100/1000BASE-X SFP to 10/100/1000BASE-T

802.3bt PoE++ Media Converter

GUP-805A-60W/GUP-805A-95W

User's Manual

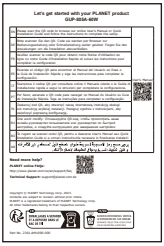
Table of Contents

1. Package Contents

Thank you for purchasing PLANET GUP-805A 100/1000BASE-X SFP to 10/100/1000BASE-T 802.3bt PoE++ Media Converter series. In the following sections, the term **"GUP-805A series"** means the GUP-805A-60W or GUP-805A-95W.

Model	PoE Standard	PoE Budget	LAN Port Speed	SFP Slot Speed
GUP-805A-60W	IEEE 802.3af/ at/bt	60 watts	10/100/ 1000Mbps	100/ 1000BASE-X
GUP-805A-95W	IEEE 802.3af/ at/bt	95 watts	10/100/ 1000Mbps	100/ 1000BASE-X

Please unpack the box of the GUP-805A series carefully, and the box should contain the following items:

GUP-805A Series Media Converter x 1	QR Code Sheet x 1
	
AC-DC Adapter (Output: 52V~55V DC) x 1	AC Power Cord x1
	

If any item is missing or damaged, please consult the dealer from whom you purchased your GUP-805A series Gigabit Ethernet 802.3bt PoE++ Media Converter.

Note

The GUP-805A-60W and GUP-805A-95W comes with one vacant SFP module slot. The mini GBIC SFP module is not included in the package.

2. Product Features

- Physical Port
  - Media conversion between 10/100/1000BASE-T and 100BASE-FX/1000BASE-SX/LX
  - Copper RJ45 interface with **Data + Power** output
  - Copper port supports 10/100/1000BASE-T auto-negotiation and auto-MDI/MDI-X.
  - Fiber media allows
    - Multi-mode fiber using LC connector
    - Single-mode fiber using LC connector
- Power over Ethernet
  - Compatible with IEEE 802.3bt Power over Ethernet plus plus end-span + mid-span PSE
  - Backward Compatible with IEEE 802.3at Power over Ethernet plus end-span/mid-span PSE
  - Provides DC 52V~55V power over RJ45 Ethernet cable to devices with Ethernet port
  - RJ45 PoE++ port with built-in 802.3bt type-4 PoE 60W or 95W injector function
  - Auto detects powered device (PD)
  - Circuit protection prevents power interference between ports
  - Remote power feeding up to 100m
  - IEEE 802.3bt/IEEE 802.3at splitter devices compatibility
- Layer 2 Features
  - Store-and-Forward mechanism
  - Non-blocking full wire-speed forwarding rate
  - IEEE 802.1Q Tag VLAN transparent, multicast pass through
  - 9K jumbo frame
  - IEEE 802.3x full-duplex and half-duplex back-pressure flow control to eliminate the loss of packets
- Mechanical
  - Metal case
  - LED indicators for easy network diagnostics
  - DIP switch for PoE power feeding options (BT/UPOE/Legacy) selection
  - DC 52V~55V power input socket
  - Wall mounting or DIN-rail installation (optional)
  - Compact in size, easy installation

3. Product Outlook

3.1 Front View

There are one RJ45 twisted-pair jack (auto-MDI/MDI-X), one 100/1000X fiber-optic SFP slot and four LED indicators, and one DIP switch for BT/UPOE/Legacy PoE power feeding options.

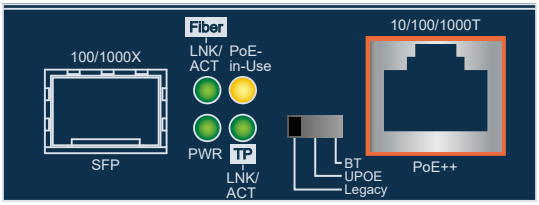


Figure 1: Front Panel of the GUP-805A Series

3.2 LED Indication

■ System

LED	Color	Function	
PWR	Green	**Lit**	To indicate that the GUP-805A series has power.
		Off	To indicate that the power is not detected.

■ 10/100/1000BASE-T 802.3bt PoE++ Port

LED	Color	Function	
PoE-in-Use	Amber	**Lit**	To indicate the RJ45 port is providing PoE in-line power.
		Off	To indicate the RJ45 port is not providing PoE in-line power.
LNK/ACT	Green	**Lit**	To indicate the link through TP port is successfully established.
		Blink	To indicate the port is actively sending or receiving data.
		Off	To indicate that the copper port is linked down.

