

**16-Port XGS-PON OLT with 8-Port
10G SFP+ + 2-Port 100G QSFP28**

XGPL-16000

Quick Installation Guide

Table of Contents

1. Package Contents	3
2. Requirements	4
3. Hardware installation	5
3.1 Installing Redundant Power Supply Unit.....	5
3.2 Removing Redundant Power Supply Unit.....	6
4. XGS-PON OLT Management	7
5. Terminal Setup	8
5.1 Logging on to the Console	9
5.2 Configuring IP Address	10
5.3 Changing Password	11
5.4 Saving the Configuration	12
5.5 Configuring a PON Port for XGS-PON, XG-PON, or GPON ONUs.....	12
6. Starting Web Management	13
6.1 Logging in to the XGS-PON OLT from Management Port.....	13
6.2 Saving Configuration via the Web.....	14
7. Recovering Back to Default Configuration.....	16
8. Customer Support	17

1. Package Contents

Thank you for purchasing PLANET XGPL-16000 16-Port XG(S)-PON OLT. Unless specified, "**XGS-PON OLT**" mentioned in this Quick Installation Guide refers to the XGPL-16000.

Open the box of the **XGS-PON OLT** and carefully unpack it. The box should contain the following items:

- The XGS-PON OLT x 1
- QR Code Sheet x 1
- RJ45-to-DB9 Console Cable x 1
- Power Cord x 1
- Rubber Feet x 4
- Two Rack-mounting Brackets with Attachment Screws x 6
- SFP Dust Cap x 24

If any item is found missing or damaged, please contact your local reseller for replacement.

2. Requirements

- Workstations running Windows 10 or later, MAC OS X, Linux, UNIX, or other platforms are compatible with TCP/IP.
- Workstations are installed with Ethernet NIC (Network Interface Card)
- **Serial Port Connection (Terminal)**
 - The above Workstations come with **COM Port (DB9) or USB-to-RS232** converter.
 - The above Workstations have been installed with **terminal emulator**, such as Tera Term or PuTTY.
 - Serial cable -- one end is attached to the RS232 serial port, while the other end to the console port of the XGS-PON OLT.
- **Management Port Connection**
 - Network cables -- Use standard network (UTP) cables with RJ45 connectors.
 - The above PC is installed with Web browser.



Note

It is recommended to use Google Chrome, Microsoft Edge or Firefox to access the XGS-PON OLT. If the Web interface of the "XGS-PON OLT" is not accessible, please turn off the anti-virus software or firewall and then try it again.



Note

For **XG(S)-PON** ONU, use an XGS-PON OLT Transceiver like PLANET **XGPL-XGSFP-N1**.

For **GPON** ONU, use a GPON OLT Transceiver like **PLANET GPL-GS-FP-C+**.

To connect an ONU, an appropriate OLT transceiver is required. Please ensure the selected transceiver meets PON specifications for compatibility and performance.

3. Hardware installation

3.1 Installing Redundant Power Supply Unit



Note

The XGPL-PWR150 is hot-swappable, so there is no need to power off the switch before removing the redundant power supply unit from the switch.

The following installation uses the XGPL-PWR150-AC as an example.

Follow these steps to install the redundant power supply unit in the switch:

