MS125 Switches

Layer 2 access switches with 10G SFP+ uplinks, designed for small branch deployments

CLOUD-MANAGED ACCESS SWITCHES

Cisco Meraki **MS125** switches provide Layer 2 access switching ideal for branch and campus deployments. The MS125 series features a variety of power options designed to meet the diverse needs of large enterprise networks.

Cisco Meraki switches are built from the ground up for cloud management without compromising any of the power and flexibility traditionally found in enterprise-class switches.

All Cisco Meraki switches are managed through an elegant, intuitive cloud interface, rather than a 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 PoE+ support
- 4 x 10G SFP+ uplink interfaces on all models
- Non-blocking switch with up to 176 Gbps bandwidth support
- Fanless design on select models
- Lifetime hardware warranty and advanced replacement at no additional cost
- Up to 740 watt PoE budget with PoE+ support and dynamic power allocation for powering APs, phones, cameras, and other PoE-enabled devices
- 6 configurable QoS queues for converged voice, video, and data applications
- Low power consumption, quiet acoustic design, and shallow rack depth options, enabling flexible deployment in wiring closets as well as offices and classrooms

Features and Capabilities

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

Branch & Campus Access

- PoE and PoE+ models available for device level powering
- Quality-of-Service (QoS) to prioritize mission critical traffic such as voice and video
- Voice VLAN support for simplified VoIP deployments
- CDP/LLDP 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

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 prevent users from adding unauthorized DHCP servers on the network
- Rapid spanning tree, BPDU guard, root guard, loop guard, UDLD 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.

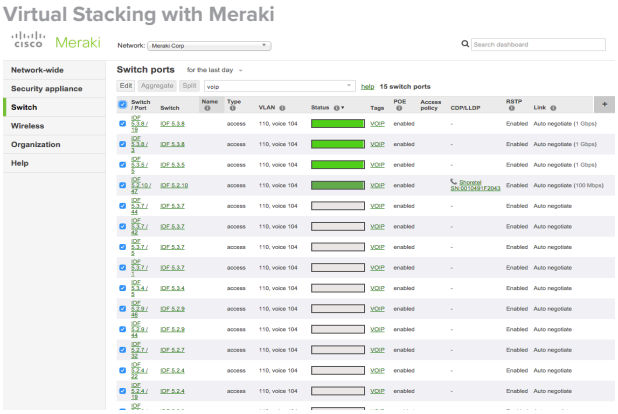
User fingerprinting allows administrators to quickly identify individual users by device and tune network resources for optimum performance.

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 MS125 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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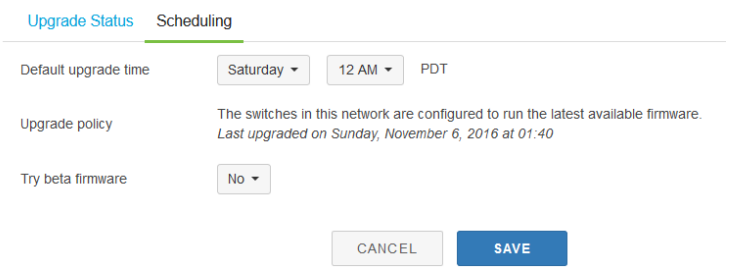
Simplified Management and Operations

The Meraki 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 scale network deployments.

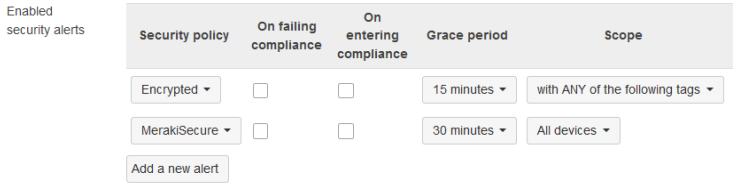
By providing a complete, powerful set of management functions over the cloud, Meraki cloud-based management eliminates the need for proprietary command line configuration interfaces which require expensive and time-consuming certifications. Meraki MS switches can be fully deployed and provisioned in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

Staged, Scheduled & Automatic Firmware Updates



Automatic Email Alerts



Designed for Reliability & Environmental Efficiency

The Meraki switch family was designed for reliable operation in network 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

The Meraki 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 on-site. 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.
- 10GbE cable SFP+ ports with link aggregation provide long range connectivity to aggregation switches such as the MS425.
- Get alerts if any switch fails or goes offline, before users complain.

