



Ethernet Connectivity

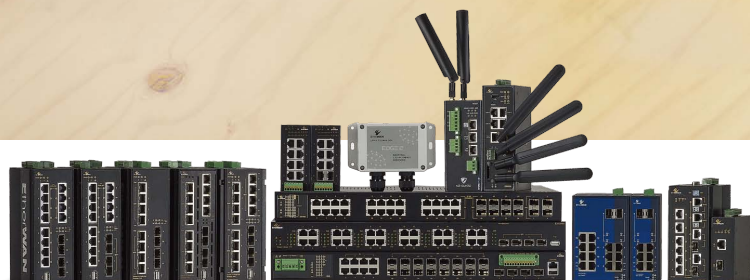
For Energy & Utility

Technology

Application

Product

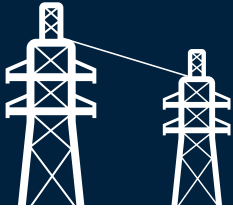
- UCAlug Class A Lab Certified IEC 61850-3 Edition 2
- Time Synchronization with IEEE1588 Performance



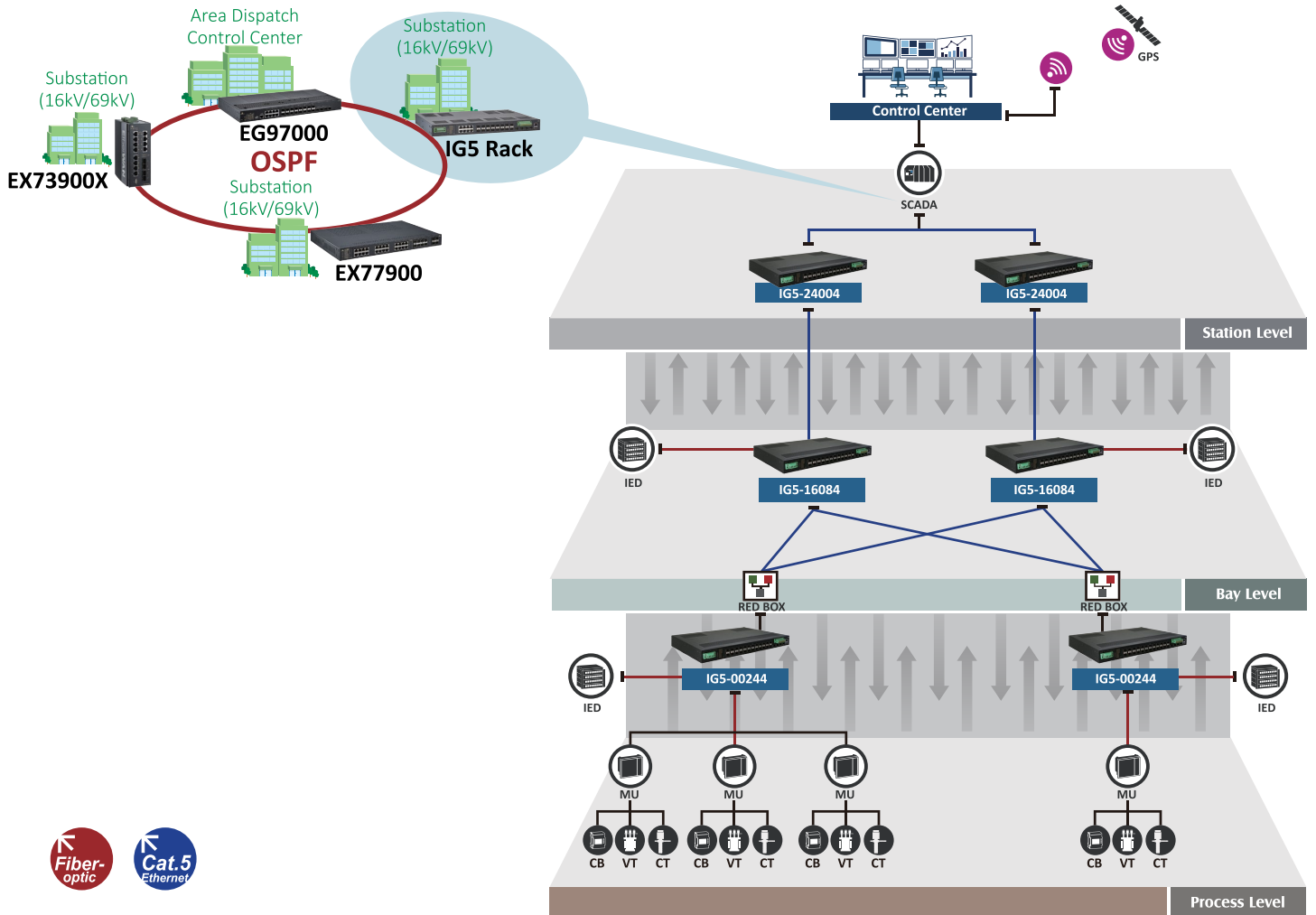
All Powered by EtherWAN Energy Solutions

