

# User Manual

**Rugged Industrial 10 port Gigabit PoE Switch, 8 x Gigabit TX 30W PSE + 2 x 1000M TX/ SFP Combo, Input Voltage: 48-56VDC, 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 55032/24 class A for ITE, the essential protection requirement of Council Directive 2014/30/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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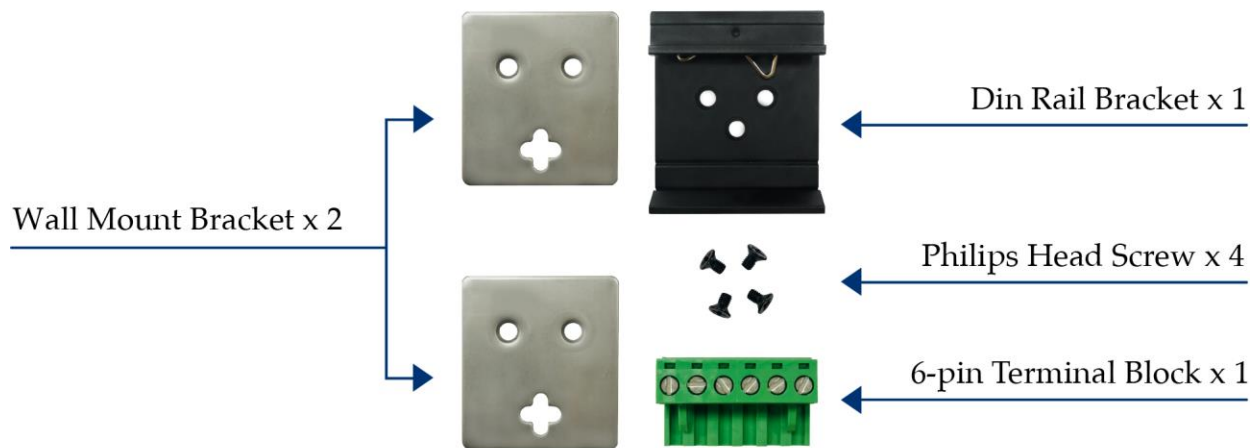
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## Introduction

This rugged 10 port hardened Gigabit PoE switch is designed especially for IP surveillance, traffic monitoring and for a broad range of applications. It accepts 3 power input sources: PW1, PW2, and Power DIN (for external power adapter). It can be used as a stand-alone device for buses, trucks, and other vehicles for surveillance purposes. This unit can also be cascaded/daisy-chained to other devices to cover wider areas through the SFP connection.

## Installation package

This product can be installed by din-rail mounted or wall-mounted. Din-rail brackets and wall-mounted 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.

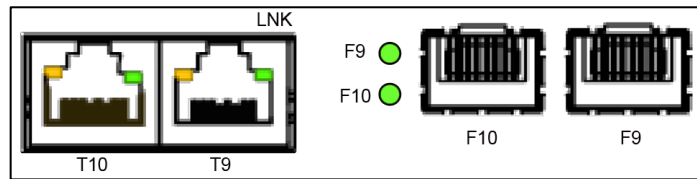
STEP 2 – Connect wire to P1+, P1-, P2+, P2-, and the neutral wire to the ground screw.

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.

