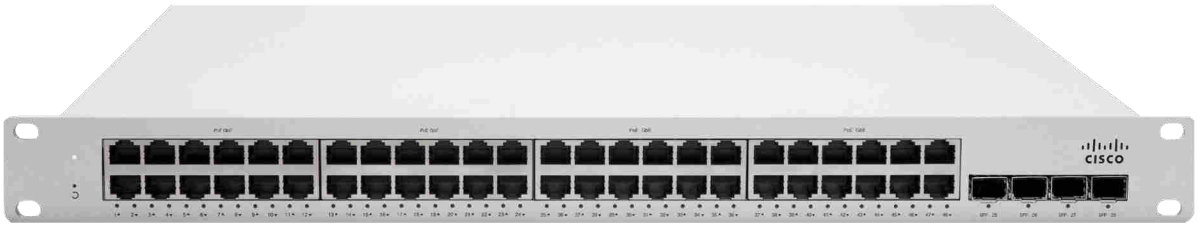
MS210 SERIES

Stackable access switches with 1G SFP uplinks, designed for the branch and campus



CLOUD-MANAGED STACKABLE ACCESS SWITCHES

Cisco Meraki MS210 switches provide Layer 2 access switching for branch and small campus locations. The MS210 includes 4 x 1G SFP uplinks and physically stacks with the MS225 to gain access to its 10G uplink. This family also supports an optional, rack-mountable PSU (Cisco RPS-2300) for power redundancy requirements.

All Meraki switches are managed through an elegant, intuitive cloud-based interface, rather than cryptic command line.

To bring up a Meraki switch, simply plug it in. Meraki switches do not require CLI for switch configuration or port management.

Meraki's centralized management platform gives administrators granular visibility into their network. Our dashboard helps you keep track of every configuration change in your network with our detailed event and change logs.

INDUSTRY LEADING CLOUD MANAGEMENT

Cloud management has a number of benefits that make it easier to build networks large and small:

- Automatic email alerts from power loss, downtime, excessive Layer 1 errors, or configuration changes
- Powerful remote diagnostic tools such as packet capture to help isolate and troubleshoot network issues
- Role-based administration
- Firmware upgrades and enhancements from the Meraki cloud
- Virtual Stacking enables switch port configuration changes on the dashboard interface without the need to physically stack switches
- Incredible network transparency with application, operating system, client, and hostname visibility
- Zero-touch provisioning for rapid deployment across sites

Product Highlights

- Gigabit access switching with 24- and 48- port models and optional PoE+ support up to 740W
- Stacking-compatible with the MS225
- 4 x 1G SFP uplink interfaces on all models
- Dual stacking interfaces with up to 80 Gbps of bandwidth
- Non-blocking switch backplane with up to 104 Gbps bandwidth support
- 6 configurable QoS queues for converged voice, video, and data applications
- Low power consumption and shallow rack depth options, enabling flexible deployment in wiring closets as well as o□ces and classrooms
- Integrated mounting brackets for rack mounting
- Lifetime hardware warranty and advanced replacement at no additional cost

Features and Capabilities

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

Branch & Campus Access

- Physical stacking with support for up to 8 stack members for built-in redundancy, performance, and access to 10Gbps uplinks when stacked with the MS225
- Quality-of-Service (QoS) to prioritize mission critical traffic such as voice and video
- Voice VLAN support for simplified VoIP deployments
- CDP, LLDP advertisement and snooping, with detailed neighbor discovery and visibility
- Port Mirroring support for monitoring network traffic at line rate
- IGMP Snooping to optimize network performance for multicast applications
- Link Aggregation Control Protocol (LACP) for high-capacity trunking, with Multichassis (MLAG) support on stacked switches

Network Security

- IEEE 802.1X, MAB, and Hybrid authentication support for wired access control with RADIUS server monitoring
- ACL support (IPv4 & IPv6) and MAC whitelisting
- Single-Host/Multi-Domain/Multi-Host/Multi Authentication
- Change of Authorization (CoA) and RADIUS accounting support
- DHCP snooping to protect against rogue DHCP servers on the network
- Dynamic ARP Inspection to prevent man-in-the-middle attacks
- Rapid Spanning Tree, BPDU guard, root guard, loop guard, and other safeguards to help prevent misconfigurations and reduce convergence time
- Per port VLAN configuration
- Multiple administrative roles with sophisticated security policy management

