Catalyst 9200L-M Series Installation Guide

About this Guide

This guide provides instruction on how to install and configure your Catalyst 9200L-M series switches in the Meraki-managed mode.

Product Overview

Models

Model Number	Description
C9200L-24T-4G	Stackable 24x1G ports; 4x1G SFP fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80
C9200L-24P-4G	Stackable 24x1G PoE+ ports; 4x1G SFP fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-24T-4X	Stackable 24x1G ports; 4x10G SFP+ fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-24P-4X	Stackable 24x1G PoE+ ports; 4x10G SFP+ fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-24PXG-4X	Stackable 8xMultigigabit Ethernet PoE+ ports and 16x1G PoE+ ports; 4x10G SFP+ fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-24PXG-2Y	Stackable 8xMultigigabit Ethernet PoE+ ports and 16x1G PoE+ ports; 2x25G SFP28 fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-48T-4G	Stackable 48x1G ports; 4x1G SFP fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-48P-4G	Stackable 48x1G PoE+ ports; 4x1G SFP fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-48PL-4G	Stackable 48x1G PoE+ ports with partial PoE support; 4x1G SFP fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-48T-4X	Stackable 48x1G ports; 4x10G SFP+ fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.

Model Number	Description
C9200L-48P-4X	Stackable 48x1G PoE+ ports; 4x10G SFP+ fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-48PL-4X	Stackable 48x1G PoE+ ports with partial PoE support; 4x10G SFP fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-48PXG-4X	Stackable 12xMultigigabit Ethernet PoE+ ports and 36x1G PoE+ ports; 4x10G SFP+ fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.
C9200L-48PXG-2Y	Stackable 8xMultigigabit Ethernet PoE+ ports and 40x1G PoE+ ports; 2x25G SFP28 fixed uplink ports; 2 power supply slots; 2 fixed fans; supports StackWise-80.

Technical Specifications

- Each model has 1 dedicated management interface (local status page access)
- 80G Dual Dedicated Hardware Stacking Ports
- PoE+ (30W per port) & IEEE 802.3at
- Four SFP+(10G/1G) fixed uplinks on 4X models
- Two SFP28(25G/10G/1G) fixed uplinks on 2Y models)
- mGig support on XG models
- Redundant hotswappable power supplies
- Operating temperature for each of the model: -5°C to 45°C
- Storage and Transportation Temperature: -20°C - 70°C
- Humidity: 5 to 90%

Model	Interfaces	Fixed Uplinks (SFP+/SFP28)	80G Hardware Stack Ports	Dedicated Management Interface	PoE Capabilities
C9200L-24T-4G	24 1G ports data	4x 1G SFP	2	1	n/a
C9200L-24P-4G	24 1G ports full PoE+	4x 1G SFP	2	1	30W PoE+

Model	Interfaces	Fixed Uplinks (SFP+/SFP28)	80G Hardware Stack Ports	Dedicated Management Interface	PoE Capabilities
C9200L-24T-4X	24 1G ports data	4x 10G/1G SFP+	2	1	n/a
C9200L-24P-4X	24 1G ports full PoE+	4x 10G/1G SFP+	2	1	30W PoE+
C9200L-24PXG-4X	24 ports full PoE+ (8 mGig ports up to 10G, 16 ports up to 1G)	4x 10G/1G SFP+	2	1	30W PoE+
C9200L-24PXG-2Y	24 ports full PoE+ (8 mGig ports up to 10G, 16 ports up to 1G)	2x 25G/10G/ 1G SFP28	2	1	30W PoE+
C9200L-48T-4G	48 1G ports data	48 ports data	2	1	n/a
C9200L-48P-4G	48 1G ports full POE+	4x 1G SFP	2	1	30W PoE+
C9200L-48PL-4G	48 1G ports partial PoE+	4x 1G SFP	2	1	30W PoE+
C9200L-48T-4X	48 1G ports data	4x 10G/1G SFP+	2	1	n/a
C9200L-48P-4X	48 1G ports full PoE+	4x10G/1G SFP+	2	1	30W PoE+
C9200L-48PL-4X	48 1G ports partial PoE+	4x 10G/1G SFP+	2	1	30W PoE+
C9200L-48PXG-4X	48 ports full POE+ (12 mGig ports up to 10G, 36 ports up to 1G)	4x 10G/1G SFP+	2	1	30W PoE+
C9200L-48PXG-2Y	48 ports full POE+ (8 mGig ports up to 10G, 40 ports up to 1G)	2x 25G/10G/ 1G SFP28	2	1	30W PoE+