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Dimensions & Interfaces

Model	Physical Dimensions (H x W x D)*	Weight	Interface	Switching Capacity
MS125-24-HW	1.73 x 17.32 x 9.84” (4.40 x 44 x 25cm)	8.16 lb (3.7 kg)	• 24 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) • 4 x 10G SFP+ uplink • RJ45 Management port	128 Gbps
MS125-24P-HW	1.73 x 17.32 x 9.84” (4.40 x 44 x 25cm)	9.26 lb (4.2 kg)	• 24 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) and PoE+ • 4 x 10G SFP+ uplink • RJ45 Management port	128 Gbps
MS125-48-HW	1.73 x 17.32 x 9.84” (4.40 x 44 x 25cm)	9.26 lb (4.2 kg)	• 48 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) • 4 x 10G SFP+ uplink • RJ45 Management port	176 Gbps
MS125-48LP-HW	1.73” x 17.32” x 13.39” (4.40 x 44 x 34cm)	11.9 lb (5.4 kg)	• 48 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) and PoE+ • 4 x 10G SFP+ uplink • RJ45 Management port	176 Gbps
MS125-48FP-HW	1.73” x 17.32” x 13.39” (4.40 x 44 x 34cm)	12.79 lb (5.8 kg)	• 48 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover) and PoE+ • 4 x 10G SFP+ uplink • RJ45 Management port	176 Gbps

*Depth includes all accessories

Power Options & Specifications

Model	Idle / Full Load Power	Available PoE/PoE+ Power	Power Supply Configuration
MS125-24-HW	10 / 26 W	–	Fixed internal
MS125-24P-HW	28 / 426 W	370 W	Fixed internal
MS125-48-HW	22 / 42 W	–	Fixed internal
MS125-48LP-HW	40 / 440 W	370 W	Fixed internal
MS125-48FP-HW	52 / 845 W	740 W	Fixed internal

What's Included

All Models	1 x Rack mounting screw kit

Rack Mounting Kit

The Meraki MS family also supports SFP pluggable optics for high-speed connectivity. Full specifications and compatibility information is available in the Meraki Accessories datasheet: https://meraki.cisco.com/lib/pdf/meraki_datasheet_sfp.pdf

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

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)
802.1ab Link Layer Discovery Protocol (LLDP) and Cisco Discovery Protocol (CDP)
802.3ad Link aggregation with up to 8 ports per aggregate.
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
IPv4 and IPv6 ACLs

Layer 3
DHCP Relay

Performance
Switching capacity: 128Gbps on 24-port models, 176Gbps on 48-port models
Forwarding rate: 95 mpps on 24-port models, 130 mpps on 48-port models
Jumbo frame (9578 byte Ethernet frame)
Flow control

Power
Power input: 100 - 240 VAC, 47-63 Hz
Power consumption: 10 - 845W

Mounting
1U Rack-mountable with included rack mount hardware
2-post front mounting options available

Environment
Operating temperature: 0 °C to 45 °C
0°C - 40°C at sea level and 0°C - 35°C at 10,000 feet for MS125-24, MS125-48 when using MA-SFP-10GB-ER
Humidity: 5 to 95% non-condensing

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 (in hours)

Model	MTBF (at 25c)
MS125-24-HW	1,957,381
MS125-24P-HW	294,713
MS125-48-HW	1,628,120
MS125-48LP-HW	287,429
MS125-48FP-HW	311,726

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

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