







1. Package Contents

Thank you for purchasing PLANET industrial 10-port Gigabit Ethernet Switch, IGS-1020TF. In the following section, the term “Industrial Gigabit Ethernet Switch” means the IGS-1020TF.

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	SFP Dust Cap x 2
		
DIN-rail Bracket w/ Screws x 1	Wall-mount Plate w/ Screws x 1	RJ45 Dust Cap x 8
		

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.

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2. Hardware Introduction

2.1 Switch Front Panel

The front panel of the Industrial Gigabit Ethernet Switch consists of 8 auto-sensing 10/100/1000Mbps Ethernet RJ45 ports and 2 dual speed 100/1000BASE-X SFP slots.

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

■ Front View

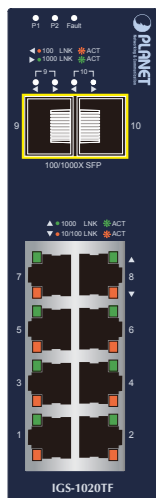


Figure 2-1: IGS-1020TF Front Panel

SFP Slot

100/1000BASE-X SFP slot for transceiver module, enabling to have a networking distance of 550 meters to 2km (multi-mode fiber) and 10/20/40/60/80/120 kilometers (single-mode fiber).

Gigabit TP Interface

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

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2.2 LED Indicators

■ System

LED	Color	Function
P1	Green	Lit: indicates power 1 has power.
P2	Green	Lit: indicates power 2 has power.
Fault	Red	Lit: indicates either power 1 or power 2 has no power.

■ Per 10/100/1000T Port

LED	Color	Function
10/100 LNK/ACT	Orange	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 100/1000X SFP Slot

LED	Color	Function
100 LNK/ACT	Orange	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.

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2.3 Switch Upper Panel

The upper panel of the Industrial Gigabit Ethernet Switch consists of one terminal block connector within two power inputs.

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

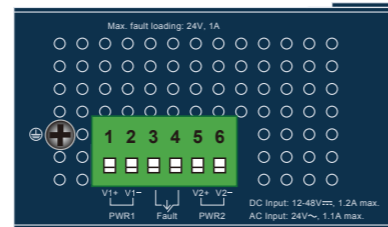



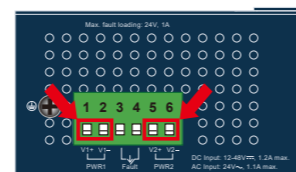
Figure 2-2: Industrial Gigabit Ethernet Switch Upper Panel

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.

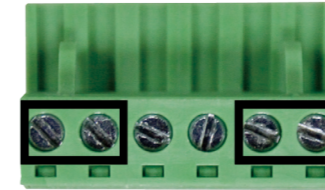
 **Caution** When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.

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




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



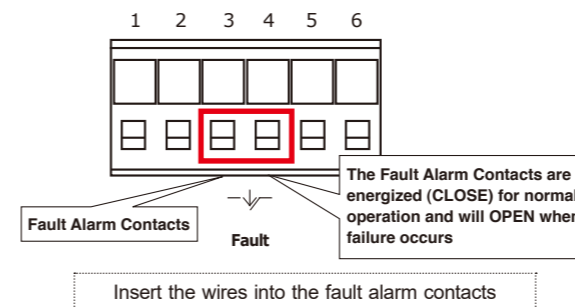
1 2 3 4 5 6
Power 1 Fault Power 2
+ - + -


 **Note**

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.

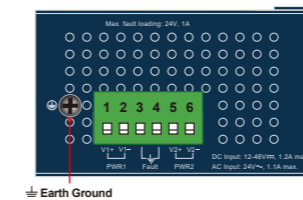



 **Note**

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.




 **Note** EMD (Lightning) DAMAGE IS NOT COVERED UNDER WARRANTY.

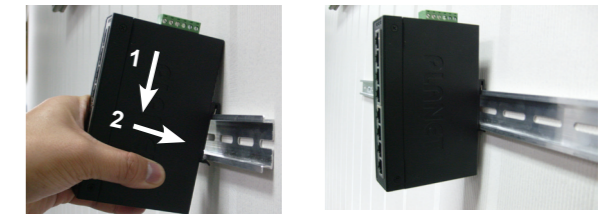
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3. Installation

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.

 **Note** This following pictures show the user how to install the device, and the device is not IGS-1020TF.


3.1 DIN-rail Mounting Installation



3.2 Wall-mount Plate Mounting



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 **Caution** 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 slot.

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: Plug-in the SFP Transceiver

 **Note** It is recommended to use PLANET SFPs 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.

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PLANET Industrial Gigabit Ethernet Switch supports 100/1000 dual mode 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. Make sure both sides of the SFP transceivers are with the same media type, for example, 1000BASE-SX to 1000BASE-SX, 1000BASE-LX to 1000BASE-LX.
2. Check whether the fiber-optic cable type matches with the SFP transceiver requirement.
 - To connect to **1000BASE-SX** SFP transceiver, please use the **multi-mode** fiber cable with one side being the male duplex LC connector type.
 - To connect to **1000BASE-LX** or **1000BASE-BX** SFP transceiver, please use the **single-mode** fiber cable with one side being the male duplex LC connector type.