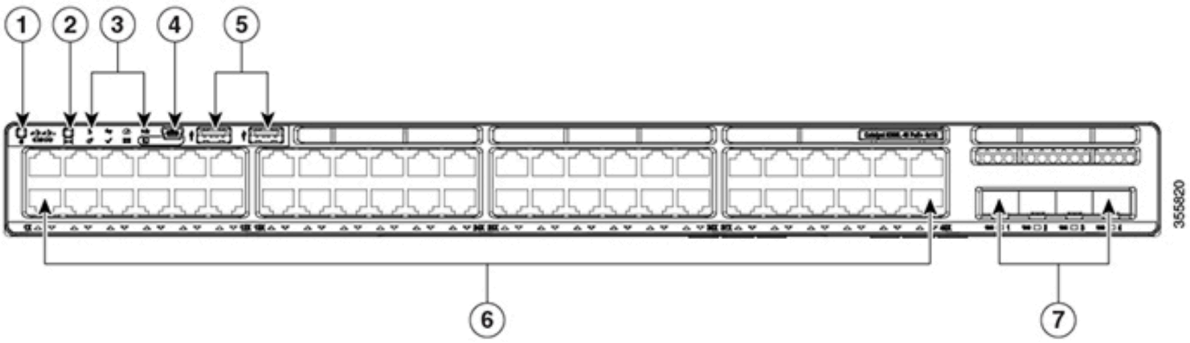
Product View and Physical Features

A Cloud ID will be located on the top or bottom panel that starts with a Q, this will be the serial number used to claim the device into the dashboard.

Front Panel Components

Inactive components: The following front panel components are used only when the device is being managed by DNAC or via CLI, and remain inactive in the Meraki-managed mode

1. STAT, Duplex, Speed, Stack, PoE, and Console LEDs.
2. USB Type-A storage and the USB Type-B console ports.



Item	Component	Purpose
1	**Blue Beacon LED**	Reports systems status (along with the System LED) Please refer to the **LED indicators in the Meraki-managed mode** table for details
2	**Reset (Mode) button**	Reset switch to factory settings. Please refer to the Factory Reset Process section for details
3	**System LED**	Reports status of the Switch (along with the Blue Beacon LED)
4	**USB mini-Type B (console) port**	With the Cisco Windows USB device driver, you can connect and disconnect the USB cable from the console port without affecting Windows HyperTerminal operations.
5	**USB Type A storage ports**	The USB Type A port provides access to external USB flash devices (also known as thumb drives or USB keys).
6	**10/100/1000 PoE+ ports**	The 10/100/1000 ports use RJ-45 connectors with Ethernet pinouts.

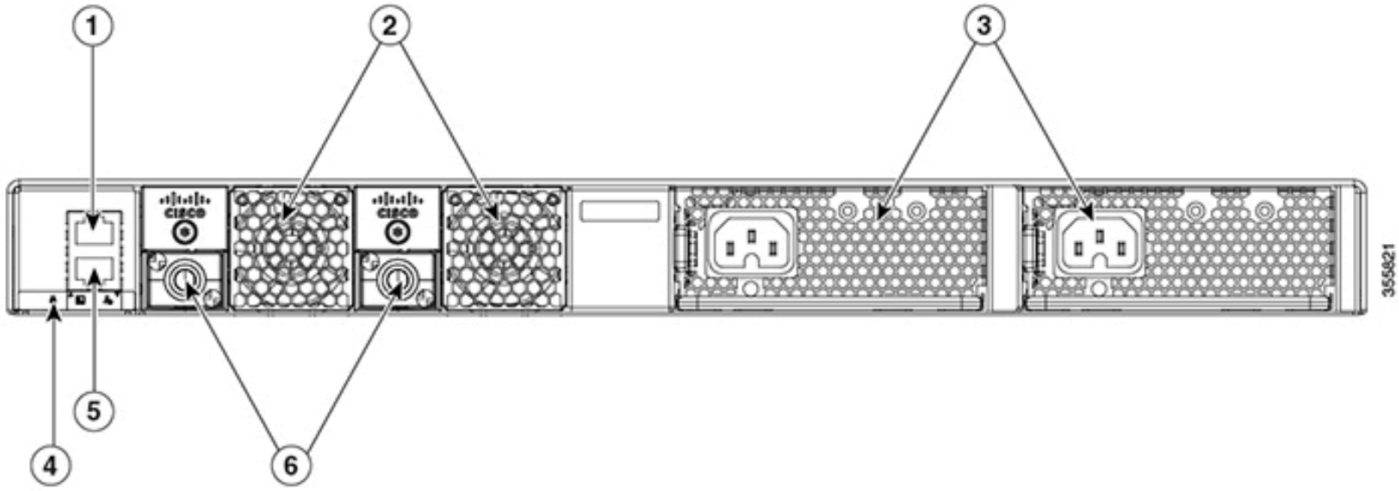
7	**Fixed uplink ports**	• 4x1G ports that support 1G SFP modules. • 4x10G ports that support either 1G SFP or 10G SFP+ modules. • 2x25G ports that support SFP28 modules

