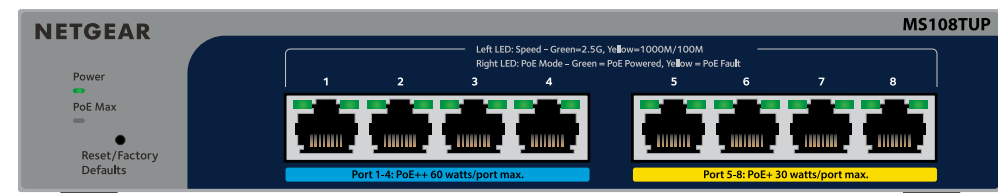


Installation Guide

8-port Ultra60 PoE++ Multi-Gigabit (2.5G) Ethernet Smart Switch MS108TUP



Package contents

- NETGEAR 8-port Ultra60 PoE++ Multi-Gigabit (2.5G) Ethernet Smart Switch
- Power adapter (power cable varies by region)
- Wall-mount installation kit
- Rubber feet
- Installation Guide

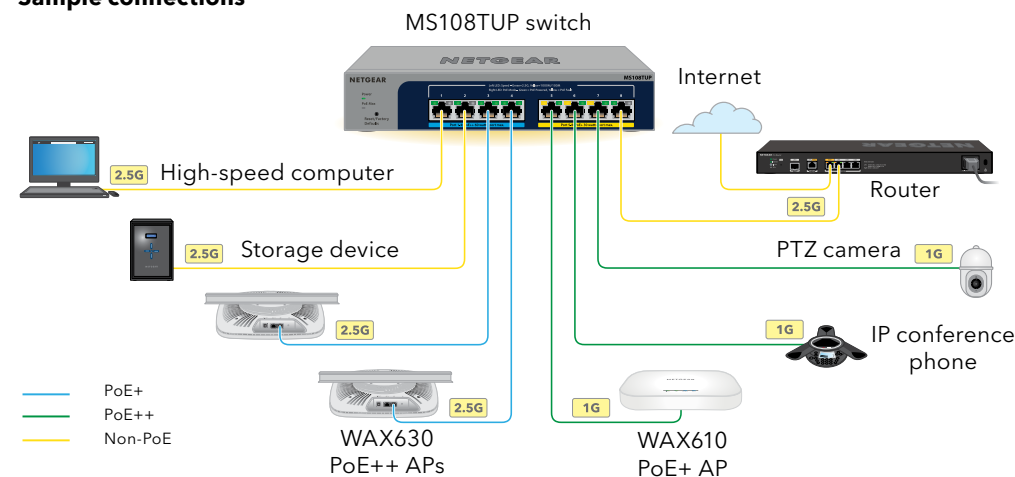


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Step 1. Connect the switch

Sample connections



1. Connect devices to the RJ-45 multi-gigabit ports (1-8) on the switch front panel. Ports 1-4 support PoE++ (IEEE 802.3bt). Ports 5-8 support PoE+ (IEEE 802.3at). Use Category 5e (Cat 5e) or higher rated Ethernet cables terminated with RJ-45 connectors to make connections at 1G and 2.5G speed.
2. Connect one port on the switch to a network that includes a DHCP server such as a router. In a small office or home office network, connect the switch to the LAN port of a router that is connected to a modem, or to a gateway.
3. Power on the switch and wait two minutes. If you connected the switch to a network with a DHCP server, the switch is automatically assigned a new IP address. (The default switch IP address is 192.168.0.239.)

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.

Step 2. Check the PoE status

The switch can supply up to 60W PoE++ (IEEE 802.3bt) to ports 1-4 and up to 30W PoE+ (IEEE 802.3at) to port 5-8. The maximum PoE power budget across all active PoE ports is 230W.

The PoE Max LED at the left side of the front panel indicates the status of the PoE budget on the switch:

- **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.

For information about the system LEDs, port LEDs, and installation, see the hardware installation guide, which you can download by visiting www.netgear.com/support/download and entering your model number.

Step 3. Discover and manage the switch

To access and manage your switch, use one of the methods in this table:

A.	NETGEAR Discovery Tool and standalone local management: See A. Use the NETGEAR Discovery Tool to discover the switch and manage the switch over the device UI.
B.	NETGEAR Insight Cloud Portal or NETGEAR Insight app remote management: See B. Use NETGEAR Insight to discover and manage the switch

NOTE: For more information, see the instructions in the user manual. You can download the manual from the NETGEAR Download Center at netgear.com/support/download. The QR code for the NETGEAR Download Center is shown at the right. For more information on using NETGEAR Insight to manage the switch, see kb.netgear.com/000044336.



A. Use the NETGEAR Discovery Tool to discover the switch and manage the switch over the device UI

Use the NETGEAR Discovery Tool to discover the switch in your network

The NETGEAR Discovery Tool (NDT) lets you discover the IP address of the switch in your network from a Mac or Windows-based computer connected to the same network as the switch. To download this tool, visit netgear.com/support/product/netgear-discovery-tool.aspx.

Use the switch device UI to manage the switch

You can use the switch as a plug-and-play device or you can change the settings by logging in to the device user interface (UI).

1. Open a web browser from a computer or tablet connected to the same network as your switch. You can use a wired or WiFi connection.
2. In the address field of your web browser, enter the switch IP address that you discovered in [Use the NETGEAR Discovery Tool to discover the switch in your network.](#)

If the switch is connected to the Internet, the Register to activate your warranty page displays. However, if you already registered the switch with the NETGEAR Insight app, the Device UI login page displays, and you can continue with Step 4.

