cisco Meraki

MS390 Series Installation Guide

About this Guide

This guide provides instruction on how to install and configure your MS390 series switch. This guide also provides mounting instructions and limited troubleshooting procedures. For more switch installation guides, refer to the switch installation guides section on our documentation website.

Product Overview

Models

Model number	Description
MS390-24-HW	Stackable Layer-3 24-port Gbe switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans
MS390-24P-HW	Stackable Layer-3 24-port Gbe POE+ switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans
MS390-24U-HW	Stackable Layer-3 24-port Gbe UPOE switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans
MS390-24UX-HW	Stackable Layer-3 24-port mGbe UPOE switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans
MS390-48-HW	Stackable Layer-3 48-port Gbe switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans
MS390-48P-HW	Stackable Layer-3 48-port Gbe POE+ switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans
MS390-48U-HW	Stackable Layer-3 48-port Gbe UPOE switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans
MS390-48UX-HW	Stackable Layer-3 36-port 2.5Gbe and 12-port mGbe UPOE switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans

| MS390-48UX2-HW		Stackable Layer-3 48-port 5Gbe UPOE switch with 10G/40G modular uplinks, hot-swappable power supplies and hot-swappable fans

Technical Specifications

- Each model has 1 dedicated management interface

- Each model has two 120G stack ports

- Each of the model has modular uplinks where you can choose from 3 different options of 10G and 40G SFP+ and QSFP+ uplink modules

| Model	Interfaces	PoE/ UPoE Capabilities	Power Load (idle/max)	Available PoE	Hot Swap Power Supply
MS390-24-HW	24 x 1GbE RJ45	n/a	79.2 / 99 W	-	Yes, Dual
MS390-24P-HW	24 x 1GbE RJ45	PoE	84.1 / 554.4 W	445W	Yes, Dual
MS390-24U-HW	24 x 1GbE RJ45	UPoE	85.4 / 990.3 W	830W	Yes, Dual
MS390-24UX-HW	24 x mGbE RJ45	UPoE	162.7 / 809.9 W	560W	Yes, Dual
MS390-48-HW	48 x 1GbE RJ45	n/a	83.9 / 109.9 W	-	Yes, Dual
MS390-48P-HW	48 x 1GbE RJ45	PoE	92.6 / 555 W	437W	Yes, Dual
MS390-48U-HW	48 x 1GbE RJ45	UPoE	145 / 844.9 W	822W	Yes, Dual
MS390-48UX-HW	36 x 100M/1G/2.5G + 12 x 100M/1G/2.5G/5G/10G	UPoE	218.5 / 785.5 W	490W	Yes, Dual
MS390-48UX2-HW	48 x 100M/1G/2.5G/5G	UPoE	157.9 / 843.8 W	645W	Yes, Dual

Product View and Physical Features

Front Panel Components
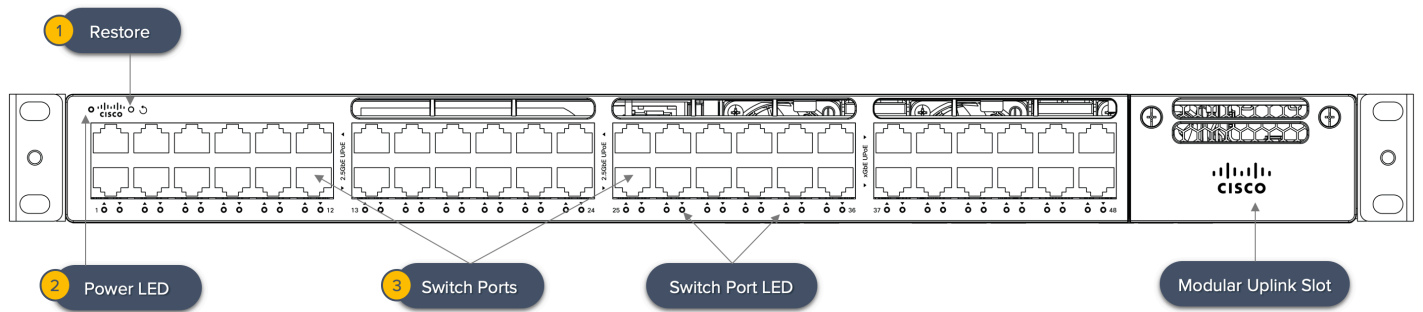
Item	Component	LED Status	Description
1	**Restore**	N/A	Restore button to clear switch IP and local configuration settings
2	**Power LED**	Solid amber	Switch is unable to connect to the Meraki cloud
		Flashing white	Firmware upgrade in process
		Solid white	Switch is fully operational and connected to the Meraki cloud
		Off	Switch does not have power
3	**Switch Ports**	Off	No client connected
		Solid amber	10/100 Mbps (1 Gbps on SFP+)
		Solid green	1/2.5/5/10 Gbps (10 Gbps on SFP+)