LED Indicators in the Meraki-managed mode

	System status	Blue Beacon LED	System LED
1	Switch is powered off or not receiving power.		Off
2	Switch is powered on and is loading the bootstrap firmware.		Solid amber
3	Switch is loading the operating system.	Off	Blinking green
4	System error: Switch failed to load operating system or bootstrap firmware.		Blinking amber
5	Setting up local management and cloud-connectivity requirements. *Note: If the switch has not been assigned a static management IP previously, it will try to obtain an IP via DHCP in this stage.*	Flashing Blue	Cycling b/w green & amber (OR blinking green)
6	System error: Switch failed to complete local provisioning.		Solid amber
7	Switch is completely provisioned but unable to connect to Meraki cloud.		Solid amber
8	Firmware download / upgrade in progress.		Blinking green
9	There is a fault with the power supply, fan, or network module (not traffic-related).	Solid Blue	Blinking amber
10	Switch is fully operational and connected to the Meraki cloud.		Solid green

Back Panel Components

Inactive components: When operating in the Meraki-managed mode, the C9200L will disable the RJ45 console port.



Item	Component	LED Status	Description
1	**Console Port**	N/A	RJ-45 Console Port
2	**Redundant Fans**	Green	Active and operational
3	**Power Supplies**	Green	Active and functional power supplies
4	**Blue Beacon LED**	Green	Active and functional power supplies
5	**Management Interface (Aux Port)**	Green	Connected, used for easy access to the local status page
6	**Stack Port**	N/A	StackWise-80 port connectors

Factory Reset Button

To perform a factory reset, keep the mode button pressed for 21 seconds or more. Release the button when you see the LED lights stop flashing. The switch will reboot and revert to its original factory settings.

Safety and Warnings

These operations are to be taken with respect to all local laws. Please take the following into consideration for safe operation:

- Power off the unit before you begin. Read the installation instructions before connecting the system to the power source.
- Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

- Read the mounting instructions carefully before beginning installation. Failure to use the correct hardware or to follow the correct procedures could result in a hazardous situation to people and damage to the system.
- This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 15 A, 125 Vac, or 10A, 240 Vac.
- Please only power the device with the provided power cables to ensure regulatory compliance.

Package contents

In addition to the MS switch, each shipment includes the following.

- 1 x default power supply unit for the switch model (please refer to the Power Supply and Specifications section)
- Rack mount brackets
- 2 x Pre-installed fans.
- STACKING NOTE: The C9200L does NOT include stacking ports by default. Please order the C9200L-STAK-KIT-M with every C9200L switch that you plan to deploy in a stack. That kit includes two stacking ports and a 50cm stacking cable.

Catalyst 9200L-M Deployment Best Practices

Before powering on devices or connecting an uplink port to the LAN, ensure to follow the steps outlined below or watch this short video.

> The above video will link to a MS390 but the steps and information are the same for the C9200L-M.

Configure your Dashboard Network

To add devices to your Meraki dashboard network please refer to the Creating a Dashboard Account and Organization document.

Check and Set Network Firmware

Ensure that the switch network is set to the correct firmware version. As of August 2025 IOS-XE 17.15.4 is the recommended version. Recommended versions are subject to change and are available in each dashboard by navigating to Organization > Firmware Upgrades

You can refer to Managing Firmware Upgrades for steps to set network firmware to the desired version.

