EtherWAN

Ethernet Connectivity

for Rolling Stock & Stations

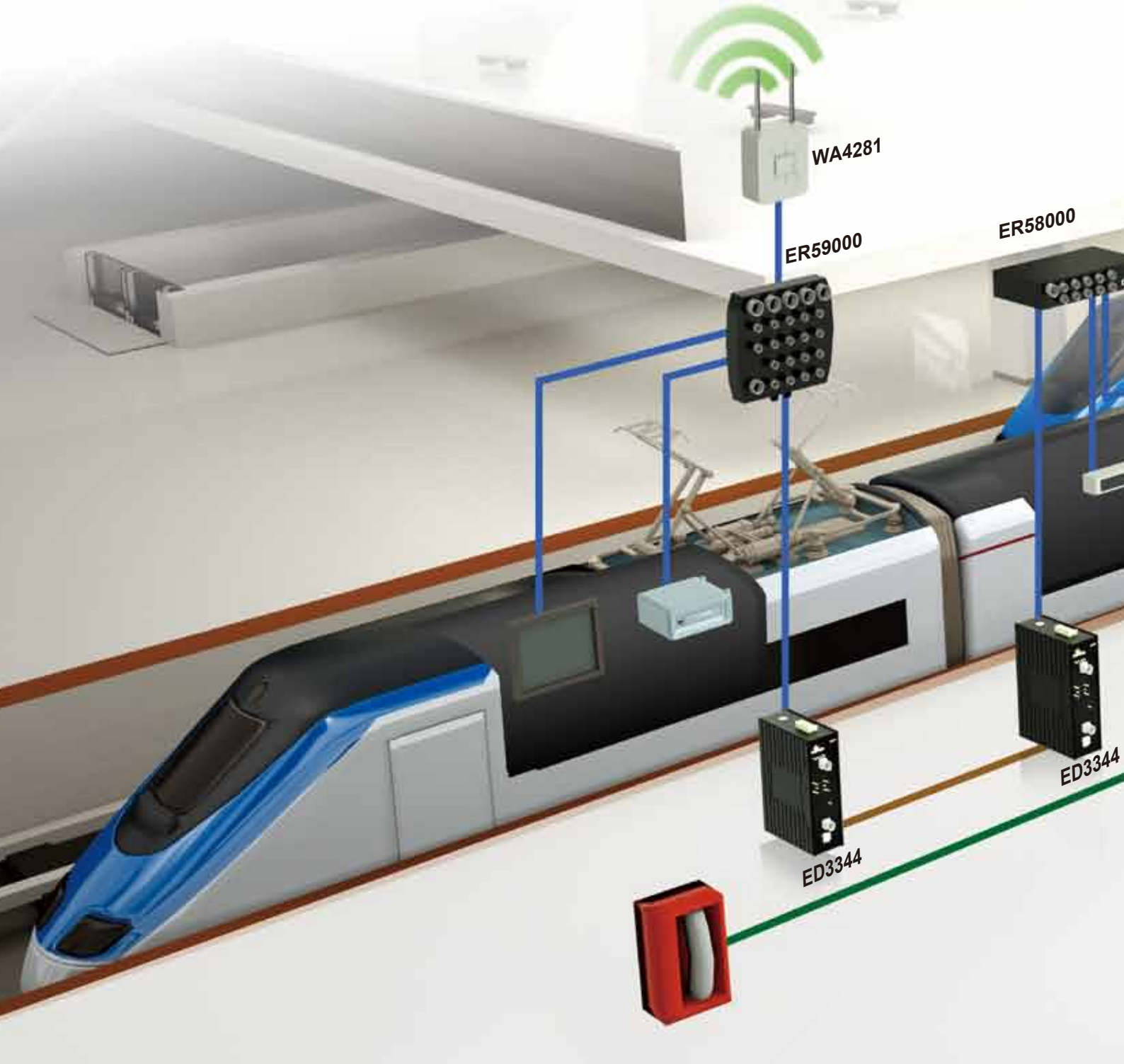
Technology | Application | Product

- EN50155 / EN50121-4 compliant
- IP65 / IP67 / IP68 hardened design
- Field proven technology

- Modulized
- M12 Ethernet Extenders
- M12 Managed Ethernet Switches
- Hardened Media Converters
- Hardened Serial Device Servers
- Dual Radio Wireless Access Points

Communications *between railway stations and railway network elements are vital for uninterrupted and safe operation of railways.*

EtherWAN provides cost-effective solutions for the data communication needs of the railway industry targeting to MRT (Mass Rapid Tansit), LRT (Light Rail Transit), and Trams. The EN50121-4 products meet railway immunity standard to be used in the trackside network. The EN50155 compliant products are ruggedized for rolling stock applications. With both wired and wireless solutions, EtherWAN's products are connecting to IP-based control devices to manage signaling, detect status, monitor environments then distribute information to public.



