

# MS120-8 Compact Switch

Layer 2 access switch with 1G SFP uplinks, small form-factor, and optional PoE+



## CLOUD-MANAGED COMPACT ACCESS SWITCHES

Cisco Meraki **MS120-8** compact switches provide Layer 2 access switching in a fanless, compact form factor. All models include 1G SFP uplinks, integrated mounting brackets, and a Kensington security slot, making them ideal for rapid and secure deployment to branch locations.

Cisco Meraki switches are built from the ground-up to be easily managed without compromising any of the power and flexibility traditionally found in enterprise-class switches.

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 8 x 1GbE ports and optional PoE/PoE+
- 2 x 1G SFP uplink interfaces on all models
- Fanless operation
- 20 Gbps non-blocking compact switch
- 67/124 watt PoE budget with PoE+ support and dynamic power allocation for powering access points, phones, cameras, and other PoE-enabled devices
- 6 dedicated QoS queues for converged voice, video, and data applications
- Integrated mounting brackets for wall or desk mounting, with included Kensington security slot
- 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

- 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

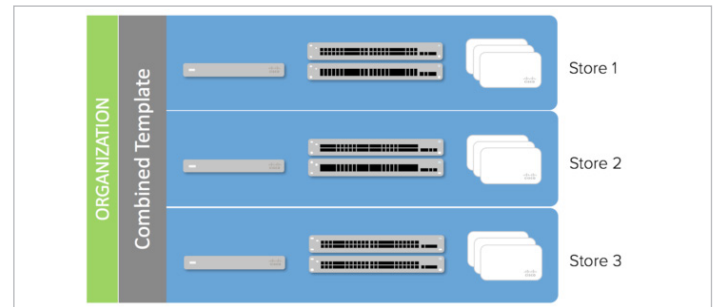
- IEEE 802.1X, MAB, and Hybrid authentication support for wired access control with RADIUS server monitoring
- ACL support (IPv4 & IPv6) and MAC whitelisting
- Single-Host/Multi-Domain/Multi-Host/Multi Authentication
- Change of Authorization (CoA) and RADIUS accounting support
- DHCP snooping to prevent users from adding unauthorized DHCP servers on the network
- Rapid Spanning Tree, BPDU Guard, Root Guard, 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
- Staged, automatic, and scheduled firmware upgrades for the complete network

## Rapid Deployment & Configuration

With Meraki's secure cloud architecture, device provisioning and orchestration becomes completely streamlined. Zero-touch configuration coupled with configuration templates let administrators define a switch configuration once and then bind thousands of switches to a profile, reducing overhead and increasing network security.



Template network configuration for distributed deployments

## 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 MS120-8 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

Switch ports for the last day ▼

Edit Aggregate Split Mirror Unmirror switch: "Closet 1.1.2"

Switch / Port	Switch *	Type ⓘ	VLAN ⓘ
<input type="checkbox"/> Closet 1.1.2 / 1	Closet 1.1.2	trunk	native 128
<input type="checkbox"/> Closet 1.1.2 / 2	Closet 1.1.2	trunk	native 128
<input type="checkbox"/> Closet 1.1.2 / 3	Closet 1.1.2	trunk	native 128

## 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 scale large network deployments.

By providing a complete, powerful set of management functions over the web, 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 packet captures without any additional probes or hardware on-site.

### Scheduled & automatic firmware updates

ファームウェア アップ! ベータ版

概要 スケジュールされた変更 すべてのネットワーク

#### スケジュールされた変更

デバイス タイプ  対象バージョン  スケジュール

### Automatic E-mail Alerts

Enabled security alerts	Security policy	On failing compliance	On entering compliance	Grace period	Scope
<input type="checkbox"/>	Encrypted <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	15 minutes <input type="text"/>	with ANY of the following tags <input type="text"/>
<input type="checkbox"/>	MerakiSecure <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	30 minutes <input type="text"/>	All devices <input type="text"/>
<input type="button" value="Add a new alert"/>					

## Designed for Reliability & Environmental Efficiency

The Meraki switch family was designed for reliable operation in network closets, which are 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 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.
- 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.

## Dimensions & Interfaces

Model	Physical Dimensions (H x W x D)*	Weight	Interface	Switching Capacity
MS120-8-HW	1.1 x 8.74 x 5.91" (2.8 x 22.2 x 15cm)	2.36 lb (1.07 kg)	<ul style="list-style-type: none"> <li>8 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover)</li> <li>2 x 1G SFP uplink</li> </ul>	20 Gbps
MS120-8LP-HW	1.1 x 8.74 x 5.91" (2.8 x 22.2 x 15cm)	2.76 lb (1.25 kg)	<ul style="list-style-type: none"> <li>8 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover)</li> <li>2 x 1G SFP uplink</li> </ul>	20 Gbps
MS120-8FP-HW	1.75 x 8.97 x 8.58" (4.4 x 22.7 x 23cm)	3.42 lb (1.55 kg)	<ul style="list-style-type: none"> <li>8 x 10/100/1000BASE-T Ethernet RJ45 with auto negotiation and crossover detection (auto-MDIX crossover)</li> <li>2 x 1G SFP uplink</li> </ul>	20 Gbps

## What's Included

All Models	1 x Mounting screw kit and anchor
MS120-8-HW and MS120-8LP-HW	1 x External Power Supply



Power Adapter



Wall Screws & Anchors

## Power Options & Specifications

Model	Idle / Full Load Power	Available PoE/PoE+ Power	Power Supply Configuration	Power Supply/Model Number
MS120-8-HW	6 / 9 W	–	External Power Supply	DC 12V/2.5A, 30W, MA-PWR-30WAC
MS120-8LP-HW	7 / 88 W	67 W	External Power Supply	DC 54V/1.67A, 90W, MA-PWR-90WAC
MS120-8FP-HW	9 / 162 W	124 W	Fixed internal	DC 56V/2.7A, 150W

Meraki offers a variety of high-speed SFP pluggable optics for use with the MS120-8 Compact switches. Full specifications and compatibility information is available in the Meraki Accessories datasheet: [https://meraki.cisco.com/lib/pdf/meraki\\_datasheet\\_sfp.pdf](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

DHCP, client, 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 <sup>1</sup>

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)

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

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 for all 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: 20Gbps

Forwarding rate: 14.88mpps with standard packet size

Jumbo frame support (9578 byte ethernet frame)

Flow control support

## Power

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

Power consumption: 6-162 W

External power supply for MS120-8, MS120-8 LP

## Mounting

Wall or utility board mountable with included mount hardware

Desktop-mountable with included feet

Kensington lock slot included

## Environment

Operating temperature: 0 °C to 45 °C

Humidity: 5 to 95% non-condensing

Fanless operation

## Regulatory<sup>2</sup>

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)
MS120-8-HW	784,221
MS120-8-LP-HW	502,221
MS120-8-FP-HW	347,479

<sup>1</sup> Requires carrier-supported email to SMS gateway and/or Meraki Mobile app

<sup>2</sup> For international availability, please contact [sales@meraki.com](mailto:sales@meraki.com)