

**2-Port 10G/2.5G/1G/100BASE-X SFP+ Media Converter**

**XT-815A**

User's Manual

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## **FCC Warning**

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.

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This device is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

## WEEE Warning



To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

## Revision

PLANET 2-Port 10G/2.5G/1G/100BASE-X SFP+ Media Converter User's Manual

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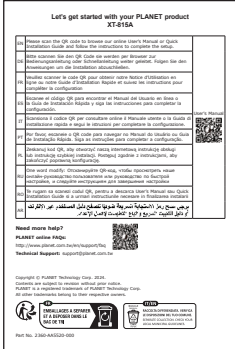

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# 1. Package Contents

Thank you for purchasing PLANET XT-815A 2-Port 10G/2.5G/1G/100BASE-X SFP+ Media Converter. In the following sections, unless specified, the term **“Media Converter”** mentioned in this manual refers to the XT-815A.

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

XT-815A Media Converter x 1	QR Code Sheet x 1
	
Power Adapter (5V,2A) x 1	
	

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.



**Note**

The XT-815A comes with two vacant SFP module slots. The mini GBIC SFP module is not included in the package.

## 1.2 Product Features

- Physical Port
  - Media conversion between 10GBASE-X SFP+, 2.5GBASE-X, 1000BASE-X, and 100BASE-FX fiber optic
  - Dual 10GBASE-X SFP+ fiber optic ports supporting
    - Multi-mode fiber with LC connector
    - Single-mode fiber with LC connector
  - SFP transceivers support auto-detection for 10G/2.5G/1G/100Mbps
- Layer 2 Features
  - Fully compliant with IEEE 802.3z Gigabit SX/LX, IEEE 802.3ae 10 Gigabit Ethernet, IEEE 802.3x Flow Control, IEEE 802.3az Energy Efficient Ethernet, and IEEE 802.1p Class of Service standards.
  - Non-blocking full wire-speed forwarding performance
  - 12K jumbo frame support for handling large data transmissions
  - Transparent IEEE 802.1Q VLAN tagging and multicast pass-through
  - IEEE 802.3x full-duplex flow control and back-pressure for packet loss prevention
- Mechanical
  - Durable metal casing for enhanced reliability
  - LED indicators to facilitate network diagnostics
  - Compact size and Plug-and-Play installation
  - External 5V DC, 2A power input socket
  - Wall mounting or DIN-rail installation (optional)
  - 0 to 50 degrees C operating temperature
  - Compatible with PLANET 10"/19" Media Converter Chassis (MC-700/MC-1500/MC-1500R/MC-1500R48).

### 1.3 Product Specifications

Model	XT-815A
Hardware Specifications	
SFP+ Port	Dual 10GBASE-X SFP+ interfaces Backward compatible with 100BASE-FX, 1000BASE-X and 2500BASE-X SFP transceivers
Fiber Mode	May vary on SFP+/SFP Module
Fiber Port Type (connector)	SFP, LC type
Fiber Maximum Distance	May vary on SFP Module
Network Cables	May vary on SFP+ and SFP modules
Enclosure	Metal case
Dimensions (W x D x H)	94 x 70.3 x 26.2 mm
Weight	195g
Power Supply	DC 5V, 2A power socket, external AC-to-DC adapter
Installation	Wall-mount or DIN-rail installation (optional)
LED	System: PWR (Green) SFP+ Port: 2.5Gbps/1Gbps LNK/ACT(Green) 10Gbps /100Mbps LNK/ACT(Amber)
Layer 2 Features	
Switch Architecture	Store-and-Forward
Fabric	40Gbps backbone to ensure high-speed data transmission
Forwarding Rate	Non-blocking, full wire-speed forwarding rate
Flow Control	Half duplex: Back pressure eliminates packet loss Full duplex: IEEE 802.3x pause frame support for efficient flow control
Maximum Frame Size	Supports jumbo frames up to 12K.
VLAN Support	Transparent 802.1Q VLAN pass-through for seamless integration in tagged network environments