> ⓘ **MS390 Power LED Change Timeline** : Power LED is amber for the initial 4 minutes 10 seconds. The rainbow color starts and stops at 4 minutes 52 seconds. The power LED is amber and the port LED turn on at 5 minutes 34 seconds. The power LED goes white at 6 minutes 10 seconds .
> Pings from cloud starts working at 6 minutes 52 seconds.

Back Panel Components
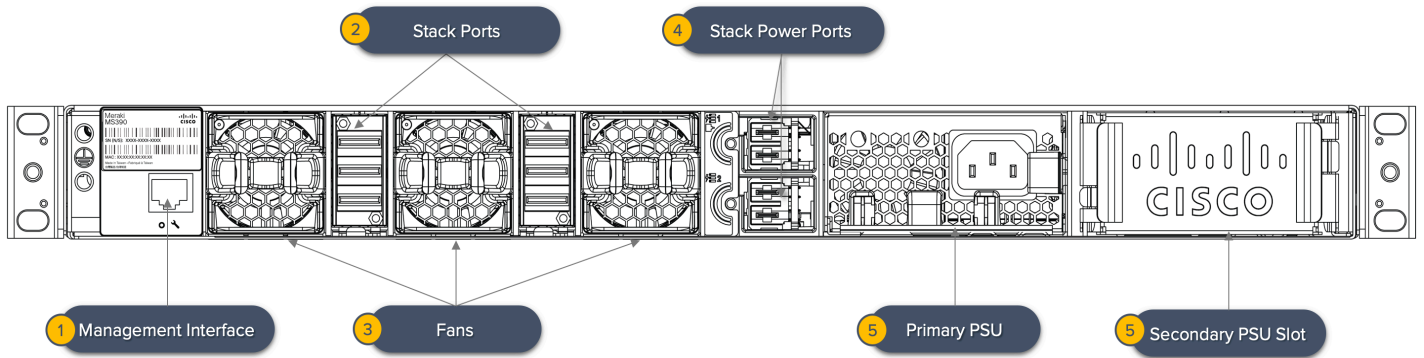
| Item	Component	LED Status	Description
1	**Management Interface**	Green	Connected, used for easy access to the local status page
2	**Stack Ports**	N/A	Stack Cables are connected here
3	**Redundant Fans**	Green	Active and operational
4	**StackPower Ports**	N/A	Stack Power cables are connected here
5	**Power Supplies**	Green	Active and functional power supplies

