

Meraki MS Series Switches

FAMILY DATASHEET



Overview

Cisco Meraki offers a broad range of switches, built from the ground up to be easy to manage without compromising any of the power and flexibility traditionally found in traditional enterprise-class switches.

Meraki access & aggregation switches are all managed through an elegant, intuitive cloud interface, freeing administrators to spend less time on configuration and more time on meeting business needs.

To set up a Meraki switch, just plug it in; there's no need for repetitive, command-based configuration, and switches can be up and running within minutes of connecting them to the network.

A powerful centralized management interface gives administrators deep visibility into the network and how it is used. See which switches are near capacity across hundreds of sites. Quickly provision and reconfigure switch ports with security, QoS, and more. The Meraki dashboard provides unified policies, event logs, and monitoring, making it easy to manage network deployments without sacrifice.

PRODUCT HIGHLIGHTS

- Range of enterprise switching options built on proven Cisco hardware technologies
- Basic L2 to high-performance L3 switches with 10GbE uplinks, suitable for deployments of all sizes
- True zero-touch configuration model that scales with organization needs and requirements
- Integrated troubleshooting tools, logging and alerting reduce operational costs
- Energy efficient design with low acoustics and fanless options
- Flexible stacking for scaled configuration and high performance in one
- Cloud management reduces cost, overhead and time to resolution
- Industry-standard features allow for simple integration into existing and mixed infrastructures
- Role-based administration and automatic, secure firmware updates delivered via the web

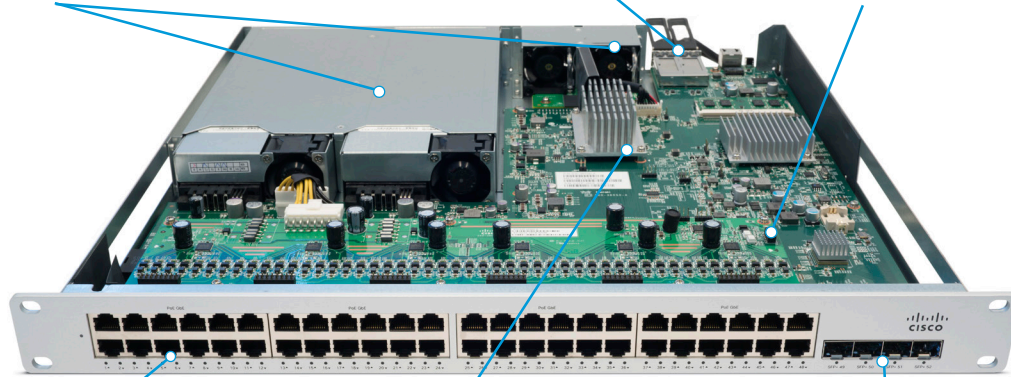
Inside the Meraki MS

MERAKI MS350-48FP SHOWN, VARIES BY MODEL

Energy Efficient Dual Power Supplies with Variable Speed Fans

Stacking connectors

High Reliability / MTBF
Extended Life Components



48x 1 GbE Ports with
802.3af/802.3at PoE/PoE+

Enhanced CPU / Memory
Meraki Cloud Management

Built-in 4 x 10 GbE SFP+ Uplink
Ports for Uplink Connectivity

ENTERPRISE-CLASS HARDWARE

Meraki switches feature high-end hardware and an exceptional feature set, including:




- GbE, 10 GbE and 40 GbE uplink ports for high-speed connectivity to aggregation layer switches or other upstream devices
- Optional Multigigabit ports providing up to 10Gbps on a single Ethernet cable, supporting the latest WiFi performance capabilities
- Wire-speed, non-blocking switch fabric (up to 800 Gbps) and 6 dedicated QoS queues for high-performance, converged voice, video, and data deployments
- Power efficient, quiet acoustic designs, and shallow rack depth options, enabling flexible deployment in wiring closets as well as offices and classrooms
- Fanless design on select models
- Power over Ethernet and PoE+, up to 30W per port
- Up to 740 watt PoE budget with PoE+ support for powering APs, phones, cameras, and other PoE enabled devices (124W for 120-8 series), with UPoE available on the MS350-24X
- Lifetime hardware warranty and advanced replacement at no additional cost
- Field-replaceable, hot-swappable power supplies and fans. RPS option for mission-critical applications

POWERFUL FEATURE SET FOR DEPLOYMENTS OF ALL TYPES





Meraki switches include all of the traditional Ethernet features found on the highest end products, including:

- Quality-of-Service (QoS) to prioritize mission critical traffic such as voice and video
- IEEE 802.1X support for port based network access control
- MAC-based RADIUS auth and MAC whitelisting
- Voice VLAN support for simplified VoIP deployments
- Port Mirroring support for monitoring network traffic at line rate
- DHCP snooping to prevent users from adding unauthorized DHCP servers on the network
- IGMP Snooping to optimize network performance with multicast traffic
- Link Aggregation Control Protocol (LACP) for high-capacity trunking, stacking, and increased availability
- Rapid spanning tree, BPDU guard, root guard, and other safeguards to help prevent misconfigurations and reduce convergence time
- Per port VLAN configuration
- Multiple administrative roles with sophisticated security policy management
- High-performance layer 3 routing capabilities on select models

Meraki Access Switching Portfolio

| Series | MS120-8 | MS120 | MS125 |
|-----------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| |  |  |  |
| Deployment type | Compact | Small branch & office | Small branch & office |
| Interfaces | 8 x 1GbE RJ45 | 24 / 48 x 1GbE RJ45 | 24 / 48 x 1GbE RJ45 |
| Uplinks | 2 x 1GbE SFP | 4 x 1GbE SFP | 4 x 10GbE SFP+ |
| PoE capabilities | 67W (LP model) 124W (FP model) | 370W (P, LP models) 740W (FP model) | 370W (P, LP models) 740W (FP model) |
| Power configuration | External PSU (non-PoE, LP model) Internal (FP Model) | Internal | Internal |
| Stacking capabilities | Virtual only | Virtual only | Virtual only |
| Routing capabilities | DHCP Relay | DHCP Relay | DHCP Relay |
| Models | MS120-8-HW MS120-8LP-HW MS120-8FP-HW | MS120-24-HW MS120-24P-HW MS120-48-HW MS120-48LP-HW MS120-48FP-HW | MS125-24-HW MS125-24P-HW MS125-48-HW MS125-48LP-HW MS125-48FP-HW |



Meraki Stackable Access Switching Portfolio

| Series | MS210 | MS225 | MS250 | MS350 |
|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| |  |  |  |  |
| Deployment type | Branch & Small campus | Branch & Small campus | Branch & Campus | Campus & Multigigabit |
| Interfaces | 24 / 48 x 1GbE RJ45 | 24 / 48 x 1GbE RJ45 | 24 / 48 x 1GbE RJ45 | 24 / 48 x 1GbE RJ45 ¹ 8 x XGbE RJ45 (24X only) |
| Uplinks | 4 x 1GbE SFP | 4 x 10GbE SFP+ | 4 x 10GbE SFP+ | 4 x 10GbE SFP+ |
| PoE capabilities | 370W (P, LP models) 740W (FP models) | 370W (P, LP models) 740W (FP models) | 370W (P, LP models) 740W (FP models) | 370W (P, LP models) 740W (24X, FP models) |
| Power configuration | Internal Optional RPS | Internal Optional RPS | Modular Redundant PSU optional | Modular Redundant PSU optional |
| Stacking capabilities | Compatible with MS225 80G physical + virtual | Compatible with MS210 80G physical + virtual | 80G physical + virtual | 160G physical + virtual |
| Routing capabilities | Static only DHCP Relay | Static only DHCP Relay | Static + Dynamic ² DHCP Server + Relay Warm spare (VRRP) | Static + Dynamic ² DHCP Server + Relay Warm spare (VRRP) |
| Models | MS210-24-HW MS210-24P-HW MS210-48-HW MS210-48LP-HW MS210-48FP-HW | MS225-24-HW MS225-24P-HW MS225-48-HW MS225-48LP-HW MS225-48FP-HW | MS250-24-HW MS250-24P-HW MS250-48-HW MS250-48LP-HW MS250-48FP-HW | MS350-24-HW MS350-24P-HW MS350-24X-HW MS350-48-HW MS350-48LP-HW MS350-48FP-HW |

¹Interfaces do not support half-duplex on the MS350

²Detailed routing specifications are available in series datasheets

Meraki Aggregation Switching Portfolio

| Series | MS410  | MS425  |
|-----------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Deployment type | 1G fiber aggregation | 10G fiber aggregation |
| Interfaces | 16 / 32 x GbE SFP | 16 / 32 x 10GbE SFP+ |
| Uplinks | 2 x 10GbE SFP+ (MS410-16) 4 x 10GbE SFP+ (MS410-32) | 2 x 40GbE QSFP+ |
| Power configuration | Modular Redundant PSU optional (sold separately) | Modular Redundant PSU optional (sold separately) |
| Stacking capabilities | 160G physical + virtual | Front-port 160G + virtual |
| Routing capabilities | Static + Dynamic DHCP Server + Relay Warm spare (VRRP) | Static + Dynamic DHCP Server + Relay Warm spare (VRRP) |
| Models | MS410-16-HW MS410-32-HW | MS425-16-HW MS425-32-HW |

Lifetime Warranty with Next Day Advance Replacement

All Cisco Meraki MS switches include a limited lifetime hardware warranty that provides next-day advance hardware replacement. Meraki's simplified software and support licensing model also combines all software upgrades, centralized systems management, and phone support under a single, easy-to-understand model. For complete details, please visit meraki.cisco.com/support.