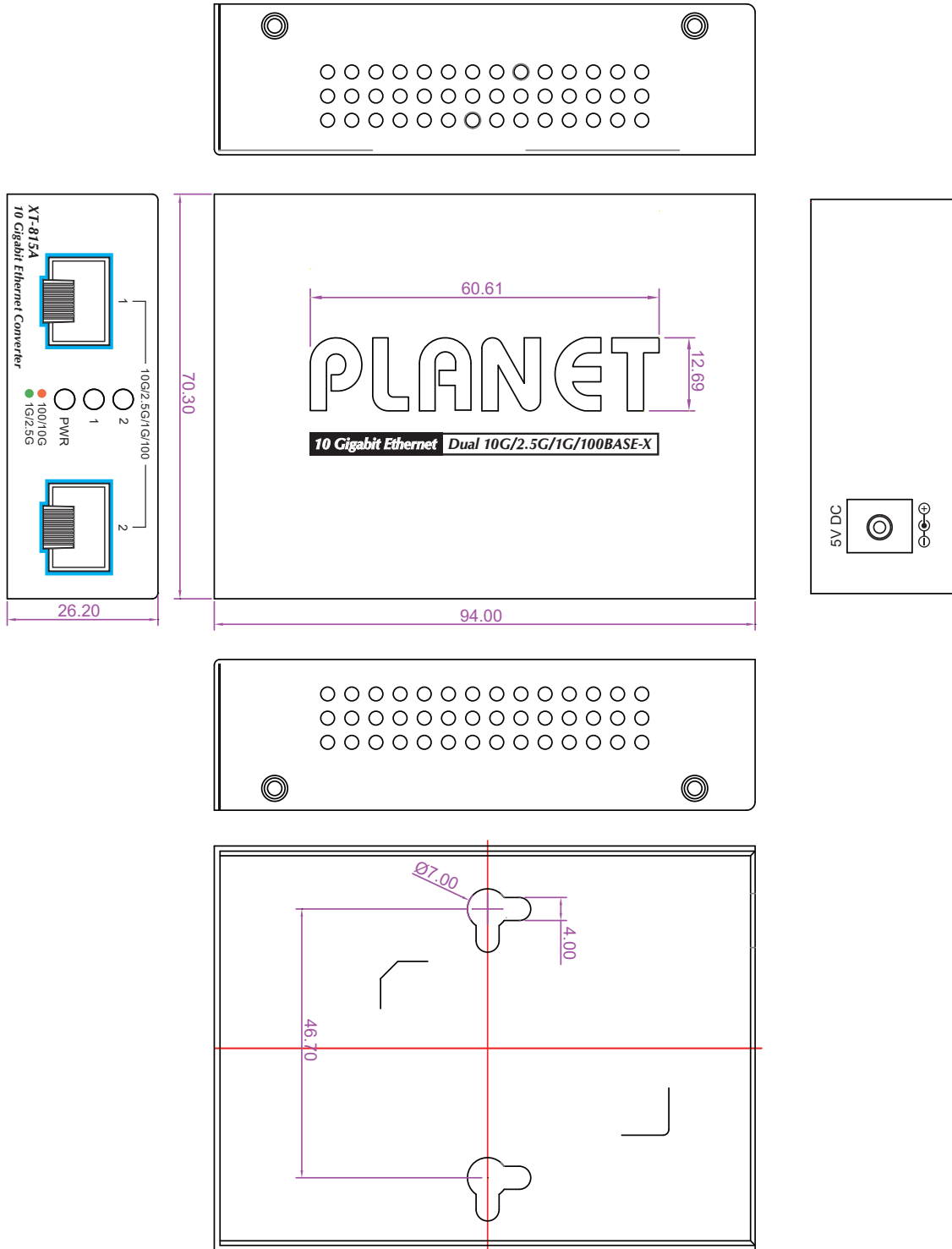
Priority Switching	8-level QoS priority switching for traffic optimization Supports 802.1p priority for efficient traffic management.
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Protocols and Standards Compliance	IEEE 802.3z Gigabit SX/LX IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.3x Flow Control IEEE 802.3az Energy Efficient Ethernet IEEE 802.1p Class of Service
Environment	
Temperature	Operating: 0 ~ 50 degrees C Storage: -10 ~ 70 degrees C
Humidity	5% ~ 95% non-condensing



