User manual

Hardened Industrial 16 port Gigabit PoE Switch, 16 x 10/100/1000 TX 30W PSE, 48-56VDC input voltage, operating temp.: -40°C to $+75^{\circ}\text{C}$

FCC MARKING

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55032/35 class A for ITE, the essential protection requirement of Council Directive 2014/30/EU on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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Trademarks:

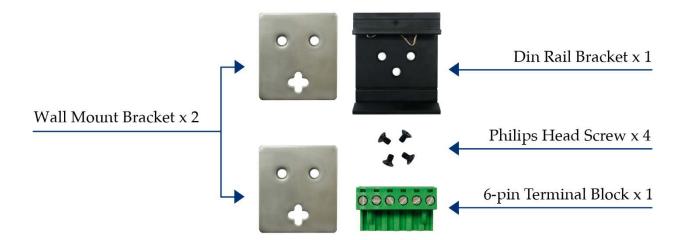
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Introduction:

This Industrial PoE switch is designed with Hardened Ethernet controller and Hardened PoE controller to ensure performance in harsh environment. It is equipped with 16 ports 30Watts Giga TX PSE and can deliver up to 300Watts of power to your PD devices. All ports are independent, with a total of 16 ports for easy expansion of your network application. With our Cold-Design technology, it will not only power up your PD but also reduce its excessive heat to a minimum. It has been rigorously tested for your security, surveillance, and telco applications.

Installation package:

This unit can be wall mounted or din-rail mounted. Wall mount brackets and din-rail bracket are included.



Power connection

This unit provides a 6 pin terminal block. PoE functions can be operated from 48-56VDC power input. Always make sure your input voltage is within this supported voltage range for each model.

<u>WARNING</u> – any exceeded input voltage will not make this unit function and may damage this unit.

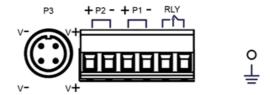
This unit comes with 3 power input sources. P1, P2, and P3.

To connect power: Follow the printed polarity for P1+, P1-, P2+, P2-, and ground. Connect positive wires to P1+ and/or P2+, connect negative wires to P1- and/or P2-, and connect the neutral wire to the ground screw as shown.

Power DIN: This unit contains an extra P3 port for power DIN. This power DIN can power the unit via external power adapter.

Relay: This unit includes an additional 24V@1A relay circuit for special purpose. When 2 powers are connected, the relay is in OPEN mode. If only one of the power sources is connected, the relay changes to SHORT mode. This relay will only work with P1 and P2. It is independent from P3.

Power connecting procedure:



STEP 1 – Pull out 6 pin terminal block.

STEP 2 – Connect wire to P1+, P1-, P2+, P2-, and the neutral wire to the ground screw.

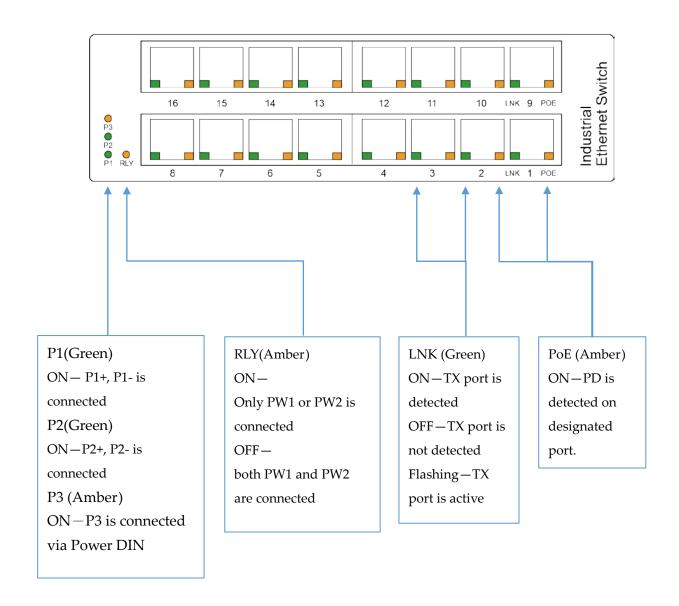
STEP 3– Plug connected 6 pin terminal block back into place.

