NETGEAR GS116LP-100NAS

NETGEAR GS116LP 16-Port Gigabit Ethernet Unmanaged PoE+ Switch

USER MANUAL

Product Overview

The NETGEAR GS116LP is a high-performance, unmanaged Gigabit Ethernet switch designed for small to medium-sized businesses and home networks. It provides 16 Gigabit Ethernet ports, all of which support Power over Ethernet Plus (PoE+) for powering compatible devices such as IP cameras, VoIP phones, and wireless access points directly through the network cable.

This switch offers a total PoE power budget of 76W, which can be expanded to 183W with a separately purchased power module. Its plug-and-play design ensures easy setup without the need for software installation or configuration. The GS116LP supports flexible placement options including desktop, wall mount or rackmount, making it adaptable to various installation environments.

Key features include:

- **16 Gigabit Ethernet Ports:** Provides high-speed wired connections for all your devices.
- **16 PoE+ Ports:** Delivers power and data over a single Ethernet cable, simplifying installations for PoE-compatible devices.
- **76W PoE Power Budget:** Sufficient power for multiple PoE+ devices, expandable to 183W.
- **Plug-and-Play Setup:** No software or configuration required for immediate use.
- **Flexible Mounting Options:** Supports desktop, wall, or rackmount placement.
- **Energy Efficient Design:** Compliant with IEEE802.3az for reduced power consumption.
- **Silent Operation:** Fanless design ensures quiet performance, suitable for noise-sensitive environments.

What's in the Box

Verify that all components are present in the package:

- 16-port Gigabit Ethernet PoE+ Unmanaged Switch (GS116LP)
- Power adapter (External 90W)
- Rack-mounting kit
- Wall-mount kit

- Quick install guide

Physical Description and Indicators



Figure 1: Angled view of the NETGEAR GS116LP switch, highlighting the front panel with its 16 Gigabit Ethernet ports and status LEDs. The ports are numbered 1 through 16, with the first 8 ports also labeled for PoE+ capability. Power and PoE Max LEDs are visible on the left side.

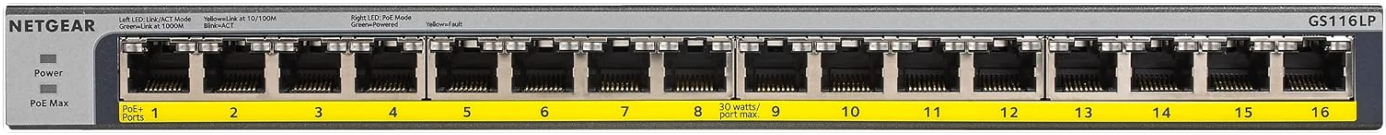


Figure 2: Direct front view of the GS116LP switch. Each of the 16 ports has two associated LEDs: a left LED for Link/ACT (Green for 1000Mbps, Yellow for 10/100Mbps) and a right LED for PoE (Green for Power, Yellow for Fault). The Power and PoE Max LEDs are located on the far left.

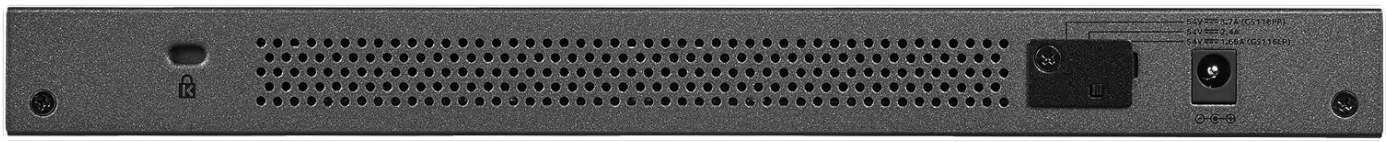


Figure 3: Rear view of the GS116LP switch. This side features the power input connector on the right and a Kensington lock slot on the left for physical security. Ventilation grilles are prominent across the back panel.

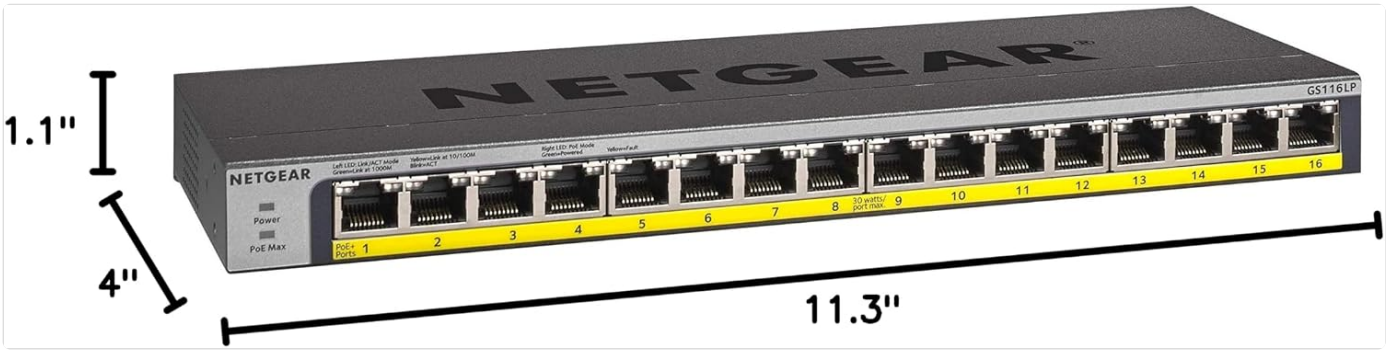


Figure 4: Dimensional view of the GS116LP switch. The switch measures approximately 11.3 inches (28.7 cm) in length, 4 inches (10.2 cm) in width, and 1.1 inches (2.8 cm) in height. These compact dimensions allow for versatile placement.