## 2. Hardware Description

### 2.1 Dimensions

- XT-815A dimensions (W x D x H): 94 x 70.3 x 26.2 mm

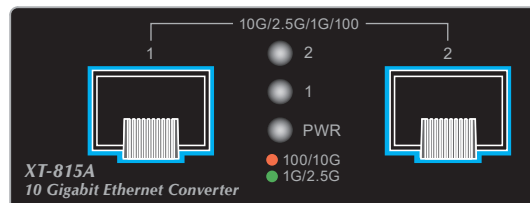


Dimensions (W x D x H): 94 x 70.3 x 26.2 mm

Figure 2-1: XT-815A Dimensions

## 2.2 Converter Front Panel and LED Indicators

Figure 2-2 shows the front panel of the Media Converter.



**Figure 2-2:** XT-815A Front Panel

### ■ System

LED	Color	Function	
PWR	Green	Lights	Power ON
		Off	Power OFF

### ■ 10GBASE-X SFP+ Interface

LED	Color	Function	
1G/2.5G LNK/ACT	Green	Lights	To indicate the port is running at 1000Mbps or 2500Mbps.
		Blink	To indicate that the Switch is actively sending or receiving data over that port.
10G/100 LNK/ACT	Amber	Lights	To indicate the port is running at 10Gbps or 100Mbps and successfully established.

## 2.3 Rear Panel

The rear panel of the XT-815A consists of one DC jack, which accepts input power with 5V DC, 2A.



**Figure 2-3:** One DC jack for DC power input

## 2.4 Power Information:

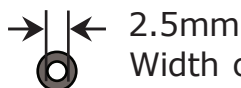
The central pole of the Media Converter's power jacks measures 2.5mm wide that requires +5VDC power input. It conforms to the bundled AC-DC adapter and PLANET's media chassis. Should you have the issue of power connection, please contact your local sales representative.

Please keep the AC-DC adapter as a spare part when the XT-815A is installed in a media chassis.



Note

Before installing the media converter into the converter slot of PLANET media converter chassis, please remove the earth grounding screw first.



2.5mm  
Width of DC Receptacle: 2.5mm  
+5V for each slot



DC receptacle is 2.5mm wide that matches the central pole; the width of the Media Converter DC jack also measures 2.5mm.

Warning: Do not install any improper unit.

The device is a power-required device, meaning it will not work till it is powered. If your networks should be active all the time, please consider using UPS (Uninterrupted Power Supply) for your device. It will prevent you from network data loss or network downtime.

In some areas, installing a surge suppression device may also help to protect your Media Converter from being damaged by unregulated surge or current to the converter or the power adapter.

### 3. Installation

This section describes the functionalities of the Media Converter's components and guides you to how to install it on the desktop. Basic knowledge of networking is assumed. Please read this chapter completely before continuing.

#### 3.1 Stand-alone Installation

**Step 1:** Unpack the Media Converter.

**Step 2:** Connect the 5V DC power adapter to the XT-815A and verify that the Power LED lights up.

(Please refer to the **2.4 Power Information** section for power input.)

**Step 3:** Prepare a fiber cable for connection to the 10GBASE-X SFP+ slot, and make sure both sides of the SFP transceiver are with the same media type.

(Please refer to the **3.5 Cable Connection** section for the type of connection.)

**Step 4:** Connect the **fiber cable**. Attach the duplex LC connector on the network cable to the SFP+ transceiver. Attach the fiber cable from the XT-815A to the fiber network. TX, RX must be paired at both ends.

**Step 5:** When all the connections are all set and the LED lights all show normal, the installation is completed.



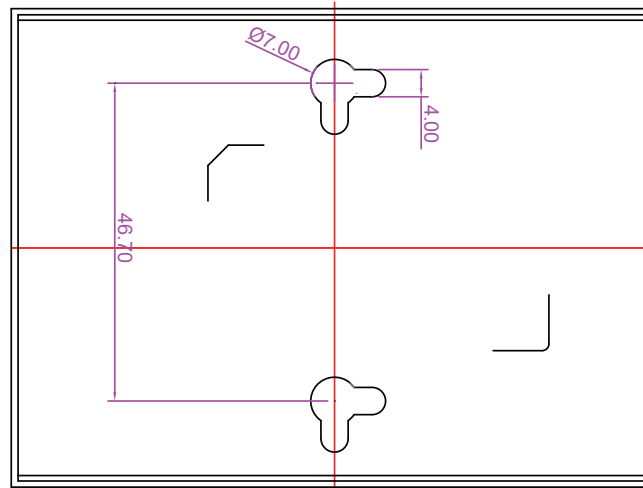
Note

After inserting the 10G SFP+ transceiver into the media converter's 10G SFP+ slot, the LNK/ACT LED will light up (Chipset restriction).