1. Use a screwdriver to loosen and remove the screws to take off the blank plate.

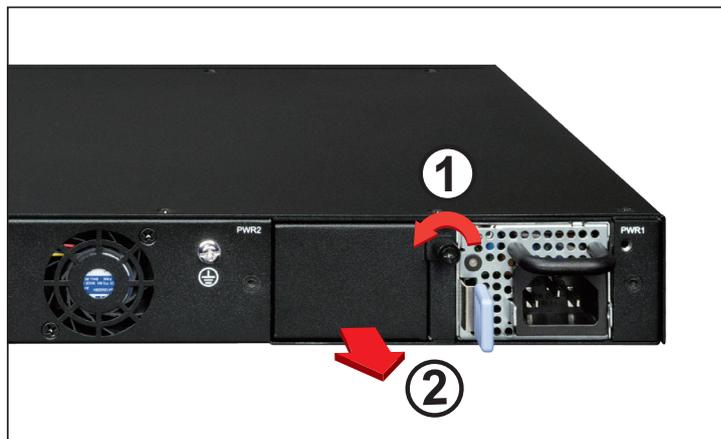


Figure 3-1: Removing the Blank Plate

2. Install the redundant power supply unit by sliding it into the compartment.

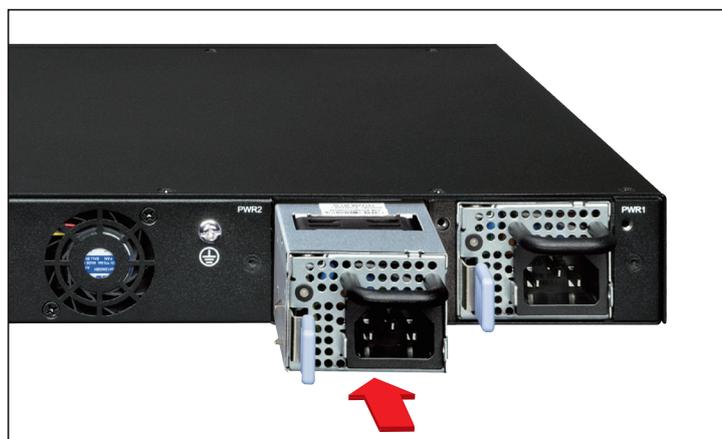


Figure 3-2: Sliding the Power Supply Unit into the Compartment



Note

Ensure the XGPL-PWR150-AC is fully inserted and securely locked in place.

3.2 Removing Redundant Power Supply Unit

Follow these steps to remove the redundant power supply unit from the switch:

1. Remove AC power cord from the XGPL-PWR150-AC.
2. To remove the redundant power supply unit from the XGPL-16000, use the handle to pull it out.



Note

The following images are based on the XGS-6350-48X2Q4C. The XGPL-16000 can be used in the same way.

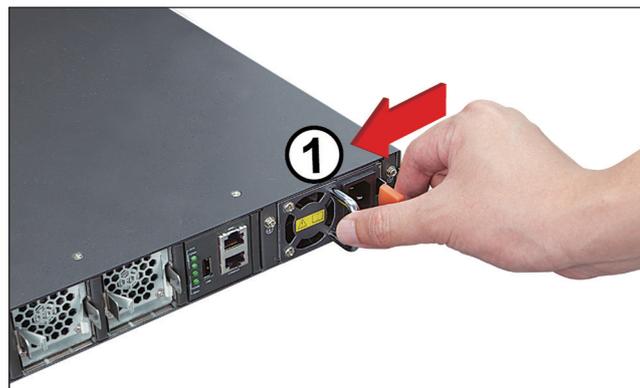


Figure 3-3: Removing the Power Supply Unit

4. XGS-PON OLT Management

To set up the XGS-PON OLT, the user needs to configure the XGS-PON OLT for network management. The XGS-PON OLT provides two management options: **Out-of-Band Management** and **In-Band Management**.

■ Out-of-Band Management

Out-of-band management is the management through console interface. **Generally, the user will use out-of-band management for the initial switch configuration**, or when in-band management is not available.

■ In-Band Management

In-band management refers to the management by logging in to the XGS-PON OLT using Telnet or HTTPS, or using SNMP management software to configure the XGS-PON OLT. In-band management enables the management of the XGS-PON OLT to attach some devices to the Switch. The following procedures are required to enable in-band management:

1. Logging on to console
2. Assigning/Configuring IP address
3. Creating a remote login account
4. Enable HTTPS or Telnet server on the XGS-PON OLT

In case in-band management fails due to XGS-PON OLT configuration changes, out-of-band management can be used for configuring and managing the XGS-PON OLT.



Important

The XGS-PON OLT is shipped with a default **Management Port** IP address: **192.168.1.1/24**. User can assign another IP address to the XGS-PON OLT via the console interface to be able to remotely access the XGS-PON OLT through Telnet or HTTPS.

5. Terminal Setup

To configure the system, connect a serial cable to a **COM port** on a PC or notebook computer and to serial (console) port of the XGS-PON OLT. The console port of the XGS-PON OLT is DCE already, so that you can connect the console port directly through PC without the need of Null Modem.



Figure 5-1: XGS-PON OLT Console Connectivity

A terminal program is required to make the software connection to the XGS-PON OLT. Tera Term program may be a good choice. The Tera Term can be accessed from the **Start** menu.

