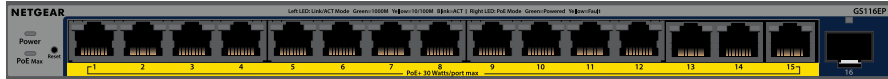# NETGEAR®
BUSINESS

Installation Guide

16-Port Gigabit Ethernet PoE+ Easy Smart Managed Switch with 1 SFP Port
Model GS116EP (180W)

16-Port Gigabit Ethernet Hi-Power PoE+ Easy Smart Managed Switch with 1 SFP Port
Model GS116EPP (231W)

Package contents

- NETGEAR Gigabit Ethernet PoE+ Easy Smart Managed Switch with 1 SFP Port
- Power adapter (power cable varies by region)
- Wall-mount installation kit
- Rubber feet

1. Register the switch

Registration is required for warranty activation and support. For more information, visit netgear.com/about/warranty.

1. From a computer or mobile device that is connected to the Internet, visit my.netgear.com.
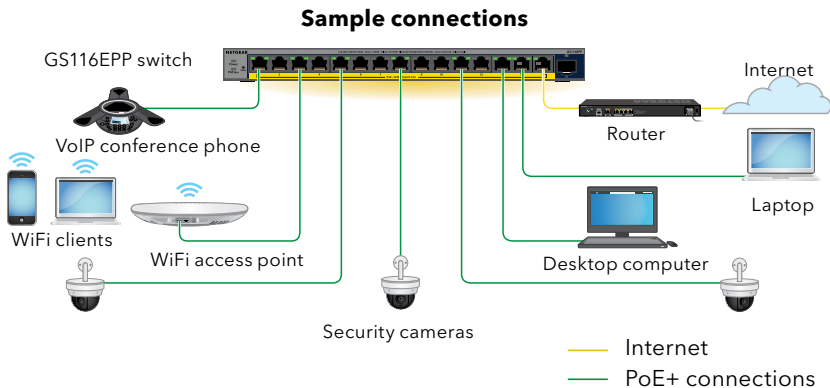
2. Log in to your NETGEAR account.

   NOTE: If you don't have a free NETGEAR account, you can create one.
   The My Products page displays.

3. From the menu on the left, select Register a Product.

4. In the **Serial Number** field, type the serial number of your switch.

   The serial number is 13 digits long. It is printed on the switch label.

5. From the **Date of Purchase** menu, select the date that you purchased the switch.

6. Click the **REGISTER** button.

   Your switch is registered to your NETGEAR account.
   A confirmation email is sent to your NETGEAR account email address.

2. Connect the switch

Sample connections

GS116EPP switch

Internet

VoIP conference phone

Router

WiFi clients

Laptop

WiFi access point

Desktop computer

Security cameras

— Internet
— PoE+ connections

NOTE: We recommend that you use a Category 5e (Cat 5e) cable or higher-rated cable for Gigabit Ethernet connections.

To use the SFP port, you must insert an SFP transceiver module, which you can purchase from NETGEAR.

This switch is designed for indoor use only. If you want to connect it to a device located outdoors, the outdoor device must be properly grounded and surge protected, and you must install an Ethernet surge protector inline between the switch and the outdoor device. Failure to do so can damage the switch.

⚠️ **WARNING:** Before connecting this switch to outdoor cables or devices, see https://kb.netgear.com/000057103 for safety and warranty information.

3. Check the LEDs

When you connect the power cord to the switch and plug it into an electrical outlet, the LEDs indicate the status:

LED		Description
Power	🟩	**Solid green**: The switch is powered on and operating normally.
	⬜	**Off**: Power is not supplied to the switch.
PoE Max (The status of the switch's PoE budget.)	⬜	**Off**: Sufficient (more than 7W of) PoE power is available.
	🟨	**Solid yellow**: Less than 7W of PoE power is available.
	🟡	**Blinking yellow**: At least once during the previous two minutes, less than 7W of PoE power was available.
Left port LED	🟩	**Solid green**:1000 Mbps link on this port.
	🟢	**Blinking green**: 1000 Mbps activity on this port.
	🟨	**Solid yellow**: 100 Mbps or 10 Mbps link on this port.
	🟡	**Blinking yellow**: 100 Mbps or 10 Mbps activity on this port.
	⬜	**Off**: No link is detected on this port.
Right Port LED	🟩	**Solid Green**: The port is delivering PoE power.
	⬜	**Off**: The port is not delivering PoE power.
	🟨	**Solid yellow**: A PoE fault occurred.

4. Discover and access the switch

NETGEAR Easy Smart Managed switches support Universal Plug and Play (UPnP) discovery. You can use your computer's network settings to discover the switch. Alternatively, you can download the NETGEAR Discovery Tool (NDT). The NETGEAR Discovery Tool lets you discover the switch in your network and access the device user interface (UI) of the switch from a Mac, Windows-based, or Linux-based computer.