EN50121-4
Related products

EX89000 ◆
Modulized Managed Hardened 24-port 10/100BASE and 4-port Gigabit Ethernet Switch with SFP options

EX29000 ◆
Modulized Managed 24-port 10/100BASE and 4-port Gigabit Ethernet Switch with SFP options

EX87000 ◆
Managed Hardened 24-port 10/100BASE and 4-port Gigabit Ethernet Switch with SFP options

EX27000 ◆
Managed 24-port 10/100BASE and 4-port Gigabit Ethernet Switch with SFP options

EX83000 ◆
Managed Hardened 16-port 10/100BASE with 2-port Gigabit combo Ethernet Switch

EX71000 ◆
Managed Hardened 8-port 10/100BASE and 2-port Gigabit Ethernet Switch with SFP options

EX47000 ◆
Unmanaged Hardened 8-port 10/100BASE Ethernet Switch

EL1141 ◆
Hardened 10/100BASE-TX to 100BASE-FX Media Converter

◆ -10°C to 60°C Operating temperature
◆ -40°C to 75°C Operating temperature

EtherWAN offers a series of EN50155 compliant products

designed to meet the European Standard for electronic equipment used in Railway applications.

The design covers requirements of power input, electromagnetic compatibility, mechanical, thermal (temperature and humidity), and isolation. To guarantee the best system availability and reliability, EtherWAN chooses the M12 connectors, featured a stainless steel thread and a coupling nut, from the 1st-tier industry leading provider with premium quality. Each build-in M12 connector is designed for outdoor use, and are guaranteed to provide dependable, reliable connections at extreme conditions.

EN50155
Related products

ER59000
IP67 M12 Managed Hardened 16-port
10/100BASE-TX + 2-port Gigabit Ethernet Switch

- Features STP/RSTP & α-ring for redundancy with recovery time <15ms
- Fully managed, Console, Web, Telnet, RMON, SNMP, and TFTP
- Wall mount installation

ER58000 PoE
M12 Managed Hardened 8-port 10/100BASE PoE
with 2-port Gigabit Ethernet Switch

- Features STP/RSTP & α-ring for redundancy with recovery time <15ms
- Fully managed, Console, Web, Telnet, RMON, SNMP, and TFTP
- Panel mount installation

ER54000 PoE
Hardened Web-Smart 5-port 10/100BASE PoE
Ethernet Switch

- Flexible port combination with copper, M12 or LC fiber optic interface
- System, IP configuration, port-based VLAN and QoS priority setting thru web browser

ER51000 PoE
Hardened unmanaged 5-port 10/100BASE
PoE Ethernet Switch

- Flexible port combination with copper, M12 or LC fiber optic interface
- Supports redundant dual DC terminal block and DC jack for power input

ED3344
Hardened 10/100BASE-TX M12 Ethernet Extender
over Coaxial Cable

- Ten speeds each with speed indicator LED on the front panel
- Ethernet Extender Port: Symmetrical on the VDSL, High-speed Full duplex link over existing coaxial cable
- 85Mbps@about 200meters / 1Mbps@about 2,600meters
- Support DIP switch to select Local or Remote
- Operate in pair with ED3331, ED3341, ED3344 and ED3371

ED3341
Hardened 10/100BASE-TX Ethernet Extender
over Coaxial Cable

- Ten speeds each with speed indicator LED on the front panel
- Ethernet Extender Port: Symmetrical on the VDSL, High-speed Full duplex link over existing coaxial cable
- 85Mbps@about 200meters / 1Mbps@about 2,600meters
- Support DIP switch to select Local or Remote
- Operate in pair with ED3331, ED3341, ED3344 and ED3371

How do we make the difference?

1. α-ring for quick redundant protocol with recovery time < 15ms
2. α-chain provides redundant solutions for PLC chain or other Ethernet switches even not with EtherWAN's α- Ring
3. LAN by pass fault-tolerance feature to ensure essential business communications in the event of power outage
4. -40°C~75°C operating temperature range (tested @ 85°C)
5. Design to resist high ESD for the best reliability in harsh environments
6. Modular design with various combinations of 24-Port 10/100BASE and 4-port Gigabit
7. Versatile methods of data transmission in wired or wireless
8. Various transmission media from CAT5e/6, twisted pair, coaxial cable to fiber optics
9. Redundant power inputs and relay contact design for alarm connections
10. Ease of installation for rack-mount, DIN-rail mount, wall-mount, panel-mount and even standalone

You might also want to know-

WA4271
Industrial IP65 Dual Radio
Multi-function PoE Wireless Device

- Operating temperature -20°C to 70°C

WA4281
Hardened IP68 Dual Radio
Multi-function PoE Wireless Device

- Operating temperature -30°C to 80°C

(WA4271) (WA4281)

- IEEE 802.11 a/b/g with MESH, Bridge and Routing support
- One IEEE802.3af PoE/PD port and one PoE/PSE port (7W) for PoE device connections