1. Click **START** menu, then **Programs**, and then **Tera Term**.
2. When the following screen appears, make sure that the COM port should be configured as:

- ◆ Baud: 115200
- ◆ Parity: None
- ◆ Data Bits: 8
- ◆ Stop Bits: 1
- ◆ Flow Control: None

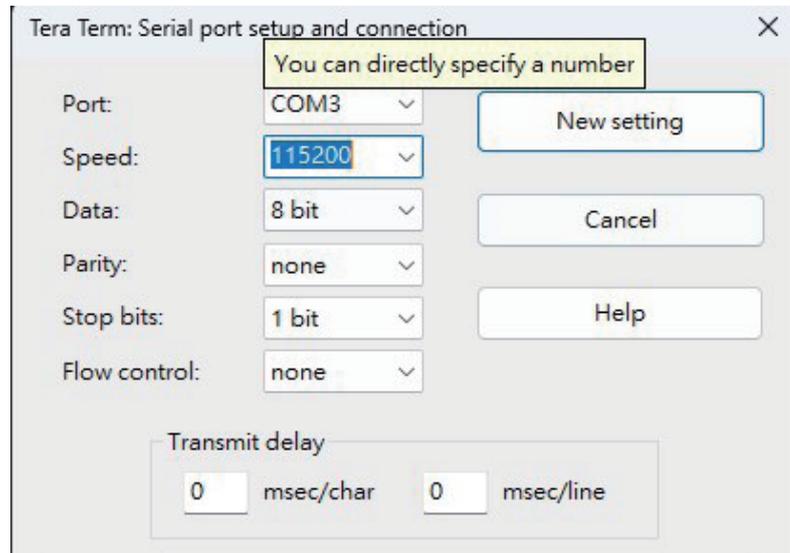


Figure 5-2: Tera Term COM Port Configuration

5.1 Logging on to the Console

Once the terminal is connected to the device, power on the XGS-PON OLT and the terminal will display **"running testing procedures"**. Then, the following message asks to log in user name and password. The factory default user name and password are shown as follows.

User name: **admin**
Password: **sw + the last 6 characters of the MAC ID in lowercase**

Find the MAC ID on your device label. The default password is "sw" followed by the last six lowercase characters of the MAC ID.

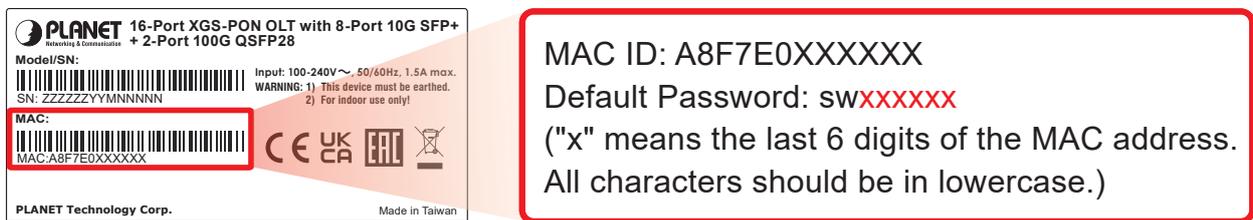


Figure 5-3: XGS-PON OLT MAC ID Label

Enter the default username and password, then set a new password according to the rule-based prompt and confirm it.

Upon success, press any key to return to the login prompt.

Log in with "admin" and the newly created password to access the CLI.

```
Switch login: admin
Password:
Jan 2 08:02:56.528369 <5> login[1725]: ROOT LOGIN on '/dev/ttyAMA0'
Please input new password: *
The password must contain 8-32 characters, including upper case, lower case, numerals and other
symbols. Please note, spaces (blanks), question marks and slash are not accepted.
Please input new password: *****
Please input new password again: *****
Jan 2 08:03:20.305580 <5> passwd[1766]: pam_unix(passwd:chauthtok): password changed for admin
Jan 2 08:03:20.412620 <5> device-config[746]: Saving current configuration...

Welcome to PLANET XGPL-16000

Switch>Jan 2 08:03:24.502359 <5> device-config[746]: %DEVCFG-INFO: Save configuration finish!
Jan 2 08:03:26.261189 <5> GPON-EVENT[1038]: OLT index 0, slot 0, chip 0 is operational.
```

Figure 5-4: Create a New Password and Log In Again

The user can now enter commands to manage the XGS-PON OLT. For a detailed description of the commands, please refer to the following chapters.

