

1. Package Contents

Thank you for purchasing PLANET industrial 6-port Gigabit Ethernet Switch, IGS-620TF. In the following sections, the term **“Industrial Gigabit Ethernet Switch”** means the IGS-620TF.

Open the box of the Industrial Gigabit Ethernet Switch and carefully unpack it. The box should contain the following items:

Industrial Gigabit Ethernet Switch x 1	User's Manual x 1	Wall-mount Plate w/ Screws x 1
		
DIN-rail Bracket w/ Screws x 1	SFP Dust Cap x 2	RJ45 Dust Cap x 4
		

If any of these are missing or damaged, please contact your dealer immediately; if possible, retain the carton including the original packing material, and use them again to repack the product in case there is a need to return it to us for repair.

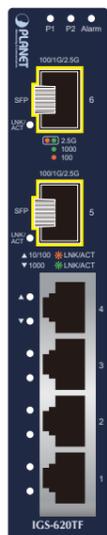
2. Hardware Introduction

2.1 Switch Front Panel

The front panel of the Industrial Gigabit Ethernet Switch consists of 4 auto-sensing 10/100/1000Mbps Ethernet RJ45 ports and 2 100/1000/2500BASE-X SFP ports.

Figure 2-1 shows the front panel of the Industrial Gigabit Ethernet Switch.

■ Front View



■ SFP Port

100/1000/2500BASE-X SFP port for transceiver module enables to have a networking distance of 300 meters to 2km (multi-mode fiber) and 10/20/30/40/60/80/120 kilometers (single-mode fiber).

■ Gigabit TP Interface

10/100/1000BASE-T copper RJ45 twisted-pair with up to 100 meters in distance.

Figure 2-1: IGS-620TF Front Panel

2.2 LED Indicators

■ System

LED	Color	Function
P1	Green	Lit: indicates power 1 has power.
P2	Green	Lit: Indicates power 2 has power.
Alarm	Red	Lit: Indicates one or more of the following events are triggering the alarm (LED).

■ Alarm LED definition

PWR1	PWR2	DIP	Fiber Port Link Status	Alarm LED	FAULT Alarm OUTPUT
NO	NO	-	-	-	NO
YES	YES	Switch	-	Off	Normal Close
YES	NO	Switch	-	On	Fault Open
NO	YES	Switch	-	On	Fault Open
YES	YES	Redundant	Primary ON	Off	Normal Close
YES	YES	Redundant	Primary DOWN	Slow blink for 2 seconds	Fault Open
YES	NO	Redundant	Primary DOWN	Blink rapidly	Fault Open
NO	YES	Redundant	Primary DOWN	Blink rapidly	Fault Open
YES	NO	Redundant	Primary ON	On	Fault Open
NO	YES	Redundant	Primary ON	On	Fault Open

■ Per 10/100/1000T Port

LED	Color	Function
10/100 LNK/ACT	Amber	Lit: Indicates the link through that port is successfully established at 10Mbps or 100Mbps. Blinking: Indicates that the Switch is actively sending or receiving data over that port.
1000 LNK/ACT	Green	Lit: Indicates the link through that port is successfully established at 1000Mbps. Blinking: Indicates that the Switch is actively sending or receiving data over that port.

■ Per 100/1000/2500X SFP Port

LED	Color	Function
100 LNK/ACT	Amber	Lit: indicates the link through that port is successfully established at 100Mbps. Blinking: indicates that the Switch is actively sending or receiving data over that port.
1000 LNK/ACT	Green	Lit: Indicates the link through that port is successfully established at 1000Mbps. Blinking: Indicates that the Switch is actively sending or receiving data over that port.
2500 LNK/ACT	Amber + Green	Lit: Indicates the link through that port is successfully established at 2500Mbps. Blinking: Indicates that the Switch is actively sending or receiving data over that port.



Although 2.5G LED is a bi-color light, the actual color is close to Amber.

2.3 Switch Upper Panel

The upper panel of the Industrial Gigabit Ethernet Switch consists of one terminal block connector within two power inputs, and also provides one DIP switch for fiber redundant function.

Figure 2-2 shows the upper panel of the Industrial Gigabit Ethernet Switch.

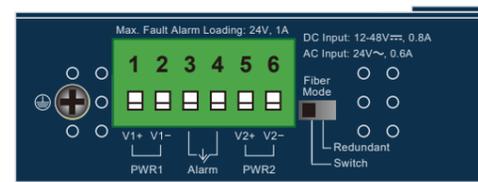


Figure 2-2: Industrial Gigabit Ethernet Switch Upper Panel

The DIP switch settings and descriptions:

DIP	Position	Function
Fiber Mode	ON	Fiber Redundancy
	OFF (default)	Switch Mode

The fiber redundancy function is explained in Chapter 4 under Fiber Redundancy Overview.



1. If using the **Switch mode**, the IGS-620TF can use 6 ports.
2. If using the **Redundant mode**, one of the two Fiber ports will be redundant while the other 4 copper ports are in operation.