### 3.2 Wall-mount Installation

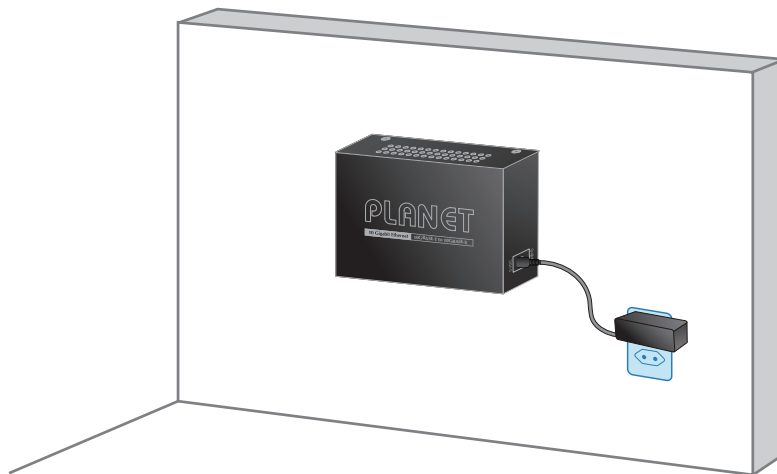
**Step 1:** Please find the wall that can mount the Media Converter.

**Step 2:** Screw two screws on the wall.



**Step 3:** Hang the Media Converter on the screws from the wall.

**Step 4:** Refer to Chapter 2.4 Power Information on the power supply to the Media Converter.



Note

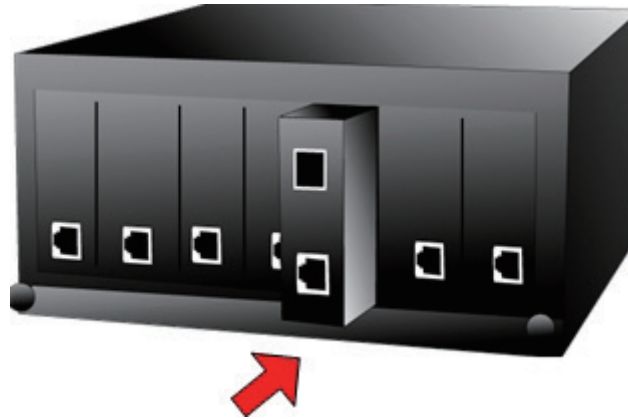
Before mounting the device to the wall, please check the location of the electrical outlet and the length of the Ethernet cable.

### 3.3 Media Chassis Installation

To install the Media Converter in a **10-inch** or **19-inch** standard rack, follow the instructions described below.

**Step 1:** Place your Media Converter on a hard flat surface, with the front panel positioned towards your front side.

**Step 2:** Carefully slide in the module until it is fully and firmly fitted into the slot of the chassis; the Power LED of the Media Converter will turn ON.



**Figure 3-1:** Insert Gigabit Media Converter into an available slot



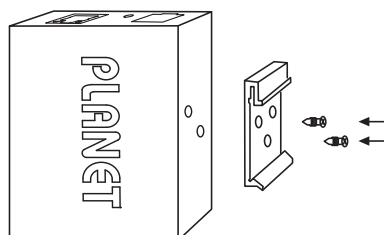
Caution

1. Never push the converter into the slot with force; it could damage the chassis.
2. The Media Converter Chassis supports hot-swap; there is no need to turn off the whole chassis before sliding in the new converter.