- Hardened Managed Ethernet Switches
- Industrial LTE Cellular Gateway
- Hardened Media Converters

Power Substation



EtherWAN offers multiple options for mission-critical power substation applications. These hardened switches offer a high level of immunity to electromagnetic interference, and offer the port density, Layer 3 features, and long-term high performance required for this critical infrastructure.



EG97000

Hardened Managed 8-port 10/100/1000BASE-T +16-port 100/1000BASE SFP +4-port 10G SFP+ Layer 3 Ethernet Switch

- Hardened Specifications for power station environments
- Layer 3 Scalability and Intelligent Security Management
- Better network connectivity and high bandwidth uplinks (10G)

EX73900X

Hardened Managed 12-Port Gigabit and 4-Port 10G SFP+ Lite Layer 3 Ethernet Switch

- Up to 4 dual rate 1G/10G SFP+ uplinks for fiber connections
- Supports static routes, RIP v1/v2, and VRRP
- 2 digital inputs and 2 relay outputs for alarm system
- IEC 61850-3/IEEE 1613 and EN 50121-4 compliance

IG5 Rack

Hardened Managed 24-port 10/100/1000BASE and 4-port 1G/10G Ethernet Switch with SFP options

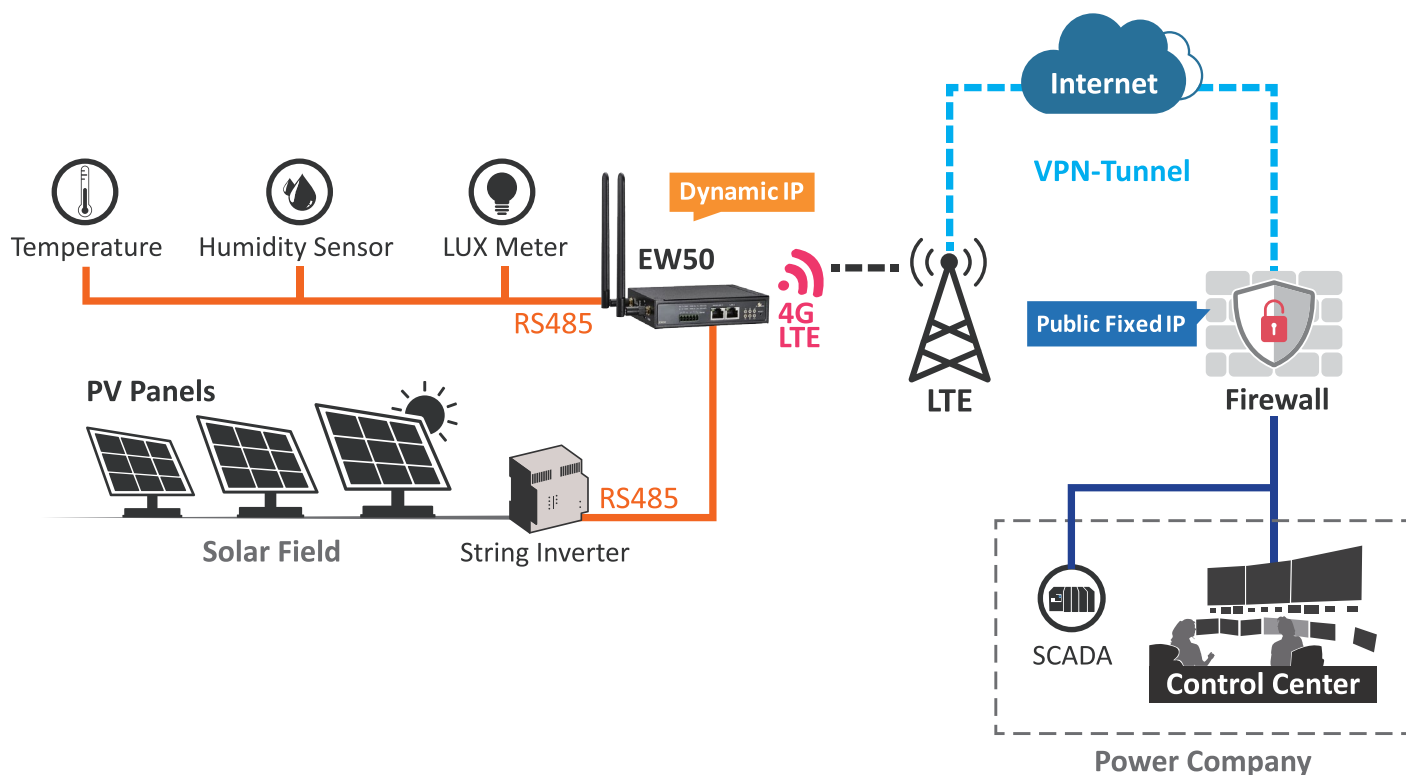
- Supports IEEE 1588v2 time stamped
- Providing effective modularity through a wide range of port combinations
- IEC 61850-3/IEEE 1613 and EN 50121-4 compliance