■ 100/1000BASE-X SFP Slot

LED	Color	Function	
Fiber LNK/ACT	Green	**Lit**	To indicate the link through fiber port is successfully established.
		Blink	To indicate the fiber port is actively sending or receiving data.
		Off	To indicate that the fiber optic port is linked down.

■ DIP Switch

PoE Mode	Function
BT (Default)	This mode makes the GUP-805A series fully support IEEE 802.3af/at/bt standards.
UPOE	This mode makes the GUP-805A series fully support Cisco UPoE or PoH standards
Legacy	The legacy detection is to identify the valid current signature of the PDs that do not fully follow the IEEE 802.3af/at/bt standard. This protects against damage to the PDs as the right PoE mode is applied.

Note

Please power on the device after changing the DIP switch mode.

3.3 Rear View

There is also one DC 52V ~ 55V power socket for the GUP-805A series Gigabit Ethernet 802.3bt PoE++ Media Converter.

Figure 2: Rear Panel of the GUP-805A Series

3.4 Power Information

The power jack of the Gigabit Ethernet 802.3at PoE+ Media Converter measures **2.1mm** in diameter, and comes with DC 52V~55V power input. It conforms to the bundled AC-DC adapter. Should you have the issue of making the power connection, please contact your local sales representative.

2.1mm

DC receptacle is 2.1mm wide that conforms to the Ethernet Extender 2.1mm DC jack's central post. Do not install any improper unit.

4. Installing The Converter

To install the GUP-805A series, simply complete the following steps:

Ethernet Installation

Step 1: Turn off the power of the device/station in a network to which the GUP-805A series will be attached.

Step 2: Ensure that there is no activity in the network.

Step 3: Attach fiber cable from the GUP-805A series to the fiber network.

Step 4: Attach a Cat.5/5e/6 UTP cable from the 10/100/1000BASE-T network to the RJ45 port on the GUP-805A series.

Step 5: Connect the 52V~55V DC power adapter to the GUP-805A series and verify that the Power LED lights up.

Step 6: Turn on the power of the device/station; the TP Link and SFP Fiber Link LEDs should light up when all cables are attached.

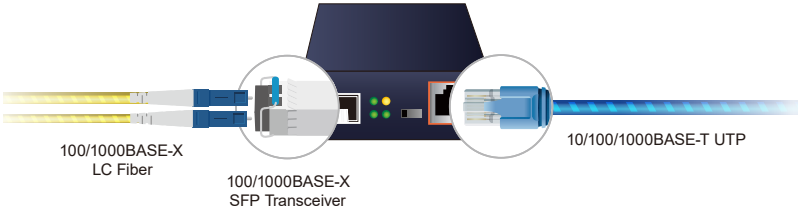


Figure 3: GUP-805A Series Installation

Note

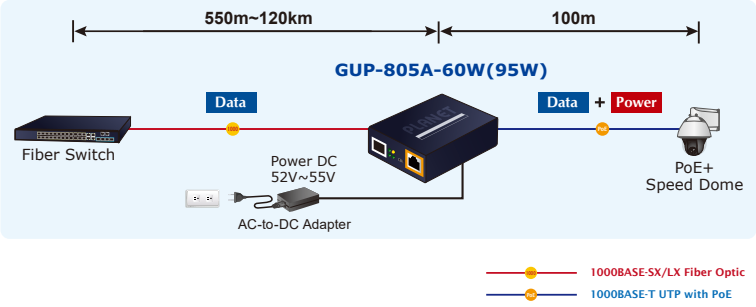
1. It is recommended to use PLANET MFB/MGB series 100/1000BASE-FX/SX/LX SFP on the GUP-805A series. If you insert an SFP transceiver that is not supported, the GUP-805A series will not recognize it.
2. Please check the link of your SFP transceivers and its physical wiring distance. In some installation, an in-line optical attenuator may be required to protect your transceivers.
3. RJ45/STP, UTP Cat5/5e/6, or straight/crossover cable is accepted; refer to section 8 for more about the wiring distance of your TP and optic-fiber networks.

PoE++ Function

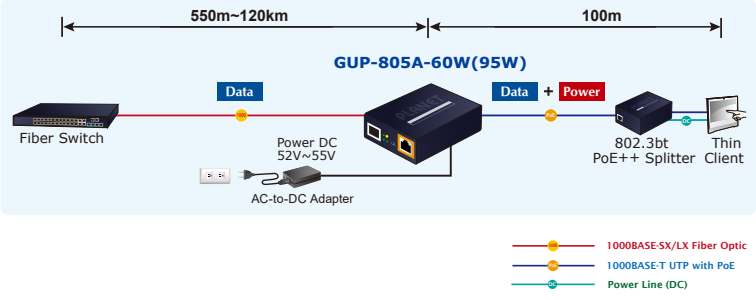
The installation of the GUP-805A Series and the IEEE 802.3bt/802.3at Injector/Splitter.