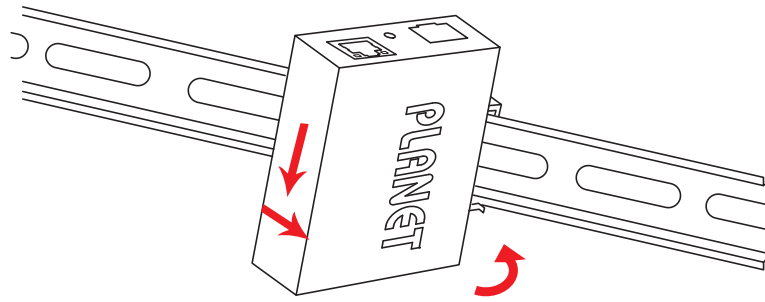
### 3.4 Optional DIN-rail Installation

There are two DIN-rail holes on the left side of the XT-815A that allows to be easily installed by DIN-rail mounting. PLANET optional DIN-rail mounting kit – RKE-DIN -- can be ordered separately. Refer to the following steps for the DIN-rail mounting of the XT-815A:

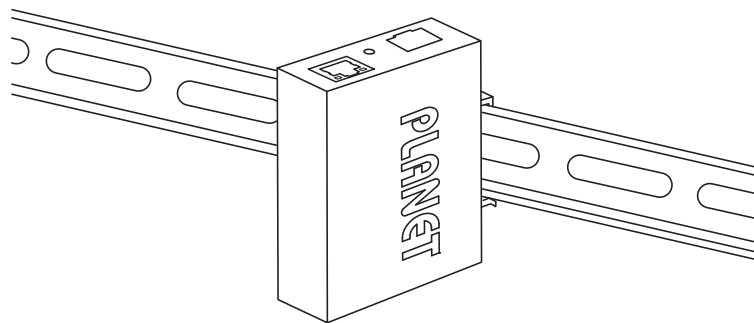
**Step 1:** Screw the DIN rail on the XT-815A.



**Step 2:** Now slide the DIN rail into the track.



**Step 3:** Check whether the DIN rail is tightly on the track.



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

## 3.5 Cable Connection

### ■ Installing the SFP+ Transceiver

The sections describe how to insert an SFP+ transceiver into an SFP+ slot.



**Figure 3-2:** Plug in the SFP+ Transceiver

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 Media Converter



Note

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

## 10GBASE-X SR/LR:

Before connecting the other switches, workstation or Media Converter, please do the following:

1. Make sure both sides of the SFP+ transceiver are with the same media type; for example, 10GBASE-SR to 10GBASE-SR, 10GBASE-LR to 10GBASE-LR.
2. Check whether the fiber-optic cable type matches the SFP+ transceiver model.
  - To connect to 10GBASE-SR SFP+ transceiver, use the **multi-mode** fiber cable with one side being the male duplex LC connector type.
  - To connect to 10GBASE-LR SFP+ transceiver, use the **single-mode** fiber cable with one side being the male duplex LC connector type.

## Connecting the fiber cable

1. Attach the duplex LC connector of the network cable to the SFP+ transceiver.
2. Connect the other end of the cable to a device like a switch with SFP+ installed, fiber NIC on a workstation or a Media Converter.

## ■ Removing the Transceiver Module

1. Make sure there is no network activity by consulting or checking with the network administrator. Or through the management interface of the switch/converter (if available), disable the port in advance.
2. Remove the fiber optic cable gently.
3. Turn the lever of the MTB module to a horizontal position.
4. Pull out the module gently through the lever.



Figure 3-3: Pulling Out from the SFP+ Transceiver





Note

Never pull out the module without pulling the lever or the push bolts on the module. Directly pulling out the module with effort could damage the module and SFP+ module slot of the Media Converter.

### ■ 100/1G/2.5G/10GBASE-X

The 100/1G/2.5G/10GBASE-X port comes with auto-negotiation capability. It automatically supports 100BASE-FX, 1000BASE-X, 2500BASE-X and 10GBASE-X networks. Users only need to plug a working network device into the 100/1G/2.5G/10GBASE-X port, and then turn on the Media Converter. The port will automatically run at 1000Mbps, 2500Mbps and 10000Mbps after the negotiation with the connected device.