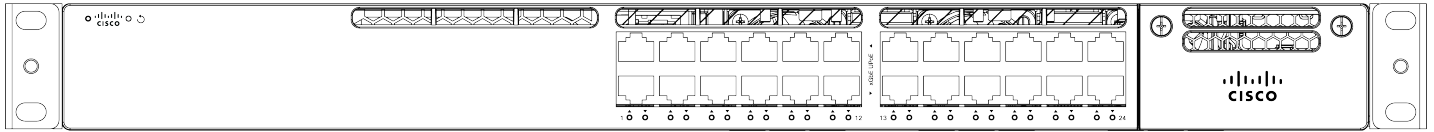# MS390 Series Front and Back Panel

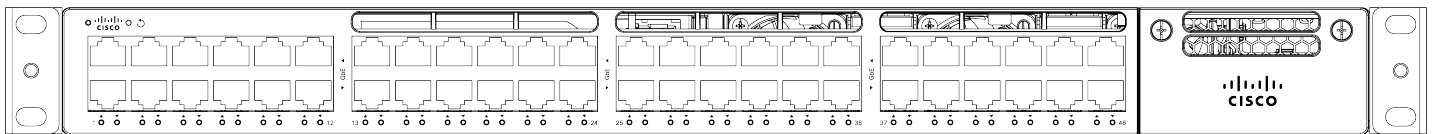## MS390-24 Series front panel
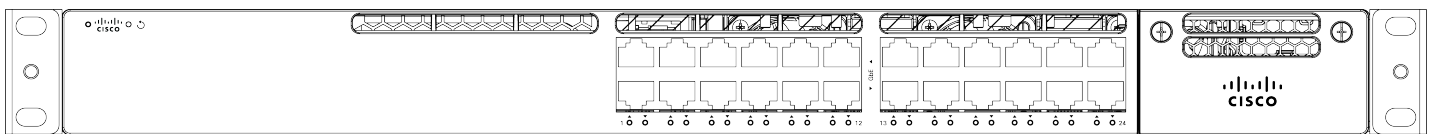
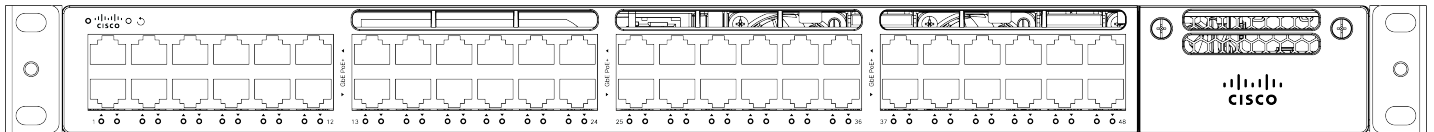## MS390-24P Series front panel
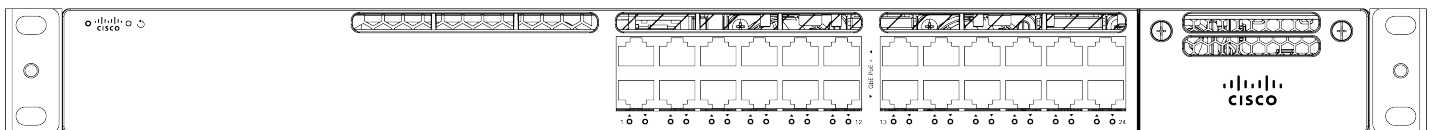
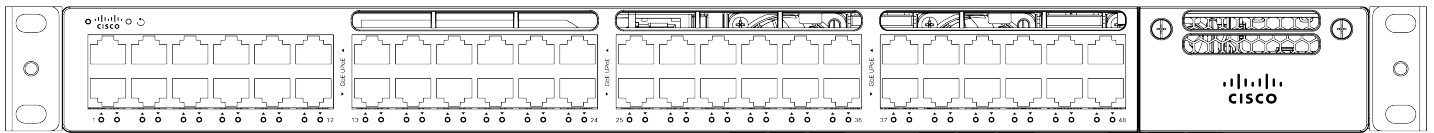## MS390-24U Series front panel
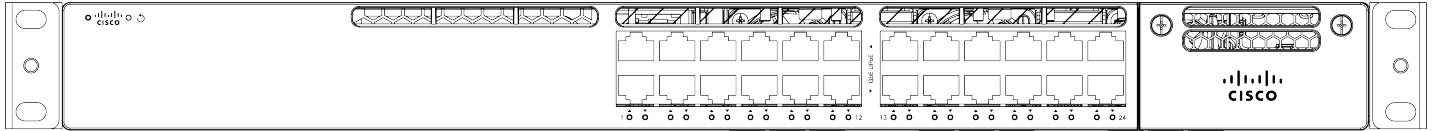
MS390-24UX Series front panel
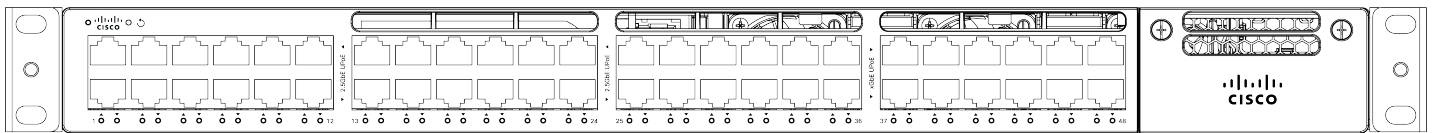