Check and Configure Upstream Firewall Settings

If a firewall is in place, it must allow outgoing connections on particular ports to particular IP addresses. The most current list of outbound ports and IP addresses for your particular organization can be found under Help → Firewall info. The help button is located on the top right corner of any dashboard page. For more information refer to Upstream Firewall Rules for Cloud Connectivity.

Stacking

For stacking please refer to this section **Stack Cabling Installation**

Assigning an IP Address

All switches must be assigned routable IP addresses. These IP addresses can be dynamically assigned via DHCP or statically assigned. C9200L switches can support a total count of 512 VLANs per stand-alone switch or switch stack. VLAN ID 1-512 are configured by default, however, the active VLANs can be changed via the local status page or dashboard. When installing an C9200L, it is important to ensure that any DHCP services or IP address assignments used for management fall within the active VLAN range.

To utilize any VLANs outside of 1-512 on a Catalyst Meraki C9200L, the switch or switch stack must have ALL of its trunk interfaces set to an allowed vlan list that contains a total that is less than or equal to 512 VLANs, including any of the module interfaces that are not in use. For example: If a switch needs to utilize VLANs **1,100-200,300-400,2100-2200,3000-3100**, **EVERY** trunk interface on that switch must be configured with that allowed VLAN list or a subset of it.
The easiest method to do this is to perform the following:

1. Navigate to **Switch > Switch ports**.
2. in the search bar use the following search term depending on if it is a stack or a single switch:
    1. **switch:"{name of switch}" is:trunk**.
    2. **stack:"{name of stack}" is:trunk**.
3. Select all trunks configured with the allowed VLANs of 1-512
4. set to new list including new range of VLANs. (example: 1,100-200,300-400,2100-2200,3000-3100).
5. Click Update.

For the C9200L series, if you receive an error a "Validation failed: This switch is limited to 512 VLANs" error when adding switches to a network, please use the VLAN Database feature to configure the active VLANs on the network.

Dynamic Assignment

When using DHCP, the DHCP server should be configured to assign a static IP address for each MAC address belonging to a Meraki switch. Other features of the network, such as 802.1X authentication, may rely on the property that the switches have static IP addresses.

Please make sure that the DHCP server used for providing a management IP address to the switch has an available address pool that falls within the active VLAN range.

Static Assignment

Static IPs can be assigned using the local status page on each switch. For more information on how to configure static IP from the local status page refer to this documentation.

Static IP via DHCP Reservations

Instead of associating each Meraki switch individually to configure static IP addresses, an administrator can assign static IP addresses on the upstream DHCP server. Through “DHCP reservations,” IP addresses are “reserved” for the MAC addresses of the Meraki switches. Please consult the documentation for the DHCP server to configure DHCP reservations.

Check upstream VLAN configuration

Ensure the upstream switch/router port is configured properly and there is no VLAN mismatch.

Check STP configuration

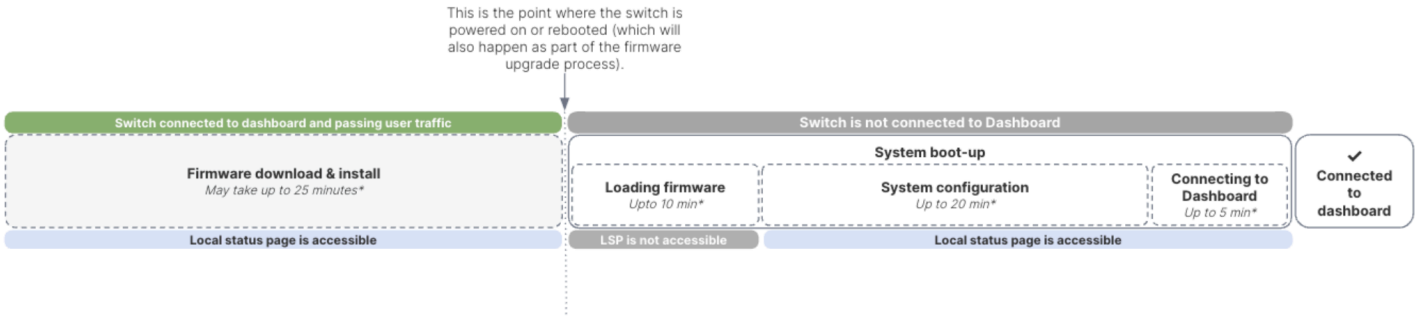
Meraki-managed C9200L series switches run a single instance of MST out of the box. Please read MS Best Practices prior to deployment.

