RPT-1016G-T-X2

Hardware User Manual

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Contents

Overview

This user manual is for "RPT-1016G-T-X2" with extended operating temperature (-40°C ~ 75°C (-40°F ~ 167°F)). This is an industrial unmanaged gigabit Ethernet switch with the following hardware features:

Interface

- MDI/MDI-X function supported on all copper ports
- Embedded 16x Gigabit Ethernet ports
- Store-and-forward switching architecture

Switch Properties

- Up to 8K MAC Address Table supported
- Up to 4Mbits Packet Buffer supported

Power Input

- Redundant 12-48VDC power

Temperature

- Extended operating temperature: -40°C ~ 75°C (-40°F ~ 167°F)
- Storage temperature: -40°C ~ 85°C (-40°F ~ 185°F)

Mechanical Construction

- Class IP30 protection
- DIN-Rail Mounting

PACKAGE CHECK LIST

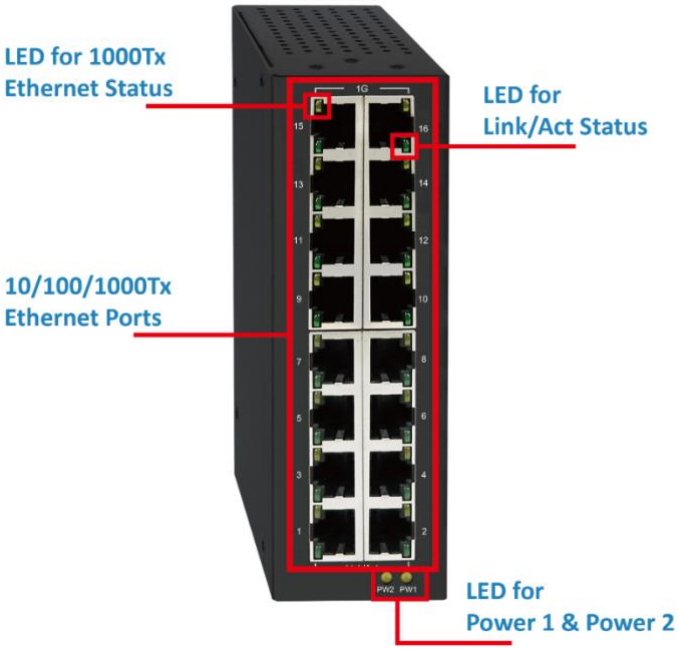
The "RPT-1016G-T-X2" is shipped with the following items. Ensure that all the items are in the box. If any item is missing or damaged, contact us for assistance.

- RPT-1016G-T-X2 switch x 1
- Protective caps for 16x copper ports
- Wall mount brackets and screws (Optional)

Hardware Description

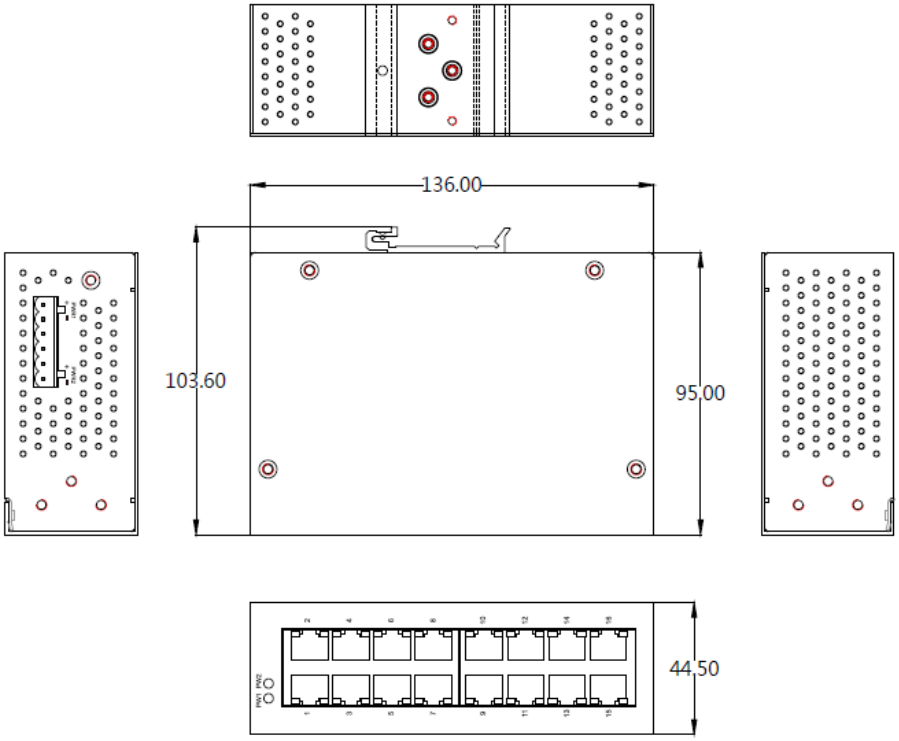
FRONT PANEL INSTRUCTION

The following picture is the front panel for "RPT-1016G-T-X2".