MS390-48 Series front panel
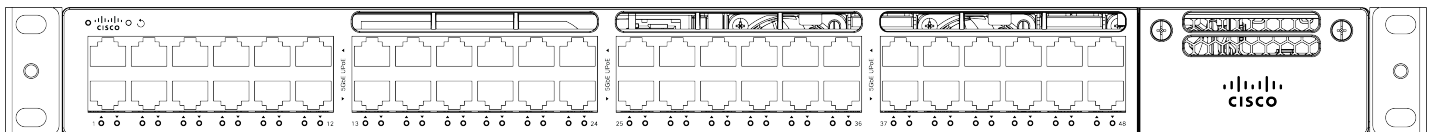

MS390-48P Series front panel

MS390-48U Series front panel

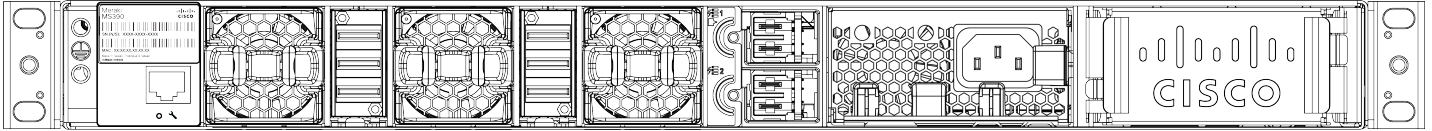## MS390-48UX Series front panel

MS390-48UX2 Series front panel
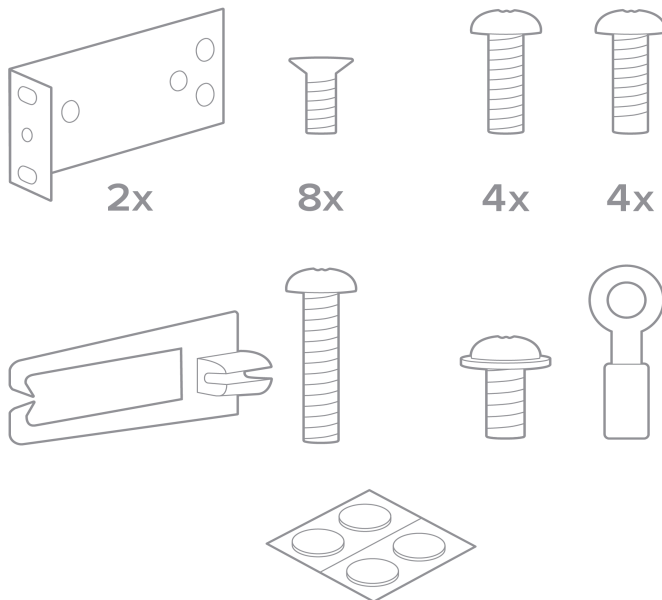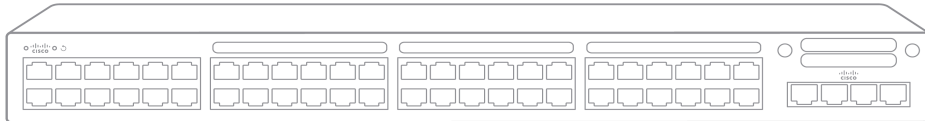
MS390 Series Back Panel

Factory Reset Button

If the button is pressed and held for at least 10 to 15 seconds and then released, the switch will reboot and be restored to its original factory settings by deleting all configuration information stored on the unit.

Package contents

2x   8x   4x   4x

In addition to the MS switch, the following are provided:

- 2 x (19 inch) Mounting brackets and screw kit that includes:
  - 8 x Flat-head screws
  - 4 x number-12 pan-head screws
  - 4 x number-10 pan-head screws
  - 1 x (4 x 20 mm) pan-head screw
  - 1 x Ground lug screw and ring terminal
  - 4 x Rubber mounting feet
- 1 x Default Power Supply Unit
- 3 Pre-installed Fans
- Cable guide
- Installation instruction pamphlet
- Regulatory Compliance and Safety Information handbook

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.