> If you plan to deploy Meraki switches into an existing Catalyst network running PVST/PVST+/Rapid-PVST, please refer to this document for interoperability. To migrate your existing Catalyst switches to MSTP, please see Configuring Spanning Tree on Meraki MS Switches for more information.

Boot-up Process and Firmware Upgrades

This section provides a detailed guide on what to expect during the boot-up and firmware upgrade process. The following image illustrates the various stages the switch will undergo during a firmware upgrade, which includes a system reboot. When a switch is powered-on, or rebooted from the Dashboard, it will only go through the stages of the System boot-up process.

The status of the Dashboard-connectivity and the local status page (LSP) availability in each of these stages are also covered in the illustration and the table below.



* The durations stated in the illustration above were measured using a 6-member stack of 48-port switches. The actual time required for system boot-up and configuration will also depend on the stack size, port density and any user-defined configuration.

The following table offers another view on what to expect from the Blue Beacon and System LED as the switch progresses through these stages. For an exhaustive list of system states, please refer to the section on LED Indicators in the Meraki-managed mode.

Stage	System status	Blue Beacon LED	System LED
Firmware download & installation	Firmware download and upgrade in progress.	Solid blue	Blinking green
System boot-up	Switch is powered on and is loading the bootstrap firmware.	OFF	Solid amber
System configuration	Switch is loading the operating system.	OFF	Blinking green
	Setting up local management IP and cloud-connectivity requirements. Note: If the switch has not been assigned a static management IP previously, it will try to obtain an IP via DHCP in this stage.	Flashing blue	Cycling b/w green & amber (OR blinking green)
Connecting to dashboard	Switch is fully operational and connected to the Meraki cloud	ON/Solid blue	Solid green

