1. Package Contents

Thank you for purchasing PLANET industrial Gigabit Media Converter, IGT-1205AT or IGT-2205AT. In the following sections, the term **"Industrial Gigabit Media Converter"** mentioned in this user's manual also means the IGT-x205AT.

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

Industrial Gigabit Media Converterx 1	User's Manual x 1	SFP Dust Cap x 2
		
DIN-rail Kit x 1	Wall-mount Kit x 1	RJ45 Dust Cap
		 IGT-1205AT x 1 IGT-2205AT x 2

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 Converter Front Panel

Figures 2-1 and 2-2 show the front panels of the Industrial Gigabit Media Converters.

Figure 2-1: IGT-1205AT Front Panel

Figure 2-2: IGT-2205AT Front Panel

■ **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 10/20/40/60/80/120 kilometers (single-mode fiber)

■ **Gigabit TP Interface**
10/100/1000BASE-T copper RJ45 twisted-pair with up to 100 meters in distance.

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 Media Converter 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 Media Converter 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 Media Converter 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 Media Converter 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 Media Converter is actively sending or receiving data over that port.

Caution

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

2.3 Converter Upper Panel

The upper panels of the IGT-x205AT consist of one terminal block connector within two DC power inputs, and the IGT-x205AT also provides one DIP switch for fiber redundant function. Figure 2-3 shows the upper panel of the IGT-x205AT.

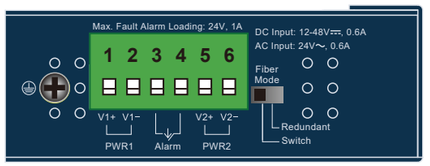


Figure 2-3: IGT-x205AT Upper Panel

The DIP switch settings and descriptions of the IGT-x205AT

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

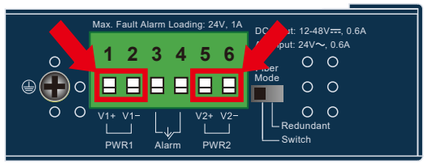
Note

1. If using the **Switch mode**, the IGT-x205AT can use 3 or 4 ports.
2. If using the **Redundant mode**, one of the two Fiber ports will be redundant while the other 1 or 2 copper ports are in operation.

2.4 Wiring the Power Inputs

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

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



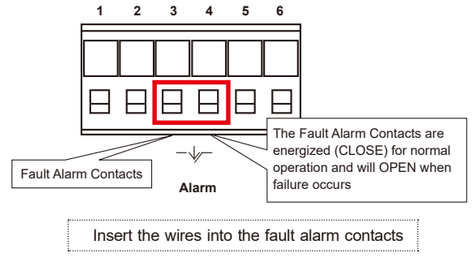
2. Tighten the wire-clamp screws for preventing the wires from loosening.

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. When inserting the wires, the Industrial Gigabit Media Converter 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.

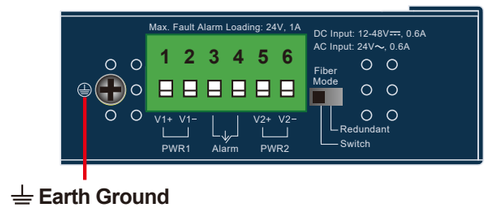


Note

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 CONVERED UNDER WARRANTY.

3. Installation

This section describes the functionalities of the Industrial Gigabit Media Converter'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 IGT-x205AT.

3.1 DIN-rail Mounting Installation

3.2 Wall-mount Plate Mounting

3.3 Side Wall-mount Plate Mounting

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 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 Media Converter as Figure 3-1 shows.

Figure 3-1: Inserting the SFP Transceiver

Note

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

PLANET Industrial Gigabit Media Converter supports 100/1000/2500X with both single mode and multi-mode SFP transceivers. Before we connect Industrial Gigabit Media Converter 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.

Note

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 Media Converter.

4. Product Specifications

Model	IGT-1205AT	IGT-2205AT
Hardware Specifications		
Copper Interface	1 x 10/100/1000BASE-T RJ45	2 x 10/100/1000BASE-T RJ45
Fiber Optic Interfaces	2 x 100/1G/2.5GBASE-X SFP interfaces (Port-1 and Port-2) Supports auto detection	
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for fault alarm; Pin 5/6 for Power 2	
DIP Switch	DIP: Fiber Mode; Position: ON / OFF (default); Function: Fiber Redundancy / Switch Mode	
Alarm	Provides one relay output for power failure Alarm Relay current carry ability: 1A @ DC 24V	
Power Requirements	DC 12~48V or AC 24V Redundant power with reverse polarity protection	
Power Consumption / Dissipation	4.8 watts/16BTU	4.92 watts/16.9BTU
Dimensions (W x D x H)	32 x 87 x 135mm	32 x 87 x 135mm
Weight	412g	419g
Enclosure	IP30 type metal case	
Installation	DIN-rail kit and wall mount ear	

ESD Protection	6KV DC	
Converter Specifications		
Processing Scheme	Store-and-Forward	
Fabric	12Gbps	14Gbps
Throughput (packet per second)	8.93Mpps@64bytes	10.42Mpps@64bytes
Flow Control	Back pressure for half duplex. IEEE 802.3x pause frame for full duplex	
Address Table	4K entries	
Jumbo Frame	9216bytes	
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)	

5. 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

Switch support team mail address:
support@planet.com.tw

PLANET Networking & Communication

PLANET Networking & Communication

User's Manual

www.PLANET.com.tw

Industrial 1-/2-Port 10/100/1000BASE-T to 2-Port 100/1G/2.5GBASE-X SFP Media Converter

IGT-x205AT

PLANET Technology Corp.
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-AH1440-001