## **APPENDIX : APPROVED PLANET SFP+ TRANSCEIVERS**

PLANET Media Converter supports 10GBASE-X with both multi-mode and single mode SFP+ transceivers. The following list of approved PLANET SFP+ transceivers are correct at the time of publication:

### **Available 10Gbps SFP+ Transceivers**

PLANET Media Converter supports 10GBASE-X with both multi-mode and single mode SFP+ transceivers. The following list of approved PLANET SFP+ transceivers are correct at the time of publication:

### **Available 2.5Gbps SFP Modules**

MTB-LB40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1330nm RX:1270nm)
MTB-LA40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1270nm RX:1330nm)
MTB-LB20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1330nm RX:1270nm)
MTB-LA20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1270nm RX:1330nm)
MTB-TSR	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 300m (-40~85 degrees C)
MTB-TLR	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 10km (-40~85 degrees C)
MTB-SR	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 300m
MTB-LR	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 10km
MTB-LA60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1270nm RX:1330nm)
MTB-LB60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1330nm RX:1270nm)
MTB-RJ	1-Port 10GBASE-T SFP+ Copper Fiber Optic Module - 30m
MTB-LR40	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 40km
MTB-TLR40	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 40km (-40~85 degrees C)
MTB-SR2	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 2km
MTB-LR20	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 20km

MTB-LR60	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 60km
MTB-LR80	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 80km
MTB-TSR2	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 2km (-40~85 degrees C)
MTB-TLR20	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 20km (-40~85 degrees C)
MTB-TLR60	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 60km (-40~85 degrees C)
MTB-TLA20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1270nm RX:1330nm) (-40~85 degrees C)
MTB-TLB20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1330nm RX:1270nm) (-40~85 degrees C)
MTB-TLA40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1270nm RX:1330nm) (-40~85 degrees C)
MTB-TLB40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1330nm RX:1270nm) (-40~85 degrees C)
MTB-TLA60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1270nm RX:1330nm) (-40~85 degrees C)
MTB-TLB60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1330nm RX:1270nm) (-40~85 degrees C)
MTB-LA10	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 10km (TX:1270nm RX:1330nm)
MTB-LB10	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 10km (TX:1330nm RX:1270nm)

### Available 2.5Gbps SFP Modules

MGB-2GTSR	2.5G SFP Transceiver (Multi-mode, 850nm, DDM, -40~85 degrees C) - 300m
MGB-2GTLA20	2.5G SFP Transceiver (Single mode WDM, TX:1310nm RX:1550nm, DDM, -40~85 degrees C) - 20km
MGB-2GTLB20	2.5G SFP Transceiver (Single mode WDM, TX:1550nm RX:1310nm, DDM, -40~85 degrees C) - 20km
MGB-2GSR	2.5G SFP Transceiver (Multi-mode, 850nm, DDM, 0~70 degrees C) - 300m

MGB-2GLA20	2.5G SFP Transceiver (Single mode WDM, TX:1310nm RX:1550nm, DDM, 0~70 degrees C) - 20km
MGB-2GLB20	2.5G SFP Transceiver (Single mode WDM, TX:1550nm RX:1310nm, DDM, 0~70 degrees C) - 20km
MGB-2GLR20	2.5G SFP Transceiver (Single mode, 1310nm, DDM) - 20km
MGB-2GLR2	2.5G SFP Transceiver (Single mode, 1310nm, DDM) - 2km
MGB-2GTLR20	2.5G SFP Transceiver (Single mode, 1310nm, DDM, -40~85 degrees C) - 20km
MGB-2GTLR2	2.5G SFP Transceiver (Single mode, 1310nm, DDM, -40~85 degrees C) - 2km

### Available 1Gbps SFP Modules

MGB-GT	SFP-Port 1000BASE-T Module
MGB-LX	SFP-Port 1000BASE-LX mini-GBIC module - 20km
MGB-SX	SFP-Port 1000BASE-SX mini-GBIC module - 550m
MGB-SX2	SFP-Port 1000BASE-SX mini-GBIC module - 2km
MGB-L40	SFP-Port 1000BASE-LX mini-GBIC module - 40km
MGB-L80	SFP-Port 1000BASE-LX mini-GBIC module - 80km
MGB-L120	SFP-Port 1000BASE-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km