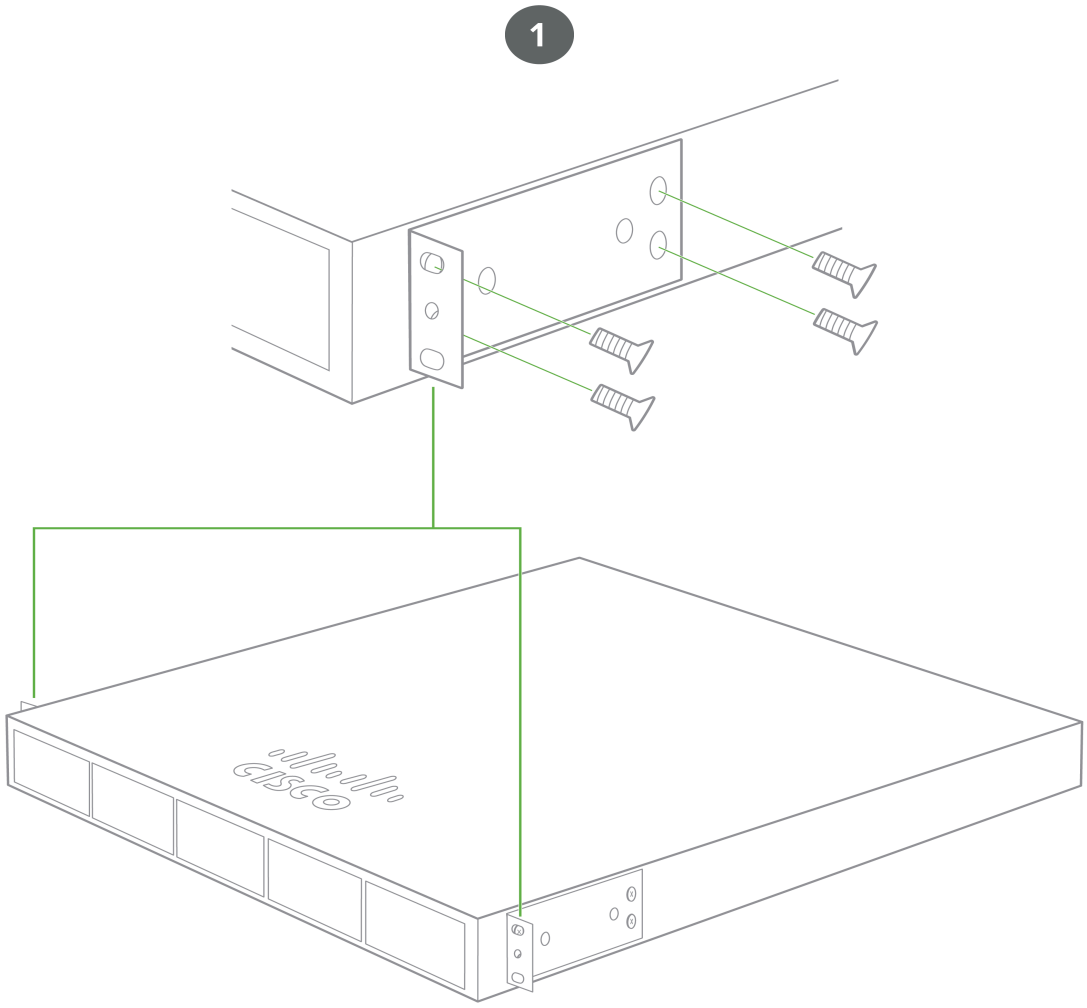
Device reboot/ reset precaution

Do not power down or reset the device during a firmware upgrade. Please refer to the table above or the section on LED Indicators in the Meraki-managed mode for details of the indicators for firmware upgrade.

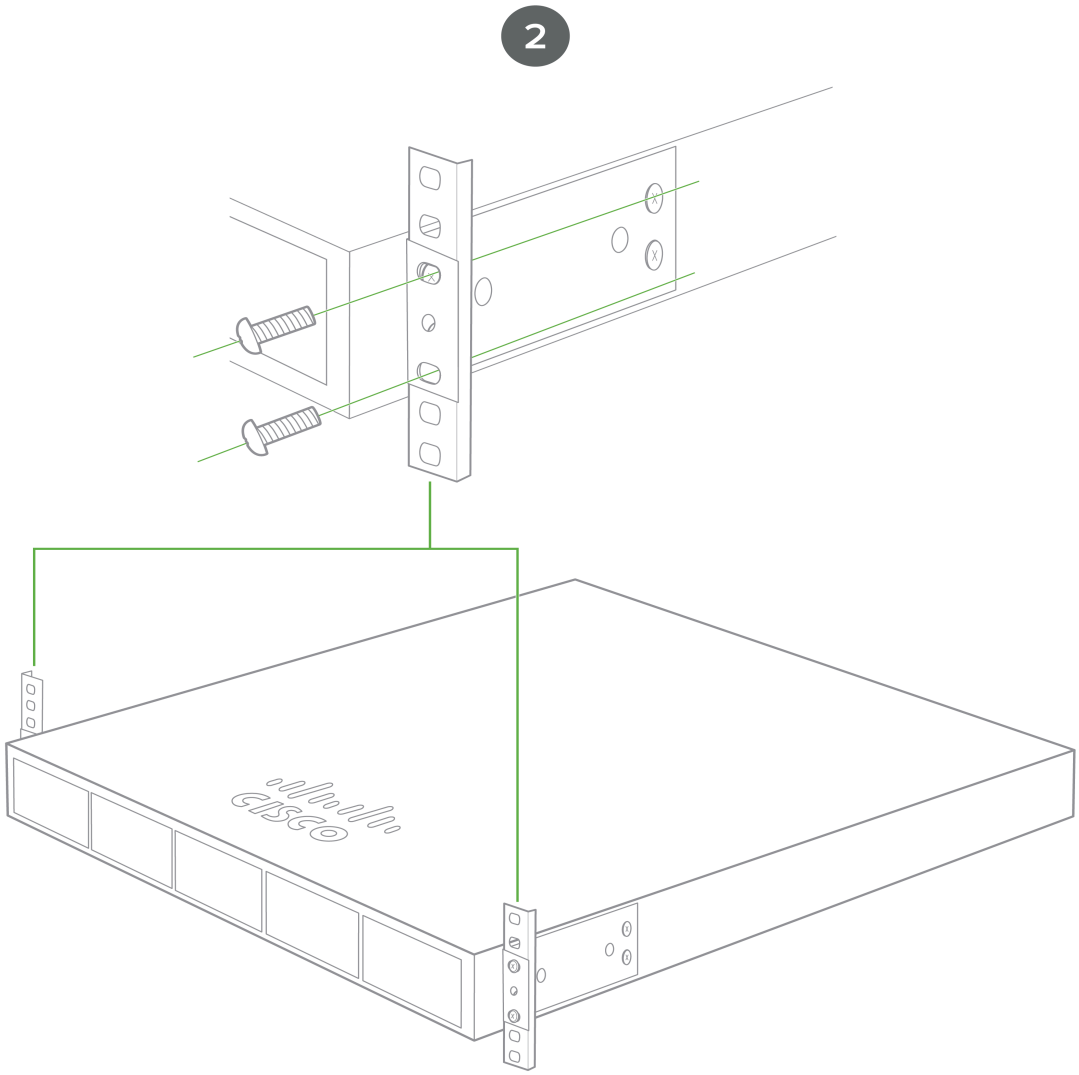
Once the devices are upgraded to the latest version continue configuring other switch features/settings. For details refer to the MS documentation

