MS355 Overview and Specifications

Overview

The MS355 is a multi-gigabit switch line designed to help prepare Organizations for the increased bandwidth requirements of the upcoming 802.11ax wireless standard with high-count mGig switch ports and increased switching capacity to meet the demands of next generation access points. Networks with sizeable wireless deployments such as universities, hospitals, and large public complexes like transportation centers can all benefit from the increased bandwidth capabilities of the MS355.

With 4 different models, each with multiple mGig RJ45 ports capable of negotiating up to 10Gbps, 40G QSFP+ ports, and dedicated 100G hardware stacking ports, the MS355 line is fully ready to support the future deployment of 802.11ax wireless infrastructure across a variety of different environments.

Features

- Managed via Cisco Meraki Dashboard
- Remote Packet Capture Tools via Meraki Dashboard
- Automatic Firmware upgrades
- SNMP/Syslog Integration
- IPv4/6 ACL support
- 802.1q VLAN tagging
- Broadcast Storm Control
- Dynamic ARP Inspection / DHCP Snooping
- 802.1X Authentication
- 10/100/1000 Mbps RJ45
- 100M/1G/2.5G/5G/10G mGbE RJ45
- 4x 1000/10000 Mbps SFP+
- 2x 40GbE QSFP+
- 2x Dedicated Stack Ports providing 400G of Stacking bandwidth
- L3 Switching including OSPF
- UPoE Support
- Hot Swappable Power Supplies and Fans
- Warm Spare capable

Configuration

The basic initial configuration of the MS355 is just as simple as any other model of MS switch. The links below provide additional information and instructions relating to each step in getting the device setup and configured for the first time.

1. Claim the device to an Organization on the Meraki Dashboard
    a. If a Dashboard Organization does not yet exist, Create one
2. Add the device to a Dashboard Network
    a. If a Network does not yet exist, Create one first
3. Physically connect the device to the local network
    a. Connect one of the RJ45 ports to existing infrastructure to provide a temporary uplink
    b. Power on the device and let it check in to the Dashboard
    c. If necessary, configure a Static IP through the Local Status Page to allow it to communicate with the Meraki Dashboard.
4. Allow the device to completely check-in and perform any initial firmware upgrades
5. Finish configuring the device from the Meraki Dashboard
    a. Create a Switch Stack
    b. Manage local VLANs / Port configuration
    c. Configure Layer 3 Routing

Context and Comparisons

	MS350-24P	MS350-24X
1GbE RJ45	24	16
mGbE RJ45 (100M/1G/2.5G/5G/10G)	-	8
10GbE SFP+	4	4
40GbE QSFP+	-	-
Hardware Stack Port	2	2
Dedicated Management Interface	1	1
Hot Swap Power Supply	Yes, Dual	Yes, Dual
Hot Swap Fans	Yes, 2x	Yes, 2x
Layer 3 Routing	Yes	Yes
UPoE Capable	No, 370W	Yes, 740W
Max Switching Capacity	128 Gbps	272 Gbps
Max Stacking Bandwidth	160 Gbps	160 Gbps

Technical Breakdown

Hardware Breakdown

	MS355-24X	MS355-24X2	MS355-48X	MS355-48X2
1GbE RJ45	16	-	32	24
mGbE RJ45 (100M/1G/2.5G/5G/10G)	8	24	16	24
10GbE SFP+	4	4	4	4
40GbE QSFP+	2	2	2	2
Hardware Stack Port	2	2	2	2
Dedicated Mgmt Interface	1	1	1	1
Hot Swap Power Supply	Yes, Dual	Yes, Dual	Yes, Dual	Yes, Dual
Hot Swap Fans	Yes, 3x	Yes, 3x	Yes, 3x	Yes, 3x

Cabling Best Practices for Multi-Gigabit operations: While Category-5e cables can support multigigabit data rates upto 2.5/5 Gbps, external factors such as noise, alien crosstalk coupled with longer cable/cable bundle lengths can impede reliable link operation. Noise can originate from cable bundling, RFI, cable movement, lightning, power surges and other transient event. It is recommended to use Category-6a cabling for reliable multigigabit operations as it mitigates alien crosstalk by design.