3. If you did not yet register the switch with the NETGEAR Insight app, click one of the following buttons:

- **Register Your Device:** This button displays if the switch is connected to the Internet. You can register the switch and activate the warranty. For information about the many benefits of registering your switch, visit netgear.com/why-register/.
- **Enter Registration Key:** If you obtained a registration key, for example by registering your switch on the MyNETGEAR.com site, you can enter the key and then log in to the device UI.
- **Skip Registration and Access the UI:** Registration is not mandatory, but we highly recommend it. If you do not register the switch within 30 days of purchase, your warranty entitlement might be affected.

4. If prompted, enter the default device admin password, which is **password**, and click the **Login** button.
5. If the Change Default Password page displays, specify and confirm a new device admin password, click the **Submit** button, and log in again using your new password.

The System Information page displays. You can now configure the switch. For more information about configuring the switch from the device UI, see the user manual, which you can download by visiting www.netgear.com/support/download and entering your model number.

B. Use NETGEAR Insight to discover and manage the switch

For NETGEAR Insight Premium and Insight Pro subscribers, the switch supports the NETGEAR Insight Cloud Portal and NETGEAR Insight app. You can use either of these options to discover and manage the switch.

NOTE: If you manage the switch using the Insight Cloud Portal or Insight app, you can also still use the device UI to manage the switch. That is, these management methods are not mutually exclusive but complement each other. Changes to Insight are synchronized to the device UI, and the other way around, changes to the device UI are synchronized to Insight. Insight is enabled by default on the switch.

Use the NETGEAR Insight Cloud Portal to discover and manage the switch

You can discover and manage the switch through the portal of the Insight cloud-based management platform.

- On a computer or tablet, visit insight.netgear.com.
- Enter the email address and password for your NETGEAR account and click the **NETGEAR Sign In** button.
- If you are an Insight Pro user, select the organization to which you want to add the switch.
- Add a new network location where you want to add the switch, or select an existing network location. The device admin password that you set for the network location replaces the existing admin password on all devices that you add to the network location.
- Click the **+ (Add Device)** button.

NOTE: If you are an Insight Pro user, you can either add a single device or you can add multiple Insight-managed devices by uploading a device list in a CSV file.

- In the Add New Device pop-up page, enter the switch's serial number and MAC address, then click **Go**.

- Optionally change the device name of the switch, then click **Next**. A page displays a confirmation that setup is in progress.

NOTE: If the switch is online but Insight does not detect the switch, the firewall at the physical location where the switch is located might prevent communication with the Insight cloud. In that situation, add port and DNS entries for outbound access to the firewall. For more information, see kb.netgear.com/000062467.

The switch automatically updates to the latest Insight firmware and Insight location configuration. This might take up to 10 minutes, during which time the switch will restart. The switch is now an Insight managed device that is connected to the Insight cloud-based management platform.

Use the NETGEAR Insight app to discover and manage the switch

You can use the Insight app to discover and manage the switch from your iOS or Android mobile device, and connects to the Insight cloud-based management platform.

- On your mobile device, visit the app store, search for NETGEAR Insight, and download the latest version of the app.
- Open the NETGEAR Insight app.
- If you do not have a NETGEAR account, tap **Create NETGEAR Account** and follow the onscreen instructions.
- Enter the email address and password for your NETGEAR account and tap **LOG IN**.
 - Your switch and mobile device are connected to the same network.** Your switch and its IP address display in the Devices list. Do the following:
 - Select the switch or tap **Unclaimed**.
 - On the next screen, tap **ADD DEVICE**, and continue with Step 5.If the switch does not display in the devices list, tap **+** in the upper-right corner, and tap **Scan Network**. If the switch still does not display, use the NDT to discover the switch. For more information, see [Use the NETGEAR Discovery Tool to discover the switch in your network](#).
 - Your switch and mobile device are not connected to the same network.** Your switch and its IP address do not display in the devices list. Do the following:
 - Tap **+** in the upper-right corner.
 - Either use the camera on your mobile device to scan the bar code or QR code, or type in the serial number, and then continue with Step 5.
- Follow the onscreen instructions to complete the registration of the switch.

NOTE: If you are using both Insight and the device UI to manage the switch, after you add the switch to an Insight network location, the Insight network location password replaces the switch admin password for the device UI. To access the device UI, you must then enter the Insight network location password.

PoE considerations

PoE power supplied by the switch is prioritized in ascending port order (from port 1 to port 8). The switch can supply a total of 230W across all active PoE+ and PoE++ ports.

- Ports 1-4:** Each port can supply up to 60W PoE++ (802.3bt) power.
- Ports 5-8:** Each port can supply up to 30W PoE+ (802.3at) power.

The following 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, PoE+, and PoE++	Default power (full)	15.4W	0.44W-13.0W
1	PoE, PoE+, and PoE++	Very low power	4.0W	0.44W-3.84W
2	PoE, PoE+, and PoE++	Low power	7.0W	3.84W-6.49W
3	PoE, PoE+, and PoE++	Mid power	15.4W	6.49W-13.0W
4	PoE+ and PoE++	High power	30.0W	13.0W-25.5W
5	PoE++	Ultra high power	45.0W	25.5W-40.0W
6-8	PoE++	Ultra high power	60.0W	40.0W-51.0W

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 PoE power demand of the PD exceeded the maximum level that the switch permits. The maximum level is 15.4W for a PoE connection, 30W for a PoE+ connection, and 60W for a PoE++ connection.	The problem is most likely with the attached PD. Check the condition of the PD, restart the PD by disconnecting and reconnecting the PD, or try a shorter cable.
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. Check the condition of the PD, restart the PD by disconnecting and reconnecting the PD, or try a shorter cable.

Support and Community

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Regulatory and Legal

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Do not use this device outdoors. The PoE port 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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