Features and Capabilities

Meraki switches include all of the traditional Ethernet features found in modern enterprise access switches, including:

INTELLIGENT CAMPUS & BRANCH SWITCHING

With built-in monitoring, troubleshooting and logging capabilities, Meraki switches provide a refreshing new approach to managing network infrastructure, regardless of deployment size. Meraki's Virtual Stacking technology eliminates the need for configuration scripts and commands, empowering administrators to make changes quickly and securely on one or all the switches in a deployment at once.

Clients with high usage

5 clients used more than 100.00 GB
'FILESVR1'; 'NAKIVOTRANSPORTSF' and 3 other clients

Usage stats

| Total Data Transferred | Total Data Downloaded | Total Data Uploaded |
|------------------------|-----------------------|---------------------|
| 3.93 TB | 1.56 TB | 2.37 TB |

Intelligent anomaly detection flags potential network events

WIRED SECURITY WITHOUT COMPROMISE

Whether deployed in an office environment, hospital or retail store, Meraki switches make enforcing security policies a breeze. Set up multiple policies and enable them at the port-level, or apply them across the entire network in a few clicks. Meraki switches also provide comprehensive security reporting, making it easy to proactively discover rogue DHCP servers and other malicious activity on the network.

Email alerts: Send an email if a new DHCP server is seen

Default DHCP server policy: Allow DHCP servers

Note: Switches with configured DHCP servers are always allowed.

Blocked DHCP servers: 02:31:3a:1c:c4:14

DHCP servers for the last day

| Description | VLAN | Subnet | IP | Last seen | Recent packet | Policy |
|------------------------------|------|----------------|---------------|------------|-----------------------------|---------|
| CORE_1 (interface CORP_WIFI) | 132 | 10.92.132.0/22 | 10.92.135.254 | 13 seconds | view packet | allowed |
| CORE_1 (interface) | 46 | 172.16.46.0/23 | 172.16.47.254 | 1 second | view packet | allowed |
| SD-WAN Security 1 | 42 | 172.16.42.0/23 | 172.16.43.254 | 2 seconds | view packet | blocked |

Rogue DHCP server detection across the entire network

TROUBLESHOOTING, THE WAY IT SHOULD BE

Drastically reduce time-to-resolution with a variety of powerful troubleshooting tools such as remote cable testing and packet captures that help isolate and troubleshoot network issues.

With Meraki's dynamic network topology, see how the entire network is interconnected, automatically.

Ensure the entire team receives alerts upon power loss, downtime, or configuration changes.

Select a tool: Cable test

Warning: This test will disrupt traffic to 100 or 10 Mbit devices.

12 [Run cable test](#)

Testing the cable attached to port 12

| Port | Link | Length | Status | Pair 1 | Pair 2 | Pair 3 | Pair 4 |
|------|------|--------|---------|--------|--------|--------|--------|
| 12 | down | 94.5 m | Failure | open | ok | ok | open |

Remote cable test in the Meraki Dashboard

INDUSTRY LEADING CLOUD MANAGEMENT

Meraki's cloud management architecture delivers true zero-touch switch provisioning – configure switches before they arrive onsite, or use Meraki templates to standardize an entire fleet of switches, no matter what size.

With Meraki Virtual stacking, administrators can manage up to thousands of ports from a single pane of glass, enabling rapid and streamlined configuration that could otherwise take weeks to complete.

| Switch / Port * | Switch | Name | Type | VLAN | Status | Tags | POE | Access policy | CDP/LLDP |
|-----------------|--------------|--------------|--------|----------------|--------|------|----------|---------------|-------------------------|
| CORE 1/16 | CORE 1 | Staging Port | access | 110 | | | | Open | - |
| CORE 1/17 | CORE 1 | To ALPHA-GW1 | access | 78 | | | | Open | sf012.00a-gw1.cisco.com |
| CORE 1/18 | CORE 1 | To ALPHA-GW2 | access | 78 | | | | Open | sf012.00a-gw2.cisco.com |
| Closet 1.1.3/1 | Closet 1.1.3 | Cisco Alpha | access | 110, voice 110 | | | disabled | Open | SEP58978D2E1674 |

Switch virtual stack for managing all switch ports at once

BUILT-IN APPLICATION LAYER VISIBILITY

Meraki is the only switch to include integrated Layer 7 fingerprinting. Identify hundreds of applications from business apps to BitTorrent and YouTube. User fingerprinting with Google-like search allows administrators to easily identify and control individual users, PCs, iPads, Androids, and other devices. This unprecedented visibility allows optimizing of network resources and maintaining optimal network performance.