MGB-LA80	SFP-Port 1000BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km
MGB-LB80	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km
MGB-TSX	SFP-Port 1000BASE-SX mini-GBIC module - 550m (-40~85 degrees C)
MGB-TSX2	SFP-Port 1000BASE-SX mini-GBIC module - 2km (-40~85 degrees C)
MGB-TLX	SFP-Port 1000BASE-LX mini-GBIC module - 20km (-40~85 degrees C)
MGB-TL40	SFP-Port 1000BASE-LX mini-GBIC module - 40km (-40~85 degrees C)
MGB-TL80	SFP-Port 1000BASE-LX mini-GBIC module - 80km (-40~85 degrees C)
MGB-TLA10	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km (-40~85 degrees C)
MGB-TLB10	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km (-40~85 degrees C)
MGB-TLA20	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km (-40~85 degrees C)
MGB-TLB20	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km (-40~85 degrees C)
MGB-TLA40	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km (-40~85 degrees C)
MGB-TLB40	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km (-40~85 degrees C)
MGB-TLA80	SFP-Port 1000BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km (-40~85 degrees C)
MGB-TLB80	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km (-40~85 degrees C)
MGB-TSA	SFP-Port 1000BASE-BX (WDM, TX:1310nm) mini-GBIC module - 2km (-40~85 degrees C)
MGB-TSB	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 2km (-40~85 degrees C)

MGB-TGT	SFP-Port 1000BASE-T Module – 100m (-40~85 degrees C)
MGB-TLA120	SFP-Port 1000BASE-BX (WDM, TX:1490nm) mini-GBIC module - 120km (-40~85 degrees C)
MGB-TLB120	SFP-Port 1000BASE-BX (WDM, TX:1550nm) mini-GBIC module - 120km (-40~85 degrees C)

### Available 100Mbps SFP Modules

MFB-FX	SFP-Port 100BASE-FX Transceiver (1310nm) -2km
MFB-F20	SFP-Port 100BASE-FX Transceiver (1310nm) - 20km
MFB-FA20	SFP-Port 100BASE-BX Transceiver (WDM, TX:1310nm) -20km
MFB-FB20	SFP-Port 100BASE-BX Transceiver (WDM, TX:1550nm) -20km
MFB-F40	SFP-Port 100BASE-FX Transceiver (1310nm) - 40KM
MFB-F60	SFP-Port 100BASE-FX Transceiver (1310nm) - 60KM
MFB-TFX	SFP-Port 100BASE-FX Transceiver (1310nm) -2km (-40~85 degrees C)
MFB-TF20	SFP-Port 100BASE-FX Transceiver (1310nm) - 20km (-40~85 degrees C)
MFB-TFA20	SFP-Port 100BASE-BX (WDM, TX:1310nm) mini-GBIC module-20km (-40~85 degrees C)
MFB-TFB20	SFP-Port 100BASE-BX (WDM, TX:1550nm) mini-GBIC module-20km (-40~85 degrees C)
MFB-TFA40	SFP-Port 100BASE-BX (WDM, TX:1310nm) mini-GBIC module-40km (-40~85 degrees C)
MFB-TFB40	SFP-Port 100BASE-BX (WDM, TX:1550nm) mini-GBIC module-40km (-40~85 degrees C)
MFB-TSB	SFP-Port 100BASE-BX Transceiver (Multi-mode/WDM, TX:1550nm RX:1310nm/DDM) - 2km (-40~85 degrees C)
MFB-TF120	SFP-Port 100BASE -FX Transceiver (1550nm) - 120km (-40~85 degrees C)
MFB-TSA	SFP-Port 100BASE-BX (Multi-mode/WDM, TX:1310nm) mini-GBIC module-2km (-40~85 degrees C)
MFB-TFB60	MFB-TFB60 SFP-Port 100BASE-BX (WDM, TX:1550nm) mini-GBIC module-60km (-40~85 degrees C)

MFB-F120	SFP-Port 100BASE -FX Transceiver (1550nm) - 120km
MFB-TFA60	SFP-Port 100BASE-BX (WDM, TX:1310nm) mini-GBIC module-60km (-40~85 degrees C)

## **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:

<https://www.planet.com.tw/en/support/faq.php>

Support team mail address:

[support @planet.com.tw](mailto:support@planet.com.tw)

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