To install the NETGEAR Discovery Tool, discover the switch in your network, access the switch, and discover the switch IP address:

1. To download the NDT, visit netgear.com/support/product/netgear-discovery-tool. aspx .

   Depending on the computer that you are using, download either the Mac or Windows version.

2. Temporarily disable the firewall, Internet security, antivirus programs, or all of these on the computer that you use to configure the switch.

3. Unzip the NDT files, and click or double-click the Setup.exe file (for example, NDT-1.2.103.exe) to install the program on your computer.

   You might see the tool icon appear on your Mac dock or Windows desktop.

4. Reenable the security services on your computer.

5. Connect the switch to your router or network.

6. Power on the switch.

7. Connect your computer to the same network as the switch.

8. Open the NDT.

   The initial page displays a menu and a button.

9. From the **Choose a Connection** menu, select the network for this switch.

10. Click the **Start Searching** button.

    The NDT displays the IP addresses of the switches that it discovers.

11. Click the **ADMIN PAGE** button.

    The login page or login window of the local browser user interface opens.

12. Enter the default password that is printed on the label of the switch.

13. If prompted, enter a new admin password for the switch.

    The Switch Information page displays, and shows the IP address assigned to the switch.

14. Save the password and IP address for future use.

PoE considerations

PoE power supplied by the switch is prioritized in ascending port order (from port 1 to port 15):

- Model GS116EP ships with a 200W power adapter and can supply a total of 180W across all active PoE+ ports.

- Model GS116EPP ships with a 254W power adapter and can supply a total of 231W across all active PoE+ ports.

This table shows the standard power ranges without overrides applied, calculated with the maximum cable length of 328 feet (100 meters). If a device receives insufficient PoE power from the switch, consider using a shorter cable.

Device Class	Compatible PoE Standard	Class Description	Maximum Power Supplied by the Switch	Power Delivered to the Device
0	PoE and PoE+	Default power (full)	15.4W	0.44W–13.00W
1	PoE and PoE+	Very low power	4.0W	0.44W–3.84W
2	PoE and PoE+	Low power	7.0W	3.84W–6.49W
3	PoE and PoE+	Mid power	15.4W	6.49W–13.00W
4	PoE+	High power	30.0W	13.0W–25.5W

PoE troubleshooting

Here are some tips for correcting PoE problems that might occur:

- If the PoE Max LED is solid yellow, disconnect one or more PoE devices to prevent PoE oversubscription.

- For each powered device (PD) that is connected to the switch, the associated PoE LED on the switch lights solid green. If the PoE LED lights solid yellow, a PoE fault occurred and PoE halted because of one of the conditions listed in the following table:

PoE Fault Condition	Possible Solution
A PoE-related short circuit occurred on the port.	The problem is most likely with the attached PD. Check the condition of the PD, or restart the PD by disconnecting and reconnecting the PD.
The PoE power demand of the PD exceeded the maximum level that the switch permits. The maximum level is 15.4W for a PoE connection and 30W for a PoE+ connection.	
The PoE current on the port exceeded the classification limit of the PD.	
The PoE voltage of the port is outside the range that the switch permits.	Restart the switch to see if the condition resolves itself.

Mount the switch on a wall

To mount the switch to a wall, you need the wall-mount screws that are supplied with the switch. These screws are 6.5 mm in diameter, 16 mm in length.

1. Locate the two mounting holes on the bottom panel of the switch.
2. Mark and drill two holes in the wall where you want to mount the switch.

    The two holes must be 3.94 in. (100 mm) apart, center-to-center.

3. Insert the supplied anchors into the wall and tighten the screws with a No. 2 Phillips screwdriver.

    Leave about 0.125 in. (4 mm) of each screw protruding from the wall so that you can insert the screws into the holes on the bottom panel.

4. Position the switch so that the mount holes are directly over the screws, and slide the switch down until the top of each mount hole sits directly on the screw, locking the switch securely.

Support and Community

Visit netgear.com/support to get your questions answered and access the latest downloads.

You can also check out our NETGEAR Community for helpful advice at community.netgear.com.

Regulatory and Legal

Si ce produit est vendu au Canada, vous pouvez accéder à ce document en français canadien à netgear.com/support/download/.

(If this product is sold in Canada, you can access this document in Canadian French at netgear.com/support/download/.)

For regulatory compliance information including the EU Declaration of Conformity, visit netgear.com/about/regulatory/.

See the regulatory compliance document before connecting the power supply.

For NETGEAR's Privacy Policy, visit netgear.com/about/privacy-policy.

By using this device, you are agreeing to NETGEAR's Terms and Conditions at netgear.com/about/terms-and-conditions. If you do not agree, return the device to your place of purchase within your return period.

Do not use this device outdoors. The PoE source is intended for intra building connection only.

Applicable to 6 GHz devices only: Only use the device indoors. The operation of 6 GHz devices is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet. Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

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