Solar Power



Solar power systems are the most environmentally-friendly type of power plant, as they generate electricity with emitting greenhouse gases. EtherWAN's hardened managed switches have the long-distance fiber connectivity needed in these sprawling facilities, and are perfect for connecting sensors, tracking systems, and power meters. EtherWAN's industrial LTE gateway provides added network connection to the Cloud or to a control center.



EW50

Industrial LTE Cellular Gateway

- Global LTE and High Performance Wi-Fi
- Comprehensive data security
- Integrated event engine
- Ruggedized, industrial grade form factor



EW200

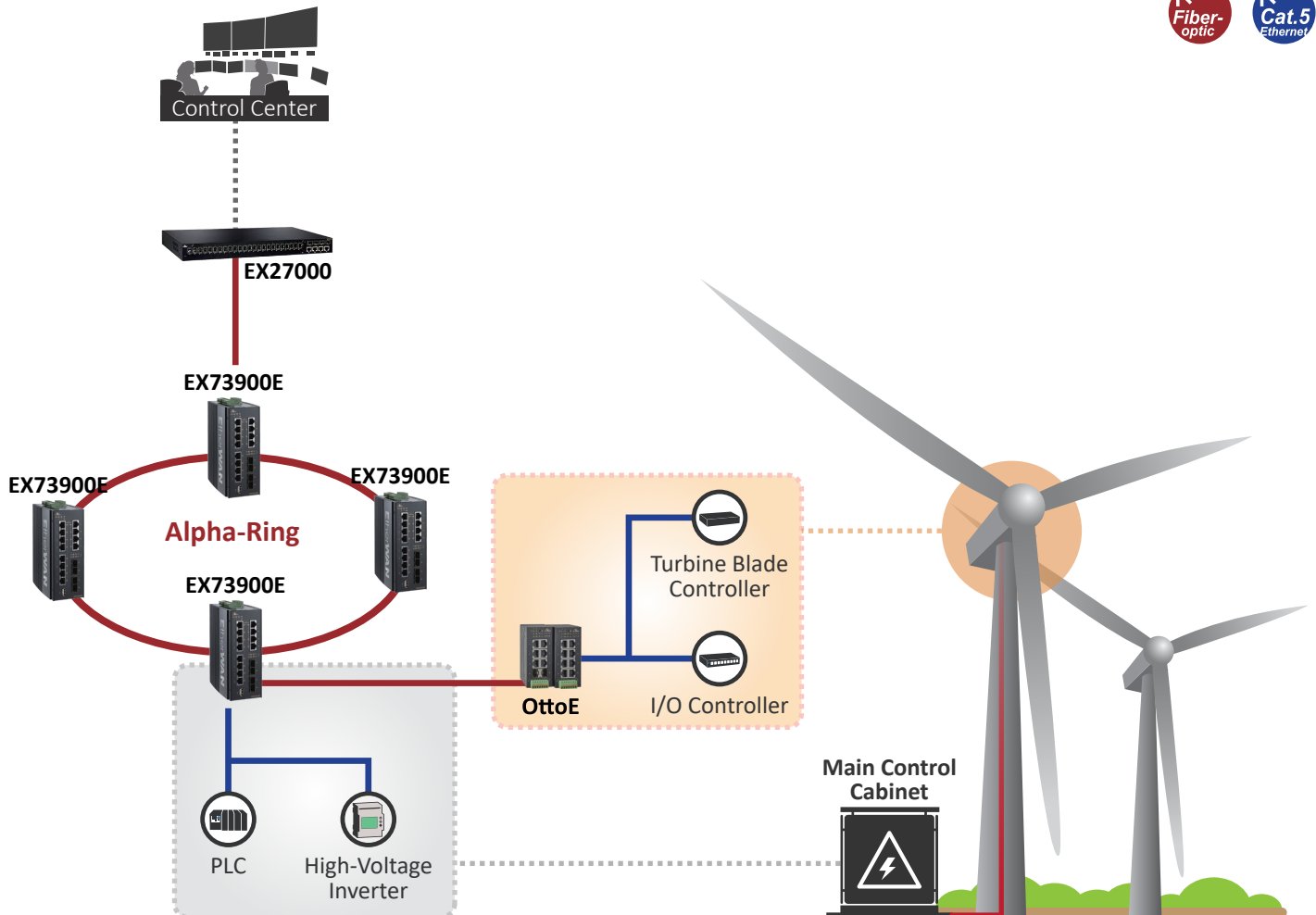
Industrial LTE Cellular Gateway/with IEEE 802.11 a/b/g/n/ac Wi-Fi Gateway

- Global LTE and High Performance Wi-Fi
- Comprehensive data security
- Integrated event engine
- Ruggedized, industrial grade form factor



Wind Power

