Installation Guide

16-Port PoE/PoE+ Gigabit Unmanaged Switch GS116LP and GS116PP

Step 1. Connect the equipment.

Package Contents

- Switch
- Power adapter
- Power cord (varies by region)
- Wall installation kit
- Rubber feet
- Rack-mount kit
- Mounting ties (for power adapter)
- Installation guide

Step 2. Connect to power.

LED Status

Power LED

- On: 1000 Mbps link
- Off: 100 or 10 Mbps link

Port LED

- On: PoE in use
- Off: PoE halted (see troubleshooting)

Activity (blinking)

- No link (off)

PoE Max LED

- Solid amber: Less than 7W of PoE power is available on the switch.
- Blinking amber: The PoE Max LED was lit solid in the previous two minutes.
- Sufficient: More than 7W of PoE power is available on the switch (the LED is off).

PoE Considerations

The switch prioritizes the PoE and PoE+ power that it supplies in ascending port order (from port 1 to port 16), with a total power budget of 183 watts with a 200 watt power adapter and 76 watts total with a 90 watt power adapter. If the power requirements for the attached powered devices (PDs) exceed the total power budget of the switch, the PD on the highest-numbered port is disabled to make sure that the PDs that are connected to the higher-priority, lower-numbered ports are supported first.

Just because a PD is listed as an 802.3at PoE powered device does not necessarily mean that it requires the maximum power limit of the specification. Many PDs require less power, allowing all eight PoE ports to be active simultaneously.

The following table describes the PoE classes and switch allocations.

<table>
<thead>
<tr>
<th>Device Class</th>
<th>Standard Class</th>
<th>Description</th>
<th>Minimum Power Allocated to the Powered Device</th>
<th>Range of Power Delivered to the Powered Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 PoE and PoE+ Default power (full)</td>
<td>0.44W</td>
<td>0.44W–12.95W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 PoE and PoE+ Very low power</td>
<td>4.0W</td>
<td>0.44W–3.84W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 PoE and PoE+ Low power</td>
<td>7.0W</td>
<td>3.84W–6.49W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 PoE and PoE+ Mid power</td>
<td>15.4W</td>
<td>6.49W–12.95W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 PoE+ only High power</td>
<td>30.0W</td>
<td>12.95W–25.5W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PoE Troubleshooting

- LED Status
- LED Max Power
- Sample connections

GS116LP

GS116PP

Router

Internet

PoE+ security cameras

PoE+ access points

PoE VoIP phone

PoE Ports

1 2 3 4 5

7 6

8 9 10 11 12 13 14 15 16

30 watts/port max.

30 watts/port max.

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JHCOVIA
Cables and Speeds

The following table describes the network cables that you can use for the switch and the speeds that these cables can support, up to 328 feet (100 meters).

### Cables and Speeds

<table>
<thead>
<tr>
<th>Speed Cable Type</th>
<th>Connections and the speeds that these cables can support, up to 328 feet (100 meters).</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Gbps Category 5e (Cat 5e) or higher</td>
<td>100 Mbps Category 5 (Cat 5) or higher</td>
</tr>
</tbody>
</table>

PoE Troubleshooting

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

- Make sure that the PoE Max LED is off if the PoE Max LED is solid amber, disconnect one or more PoE devices to prevent PoE oversubscription. Start by disconnecting the device from the highest-numbered port.
- Make sure that the Ethernet cables are plugged in correctly. For each powered device (PD) that is connected to the switch, the corresponding right port LED on the switch lights solid green. If the right port LED lights solid amber, a PoE fault occurred and PoE halted because of one of the conditions listed in the following table. Restart the switch to see if the condition resolves itself.
- Here are some tips for correcting PoE problems that might occur:

<table>
<thead>
<tr>
<th>PoE Fault Condition</th>
<th>Possible Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>A PoE-related short circuit occurred on the port.</td>
<td>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.</td>
</tr>
<tr>
<td>The PoE current on the port exceeded the classification limit of the PD.</td>
<td>The problem is most likely with the PD. Verify that the PD is delivering the correct PoE, and replace it if necessary.</td>
</tr>
<tr>
<td>The PoE voltage of the port is outside the classification limit of the PD.</td>
<td>The problem is most likely with the PD. Verify that the PD is delivering the correct PoE, and replace it if necessary.</td>
</tr>
<tr>
<td>The PoE current on the port exceeded the maximum level that the PD permits.</td>
<td>The problem is most likely with the PD. Verify that the PD is delivering the correct PoE, and replace it if necessary.</td>
</tr>
<tr>
<td>The PoE power demand of the PD exceeded the maximum level that the switch permits.</td>
<td>If the right port LED lights solid green, you can insert the screws into the holes on the bottom panel.</td>
</tr>
</tbody>
</table>

Attach the Switch to a Wall

To attach the switch to a wall, you need the wall-mount screws that are supplied with the switch.

1. Attach the supplied mounting brackets to the side of the switch.
2. Insert the screws provided in the product package through each bracket and into the bracket mounting holes in the switch.
3. Tighten the screws with a No. 2 Phillips screwdriver to secure each bracket.
4. Use a screwdriver to remove the metal plate covering the slider.
5. Move the slider to the correct setting.
6. Replace the metal plate.

Change the Switch's Flexible PoE Budget

You can move the slider on the back of the switch to increase or decrease the PoE budget. You can increase the PoE budget if you buy a higher wattage power supply. You can also move the slider to a lower level if the PoE budget is less than the power supply wattage. This reduces your switch's power consumption. However, remember that the budget for each port is lower than the power supply wattage.

1. Power down the switch and disconnect the power cord.
2. Use a screwdriver to remove the metal plate that covers the slider.
3. Move the slider to the correct setting.
4. Replace the metal plate.
5. Connect the power cord and power on the switch.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network interfaces</td>
<td>16 Gigabit Ethernet RJ-45 ports that support 1G, 100 M, and 10 M</td>
</tr>
<tr>
<td>Power adapter input</td>
<td>Power adapter varies by region.</td>
</tr>
<tr>
<td>Power adapter output</td>
<td>The switch supports two power adapters: 200W: 54V @ 3.7A, 130W: 54V @ 2.4A, 90W: 54V @ 1.66A</td>
</tr>
<tr>
<td>Max PoE budget</td>
<td>The maximum budget for each power adapter is as follows: 200W: 54V @ 3.7A, 130W: 54V @ 2.4A, 90W: 54V @ 1.66A</td>
</tr>
</tbody>
</table>

Dimensions (W x D x H): 11.26 x 4.02 x 1.06 in. (286 x 102 x 27 mm)

Weight: 1.94 lb (0.88 kg)

Operating temperature: 32-122°F (0-40°C)

Operating humidity: 10%-90% relative humidity, noncondensing.

Compliance: FCC Class B, CE Class A, WEEE Class A, RoHS EAC

Support

Thank you for purchasing the NETGEAR product. You can visit netgear.com/support to register your product, get help, access the latest downloads and user manuals, and join our community. We recommend that you use only official NETGEAR support resources.

If this product is sold in Canada, you can access this document in French at http://kb.netgear.com/11621.

For the current EU Declaration of Conformity, visit http://kb.netgear.com/11621.

For regulatory compliance information, visit http://www.netgear.com/about/regulatory/.

Do not use this device outdoors. If you connect cables or devices that are outdoors to this device, see http://kb.netgear.com/000044341 for safety and warranty information.

See the regulatory compliance document before connecting the power supply.

Get the Free NETGEAR Insight App

You can use the NETGEAR Insight app to register your switch.

1. Download the NETGEAR Insight app from your iOS or Android mobile device.
2. Connect your mobile device to the WiFi network of the router or access point.
3. Open the NETGEAR Insight app to log in or create an account.
4. Use the bar code or enter the serial number of the switch located on the product label or product packaging.

For information about how to connect a NETGEAR Insight managed switch to an existing network, visit http://kb.netgear.com/000044341.