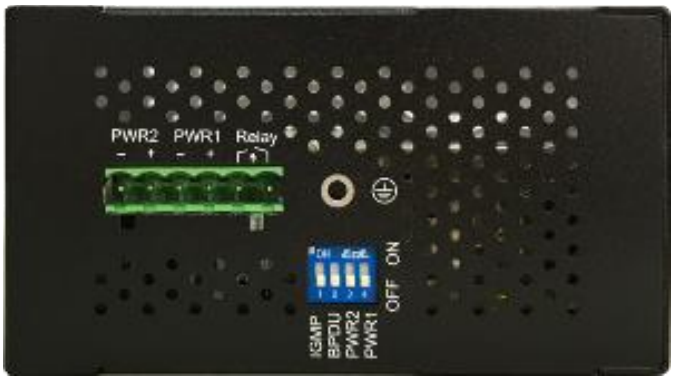


DIMENSIONS

WxHxD: 45x136x95 mm



TOP VIEW



This is the top view of the RPT-1016G-T-X2 containing the ground, power inputs, fault alarm relay, and DIP switch.

LED INSTRUCTION

System LEDs

LED	Color	Status	Description
PWR1	Green	On	Power is supplied on the power input 1.
		Off	Power is not supplied on the power input 1.
PWR2	Green	On	Power is supplied on the power input 2.
		Off	Power is not supplied on the power input 2.
Fault	Red	On	The power input 1 or power input 2 is failed.
		Off	The power input 1 and power input 2 are in normal operation.

Interface Status LEDs

LED	Color	Status	Description
LAN Port P1 to P16 (1000M)	Green	On	The 1000Mbps link of the port is active.
		Flashing	Data is transmitted on the port at 1000Mbps.
		Off	The 1000Mbps link of the port is inactive.
LAN Port P1 to P16 (10/100M)	Amber	On	The 10/100Mbps link of the port is active.
		Flashing	Data is transmitted on the port at 10/100Mbps.
		Off	The 10/100Mbps link of the port is inactive.

EARTH GROUNDING

The earth grounding and cautious wire routing are helpful to suppress the effects of noise from electromagnetic interference (EMI). The switch has to be installed on a well-grounded surface, for instance, a metal panel.

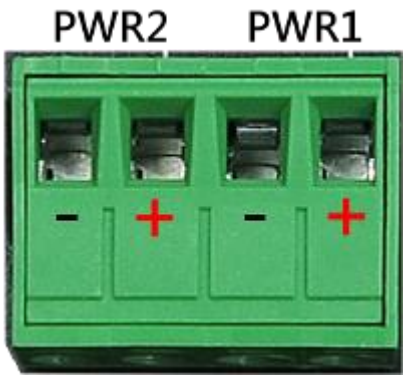
The location of earth ground screw is usually near the location of power inputs, for example:

- Top side for most of din-rail models
- Rear side for most of rack-mount models
- Front side for most of M12 models

Note: Connect the ground from the ground screw to the surface of ground before wiring the power inputs.

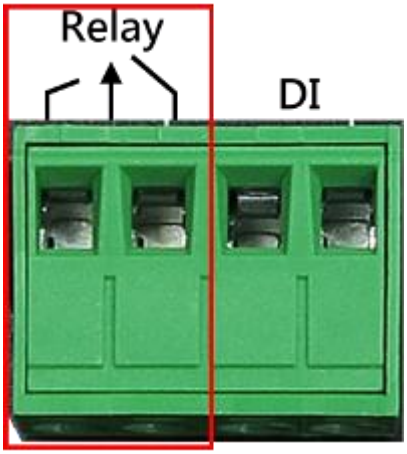
Hardware Installation

Wiring Power Inputs



1. Insert the positive and negative wires into the PWR1 (+,-) and PWR2 (+,-) on the 6-contact terminal block connector.
2. Tighten the screws to prevent the wires from loosening.