Wind towers are widely spaced, and require conversion of copper Ethernet signals to fiber. EtherWAN offers a comprehensive selection of both managed and unmanaged switches with a variety of form factors to suit almost all wind generating applications. Further reliability is added through EtherWAN's proprietary Alpha-ring redundancy protocol, which minimizes downtime in case of a link failure.



EX27000

Industrial Managed 8 to 24-port 10/100BASE and 4-port Gigabit Ethernet Switch with SFP options

- Compliant with IEC 61850-3 & IEEE 1613, and EN 50121-4 standards
- Supports AC Inlet and DC Terminal Block
- Supports -10 to 60°C (14 to 140°F) operating temperature



OttoE Series

Industrial Unmanaged 8-port Fast/Gigabit Ethernet Switch

- Supports -10 to 60°C (14 to 140°F) operating temperature
- Up to two 100/1000BASE SFP option
- Supports QoS PROFINET (TG100), EtherNet/IP



EX73900E

Hardened Managed 10 to 16-Port Gigabit Lite Layer 3 Ethernet Switch

- Dual rate 100/1000BASE SFP ports for fiber connections
- Integrated with 2 digital inputs and 2 relay outputs for alarm system
- IP40 Protection level
- IEC 61850-3/IEEE 1613 and EN 50121-4 compliance