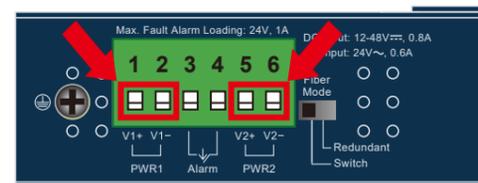
2.4 Wiring the Power Inputs

The 6-contact terminal block connector on the top panel of Industrial Gigabit Ethernet Switch is used for two redundant power inputs. Please follow the steps below to insert the power wire.

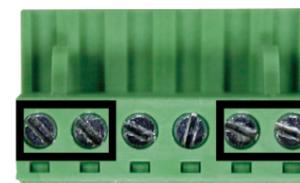


When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.

1. Insert positive and negative DC power wires into contacts 1 and 2 for POWER 1, or 5 and 6 for POWER 2.



2. Tighten the wire-clamp screws for preventing the wires from loosening.



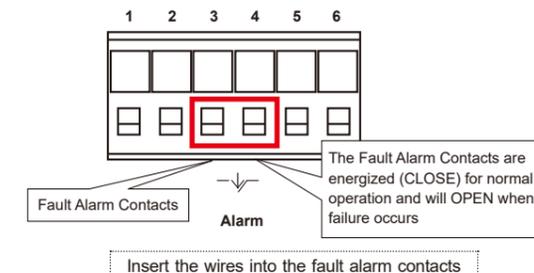
1 2 3 4 5 6
Power 1 Alarm Power 2
+ - + -



1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. The DC power input range is 12V ~ 48V DC and supports 24V AC.
3. Use one power input when using 24V AC.

2.5 Wiring the Fault Alarm Contact

The fault alarm contacts are in the middle of the terminal block connector as the picture shows below. Inserting the wires, the Industrial Gigabit Ethernet Switch will detect the fault status of the power failure and then forms an open circuit. The following illustration shows an application example for wiring the fault alarm contacts.



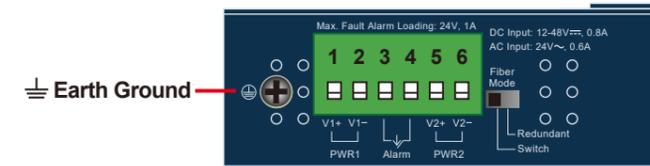
Insert the wires into the fault alarm contacts



1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. Alarm relay circuit accepts up to 24V DC, max. 1A currents.

2.6 Grounding the Device

Users **MUST** complete grounding wired with the device; otherwise, a sudden lightning could cause fatal damage to the device.



EMD (Lightning) DAMAGE IS NOT COVERED UNDER WARRANTY.

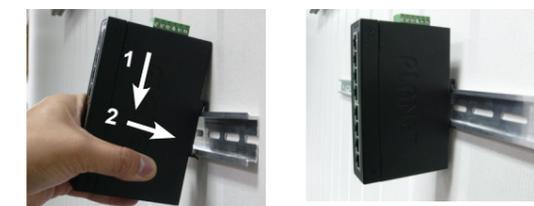
3. Installation

This section describes the functionalities of the Industrial Gigabit Ethernet Switch's components and guides how to install it on the DIN-rail and wall. Basic knowledge of networking is assumed. Please read this chapter completely before continuing.



This following pictures show the user how to install the device, and the device is not IGS-620TF.

3.1 DIN-rail Mounting Installation



3.2 Wall-mount Plate Mounting



You must use the screws supplied with the wall-mounting brackets. Damage caused to the parts by using incorrect screws would invalidate your warranty.

3.3 Installing the SFP Transceiver

The sections describe how to insert an SFP transceiver into an SFP port.

The SFP transceivers are hot-pluggable and hot-swappable. You can plug in and out the transceiver to/from any SFP port without having to power down the Industrial Gigabit Ethernet Switch as Figure 3-1 shows.



Figure 3-1: Inserting the SFP Transceiver



It is recommended to use PLANET SFP transceiver on the Industrial Gigabit Ethernet Switch. If you insert an SFP transceiver that is not supported, the Industrial Gigabit Ethernet Switch will not recognize it.

PLANET Industrial Gigabit Ethernet Switch supports 100/1000/2500X with both single mode and multi-mode SFP transceivers. Before we connect Industrial Gigabit Ethernet Switch to the other network device, please do the following:

1. Set the DIP Switch of SFP Port 1 or Port 2 to the "OFF" position with fiber speed auto detection.

DIP	Position	Function
Fiber Mode	ON	Fiber Redundancy
	OFF (default)	Switch Mode

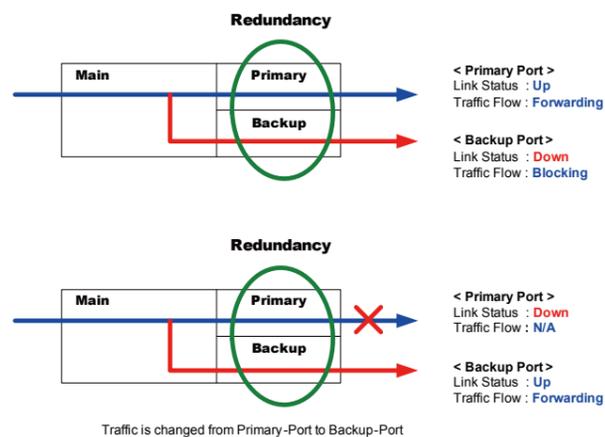
2. Make sure both sides of the SFP transceivers are with the same media type, for example, 1000BASE-SX to 1000BASE-SX, and 1000BASE-LX to 1000BASE-LX.



