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## MS410 Overview and Specifications

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### Overview

The Cisco Meraki 410 series extends cloud management across the aggregation layer for medium-size networks with our 1/10G fiber aggregation switches. As with our access layer switches, our aggregation switches are built from the ground up to be easy to manage without compromising any of the power and flexibility traditionally found in enterprise-class switches.

Available in 2 different port densities, 16 or 32 x 1G SFP, both of which include 10Gb SFP+ ports and 2 dedicated hardware stacking ports capable of providing up to 160Gbps stacking bandwidth to support small and medium-sized enterprise environments.



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### 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
- 16 or 32 x 1000 Mbps SFP
- 2 or 4 x 1000/10000 Mbps SFP+
- Dual Dedicated 40G Hardware Stacking Ports
- L3 Switching including OSPF
- Hot Swappable Power Supplies and Fans
- Warm Spare capable

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### Configuration

The basic initial configuration of the MS410 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.

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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](#)

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## Technical Breakdown

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### Hardware Breakdown

	<b>MS410-16</b>	<b>MS410-32</b>
<b>1GbE SFP</b>	16	32
<b>10GbE SFP+</b>	2	4
<b>Hardware Stack Port</b>	2	2
<b>Dedicated Management Interface</b>	1	1
<b>Hot Swap Power Supply</b>	Yes, Dual	Yes, Dual
<b>Hot Swap Fans</b>	Yes, x2	Yes, x2

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### Throughput and Capabilities

	<b>MS410-16</b>	<b>MS410-32</b>
<b>Layer 3 Routing</b>	Yes	Yes
<b>Switching Capacity</b>	72 Gbps	144 Gbps
<b>Stacking Bandwidth</b>	160 Gbps	160 Gbps

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## Physical

	<b>MS410-16</b>	<b>MS410-32</b>
<b>Mount Type</b>	1U Rack Mount	1U Rack Mount
<b>Dimensions (h x w x d)</b>	1.74 x 17.33 x 19in (4.37 x 48.46 x 51.66cm)	1.74 x 17.33 x 19in (4.37 x 48.46 x 51.66cm)
<b>Weight</b>	11.8 lbs (5.4 kg)	12.6 lbs (5.7 kg)
<b>Power Supply</b>	250W AC	250W AC
<b>Power Load (idle/max)</b>	50 / 85 W	50 / 85 W
<b>Operating Temperature</b>	32°F - 113 °F 0°C - 45°C	32°F - 113 °F 0°C - 45°C
<b>Humidity</b>	5% to 95%	5% to 95%

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## Troubleshooting

The MS uses LEDs to inform the user of the device's status. When the device powers on, the main LED will be amber. Additional functions are described below, from left to right.

<b>Item</b>	<b>Function</b>	<b>LED Status</b>	<b>Meaning</b>
1	Restore	N/A	Restore button to clear switch IP and local configuration settings
2	Fan	Orange	One or more of the system fans has malfunctioned or is missing
3	Power (PSU)	Orange	One of the system PSUs (power supplies) has malfunctioned or is missing
2	Status	Orange	Switch is unable to or has not yet connected to the Meraki cloud
		Flashing green	Firmware upgrade in process
		White	Switch is fully operational and connected to the Meraki cloud
		Rainbow	Switch is booting, searching for uplink to Meraki Cloud
		Off	Switch does not have power

3	Switch Port LEDs	Off	No client connected
		Solid orange	1 Gbps on SFP+
		Solid green	1 Gbps on SFP/10 Gbps on SFP+

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## 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.

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## 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.

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## 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

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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 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 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 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.