Installation Instructions

1. Attach the rack mount bracket to both sides of the switch as shown below:

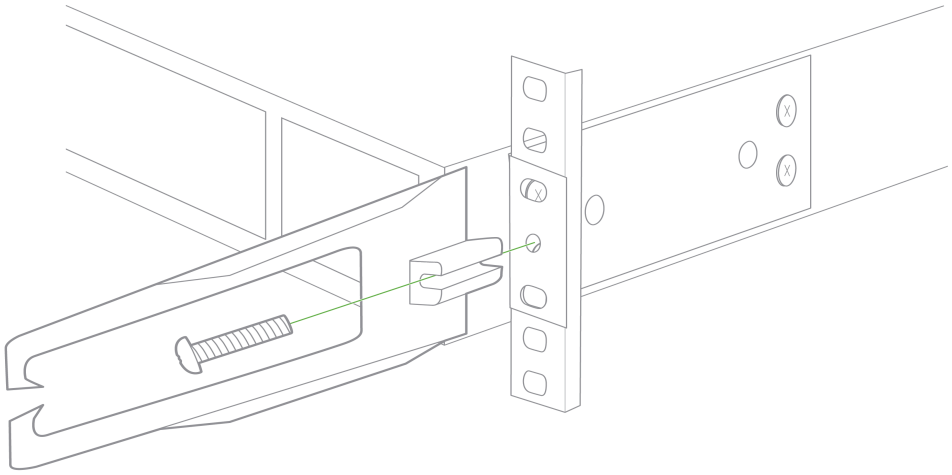


2. Align the rack mount brackets on the sides of the switch onto the rack.



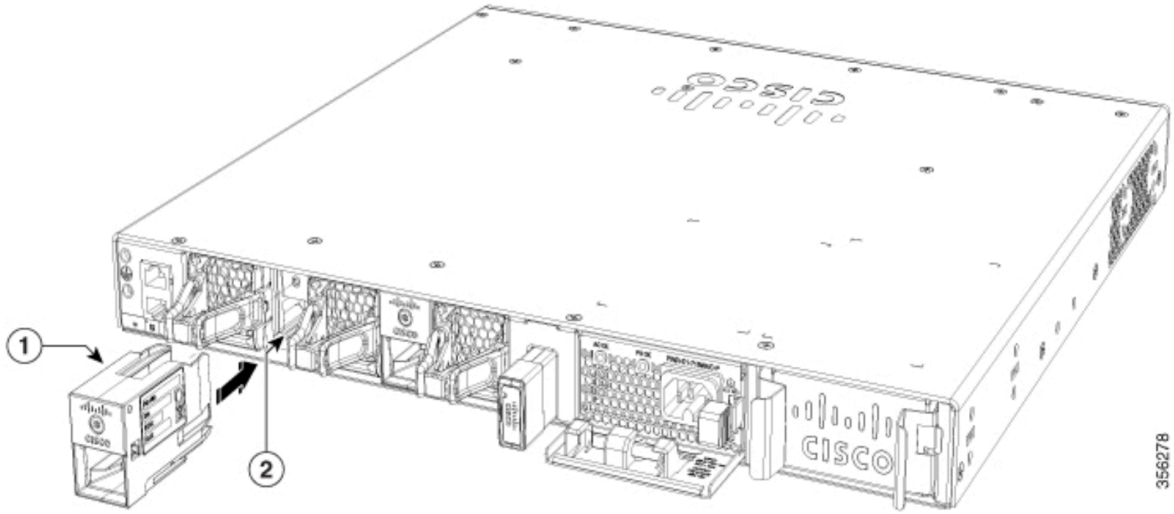
3. Secure and screw in the rack mount bracket on to the rack.