Network Troubleshooting & Automation

- Virtual Stacking helps IT admins make configuration changes to hundreds of switch ports in seconds with our intuitive dashboard interface
- Configuration templates for rapid, zero-touch provisioning and auditing of all sites
- Network Topology for automatic and interactive network mapping
- Remote cable testing, packet capture and client discovery
- Automatic and scheduled firmware upgrades for the complete network

Converged Voice, Video and Data Environments

The Meraki switch family is designed to unify data, voice, and video onto a single IP backbone. All Meraki switches support rich quality-of-service (QoS) functionality for prioritizing data, voice, and video traffic. The switches support eight class-of-service (CoS) queues on every port, enabling them to maintain end-to-end traffic prioritization.

PoE models provide power to VoIP telephones, IP security cameras, wireless access points (APs), and other IP devices. In addition, using CDP and LLDP, PoE power is intelligently budgeted to maximize the number of PoE clients supported.

Application Layer Visibility

Meraki switches include integrated Layer 7 fingerprinting without the need to purchase additional modules or services. Identify hundreds of applications from business apps to BitTorrent and YouTube.

User fingerprinting allows administrators to quickly identify individual users by device and tune network resources for optimum performance.

Unified Software Architecture

Meraki switches run the same operating system used by all of our products, which allows us to deliver a consistent user experience for network management.

When connected, new MS210 switches automatically reach out to the Meraki cloud and download the most current configuration. Future updates can be user-scheduled, ensuring the network is kept up-to-date with bug fixes, security updates, and new features.

Virtual Stacking with Meraki

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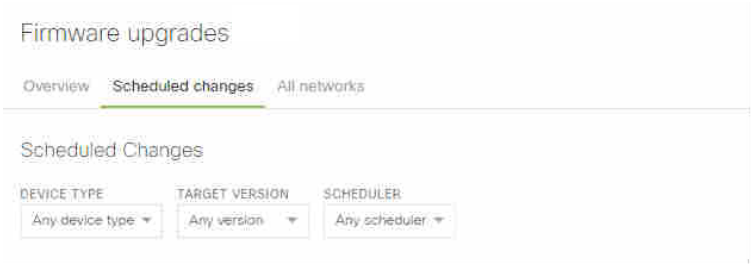
Simplified Management and Operations

Meraki's cloud-managed architecture makes it simpler than ever to quickly provision and reconfigure switch ports with security, QoS, and other parameters. The Meraki dashboard provides unified policies, event logs, and monitoring, which make it easy to manage and grow large network deployments.

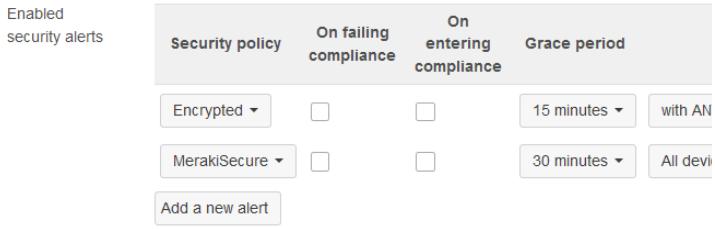
By providing a complete, powerful set of management functions over the web, Meraki's cloud-based management eliminates the need for proprietary command line configuration interfaces which require expensive and time consuming certifications. Meraki MS switches can be fully deployed and provisioned in minutes, without requiring any local configuration or staging. Additional or replacement switches can be sent to remote o□ces and installed by non-technical sta□, saving thousands of dollars in time and travel expenses.

The Meraki MS family also includes several remote diagnostic features, from network connectivity and cable integrity tests to latency measurement tools. For deep client troubleshooting, administrators can even perform per-port remote pcap packet captures without any additional probes or hardware on site.