Pre-install Preparation

You should complete the following steps before going on-site to perform an installation.

Configure your Dashboard Network

The following is a brief overview only of the steps required to add a switch to your network. For detailed instructions about creating, configuring and managing Meraki networks, refer to the online documentation (documentation.meraki.com).

1. Login to http://dashboard.meraki.com. If this is your first time, create a new account.
2. Find the network to which you plan to add your switches or create a new network.
3. Add your switches to your network. You will need your Meraki order number (found on your invoice) or the serial

number of each switch, which looks like Qxxx-xxxx-xxxx, and is found on the bottom of the unit. You will also need your Enterprise license key, which you should have received via email.

4. Go to the map / floor plan view and place each switch on the map by clicking and dragging it to the location where you plan to mount it.

Check and Set Firmware

To ensure your switch performs optimally immediately following installation, it is recommended that you facilitate a firmware upgrade prior to mounting your switch.

1. Attach your switch to power and a wired Internet connection.

2. The switch will turn on and the power LED will glow solid orange.

3. If the unit requires an upgrade, the power LED will begin blinking white until the upgrade is complete, at which point the LED will turn solid white. You should allow at least a few minutes for the firmware upgrade to complete, depending on the speed of your internet connection.

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 on the firewall configuration page in your dashboard.

Assigning an IP Address

All switches must be assigned routable IP addresses. These IP addresses can be dynamically assigned via DHCP or statically assigned.

> ⓘ MS390 switches can support up to 1000 VLANs per stand-alone switch or switch stack. VLANs 1-1000 are configured by default, however the active VLANs can be changed via the local status page. When installing an MS390, it is important to ensure that any DHCP services or IP address assignments used for management fall within the active VLAN range.

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.

Static Assignment

Static IPs are assigned using the local web server on each switch. The following procedure describes how to set the static IP:

1. Using a client machine (e.g., a laptop), connect to the switch over a wired connection.

2. Using a web browser on the client machine, access the switch's built-in web server by browsing to http://my.meraki.com.

3. Click on the "Uplink Configuration" tab. Log in. The default login is the serial number (e.g. Qxxx-xxxx-xxxx), with no password.

4. Configure the static IP address, net mask, gateway IP address and DNS servers that this switch will use on its management connection.