Wiring Fault Alarm



1. Insert the wires into the left two contacts of the 6-contact terminal block (Fault Alarm Relay).
2. Tighten the screws to prevent the wires from loosening.
3. The relay will detect the power and link failure.
4. Users can connect the relay to an alarm and buzzer so that when the relay forms an open circuit, the users will be notified.

DOUBLE-SECURE POWER INPUT FAULT ALARM

The power inputs are designed as a "**common negative**", which implies that the negative input is connected, but "**double-secure**" is supported to prevent the unnotified failure of power from one of the negative inputs. Should one of the negative power inputs fail, the system will detect the failure. **NOTE:** the system will trigger an event occurrence only if the user has set the fault alarm or event log for power.

MOUNTING

Din-Rail Mounting

a. Screw the DIN-Rail bracket to the switch.

b. Insert the top of the DIN-Rail bracket to the DIN-Rail track.

c. Pull down the DIN-Rail bracket to the DIN-Rail track and check if it is mounted tightly on the DIN-Rail track.

Wall Mounting

a. Remove the DIN-Rail bracket.

b. Screw the wall mount kits to the switch.

INSTALLATION STEPS

1. Unpack
   The switch is well packed and shipped to our customers. Unpack it from the box.
2. Check Content Items
   Please make sure all the items listed in the "**Package Check List**" are in the box.
3. Mounting
   The DIN-Rail is screwed on the switch by default. If the DIN-Rail is not screwed to the switch, refer to the "**DIN-Rail Mounting**" section to install it manually.
   The Wall mount brackets are optional items. If you need the wall mount brackets, contact us for assistance. To install the switch on the wall, refer to the "**Wall Mounting**" section.
4. Power On
   To power on the switch, users must prepare a power supply and wire the power input. Refer to the "**Wiring Power Inputs**" section.
   The power LEDs are described in the "**LED Instruction**" section.
5. Connect
   To connect to the switch, users need a **RJ45 cable**. Insert the RJ45 cable into one of the switch ports and insert the other end to the host such as PC.
   The link LEDs are described in the "**LED Instruction**" section.
6. Check LEDs
   We recommend the users to check the status of LEDs in the "**LED Instruction**" section. If all the LEDs are in the normal state, the installation is completed.

Specification

Technology	
Standards	IEEE 802.3 10BaseT IEEE 802.3u 100BaseTX IEEE 802.3ab 1000BaseT IEEE 802.3x Flow Control
Processing Type	Store and Forward
Transfer Rate	14,880pps for Ethernet port 148,800pps for fast Ethernet port 1,488,000pps for gigabit Ethernet port
Transmission Distance	Up to 100M (Fast Ethernet)
Transmission Speed	Up to 1000Mbps
Switch Properties	
Switch Fabric	32Gbps
Priority Queues	-
Jumbo Frame	-
MAC Table Size	8K
Packet Buffer	4Mbits
Interface	
RJ45 Port	16x 10/100/1000T(x), auto negotiation speed duplex mode, auto MDI/MDI-X
LED Indicators	**Per unit:** PWR1, PWR2 **Ports:** Link/Active with highest speed(Green), low speed(Amber)
Alarm Contact	1x relay output with current carrying capacity of 1A @ 24 VDC
Power Requirements	
Operation Voltage	12-48VDC, redundant dual inputs
Connection	1x removable 6-contact terminal block
Power Consumption	0.52A@24VDC

Protection	Overload Current Protected, Reverse Polarity Protected
Mechanical Construction	
Enclosure	Aluminum
Protection Class	IP30
Dimensions	45x136x95 mm (WxHxD)
Weight	0.5 kg
Mounting	DIN-Rail Mounting
Environmental Limits	
Operating Temperature	Extended: -40°C ~ 75°C (-40°F ~ 167°F)
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Ambient Relative Humidity	5 to 95%, (Non-Condensing)
Regulatory Approvals	
EMI	FCC Part 15 Subpart B Class A CE EN 55032 Class A
EMS	IEC61000-4-2 (ESD) IEC61000-4-3 (RS) IEC61000-4-4 (EFT) IEC61000-4-5 (Surge) IEC61000-4-6 (CS) IEC61000-4-8 (Magnetic Field)
Free Fall	IEC60068-2-32
Shock	IEC60068-2-27
Vibration	IEC60068-2-6
Green	RoHS Compliant
Certifications	IEC 61000-6-2 IEC 61000-6-4
MTBF	>100,000 hours

Warranty	5 Years