Scheduled & automatic firmware updates



Automatic E-mail Alerts



Designed for Reliability & Environmental E□ciency

The Meraki switch family was designed for reliable, long-lived operation in wiring closet environments, which may be prone to high temperatures and limited ventilation. By minimizing total component count and only using proven switching silicon, Meraki is able to deliver highly reliable products with exceptional mean time between failure (MTBF) ratings.

Each Meraki switch also operates with a split-plane architecture, where silicon-based switching and data forwarding are separated from software-based control and management. By decoupling the underlying switching logic from control, each unit is able to deliver wire-speed switching even when advanced software features such as Layer 7 host and OS fingerprinting are enabled.

Finally, the highly integrated designs of Meraki switches result in power and cooling savings in large deployment environments of 30-60% when compared with similar managed Gigabit switches.

DISTRIBUTED BRANCHES & REMOTE SITES

Meraki's cloud-based system makes it easy to manage a single switch, or thousands of distributed switches, from a single interface.

- Troubleshoot problems remotely, e.g., find which port has a bad cable attached.
- Add or replace switches without having to send a technician onsite. Switches automatically download their current configuration as soon as they are connected to the network.
- Receive email alerts or SMS messages whenever there's a problem at a remote site.

CAMPUS EDGE

MS switches are ideal for small and large scale campus deployments, where reliability, scalability, and managability are top priorities.

- Virtual Stacking helps IT admins control port access policies, apply VLANs, toggle port power and more.
- SFP uplinks with link aggregation provide high speed connectivity to the core of the network.
- Receive alerts if any switch loses connectivity, before users complain.

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Dimensions & Interfaces

Model	Physical Dimensions (H x W x D)*	Weight	Interface	Switching Capacity	Stacking Bandwidth
MS210-24-HW	1.72 x 19.08 x 9.84” (4.38 x 48.46 x 25cm)	6.03 lb (2.73 kg)	• 24 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) • 4 x 1GbE SFP uplink • 2 x stacking ports • RJ45 Management port	56 Gbps	80 Gbps
MS210-24P-HW	1.72 x 19.08 x 9.84” (4.38 x 48.46 x 25cm)	8.18 lb (3.71 kg)	• 24 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) • 4 x 1GbE SFP uplink • 2 x stacking ports • RJ45 Management port	56 Gbps	80 Gbps
MS210-48-HW	1.72 x 19.08 x 13.38” (4.38 x 48.46 x 34cm)	8.78 lb (3.98 kg)	• 48 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) • 4 x 1GbE SFP uplink • 2 x stacking ports • RJ45 Management port	104 Gbps	80 Gbps
MS210-48LP-HW	1.72” x 19.08” x 13.38” (4.38 x 48.46 x 34cm)	9.63 lb (4.37 kg)	• 48 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) • 4 x 1GbE SFP uplink • 2 x stacking ports • RJ45 Management port	104 Gbps	80 Gbps
MS210-48FP-HW	1.72” x 19.08” x 13.38” (4.38 x 48.46 x 34cm)	9.63 lb (4.37 kg)	• 48 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) • 4 x 1GbE SFP uplink • 2 x stacking ports • RJ45 Management port	104 Gbps	80 Gbps

*Depth includes all accessories

Power Options & Specifications

Model	Idle / Full Load Power	Available PoE+ Power	Power Supply Configuration	Optional Redundant Power Supply
MS210-24-HW	15 / 24 W	–	Fixed internal	External RPS*
MS210-24P-HW	21 / 448 W	370 W	Fixed internal	External RPS*
MS210-48-HW	25 / 42 W	–	Fixed internal	External RPS*
MS210-48LP-HW	53 / 490 W	370 W	Fixed internal	External RPS*
MS210-48FP-HW	54 / 882 W	740 W	Fixed internal	External RPS*

* Cisco RPS chassis (PWR-RPS2300)

What's Included

MS210-24-HW	Mounting screw kit
MS210-24P-HW	Mounting screw kit
MS210-48-HW	Mounting screw kit
MS210-48LP-HW	Mounting screw kit
MS210-48FP-HW	Mounting screw kit