Or, Connect the P3 power DIN from external power adapter.

WARNING -- Always SHUT OFF power source to connect power wire.

<u>WARNING</u> -- Always ground the power source to maintain a clean power input. Cheaply made power supplies create too much noise and will cause the power input to fluctuate when connected to this unit. To avoid this, always ground the power source to maintain a clean power input.

LED indicator



Specification

IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet
TERRI COR O. I. ACCORD. T. Cl I.V. Full
IEEE Standard IEEE 802.3ab 1000Base-T Gigabit Ethernet
IEEE 802.3x Flow Control and Back Pressure
IEEE 802.3af PoE
IEEE 802.3at PoE+
Switch Architecture Back-plane (Switching Fabric): 32Gbps
Data Processing Store and Forward
Flow Control IEEE 802.3x Flow Control and Back Pressure
Jumbo Frame 9KB
MAC address Table Size 8K
Packet Buffer Size 4.1Mbits
16 x RJ-45 10/100/1000BaseT(X) auto negotiation
Network Connector Auto MDI/MDI-X function, Full/Half duplex
16 x Gigabit PoE+ 802.3at/af PSE port, 30W per port
Network Cable UTP/STP Cat.5e or above Cable
EIA/TIA-568 (100m)
Protocol CSMA/CD
PW1 (Green): ON – Power 1 is detected
PW2 (Green): ON – Power 2 is detected
PW3 (Amber): ON—Power 3 is connected via Power DIN
RLY (Amber): ON—Only PW1 or PW2 is connected
OFF—Both PW1 and PW2 are connected
LED TX/RJ-45 port:
LNK (Link/Active) (Green): ON—TX port is detected Flashing—TX data is
transmitting/receiving
PoE (Amber): ON – PD is detected and PSE is activated
OFF—PD is not detected
Reserve Polarity Protection Present
Overload Current Protection Present
Power Supply Redundant Dual DC 48V-56V Power Input
Power Consumption 12.9W@48 VDC full load, Without PoE
Relay outputs with current carrying capacity of 1 A @24VDC
Alarm Relay Contact Relay in open circuit mode when 2 powers are connected. in
short circuit mode when only one power supply is connected

PoE Power	PoE power per port 30watts.	
	Maximum total power 300Watts with 56VDC input, Supports	
	IEEE 802.3af/at	
Removable Terminal Block	Provide 2 Redundant power, Alarm relay contact, 6 Pin	
	Wire range: 0.34mm^2 to 2.5mm^2	
	Solid wire (AWG):12-24/14-22	
	Stranded wire(AWG): 12-24/14-22	
	Torque:5lb-In/0.5Nm/0.56Nm	
	Wire Strip length: 7-8mm	
Operating Temperature	-40°C to 75°C	
Operating Humidity	5% to 95% (Non-condensing)	
Storage Temperature	-40°C to 85°C	
MTBF (mean time between	449,232 hrs (Telcordia (Bellcore), GB) at 50°C	
failure)		
Housing	Rugged Metal, IP30 Protection	
Case Dimension	155 x 48 x 120 mm (LxWxD)	
Installation	DIN Rail Mount or Wall Mount	
Certifications:		
Safety	UL 60950-1	
Safety	LVD (EN 62368-1)	
EMC	CE, FCC, EN55032/35, VCCI	
EMI	CISPR 32, FCC Part 15 Subpart B Class A	
EMS	IEC 61000-4-2 ESD: Contact: 6KV; Air: 8KV	
	IEC 61000-4-4 EFT: Power: 2KV; Signal: 2KV	
	IEC 61000-4-5 Surge: Power: 2KV; Signal: 2KV	
Vibration	EN 60068-2-6	
Shock	EN 60068-2-27	
Free Fall	EN 60068-2-32	

Housing Dimension (mm)

