	-	2.2km (7217ft)	100Mbps	30W IEEE 802.3at PSE	-40 ~ 75°C
<b>ED3638</b>	1	-	1	1	2.4km (7874ft)	100Mbps	30W IEEE 802.3at PSE	-40 ~ 75°C
<b>ED3238</b>	1	-	-	1	250m (802ft) Based on RG11	100Mbps	15.4W IEEE 802.3af PSE	-10 ~ 50°C

\*PoL Extender Series work in a pair, by the power Transmitter of PoL and the power Receiver of PoL

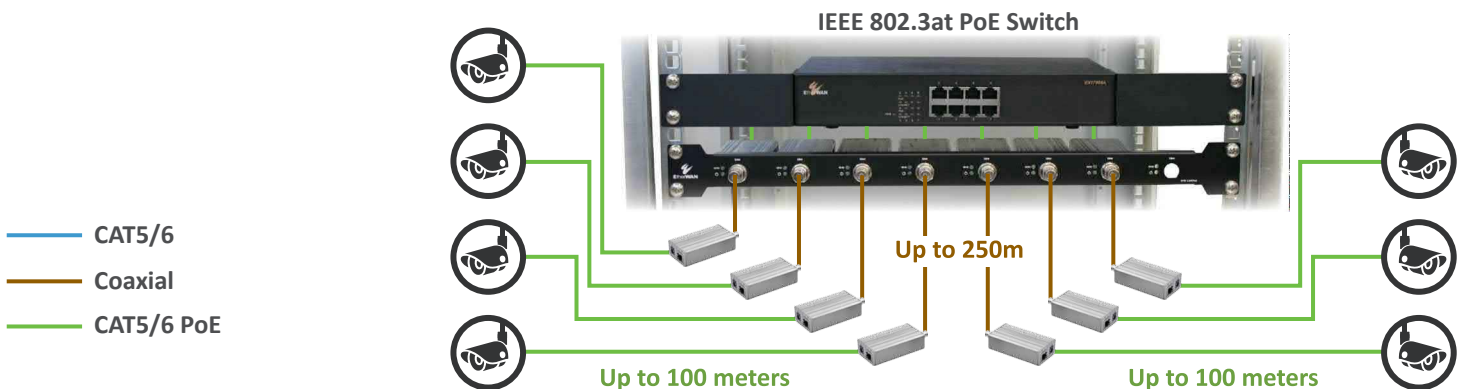
## Power over Link Performance (no PSU is attached to the Receiver)

Data rate	ED3538 (Based on a pair of 24AWG copper wire)		ED3638 (Based on a RG6 coaxial cable)		ED3238 (Based on a RG6 and RG11 coaxial cables)	
	Distance	Output Power	Distance	Output Power	Distance	Output Power
<b>100Mbps</b>	300m (984ft)	30.0W	400m (1312ft)	30.0W	180m (590ft) ... RG6 250m (820ft) ... RG11	15.4W
<b>80Mbps</b>	400m (1312ft)	15.4W	600m (1968ft)	15.4W	-	-
<b>60Mbps</b>	600m (1968ft)	14.0W	800m (2624ft)	15.4W	-	-
<b>40Mbps</b>	1km (3280ft)	7.0W	1.2km (3937ft)	8W	-	-
<b>20Mbps</b>	1.2km (3937ft)	5.0W	1.6km (5249ft)	6W	-	-

### Connection Example of ED3638:



### ED3238 Rack Mounting Kit Houses up to 8 units:





# Ethernet Extenders



## Product Highlights

Model	RJ45 Interface		Extender Interface			Max. Distance	Max. Bandwidth	Power Input	Operating Temp.	Installation
	100BASE	1000BASE	RJ11	Terminal Block	BNC					
<b>ED3501</b>	1		1	1	-	2.6km (8530ft)	100Mbps	12VDC by AC/DC PSU adapter	-10 ~ 60°C	(D) (R)
<b>ED3541</b> ISA12.12.01	1		1	1	-	2.6km (8530ft)	100Mbps	12-48VDC	-40 ~ 75°C	(D)

\*The extender series work in a pair, and operate as either a remote or local unit through DIP-switch configuration



# Surge Protectors



## Product Highlights

Model	Total Surge Current (8/20) $\mu$ s	Max. Continuous Operating Voltage Uc	Max. Continuous Operating Voltage Uc (PoE)	Nominal Pulse Current Ian (Core-Core)	Nominal Pulse Current Ian (Core-Earth)	Connector Input/Output
<b>PD1041</b> IEC61643-21 UL497B	10KA	$\leq 3.3$ VDC	$\leq 3.3$ VDC ( $\pm 60$ VDC/PoE+)	100A (8/20) $\mu$ s $\leq 40$ A (10/700) $\mu$ s	2KA (8/20) $\mu$ s Signal Pair $\leq 160$ A (10/700) $\mu$ s	RJ-45/RJ-45
<b>PD3041</b> IEC61643-21 UL497B	10KA	$\leq 185$ VDC	N/A	5KA (8/20) $\mu$ s 150A (10/700) $\mu$ s $\leq 100$ A (10/1000) $\mu$ s	5KA (8/20) $\mu$ s 150A (10/700) $\mu$ s $\leq 100$ A (10/1000) $\mu$ s	RJ-11 Terminal Block/ RJ-11 Terminal Block



# Media Converters

## Product Highlights

Model	RJ45 Interface		Fiber Interface		PoE	Power Input	Operating Temperature	Installation
	100BASE	1000BASE	100BASE	100/1000 Dual Rate				
<b>EL2242</b>	-	1	-	1 (SFP)	IEEE 802.3at PSE	48-57VDC	-40 ~ 75°C	(D)
<b>EL1032T</b>	1	-	1	-	IEEE 802.3at PSE	48-57VDC	-10 ~ 60°C	(P) (R) (W)
<b>EL2315</b>	-	1	-	1 (SFP)	-	12VDC to AC PSU	0 ~ 50°C	(P) (R) (W)
<b>EL100</b>	1	-	1	-	-	12VDC to AC PSU	0 ~ 45°C	(P) (R) (W)
<b>EL2211</b>	-	1	-	1 (1000BASE)	-	12VDC to AC PSU	0 ~ 50°C	(P) (R) (W)
<b>EL1142</b>	2	-	2	-	-	12-48VDC	-40 ~ 75°C	(D)
<b>EL8000</b>	-	1	-	1 (1000BASE)	-	12-48VDC	-40 ~ 75°C	(D)

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