5. If necessary, reconnect the switch to the LAN.

Static IP via DHCP Reservations

Instead of associating to 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.
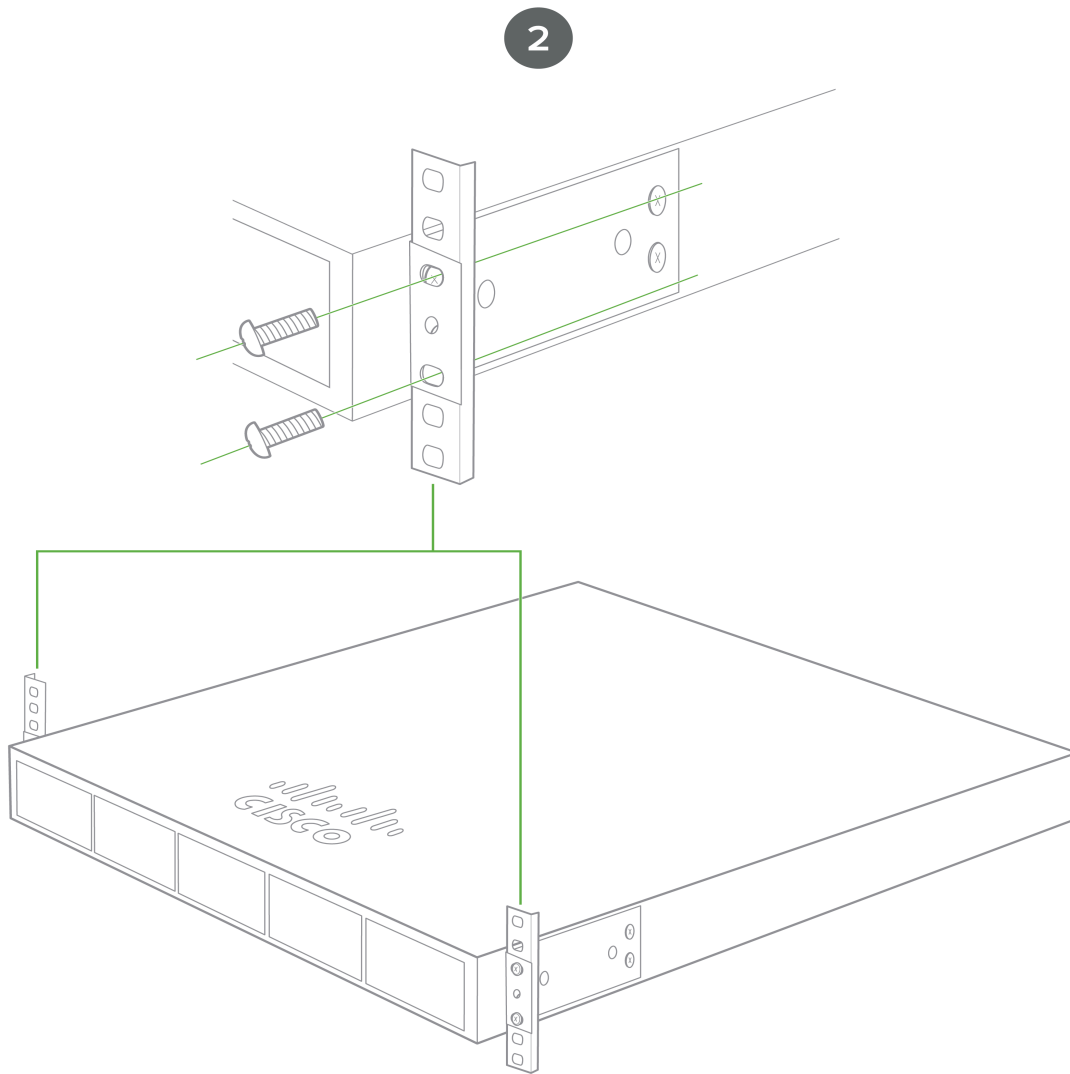
Installation Instructions

> (i) Note: Each switch comes with a graphical instruction pamphlet within the box. This pamphlet contains detailed step by step guides and images to assist in the physical install of the switch.