Granular network client visibility up to the application layer

BEYOND-THE-NETWORK SOFTWARE ARCHITECTURE

Meraki switches run the same Meraki operating system used by all of Meraki's products. The use of a common operating system allows Meraki to deliver a consistent experience across all product lines, from our Security products to our VoIP phones. When connected, MS350 switches automatically connect to the Meraki cloud, download configuration, and join the appropriate network. If new firmware is required, this is retrieved by the switch and updated automatically. This ensures the network is kept up-to-date with bug fixes, security updates, and new features.



Included In the Box

| | |
|----------------|----------------------------------------------------------------------------------------------------------------|
| MS120-8 Series | Integrated mounting brackets, External PSU (non-PoE and LP models), Mounting screw kit, Getting started insert |
| MS120 Series | Mounting screw kit, Getting started insert |
| MS125 Series | Mounting screw kit, Getting started insert |
| MS210 Series | Mounting screw kit, Getting started insert |
| MS225 Series | Mounting screw kit, Getting started insert |
| MS250 Series | Power Supply (1), System fans (2), Mounting screw kit, Getting started insert |
| MS350 Series | Stacking cable (1), Power Supply (1), system fans (2), Mounting screw kit, Getting started insert |
| MS410 Series | Power Supply (1), System fans (2), Mounting screw kit, Getting started insert |
| MS425 Series | Power Supply (1), System fans (3), Mounting screw kit, Getting started insert |

Optional Accessories

| DESCRIPTION | ACCESSORY | SUPPORTED MODELS |
|----------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------|
| Power cable | MA-PWR-CORD-US MA-PWR-CORD-EU MA-PWR-CORD-UK MA-PWR-CORD-AU | All models |
| External Power Supply | DC 54V/1.67A, 90W, MA-PWR-90WAC DC 12V/2.5A, 30W, MA-PWR-30WAC | MS120-8, MS120-8-LP, MS125 models |
| 250W Power Supply | MA-PWR-250WAC | MS250-24, MS250-48, MS350-24, MS350-48, MS410 models, MS425 models |
| 640W Power Supply | MA-PWR-640WAC | MS250-24LP, MS250-48LP, MS350-24P, MS350-48LP |
| 1025W Power Supply | MA-PWR-1025WAC | MS250-24FP, MS250-48FP, MS350-24X, MS350-48FP |
| Meraki Stacking Cable, 0.5 Meter | MA-CBL-40G-50CM | All MS210, MS225, MS250, MS350, MS410 models, MS425 models |
| Meraki Stacking Cable, 1 Meter | MA-CBL-40G-1M | All MS210, MS225, MS250, MS350, MS410 models, MS425 models |
| Meraki Stacking Cable, 3 Meter | MA-CBL-40G-3M | All MS210, MS225, MS250, MS350, MS410 models, MS425 models |
| 16K System Fan | MA-FAN-16K | MS350-24, MS350-24P, MS350-48, MS350-48LP, MS350-48FP, MS410 models |
| 18K System Fan | MA-FAN-18K | MS350-24X, MS425 Series |

Meraki MS switches support SFP/SFP+/QSFP+ optic accessories for high-speed connectivity. Meraki offers a variety of GbE, 10GbE and 40GbE accessories. Full specifications and compatibility information is available in the Meraki Accessories datasheet: https://meraki.cisco.com/lib/pdf/meraki_datasheet_sfp.pdf

Additional Resources

Meraki MS120-8 Compact Series Datasheet

https://meraki.cisco.com/lib/pdf/meraki_datasheet_ms120_compact.pdf

Meraki MS120 Series Datasheet

https://meraki.cisco.com/lib/pdf/meraki_datasheet_ms120.pdf

Meraki MS125 Series Datasheet

https://meraki.cisco.com/lib/pdf/meraki_datasheet_ms125.pdf

Meraki MS210 Series Datasheet

meraki.cisco.com/lib/pdf/meraki_datasheet_ms_210.pdf

Meraki MS225 Series Datasheet

meraki.cisco.com/lib/pdf/meraki_datasheet_ms_225.pdf

Meraki MS250 Series Datasheet

meraki.cisco.com/lib/pdf/meraki_datasheet_ms_250.pdf

Meraki MS350 Series Datasheet

https://meraki.cisco.com/lib/pdf/meraki_datasheet_ms_350.pdf

Meraki MS400 Series Datasheet

meraki.cisco.com/lib/pdf/meraki_datasheet_ms400-series.pdf

Meraki SFP & Stacking Accessories Datasheet

meraki.cisco.com/lib/pdf/meraki_datasheet_sfp.pdf

Cost Calculator

<https://meraki.cisco.com/buy/cost-calculator>