3



Stack Cabling Installation

- Install the StackWise adapter in each destination StackWise port, and secure it in place using the supplied Torx T15 key, or a Torx T15 screwdrive.



- Connect the cable to the stack port on the switch back panel (as shown in the back panel diagram). Align the connector and connect the stack cable to the stack port on the switch back panel, insert until the spring latch locks into the slot.
- Connect the other end of the cable to the port on the other switch, ensure the spring latch is locked in the slot.

Basic Troubleshooting

The following steps can be used for troubleshooting basic connectivity issues with your switch.

- Soft Reset the switch by holding the factory reset button for 10-15 seconds (less than 20seconds)
- Factory Reset the switch by holding the factory reset button for > 21 seconds
- After a factory reset, the switch will re-download its firmware that can take a while on slow internet links. (Expect 1GB of firmware per switch/stack)
- Try switching cables, or testing your cable on another device

Reference https://documentation.meraki.com/MS for additional information and troubleshooting tips.

If you are still experiencing hardware issues, please contact Cisco Meraki support by logging in to dashboard and using the **Help** option near the top of the page, then opening and email case or calling using the contact information on that page.

Warranty

MS Warranty coverage periods are as follows:

	Time Period	Comments
C9200L Series	Lifetime	Including 9200L models

MS Accessories	1 Year	The following are considered accessories: SFP Modules, twinax/SFP+ cables, stacking cables, all mounting kits and stands, interface modules, additional power cords, PoE injectors

The above table is a general guideline for warranty terms and is not final. Warranty terms are subject to printed warranty information on the online Meraki Returns and Policy section.

If your Cisco Meraki device fails and the problem cannot be resolved by troubleshooting, contact support to address the issue. Once support determines that the device is in a failed state, they can process an RMA and send out a replacement device free of charge. In most circumstances, the RMA will include a pre-paid shipping label so the faulty equipment can be returned.

In order to initiate a hardware replacement for non-functioning hardware that is under warranty, you must have access to the original packaging the hardware was shipped in. The original hardware packaging includes device serial number/Cloud ID and order information, and may be required for return shipping.

Meraki C9200L devices have been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. A digital device that is marketed for use in a residential environment notwithstanding use in commercial, business and industrial environments.

Additional warranty information can be found on: https://meraki.cisco.com/support#process:warranty

Support and Additional Information

If issues are encountered with device installation or additional help is required, **contact Meraki Support** by logging in to **dashboard.meraki.com** and opening a case by visiting the **Get Help** section.

- The equipment is intended for industrial or other commercial activities.
- The equipment is used in areas without exposure to harmful and dangerous production factors, unless otherwise specified in the operational documentation and/or on the equipment labeling.
- The equipment is not for domestic use. The equipment is intended for operation without the constant presence of maintenance personnel.
- The equipment is subject to installation and maintenance by specialists with the appropriate qualifications, sufficient specialized knowledge, and skills.
- Rules and conditions for the sale of equipment are determined by the terms of contracts concluded by Cisco or authorized Cisco partners with equipment buyers.
- Disposal of a technical device at the end of its service life should be carried out in accordance with the requirements of all state regulations and laws.
- Do not throw in the device with household waste. The technical equipment is subject to storage and disposal in accordance with the organization's disposal procedure.
- The equipment should be stored in its original packaging in a room protected from atmospheric precipitation. The permissible temperature and humidity ranges during storage are specified in the Operation (Installation) Manual.
- Transportation of equipment should be carried out in the original packaging in covered vehicles by any means of transport. The temperature and humidity during transportation must comply with the permissible established ranges of temperature and humidity during storage (in the off state) specified in the Operation Manual (Installation).

For additional information on Meraki hardware and for other installation guides, please refer to **documentation.meraki.com**.

Additionally, you can refer to Cisco Catalyst 9200L Series Switches Hardware Installation Guide.