Optional Accessories

Description	Model	Supported Switch Models
Meraki Stacking Cable, 0.5 Meter	MA-CBL-40G-50CM	All Models
Meraki Stacking Cable, 1 Meter	MA-CBL-40G-1M	All Models
Meraki Stacking Cable, 3 Meter	MA-CBL-40G-3M	All Models
Remote Power System (RPS) Chassis	PWR-RPS2300	All Models

The Meraki MS family also supports SFP/SFP pluggable optics for high-speed connectivity. Meraki o□ers a variety of Gigabit and 10 Gigabit accessories. Full specifications and compatibility information is available in the Meraki Accessories datasheet: https://meraki.cisco.com/lib/pdf/meraki_datasheet_sfp.pdf

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Specifications

Management

Managed via the Web with the Meraki cloud management platform

Integrated with Meraki Wireless and complete portfolio of IT products and solutions

Zero-touch remote provisioning (no staging needed)

Detailed historical per-port and per-client usage statistics

Operating System, device, and hostname fingerprinting

SNMP and SYSLOG support for integration with other network management solutions

Automatic firmware upgrades with scheduling control

Remote Diagnostics

Email, SMS and Mobile push notification alerts [1]

Ping, traceroute, cable testing, and link failure detection with alerting

Remote packet capture

Dynamic and interactive network discovery and topology

Combined event and configuration change logs with instant search

Stacking

Physically stack up to 8 switches with 80 Gbps of stacking bandwidth on all models

Virtual Stacking supports thousands of switch ports in a single logical stack for unified management, monitoring, and configuration

Stacking-compatible with the MS225

Ethernet Switching Capabilities

802.1p Quality of Service, 8 queues (w/ 6 configurable for DSCP-to-CoS mapping)

802.1Q VLAN and trunking support for up to 4,094 VLANs

802.1w, 802.1D Rapid Spanning Tree Protocol (RSTP, STP)

STP Enhancements: BPDU guard, Root guard, Loop guard, UDLD

Broadcast storm control

802.1ab Link Layer Discovery Protocol (LLDP) and Cisco Discovery Protocol (CDP)

802.3ad Link aggregation with up to 8 ports per aggregate, Multichassis aggregates supported on stacked switches

Port mirroring

IGMP snooping for multicast filtering

MAC forwarding entries: 16K on 24-port models, 32K on 48-port models

Security

Integrated multi-factor authentication for Dashboard management

Role-based access control (RBAC) with granular device and configuration control

Corporate wide password policy enforcement

IEEE 802.1X RADIUS and MAB, hybrid authentication and RADIUS server testing

Single-Host/Multi-Domain/Multi-Host/Multi Authentication

Port security: Sticky MAC, MAC whitelisting

DHCP snooping, detection and blocking, Dynamic ARP Inspection

IPv4 and IPv6 ACLs

[1] Requires carrier-supported email to SMS gateway and/or Meraki Mobile app

[2] *For international availability, please contact sales@meraki.com*

Performance

Switching capacity: 56Gbps on 24-port models, 104Gbps on 48-port models

Forwarding rate: 41.67mpps on 24-port models, 77.38mpps on 48-port models

Jumbo frame support (9578 byte Ethernet frame)

Flow control support

Layer 3

Static routing

DHCP Relay

Power

Power input: 100 - 240 VAC, 47-63 Hz

Power consumption: 15 - 882W

RPS interface: Requires RPS-2300 chassis, see Cisco RPS-2300 Datasheet for further information

Mounting

1U Rack-mountable with included rack mount hardware

2-post front mounting options available

Desktop-mountable with included feet

Environment

Operating temperature: -5°C to 50°C

Humidity: 5 to 95% non-condensing

MS210-24, MS210-48 feature fanless operation

Regulatory[2]

CSA-US (US, Canada)

FCC (USA)

IC (Canada)

CE (Europe)

RCM (Australia/New Zealand)

RoHS

Warranty

Full lifetime hardware warranty with next-day advanced replacement included

MTBF Ratings

Model	MTBF (at 25c)
MS210-24-HW	590,165
MS210-24P-HW	391,648
MS210-48-HW	439,585
MS210-48LP-HW	381,015
MS210-48FP-HW	320,555