

User manual

Hardened Industrial 16 port Gigabit PoE Switch, 14 x 10/100/1000M TX 30W PSE + 2 x 1000M SFP,
48-56VDC input voltage, operating temp.: -40°C to +75°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.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

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Introduction:

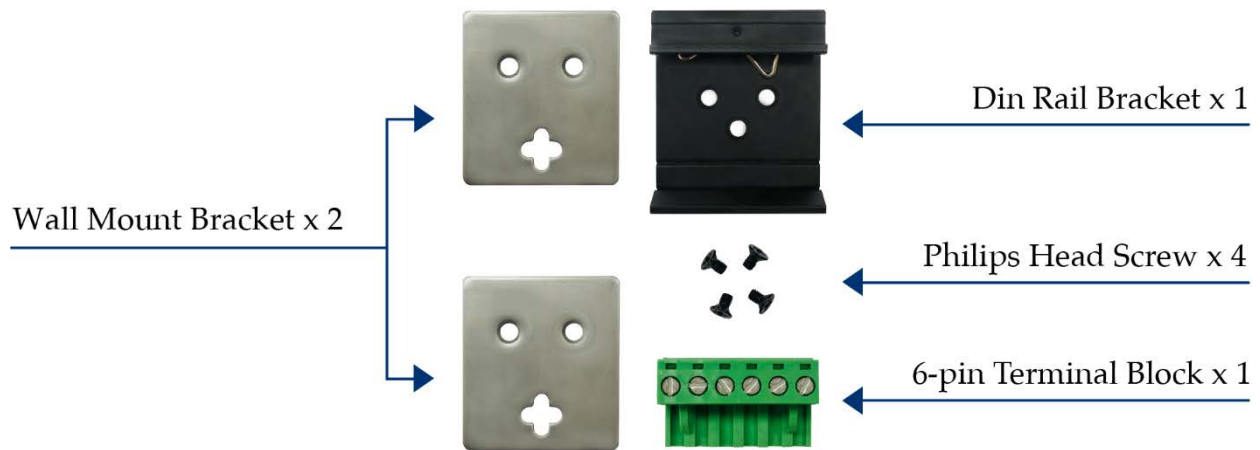
This Industrial PoE switch is designed with Hardened Ethernet and PoE controllers to ensure performance in harsh environment. It is equipped with 14 ports 30Watts Giga TX PSE and can deliver up to 300Watts of power to your PD devices.

All 16 ports are independent and can all be used for easy expansion of your network application. With our unique Cold-Design technology, it will not only power up your PD and also reduce its excessive heat to a minimum.

It has been rigorously tested for your security, surveillance, and telco applications. This unit can also be cascaded/daisy-chained to other devices to cover wider areas through the SFP connection.

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.

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

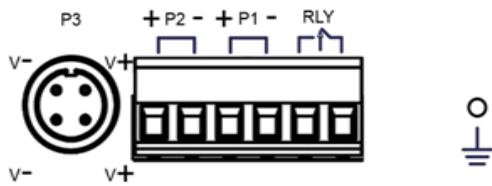
This unit comes with 3 power input sources. P1, P2, and P3.

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.

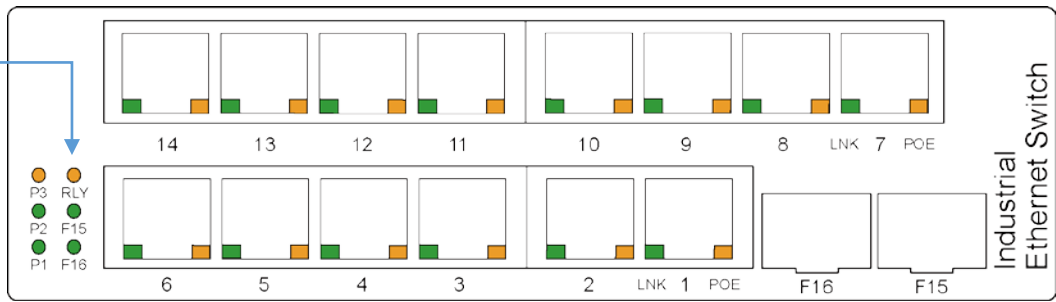
Or, Connect the P3 power DIN from external power adapter.

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

WARNING -- 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

RLY(Amber)
 ON – Only PW1 or PW2 is connected
 OFF-both PW1 and PW2 are connected



P1(Green)
 ON -- P1+, P1- is connected
P2(Green)
 ON -- P2+, P2- is connected
P3 (Amber)
 ON – P3 is connected via Power DIN

F15, F16 (Green)
 ON – F15 or F16 SFP fiber is detected
 OFF – F15 or F16 SFP fiber is not detected.
 Flashing – F15 or F16 SFP fiber is active

LNK (Green)
 ON – TX port is detected
 OFF – TX port is not detected
 Flashing – TX port is active

PoE (Amber)
 ON – PD is detected on designated port.

Specification

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X 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
Network Connector	14 x RJ-45 10/100/1000BaseT(X) auto negotiation, Auto MDI/MDI-X function, Full/Half duplex 14 x Gigabit POE+ 802.3at/af PSE port, 30W per port 2 x SFP 1000M
Network Cable	UTP/STP Cat.5e or above Cable EIA/TIA-568 (100m)
Protocol	CSMA/CD
LED	<p>PW1 (Green): ON – Power 1 is detected PW2 (Green): ON – Power 2 is detected PW3 (Amber): ON – Power 3 is detected for Power DIN RLY (Amber): ON – Connect only PW1 or PW2 OFF – Both PW1 and PW2 are connected</p> <p>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</p> <p>SFP Fiber Per port: F15/F16 (Green) ON – F15 or F16 SFP fiber is detected Flashing – F15 or F16 SFP fiber is active</p>
Reserve polarity protection	Present
Overload current protection	Present

Power Supply	Redundant Dual DC 48V-56V Power Input
Power Consumption	5.76W@48 VDC full load, Without PoE
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC, 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 failure)	504739 hrs (Telcordia (Bellcore), GB) at 50°C
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, EN 55032/35
EMI	CISPR 32, FCC Part 15B 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)