Throughput and Capabilities

	MS355-24X	MS355-24X2	MS355-48X	MS355-48X2
Layer 3 Routing	Yes	Yes	Yes	Yes
UPoE Capable	Yes, 740W	Yes, 740W	Yes, 740W	Yes, 740W
Switching Capacity	352 Gbps	640 Gbps	544 Gbps	688 Gbps
Stacking Bandwidth	400 Gbps	400 Gbps	400 Gbps	400 Gbps

Physical

	MS355-24X	MS355-24X2	MS355-48X	MS355-48X2
Mount Type	1U Rack Mount	1U Rack Mount	1U Rack Mount	1U Rack Mount
Dimensions (h x w x d)	1.7 x 19.1 x 20 in / 4.37 x 48.46 x 51.66 cm	1.7 x 19.1 x 20 in / 4.37 x 48.46 x 51.66 cm	1.7 x 19.1 x 20 in / 4.37 x 48.46 x 51.66 cm	1.7 x 19.1 x 20 in / 4.37 x 48.46 x 51.66 cm

Weight	15.34 lbs / 6.96 kg	15.08 lbs / 6.84 kg	16.05 lbs / 7.28 kg	16.15 lbs / 7.33 kg
Power Supply	1025W AC	1025W AC	1025W AC	1025W AC
Power Load (idle/max)	110W / 1793W	110W / 1793W	110W / 1793W	110W / 1793W
Operating Temperature	32°F - 113 °F 0°C - 45°C	32°F - 113 °F 0°C - 45°C	32°F - 113 °F 0°C - 45°C	32°F - 113 °F 0°C - 45°C
Humidity	5% to 95%	5% to 95%	5% to 95%	5% to 95%

Troubleshooting

The MS uses LEDs to inform the user of the device's status. When the device powers on, all the Internet LEDs flash twice. Additional functions are described below, from left to right.

Front Panel Components

Item	Function	LED Status	Meaning
1	Power	Solid orange	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
2	Switch Ports	Off	No client connected
		Solid orange	10/100 Mbps (1 Gbps on SFP+)
		Solid green	1/2.5/5/10 Gbps (10 Gbps on SFP+)

Back Panel Components

Item	Function	LED Status	Meaning
1	Restore	N/A	Restore button to clear switch IP and local cor
2	Management Interface	Green	Connected, used for easy access to the local s

3	Stack Ports	N/A	Stack Cables are connected here
4	Redundant Fans	Green	Active and operational
5	Redundant Power Supplies	Green	Active and functional power supplies

Power cords may be ordered separately.

Equipment is to be used only in a restricted access location and installed/operated only by trained service personnel.

Common Troubleshooting

My device is connected to the network but not checking in to the Meraki cloud or shows a solid Orange LED.

Confirm that the device is powered on and has a valid IP address that is able to access the Internet. Use the Local Status Page to get more information about the connectivity status of the device such as if it can successfully reach the Local Gateway, Internet, and/or Meraki Cloud servers. If necessary, contact Meraki Support for additional assistance.

My Status LED is blinking WHITE

A blinking WHITE Status LED indicates that the device is in contact with the Dashboard Cloud servers and is performing a firmware update. This can sometimes take 20-45 minutes or more to complete depending on hardware and other factors.

My Status LED is blinking ORANGE

The device is not able to successfully communicate with the Dashboard Cloud servers or there may be a hardware issue with the device. Check the Local Status Page of the device to confirm the status and reach out to Meraki Support for further troubleshooting.

Event Log

The most common Event Log messages and their meaning are listed below.

Port STP change

Indicates the STP state of the port has changed, lists the relevant port number, previous, and new states. Typically accompanied by a 'Port status change' event.

Port status change

Indicates the link state of the port has changed, lists the relevant port number, old, and new state. Always accompanied by a 'Port STP change' event.

SFP module inserted/removed

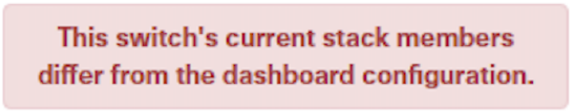
Indicates that an SFP module was either inserted or removed, includes SFP module information for inserted events and always lists the relevant port number.

Common Stacking Alerts

View our dedicated Switch Stacking document for more detailed information about configuring a Switch Stack and common issues.

Ensure all stack members are configured on dashboard, online and connected via their stacking ports. If connected and configured correctly, the error will disappear within 20-30 minutes. If the error persists, please contact Cisco Meraki Technical Support for further troubleshooting.

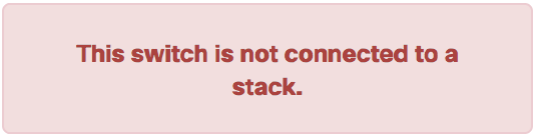
This switch's current stack members differ from the dashboard configuration.



This error can occur in the following scenarios:

- Stack members are configured on dashboard, but not all members are connected via their stacking ports.
- A stack member has failed or is powered off.

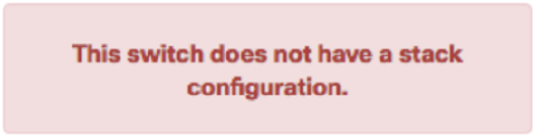
This switch is not connected to a stack.



This error can occur in the following scenarios:

- The switch is configured on dashboard as a stack member, but is not connected to a stack.

This switch does not have a stack configuration.



This error can occur in the following scenarios:

- The switch is physically connected as a stack, but not configured on dashboard as a stack member.