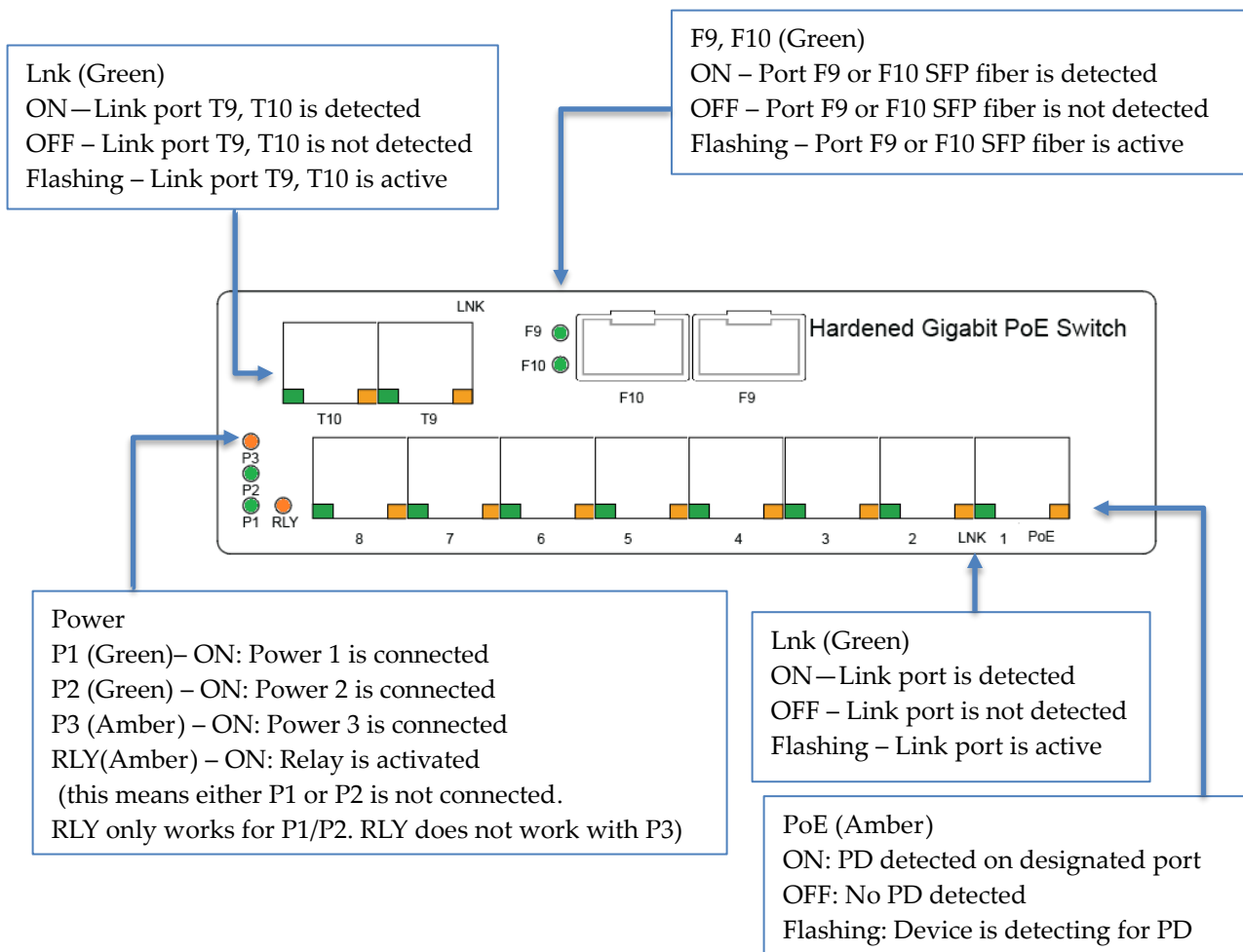
## TX/SFP Combo data connection



For multiple network application, this product provides two Gigabit TX/SFP Combo ports network connection. Because this is a combo port, this means that the F9 and T9 ports are mutually exclusive, and the F10 and T10 ports are mutually exclusive. This means that connecting to the F9 port means T9 will be disabled, connecting to the F10 port means T10 will be disabled, and vice-versa.

**\*Please Do NOT connect all four ports (F9, F10, T9, T10) at the same time. This will NOT work.**

## LED indicator



# Specification

<b>IEEE Standard</b>	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 for PoE IEEE 802.3at for PoE+
<b>Switch Architecture</b>	Back-plane (Switching Fabric): 20Gbps
<b>Data Processing</b>	Store and Forward
<b>Flow Control</b>	IEEE 802.3x Flow Control and Back Pressure
<b>Jumbo Frame</b>	10KB
<b>MAC Address Table Size</b>	11K
<b>Packet Buffer Size</b>	2M
<b>Network Connector</b>	8 x RJ-45 10/100/1000BaseT(X) auto negotiation, 8 x Gigabit POE+ 802.3at/af PSE port, 30W per port Auto MDI/MDI-X function, Full/Half duplex 2 x 1000M TX / SFP combo
<b>Network Cable</b>	UTP/STP Cat.5e or above Cable EIA/TIA-568 10-ohm (100m)
<b>Protocol</b>	CSMA/CD
<b>LED</b>	PW1(Power 1) Green, PW2(Power 2) Green, PW3(Power 3) Amber for Power DIN RLY( Alarm Relay) Amber TX/RJ-45 port: port 1 to port 8 Green --- LNK (Link/Active) Amber - PoE TX/RJ-45 port: port T9 and port T10 Green - LNK (Link/Active) SFP Fiber Per port: Green --- Link/Active
<b>Reserve Polarity Protection</b>	Present
<b>Overload Current Protection</b>	Present
<b>Power Supply</b>	P1 and P2 for Redundant Dual DC 48V-56V P3 for Power DIN to connect external power adapter DC 48-56V For Switch only --- Power input range DC 12-56VDC For PoE --- Power input range 48-56VDC

<b>Power Consumption</b>	5.76W@48 VDC full load, Without PoE
<b>Alarm Relay Contact</b>	Relay outputs with current carrying capacity of 1 A @24VDC, Relay in “open” circuit mode when PW1 and PW2 are connected. in “short” circuit mode when only one power supply is connected
<b>PoE power</b>	Input Voltage 48VDC-56VDC. POE power per port 30watts. Maximum 36Watts with 56VDC input. Maximum total power 240Watts with 56VDC input
<b>Removable Terminal Block</b>	Provide 2 Redundant power, Alarm relay contact, 6 Pin. And circular POWER DIN for power adapter Wire range: 0.34mm <sup>2</sup> to 2.5mm <sup>2</sup> 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
<b>Operating Temperature</b>	-40°C to 75°C
<b>Operating Humidity</b>	5% to 95% (Non-condensing)
<b>Storage Temperature</b>	-40°C to 85°C
<b>MTBF (mean time between failure)</b>	510,889 hrs ( MIL-HDBK-217F) at 50°C
<b>Housing</b>	Rugged Aluminum ,IP30 Protection
<b>Case Dimension (LxWxD)</b>	155 x 48 x 120 mm (LxWxD)
<b>Installation</b>	DIN Rail and Wall Mount options included
<b>Certifications</b>	
<b>Safety</b>	UL 60950-1
<b>Safety</b>	LVD (EN62368-1)
<b>EMC</b>	CE, FCC, EN 55032/24
<b>EMI</b>	CISPR 32, FCC Part 15B Class A
<b>EMS</b>	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
<b>Vibration</b>	EN 60068-2-6
<b>Shock</b>	EN 60068-2-27
<b>Free Fall</b>	EN 60068-2-32

# Housing Dimension (mm)