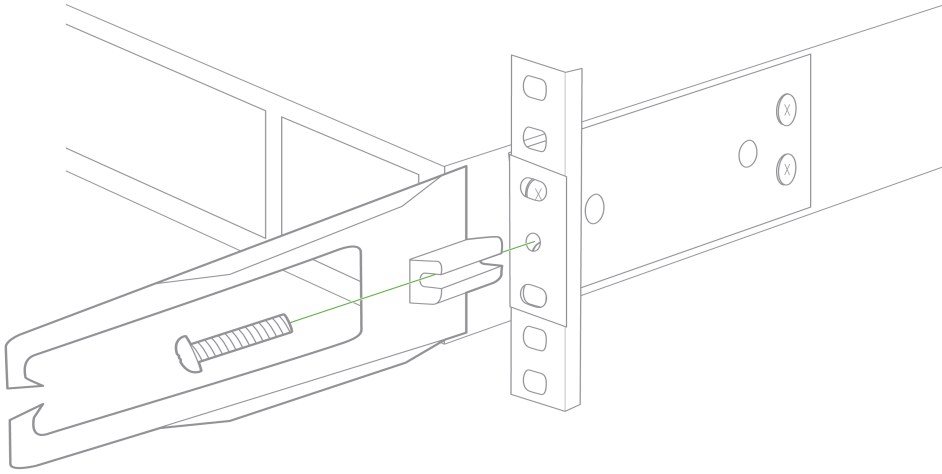1. Attach the rack mount bracket to both sides of the switch as shown below:
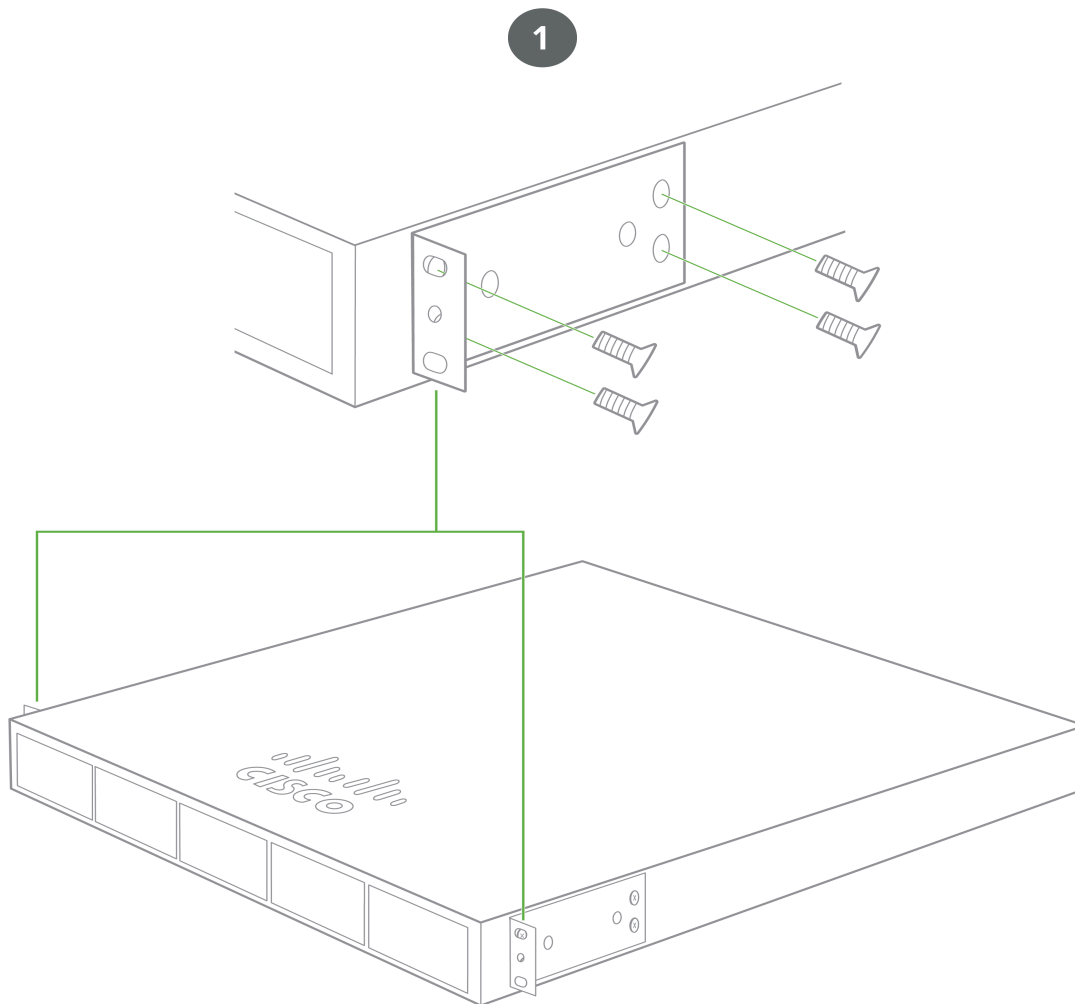
2. Align the rack mount brackets on the sides of the switch onto the rack.
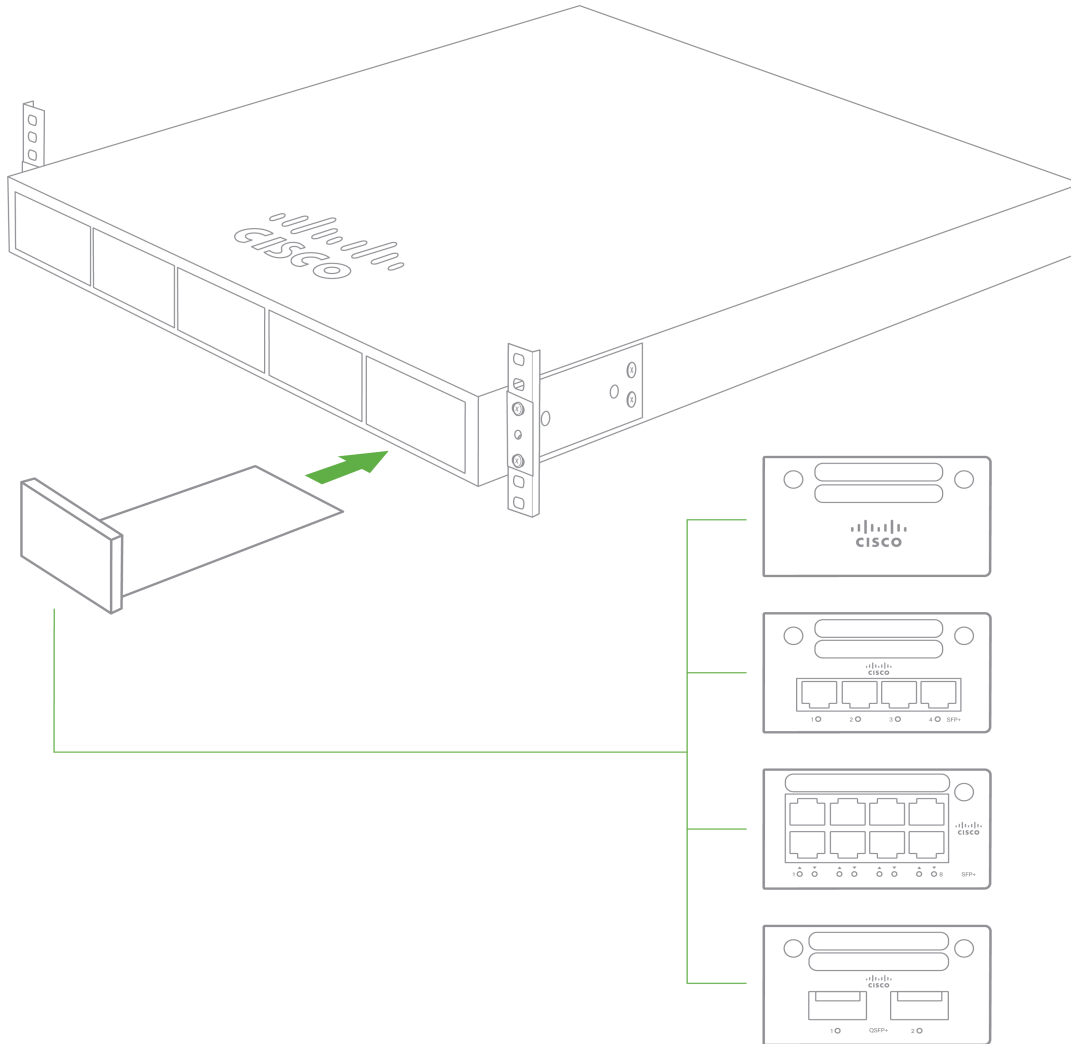

3. Secure and screw in the rack mount bracket on to the rack.

4. Insert the Uplink module.

Stack Cabling Installation

- 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 and finger-tighten the screws (clockwise direction). Make sure the Cisco logo is on the top side of the connector.

- Connect the other end of the cable to the port on the other switch and finger-tighten the screws. Avoid over tightening the screws.

ⓘ Please refer to these instructions here before stacking MS390 out of the box.

StackPower Cabling Installation

- Connect the end of the cable with a green band to either StackPower port on the first switch (see back panel diagram to locate the StackPower ports). Align the connector correctly, and insert it into a StackPower port on the switch rear panel.
- Connect the end of the cable with the yellow band to another switch. Hand-tighten the captive screws to secure the StackPower cable connectors in place.
- StackPower feature doesn't need any dashboard configuration but is automatically enabled when the cables are installed.

Basic Troubleshooting

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

- Factory reset the switch by holding the factory reset button for 10-15 seconds
- 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
MS390 Series	Lifetime	-
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

Note: 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 and order information, and may be required for return shipping.

ⓘ Meraki MS390 devices have been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

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.

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