IEC 61850-3

IEC 61850-3
EN 50121-4IEC 61850-3
EN 50121-4IEC 61850-3
EN 50121-4IEC 61850-3
EN 50121-4

60/90W PoE

EN 50121-4



Model Name	EX77900	EX73900E/X	IG5 Rack	EX87000	EX27000	EX78900E/X	SmartE	OttoE
Interface								
10/100BASE Ports	-	-	-	24	24	-	5, 8, 16	8
10/100/1000BASE Ports	24	8/12	24	4	4	8/12	8, 16	8
1G/10G SFP+ Ports	4	2, 4	4	-	-	4	-	-
Power Input								
No. of Power Inputs	1 or 2	2	2	1 or 2	1 or 2	2	2	2
110 - 240VAC	√	-	√	√	√	-	-	-
Terminal Block	±48VDC	12- 48VDC	±48VDC, 88- 370VDC	±48VDC, 88- 370VDC	±48VDC, 88- 370VDC	52- 57VDC	12- 57VDC	9- 55VDC
Mechanical								
Installation*	R	D, P	R	R	R	D, P	D, P	D
Dimensions (mm) (W x D x H)	442 x 375 x 44	72 x 140 x 170	442 x 325 x 44	442 x 284 x 44 442 x 375 x 44	442 x 343 x 44 442 x 375 x 44	72 x 140 x 170	5/8-port: 45 x 125.5 x 130 16-port: 85 x 125.5 x 130	45 x 75 x 100
Operating Temperature	-40 to 75°C	-40 to 75°C	-40 to 75°C	-40 to 75°C	-10 to 60°C	-40 to 75°C	-40 to 75°C	-10 to 60°C
Network Redundancy								
Alpha-Ring / Alpha-Chain	√	√	√	√	√	√	LTS/FRD	-
STP / RSTP	√	√	√	√	√	√	√	-
Network Management & Control								
Layer 2	√	√	√	√	√	√	√	-
Layer 3 Routing	√	√	√	-	-	√	-	-
Regulatory Approvals								
CE / FCC / VCCI	√	√	√	√	√	√	√	√
IEC 61850-3 / IEEE 1613	√	√	√	√	√	-	-	-
EN 50121-4	-	√	√	√	√	√	-	√

IEC 61850-3
EN 50121-4

Model Name	EL1141	Model Name	EW50	EW200
Interface		Wireless-Cellular (WAN)		
Max. 10/100BASE Ports	2	Cellular Data Rate (Max.)	4G LTE: LTE FDD: 150Mbps down; 50Mbps up / LTE TDD: 130Mbps down; 35Mbps up 3G: WCDMA: 42Mbps down; 5.76Mbps up 2G: GSM/EDGE: 236.8Kbps down & up	
Power Input		LTE Modem	1	1
No. of Power Inputs	3	SIM Slot	2	2
Terminal Block	12- 48VDC	Antenna Connector	2 x SMA Female	2 x SMA Female
DC Jack	12VDC	Ports		
Mechanical		Ethernet Ports	2 x RJ-45 GE	4 (5) x RJ-45 GE
Installation*	D	Digital I/O	1 x DI ("Logic 0": 0- 2V, "Logic 1": 5V- 30V), 1 x DO (Relay Mode, up to 30V / 1A)	
Dimensions (mm) (W x D x H)	50 x 110 x 135	Serial Port	2 x RS-232 / RS-485 (4-pin Terminal Block)	1 x RS-232 / RS-485 (4-pin Terminal Block)
Operating Temperature	-40 to 75°C	Log Storage	1 x Micro-SD, 1 x USB 2.0	1 x USB 2.0
Network Redundancy		Power Source	1 x DC 9V- 36V (Max. 7W)	2 x DC 12V- 48V (Max. 25W)
Alpha-Ring / Alpha-Chain	-	Mechanical		
STP / RSTP / MSTP	-	Installation*	D	D
Regulatory Approval		Dimensions (mm) (W x D x H)	31 x 99 x 131 (w/o mounting kit) 31 x 108 x 131 (with DIN-Rail kit)	62 x 125 x 160 (w/o mounting kit) 62 x 135 x 160 (with DIN-Rail kit)
CE / FCC / VCCI	√	Operating Temperature	-30 to 70°C	-30 to 70°C
UL 508	√	Regulatory Approval		
UL 60950	-	FCC / CE / VCCI / NCC / RCM / NBTC	√	CE / NCC BSMI / NBTC
IEC 61850-3 / IEEE 1613	IEC 61850-3	EN 60950 / EN 62368	√	√
EN 50121-4	√			

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

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