5.2 Configuring IP Address

■ Management Port

The IP address configuration commands for **Management Port** are listed below. Before using in-band management, the XGS-PON OLT must be configured with an IP address by out-of-band management (i.e. console mode).



Note

The XGS-PON OLT is shipped with a default **Management Port** IP address: **192.168.1.1/24**.

The configuration commands are as follows:

```
Switch# config
Switch(config)# interface g0/0/0
Switch(config-g0/0/0)# ip address 192.168.1.254 255.255.255.0
```

The previous command would apply the following settings for the XGS-PON OLT.

IPv4 Address: 192.168.1.254
Subnet Mask: 255.255.255.0

```
Switch#config
Switch(config)#interface g0/0/0
Switch(config-g0/0/0)#ip address 192.168.1.254 255.255.255.0
```

Figure 5-5: Configuring IPv4 Address of Management Port Screen

■ Interface VLAN 1

The configuration commands are as follows:

```
Switch# config
Switch(config)# interface vlan 1
Switch(config-vlan1)# ip address 192.168.0.100 255.255.255.0
```

The previous command would apply the following settings for the XGS-PON OLT.

IPv4 Address: 192.168.0.100
Subnet Mask: 255.255.255.0

```
Switch#config
Switch(config)#interface vlan1
Switch(config-vlan1)#ip address 192.168.0.100 255.255.255.0
```

Figure 5-6: Configuring IPv4 Address of Interface VLAN 1 Screen

To check the current IP address or modify a new IP address for the XGS-PON OLT, please use the procedures as follows:

■ Showing the Current IP Address

1. On "**Switch#**" prompt, enter "**show ip interface brief**".
2. The screen displays the current IP address, subnet mask and gateway as shown in Figure 5-7.

```
Switch#show ip interface brief
Interface IP-Address Method Status
g0/0/0 192.168.1.254 manual UP
vlan1 192.168.0.100 manual DOWN
```

Figure 5-7: Showing IP Information Screen

If the IP is successfully configured, the XGS-PON OLT will apply the new IP address setting immediately. You can access the Web interface of XGS-PON OLT through the new IP address.



Note

If you are not familiar with console command or the related parameter, enter "**help**" or "**?**" anytime in console to get the help description.

5.3 Changing Password

The default password of the switch is "admin". For security reason, it is recommended to change password and the following command configuration is required:

```
Switch# config
Switch(config)# username admin password 1qaz@WSX
Switch(config)#
```

5.4 Saving the Configuration

In XGS-PON OLT, the running configuration file stores in the RAM. In the current version, the running configuration sequence running-config can be saved from the RAM to FLASH by **write** command, so that the running configuration sequence becomes the start-up configuration file, which is called configuration save.

```
Switch# write
```

```
Switch#write
Jan  2 08:19:21.811223 <5> device-config[741]: Saving current configuration...
Switch#Jan  2 08:19:25.929602 <5> device-config[741]: %DEVCFG-INFO: Save configurat
ion finish!
```

Figure 5-8: Write Screen

5.5 Configuring a PON Port for XGS-PON, XG-PON, or GPON ONUs

The XGS-PON OLT supports XGS-PON (10G/10G), XG-PON (10G/2.5G), and GPON (2.5G/1.25G) ONUs.

By default, the PON port operates in XGS-PON mode. To connect an XG-PON or GPON ONU, the port mode must be changed accordingly.

For example, to switch PON port 0/0/1 to a different mode, use the following commands:

■ Switching XG(S)-PON Port to GPON Mode

```
Switch>enable
Switch#config
Switch(config)#interface gpon0/0/1
Switch(config-gpon0/0/1)#gpon pon-type gpon
All GPON configuration including ONU configuration will be discarded, continue?(y/n)y
Switch(config-gpon0/0/1)#
```

■ Switching PON Port to XG-PON Mode

```
Switch#config
Switch(config)#interface gpon0/0/1
Switch(config-gpon0/0/1)#gpon pon-type xgpon
All GPON configuration including ONU configuration will be discarded, continue?(y/n)y
Switch(config-gpon0/0/1)#
Switch(config-gpon0/0/1)#
```

■ Switching PON Port to XGS-PON Mode

```
Switch(config)#interface gpon0/0/1
Switch(config-gpon0/0/1)#gpon pon-type xgspon-only
All GPON configuration including ONU configuration will be discarded, continue?(y/n)y
Switch(config-gpon0/0/1)#
Switch(config-gpon0/0/1)#
Switch(config-gpon0/0/1)#
```

6. Starting Web Management

The following shows how to start up the **Web Management** of the Industrial L2+ Managed Switch. Note the Industrial L2+ Managed Switch is configured through an Ethernet connection. Please make sure the manager PC must be set to the same **IP subnet address**.