Never pull out the module without pulling the lever or the push bolts on the module. Directly pulling out the module with force could damage the module and the SFP port of the Industrial Gigabit Ethernet Switch.

4. Fiber Redundancy Overview

The Industrial Gigabit Ethernet Switch provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundancy mode supports auto-recover function. If the destination port of a packet is link-down, it will forward the packet to the other port of the backup pair. The following figure shows the redundancy function.



- Link status auto detection and redundancy on dual ports with the same connector type are featured.

- Only when primary port is active, the backup port is blocked.

- When primary port link failure occurs, the traffic will swap to backup port automatically.

- Once the primary port status is back to link-up, the traffic will swap from backup port to primary port.

5. Product Specifications

Model	IGS-620TF		
Hardware Specifications			
Copper Ports	4 x 10/100/1000BASE-T RJ45 TP Auto-MDI/MDI-X, auto-negotiation		
SFP Ports	2 x 100/1G/2.5GBASE-X SFP interfaces Supports auto detection		
DIP Switch	DIP	Position	Function
	Fiber Mode	ON	Fiber Redundancy
OFF (default)		Switch Mode	
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for fault alarm; Pin 5/6 for Power 2		
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A @ DC 24V		
ESD Protection	6KV DC		
Enclosure	IP30 type metal case		
Installation	DIN-rail kit and wall mount ear		
Dimensions (W x D x H)	32 x 87 x 135mm		
Weight	425g		
Power Requirements	DC 12~48V or AC 24V Redundant power with reverse polarity protection		
Power Consumption / Dissipation	7.5 watts/26BTU		
Switch Specifications			
Switch Processing Scheme	Store-and-Forward		
Switch Fabric	18Gbps		
Throughput (packet per second)	13.39Mpps@64bytes		
Address Table	4K entries		
Jumbo Frame	9216 bytes		
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex		
Standards Conformance			
Standards Compliance	IEEE 802.3 Ethernet		
	IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet		
	IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX		
	IEEE 802.3x Full-Duplex Flow Control IEEE 802.1p Class of Service		
Regulatory Compliance	FCC Part 15 Class A, CE		
Stability Testing	IEC60068-2-32 (Free fall) IEC60068-2-27 (Shock) IEC60068-2-6 (Vibration)		
Environment			
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C		
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)		



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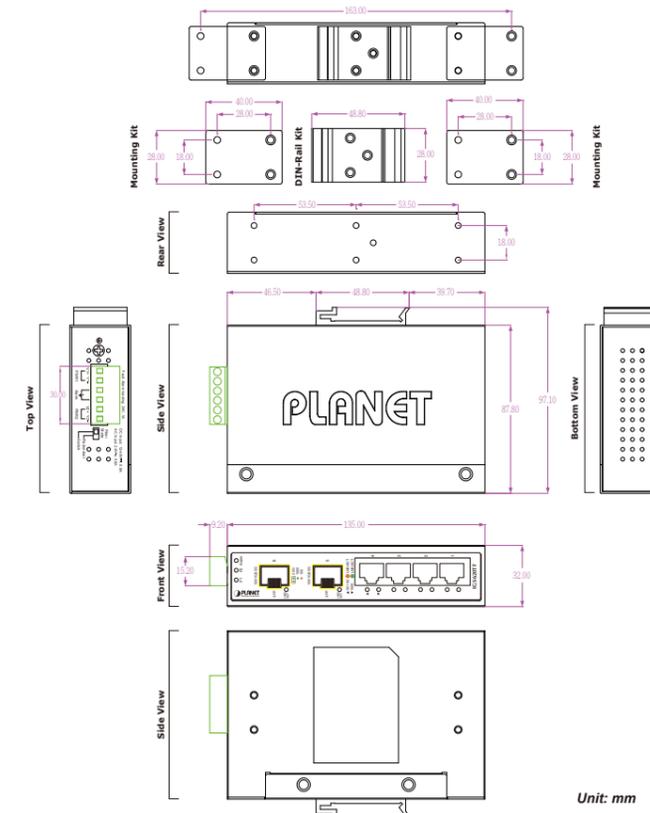
10F., No. 96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan

Warning:
This device is compliant with Class A of CISPR 32.
In a residential environment this device may cause radio interference.
2350-AH0580-004



6. Physical Dimensions

The IGS-620TF Industrial Gigabit Ethernet Switch dimensions (W x D x H): 32 x 87.8 x 135mm



Unit: mm

7. Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource on PLANET web site first to check if it could solve your issue. If you need more support information, please contact PLANET switch support team.

PLANET online FAQs:
<http://www.planet.com.tw/en/support/faq.php>
Switch support team mail address:
support@planet.com.tw

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