LED Indicators

- **Power LED:**
  - Solid Green: Device is powered on.
  - Off: Device is powered off.
- **PoE Max LED:**
  - Solid Amber: PoE power consumption is between 50W and 76W.
  - Blinking Amber: PoE power consumption exceeds 76W. This indicates an overload condition, and the switch

might shut down PoE to some ports to protect itself.
    - Off: PoE power consumption is below 50W.

- **Left LED (per port - Link/ACT):**
    - Solid Green: A 1000 Mbps (Gigabit) link is established.
    - Solid Yellow: A 10/100 Mbps link is established.
    - Blinking: Data activity is occurring on the port.
    - Off: No link is established.

- **Right LED (per port - PoE):**
    - Solid Green: A PoE device is connected and receiving power.
    - Blinking Green: PoE fault (e.g., short circuit, overcurrent).
    - Off: No PoE device connected or no power being supplied.

Setup and Installation

The GS116LP switch is designed for simple plug-and-play installation. No software configuration is required.

Step-by-Step Installation:

1. **Unpack the Switch:** Carefully remove the switch and all accessories from the packaging.
2. **Choose a Location:** Select a suitable location for the switch. Consider the following:
    - Ensure adequate ventilation around the switch.
    - Keep the switch away from direct sunlight, heat sources, and moisture.
    - Place it on a stable, flat surface for desktop use, or prepare for wall/rack mounting.
3. **Mounting (Optional):**
    - **Desktop:** Simply place the switch on a flat surface.
    - **Wall Mount:** Use the provided wall-mount kit. Mark two screw locations on the wall, ensuring they align with the mounting holes on the switch. Insert screws (not fully tightened) into the wall, then hang the switch onto the screws.
    - **Rackmount:** Use the provided rack-mounting kit to secure the switch into a standard 19-inch equipment rack.
4. **Connect Power:** Connect the provided power adapter to the power input port on the rear of the switch and then plug the adapter into a power outlet. The Power LED on the front panel should illuminate green.
5. **Connect Devices:** Connect your network devices (computers, servers, network printers, IP cameras, VoIP phones, wireless access points, etc.) to the Gigabit Ethernet ports on the front of the switch using standard Ethernet cables.
    - For non-PoE devices, simply connect them to any available port.
    - For PoE-powered devices, connect them to any of the 16 ports. The switch will automatically detect and provide power to compatible PoE devices.
6. **Verify Connections:** Check the Link/ACT LEDs for each connected port. A solid green or yellow LED indicates a successful link. A blinking LED indicates data activity. For PoE devices, ensure the PoE LED is solid green.

Operating the Switch

The NETGEAR GS116LP is an unmanaged switch, meaning it operates automatically without requiring any user configuration or software. Once powered on and devices are connected, it functions as a central hub for your wired

network.

Basic Operation:

- **Data Forwarding:** The switch intelligently forwards data packets between connected devices at Gigabit speeds (1000 Mbps) or 10/100 Mbps, depending on the connected device's capability.
- **Auto-Negotiation:** Each port automatically detects the speed and duplex mode of the connected device and adjusts accordingly.
- **Auto MDI/MDIX:** The switch automatically detects the type of Ethernet cable (straight-through or crossover) and adjusts, eliminating the need for specific cable types.

Power over Ethernet (PoE+) Functionality:

The GS116LP provides Power over Ethernet Plus (PoE+) on all 16 ports, adhering to the IEEE 802.3at standard. This allows the switch to deliver up to 30W of power per port to compatible PoE devices, up to a total budget of 76W.

- **Automatic PoE Detection:** When a PoE-compatible device is connected, the switch automatically detects its power requirements and supplies the necessary power.
- **Power Budget Management:** The switch manages the total power budget. If the total power demand from connected PoE devices exceeds 76W, the PoE Max LED will blink amber, and the switch may prioritize power delivery to certain ports or shut down power to lower-priority ports to prevent overload.
- **FlexPoE (Upgradeable Power):** The GS116LP supports NETGEAR FlexPoE technology, allowing you to increase the total PoE power budget to 183W by purchasing and installing a higher-wattage external power supply (sold separately). This provides flexibility for future expansion of your PoE network.

Maintenance

The NETGEAR GS116LP switch requires minimal maintenance to ensure optimal performance and longevity.