Model Name	EX71000	EX83000	EX27000 / EX87000	EX29000 / EX89000	EX47000
Interface					
Max. 10/100BASE Ports	8	16	24	24	8
Max. 10/100/1000BASE Ports	2	2	4	4	-
Max. PoE Ports	-	-	-	-	-
Max. 100BASE SFP	4	-	24	-	-
Max. 1000BASE SFP	2	-	4	4	-
Machanical					
Installation*	D, P, R	D, P, R	R	R	D, P
Dimensions (WxDxH mm)	60x125x145	84x125x145	Single Power: 442x250x44 Dual Power: 442x375x44	442x343x44.2	60x125x145
Dimensions (WxDxH inch)	2.36"x4.92"x5.7"	3.3"x4.92"x5.7"	Single Power: 17.4"x9.8"x1.74" Dual Power : 17.4"x14.7"x1.74"	17.4"x13.5"x1.74"	2.36"x4.92"x5.7"
Power Input					
No. of Power Input	3	3	1 or 2	1	3
110 - 240VAC	-	-	✓	✓	-
Terminal Block	12 - 48VDC	12 - 48VDC	± 48VDC, 88 - 370VDC	± 48VDC, 88 - 370VDC	12 - 48VDC
DC Jack	12VDC	12VDC	-	-	12VDC
Operating Temperature	-40°C - 75°C	-40°C - 75°C	-10°C - 60°C / -40°C - 75°C	-10°C - 60°C / -40°C - 75°C	-40°C - 75°C
Network Redundancy					
α-Ring / α-Chain	✓	✓	✓	✓	-
STP / RSTP / MSTP	✓	✓	✓	✓	-
Network Mgnt & Ctrl					
	VLAN, QoS, IGMP, GMRP, Bandwidth Rate Control, LACP, Port Trunking, Port Mirroring, Packet Filtering, IEEE802.1x Security, DHCP Server, DHCP Client, SNMP (v1, v2c, v3), RMON, Web Management, Telnet Management, RS-232 Console Management, SSH / SSL				-
Regulatory Approvals					
CE / FCC / VCCI	✓	✓	✓	✓	✓
UL508	✓	✓	-	-	-
EN50155	-	-	-	-	-
EN50121-4	✓	✓	✓	✓	✓







Model Name	ED3341	ED3344	EL1141
Interface			
Max. 10/100BASE Ports	1	1 (M12)	2
Max. Extender Ports	1 (BNC)	1 (BNC)	-
Max. 100BASE FX	-	-	1
Machanical			
Installation*	D, P, R	D, P, R	D, P, R
Dimensions (WxDxH mm)	50x110x135	50x110x135	50x110x135
Dimensions (WxDxH inch)	1.97"x4.33"x5.31"	1.97"x4.33"x5.31"	1.97"x4.33"x5.31"
Power Input			
No. of Power Input	3	3	3
Terminal Block	12 - 48VDC	12 - 48VDC	12 - 48VDC
DC Jack	12VDC	12VDC	12VDC
Operating Temperature	-40°C - 70°C	-40°C - 75°C	-40°C - 75°C
Regulatory Approvals			
CE / FCC / VCCI	✓	✓	✓
UL508	✓	✓	✓
EN50155	✓	✓	-
EN50121-4	✓	✓	✓

Model Name	ER59000	ER58000	ER54000	ER51000
Interface				
Max. 10/100BASE Ports	16	8	5	5
Max. 10/100/1000BASE Ports	2	2	-	-
Max. PoE Ports (optinal)	8	8 (30W)	4 (30W)	4 (30W)
Max. 100BASE SFP	-	-	-	-
Max. 1000BASE SFP	-	-	-	-
Machanical				
Installation*	W	P	K	K
Dimensions (WxDxH mm)	258x228x117	288x161.5x64	235x125x50	235x125x50
Dimensions (WxDxH inch)	10.15"x8.97"x4.6"	11.3"x6.4"x2.5"	9.25"x4.92"x1.97"	9.25"x4.92"x1.97"
Power Input				
No. of Power Input	2	2	3	3
110 - 240VAC	-	-	-	-
Terminal Block	M23 (12 - 48VDC or 18 - 30VAC)	M23 (22 - 57VDC)	24 - 48VDC	24 - 48VDC
DC Jack	-	-	55VDC	55VDC
Operating Temperature	-40°C - 75°C	-40°C - 75°C	-40°C - 75°C	-40°C - 75°C
Network Redundancy				
α-Ring / α-Chain	✓	✓	-	-
STP / RSTP / MSTP	✓	✓	-	-
Network Mgnt & Ctrl				
	Management	Management	Web Management	-
Regulatory Approvals				
CE / FCC / VCCI	✓	✓	✓	✓
UL508	-	-	-	-
EN50155	✓	✓	✓	✓
EN50121-4	-	-	-	-

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

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