For example, the IP address of the XGS-PON OLT is **192.168.1.1** on Management Port, then the manager PC should be set to **192.168.1.x** (where x is a number between 2 and 254, except 1), and the default subnet mask is 255.255.255.0.

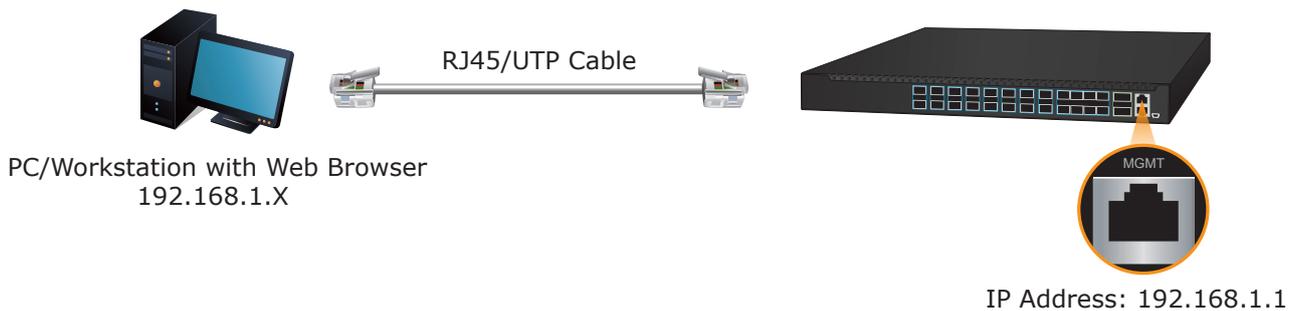


Figure 6-1: IP Management Diagram

6.1 Logging in to the XGS-PON OLT from Management Port

1. Use Google Chrome or Edge Web browser and enter IP address **https://192.168.1.1** (that you have just set in console) to access the Web interface.
2. When the following dialog box appears, please enter the default user name **"admin"** and password. Refer to **Section 4.1** to determine your initial login password.

The screenshot shows the login interface for Planet Networking & Communication. At the top left is the Planet logo with the tagline "Networking & Communication". Below the logo are four input fields: "username", "password" (with an eye icon for visibility), "Verification Code" (with a CAPTCHA image showing the numbers "3685"), and a language dropdown menu currently set to "English". At the bottom center is a blue button labeled "Login".