Before your installation, it is recommended to check your network environment. If there is any IEEE 802.3bt/802.3at devices that need to be powered on, the GUP-805A series can provide you with a way to supply power for this Ethernet device conveniently and easily.

The GUP-805A series equips an AC-DC adapter with DC 52V~55V input and it injects the DC power into the pin of the twisted-pair cable (Pins 1, 2, 3 6 and Pins 4, 5, 7, 8).



For the places hard to find the power inlet, the GUP-805A series provides the easiest way to power your powered device such as laptops, Thin Client, POS System, PTZ (pan, tilt & zoom) network cameras, PTZ speed dome, color touch-screen IP phones, multi-channel wireless LAN access points via PLANET IEEE 802.3bt/802.3at Power over Ethernet Splitter (POE-173S/162S/161S) over a long distance if necessary.



5. Duplex Mode Support

The GUP-805A series TP port supports triple speed -- 10/100/1000BASE-T auto-negotiation. It will auto detect the link speed and the duplex mode by default with its link partner. The fiber port (100/1000BASE-FX/SX/LX) allows **100/1000Mbps full duplex** by auto-negotiation. Please also check the setting of the link partner as well.

6. Cable Connection Parameter

The wiring details are shown below:

Duplex	Connection	Limitation (max.)
Twisted Pair		
Half/Full	Node to Node Node to Switch/Hub	100 meters

Fiber Optic Cables:

Standard (Wavelength)	100BASE-FX (1310nm)	1000BASE-SX (850nm)	1000BASE-LX (1310nm)
Fiber Type & Cable Specifications	Multi-mode	50/125μm or 62.5/125μm	
	Single-mode	9/125μm	

7. Product Specifications

Model	GUP-805A-60W	GUP-805A-95W
Interface		
Copper Port	10/100/1000BASE-T Ethernet RJ45 interface Auto-negotiation, auto MDI/MDI-X with PoE injector function	
SFP Interface	100/1000BASE-X SFP interface	
Fiber Mode	May vary on SFP Module	
Fiber Port Type (connector)	SFP, LC type	
Fiber Maximum Distance	May vary on SFP Module	
Power Over Ethernet		
PoE Output	IEEE 802.3af Power over Ethernet PSE IEEE 802.3at Power over Ethernet Plus PSE IEEE 802.3bt Power over Ethernet Plus Plus PSE	
Power Output	PoE 52-55V DC, 60 watts	PoE 52-55V DC, 95 watts
PoE Power Budget	60 watts	95 watts
PoE Power Supply Type	End-span + Mid-span	
Power Pin Assignment	802.3bt: 1/2(-), 3/6(+), 4/5(+), 7/8(-) End-span: 1/2(-), 3/6(+) Mid-span: 4/5(+), 7/8(-)	
Hardware Specifications		
Enclosure	Metal case	
Dimensions (W x D x H)	94 x 70 x 26 mm	
Weight	144g	
LED	System: PWR (Green) Fiber 100/1000BASE-X: LNK/ACT (Green) TP 10/100/1000BASE-T: LNK/ACT (Green) PoE: Power-in-use (Amber)	
DIP Switch	PoE power feeding options (BT/UPOE/Legacy) selection	

Power Supply	DC 52V~55V Power Socket, external AC-to-DC adapter
Installation	Wall-mount or DIN-rail installation (Optional)
Layer 2 Features	
Switch Architecture	Store-and-Forward
Forwarding Rate	Non-blocking full wire-speed forwarding rate
Flow Control	Back pressure for half duplex mode IEEE 802.3x pause frame for full duplex mode
Maximum Frame Size	9K
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Protocols and Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3ab Gigabit Ethernet over TP IEEE 802.3z Gigabit Ethernet over Fiber Optic IEEE 802.3x Flow Control IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt Power over Ethernet Plus Plus
Cables	TP: Cat 3/4/5/5e/6 UTP cable Fiber: Multi-mode: 50/125μm or 62.5/125μm optic fiber Single-mode: 9/125μm optic fiber
Environment	
Temperature	Operating: 0 ~ 50 degrees C Storage: -10 ~ 70 degrees C
Humidity	5% ~ 95% non-condensing

Note

1. For connection to the Gigabit Ethernet products, please refer to the device's technical manual.
2. Consult your dealer for DIN-rail installation.

8. Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource and User's Manual 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

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