■ Connect the Fiber Cable

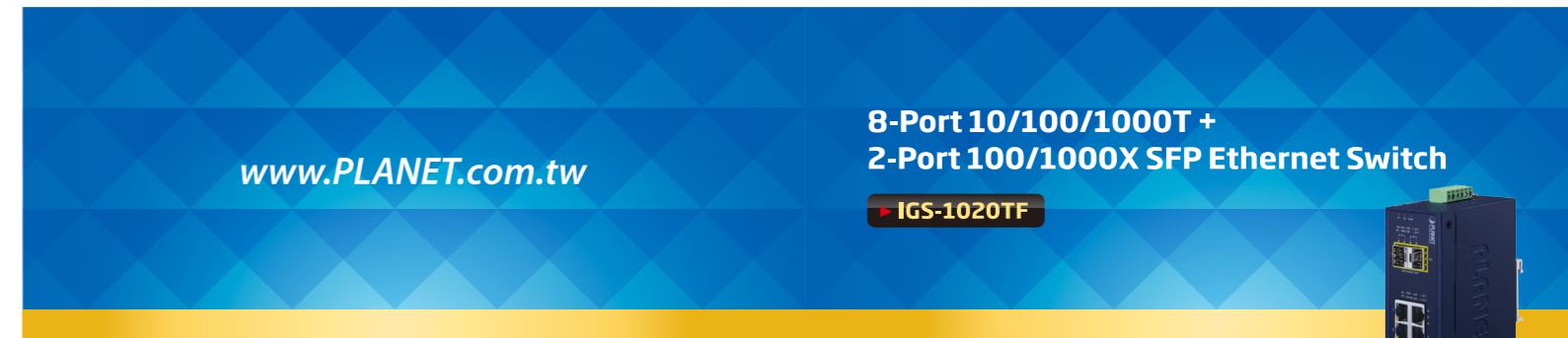
1. Attach the duplex LC connector on the fiber cable to the SFP transceiver.
2. Connect the other end of the fiber cable to a device with the SFP transceiver installed.
3. Check the LNK/ACT LED of the SFP slot on the front of the Industrial Gigabit Ethernet Switch. Ensure that the SFP transceiver is operating correctly.

Installation	DIN-rail kit and wall-mount ear
Dimensions (W x D x H)	56 x 87 x 135 mm
Weight	540g
Power Requirements	DC 12~48V or AC 24V Redundant power with polarity reverses protection function
Power Consumption/Dissipation	8.7watts/29.69BTU
Cable	Twisted-pair
	Fiber-optic Cable

4. Product Specifications

Model	IGS-1020TF
Hardware Specifications	
Copper Ports	8 x 10/100/1000BASE-T RJ45 TP Auto-MDI/MDI-X, auto-negotiation
SFP/mini-GBIC Slots	2 1000BASE-SX/LX/BX SFP interfaces (Port-9 and Port-10) Compatible with 100BASE-FX SFP
Switch Processing Scheme	Store-and-Forward
Switch Fabric	20Gbps (non-blocking)
Switch Throughput (packet persecond)	14.88Mpps@64bytes
MAC Address Table	4K entries
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Jumbo Frame	9216 bytes
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

Standards Conformance	
Standards Compliance	IEEE 802.3 Ethernet/10BASE-T IEEE 802.3u Fast Ethernet/100BASE-TX IEEE 802.3ab Gigabit Ethernet/1000BASE-T IEEE 802.3z Gigabit Ethernet/1000BASE-SX/LX IEEE 802.3x Full-Duplex Flow Control IEEE 802.3az Energy Efficient Ethernet (EEE) IEEE 802.1p CoS
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (anti-shock) IEC60068-2-6 (anti-vibration)
Environment	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)



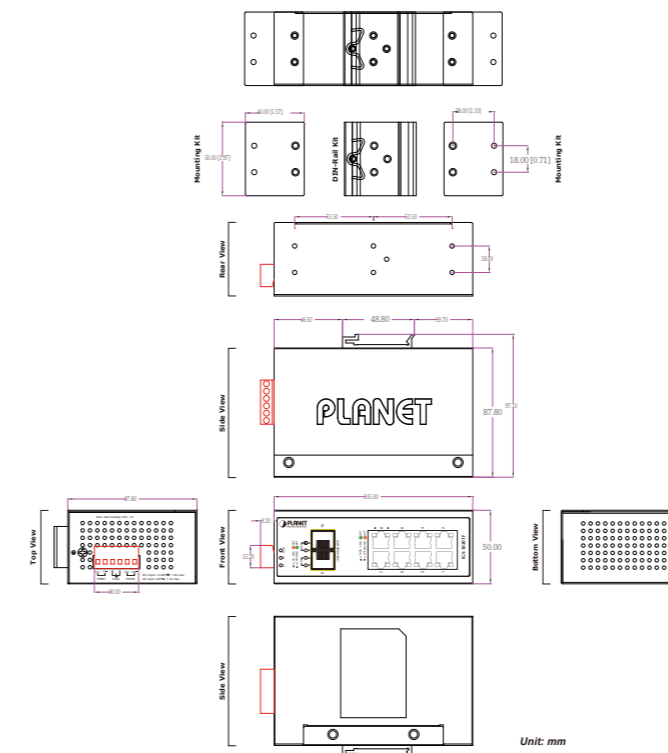
PLANET Technology Corp.
10F., No. 96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan

Warning:
This equipment is compliant with Class A of CISPR 32.
In a residential environment this equipment may cause radio interference.
2350-AH7010-002



5. Physical Dimensions

IGS-1020TF Industrial Gigabit Ethernet Switch dimensions (W x D x H): 135 x 87.8 x 50mm



6. 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