- **Cleaning:**
  - Periodically clean the exterior of the switch with a soft, dry, lint-free cloth.
  - Do not use liquid or aerosol cleaners, as they may damage the device.
  - Ensure ventilation openings are free from dust and obstructions to maintain proper airflow.
- **Environmental Conditions:**
  - Operate the switch within its specified temperature and humidity ranges (refer to Specifications section).
  - Avoid placing the switch in areas with extreme temperatures, high humidity, or direct sunlight.
- **Cable Management:**
  - Ensure all Ethernet cables are securely connected and not excessively bent or strained.
  - Proper cable management can prevent accidental disconnections and improve airflow.
- **Power Cycling (if necessary):**
  - If you experience network issues, a simple power cycle (unplugging the power adapter for 10 seconds and then plugging it back in) can often resolve minor glitches.

Troubleshooting

This section provides solutions to common issues you might encounter with your NETGEAR GS116LP switch.

Common Issues and Solutions:

1. **No Power (Power LED is Off):**
    - Ensure the power adapter is securely connected to the switch and a working power outlet.
    - Verify the power outlet is functional by plugging in another device.
    - Try a different power outlet.
2. **No Link on a Port (Link/ACT LED is Off):**
    - Check if the Ethernet cable is securely connected at both ends (switch port and device port).
    - Ensure the connected device is powered on and functioning correctly.
    - Try a different Ethernet cable.
    - Connect the device to a different port on the switch.
    - Verify the cable length does not exceed the maximum recommended length (100 meters for Gigabit Ethernet).
3. **Slow Network Speed (Link/ACT LED is Yellow for a Gigabit Device):**
    - Ensure both the switch port and the connected device's network adapter support Gigabit Ethernet.
    - Check the Ethernet cable. A damaged or low-quality cable (e.g., Cat5 instead of Cat5e/Cat6 for Gigabit) can limit speed. Try a different, known-good Cat5e or Cat6 cable.
    - Ensure the device's network adapter drivers are up to date.
4. **PoE Device Not Receiving Power (PoE LED is Off or Blinking Green):**
    - Ensure the connected device is a PoE-compatible device (IEEE 802.3af or 802.3at standard).
    - Check the Ethernet cable for damage.
    - Verify the PoE power budget. If the PoE Max LED is blinking amber, the switch is overloaded. Disconnect some PoE devices or consider upgrading the power supply with a FlexPoE compatible adapter.
    - If the PoE LED is blinking green, it indicates a PoE fault. Disconnect the device and reconnect it. If the issue persists, the device or cable may be faulty.
    - Try connecting the PoE device to a different port.
5. **Intermittent Connectivity:**
    - Check all cable connections for looseness or damage.
    - Ensure the switch is placed in a well-ventilated area and not overheating.
    - Power cycle the switch and the connected devices.
    - Check for sources of electromagnetic interference (EMI) near the switch or cables.

If you continue to experience issues after attempting these troubleshooting steps, please refer to the Warranty and Support section for further assistance.

Specifications

Feature	Description
Model Number	GS116LP-100NAS
Number of Ports	16 Gigabit Ethernet ports
PoE+ Ports	16 (IEEE 802.3at compliant)
Total PoE Power Budget	76W (Upgradeable to 183W with optional power supply)

Data Transfer Rate	1 Gbps (Gigabit Ethernet)
Switching Capacity	32 Gbps (non-blocking)
MAC Address Table Size	8K
Jumbo Frame Support	Up to 9,216 bytes
Dimensions (L x W x H)	11.3" x 4" x 1.1" (287 x 102 x 28 mm)
Item Weight	1.94 lbs (0.88 kg)
Power Consumption	Max 82.3W (with PoE)
Operating Temperature	0 to 40°C (32 to 104°F)
Storage Temperature	-20 to 70°C (-4 to 158°F)
Operating Humidity	10% to 90% non-condensing
Certifications	CE, FCC, VCCI, C-Tick, RoHS

Warranty and Support

NETGEAR products are built with quality and reliability in mind. Your GS116LP switch comes with comprehensive support and warranty coverage.

Limited Lifetime Hardware Warranty:

The NETGEAR GS116LP switch is backed by a Limited Lifetime Hardware Warranty. This warranty covers defects in materials and workmanship under normal use. For specific terms and conditions, including duration and limitations, please refer to the official NETGEAR warranty policy available on their website.

Technical Support:

NETGEAR offers various support options to assist you with your product:

- **Online Support:** Visit the official NETGEAR support website for FAQs, knowledge base articles, and downloads. You can typically find support resources at www.netgear.com/support/.
- **24/7 Chat Support:** Access live chat support with a NETGEAR expert for immediate assistance.
- **Community Forums:** Engage with other NETGEAR users and experts in the NETGEAR community forums for peer-to-peer support and advice.
- **Next Business Day Replacement:** In regions where available, NETGEAR offers a next business day replacement service for eligible products under warranty.

When contacting support, please have your product model number (GS116LP) and serial number ready. The serial number is typically located on a sticker on the bottom or rear of the device.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question