Figure 6-2: Login Screen

3. After entering the password, the main screen appears as shown in Figure 6-3.

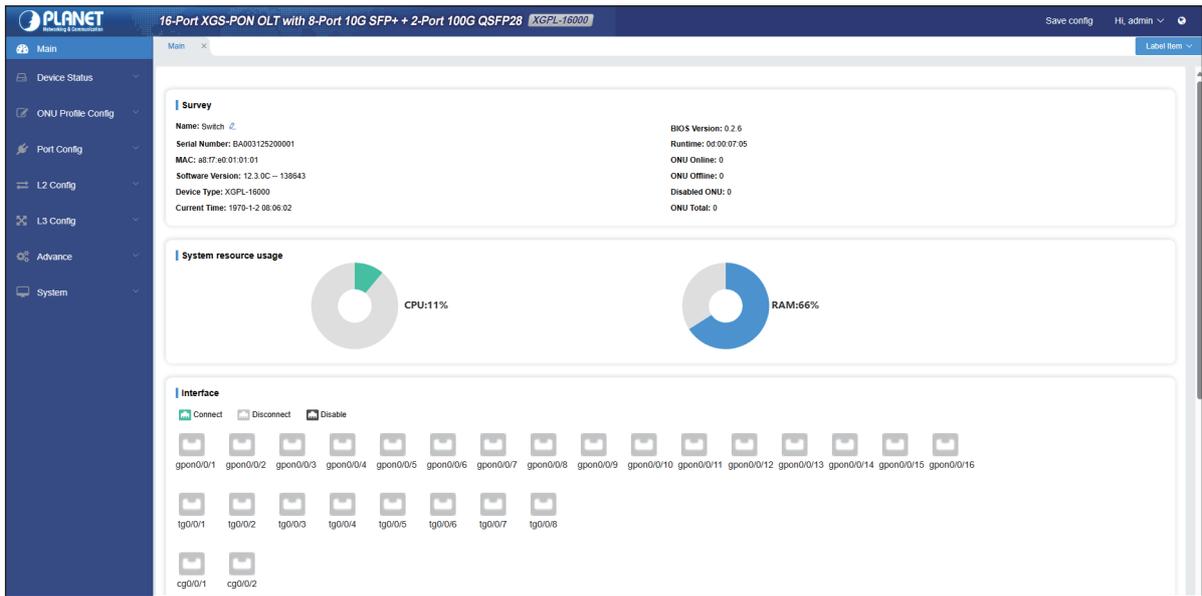


Figure 6-3: Web Main Screen of XGS-PON OLT

4. The Switch Menu on the left of the Web page lets you access all the commands and statistics the Switch provides.

Now, you can use the Web management interface to continue the Switch management or manage the XGS-PON OLT by console interface. Please refer to the user manual for more.

6.2 Saving Configuration via the Web

To save all applied changes and set the current configuration as a startup configuration, the startup-configuration file will be loaded automatically across a system reboot.

Click **“Save All”** on the top control bar. **“Save All”** function is equivalent to the execution of the **write all** command.

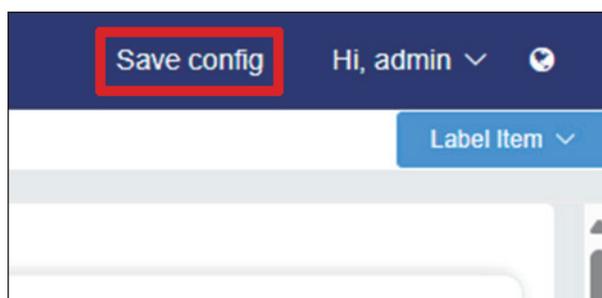
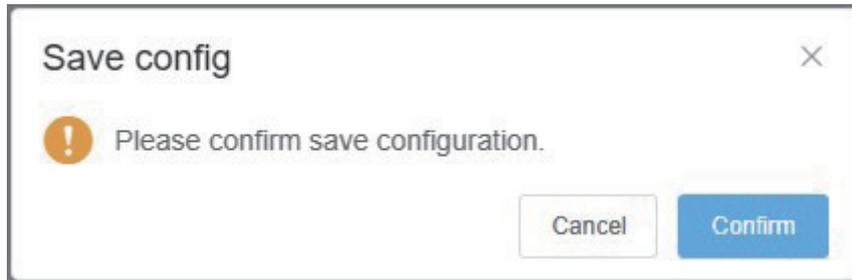


Figure 6-4: Save Configuration

Press the **"OK"** button to save current running-configuration to start up configuration.



7. Recovering Back to Default Configuration

Reset the XGS-PON OLT to factory default settings:

1. Reboot the device by immediately pressing “Ctrl + P” to enter the Monitor Mode when the boot screen appears.

```
Switch#Rebooting.  
[ 2606.961315] reboot: Restarting system  
Hit Ctrl+p to stop autoboot: 5  
  
Welcome to XGPL-16000  
  
monitor#
```

Figure 7-1: Entering Monitor Mode

2. In the Monitor Mode, execute the following command to erase the current configuration:

```
monitor#format flash  
Please wait for format flash... Successfully format flash  
monitor#
```

Figure 7-2: Formatting Flash to Restore Factory Defaults

3. After the formatting process is complete, reboot the device by entering:

```
monitor#reboot  
Do you want to reboot the Switch (y/n) y
```

Figure 7-3: Rebooting the Device After Formatting

4. The system will restore the factory default settings. The management IP will be reset to “192.168.1.1/24”, and the default login credentials will be restored.



Note

As this process permanently erases all configurations, ensure that you back up important settings.

8. Customer Support

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

PLANET online FAQs:

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

Support team mail address:

support@planet.com.tw

XGPL-16000 User's Manual

<https://www.planet.com.tw/en/support/download.php?view=3&key=XGPL-16000#list>



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