

Cloud Managed Security Appliance Family



Overview

The Meraki MX is a complete next generation firewall and branch gateway solution, designed to make distributed networks fast, secure, and easy to manage. The world's first cloud-managed security appliance, the Meraki MX provides complete visibility and control in campus and distributed environments.

Next Generation Firewall Capabilities

- Application-aware traffic control: set bandwidth policies based on Layer 7 application type (e.g. YouTube, Skype, P2P).
- Stateful firewall: set policies through an intuitive interface.
- Prioritize critical applications and throttle recreational traffic.
- Content filtering: CIPA compliant category-based filters, configurable for classes of users based on Active Directory membership.

Industry-leading Cloud Management

- Unified WAN, LAN, and wireless LAN management under a single dashboard. Scales easily from small deployments to large, multi-site deployments with tens of thousands of devices.
- Role-based administration, configuration change and power loss email alerts, auditable change logs.
- Summary reports with user, device and application usage details, archived in the cloud.
- Quarterly feature updates and enhancements delivered on demand from the Meraki Cloud Controller.

Auto-provisioning VPN

- Site-to-site VPN: automatic routing table generation, provisioning and key exchange via Meraki's secure cloud.
- Interoperates with standards-based IPsec VPNs.
- Client VPN: support for native Windows, Mac OS X, iPad and Android clients with no-per user licensing fees.

Branch Gateway Services

- Built-in DHCP, NAT, QoS and VLAN management services.
- Link bonding: combines multiple WAN links into a single high-speed interface, with policies for QoS, traffic shaping and failover.
- Layer 3 failover: automatic detection of layer 2 and layer 3 outages and fast failover, including 3G/4G USB modems.
- WAN optimization: data redundancy elimination, protocol optimization, and compression provide bandwidth savings up to 99% for Windows filesharing (CIFS), FTP, HTTP, and TCP traffic.

Inside the Meraki MX

MX400 shown, features vary by model

Redundant Power
Reliable, energy efficient design

WAN Optimization
1TB SATA disk



Enhanced CPU
Layer 3-7 firewall and traffic shaping

Additional Memory
For content filtering

Multiple Uplink Ports
Link bonding/failover

3G/4G Modem Support
Automatic wireless failover

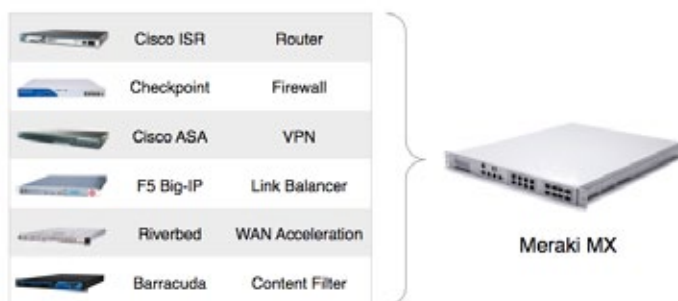
10Gb Ethernet/SFP+ Ports
For switch connectivity

Cloud Managed Architecture

Built on Meraki's award-winning Cloud Networking platform, the MX is the only 100% cloud-managed networking and security appliance. MX appliances self-provision, automatically pulling policies and configuration from the cloud. Powerful remote tools provide network-wide visibility and control, and enable administration without on-site networking expertise.

Cloud services deliver seamless firmware and security signature updates, automatically establish site-to-site VPN tunnels, and provide 24x7 network monitoring. Moreover, the MX's browser-based management dashboard completely eliminates the need for training.

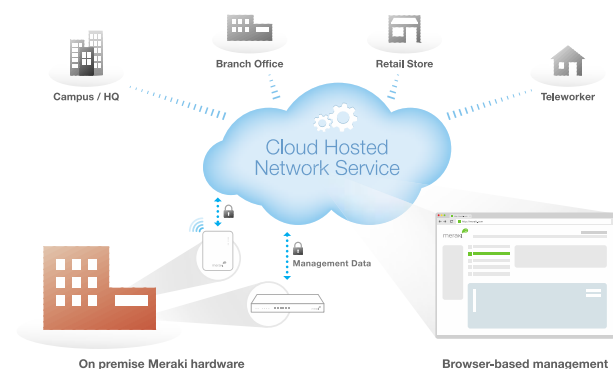
The MX hardware platform is purpose-built for cloud management, with CPU and memory resources designed to provide application and content-aware security at the edge. The MX's robust platform enables advanced features like Layer 7 application traffic shaping, content filtering, antivirus/antiphishing, and site-to-site VPN, while providing the throughput and capacity for modern, high-density networks.



Control Applications, Users and Devices

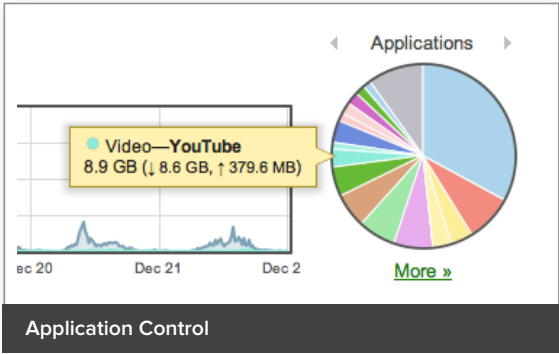
The MX provides complete control over users, content, and applications, giving the visibility, security, and control required for mixed-use networks. Layer 7 fingerprinting technology lets administrators block unwanted content and applications and prevent recreational apps like BitTorrent from wasting precious bandwidth. Likewise, the MX can prioritize critical traffic like voice and video.

User fingerprinting identifies clients by name, operating system, or device (e.g., iPad). Fast search, automatic reports, and device quarantine provide complete visibility and control over the users across the entire network.



Consolidate up to six devices with a single Meraki MX appliance

Meraki Cloud Management Architecture



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Description	IP address	MAC address	Usage	Access	Manufacturer
1. Dustin-Jensen-IPad	172.16.30.51	a4-41-a0-10-FC-9d	11.3 MB	normal	Apple
2. Brian-Tobias-IPad	172.16.30.142	7c-8d-62-d7-91-58	853 KB	normal	Apple
3. IPad	172.16.30.49	7d-8d-a2-40-f2-02	145.8 MB	normal	Apple
4. Meraki-Marketing-IPad	172.16.30.67	06-8f-01-38-78-8d	331.3 MB	normal	Apple
5. ECC-IPad-1	172.16.30.183	7c-8d-62-d0-32-75	8.5 MB	normal	Apple
6. Wilson-John-Chana-IPad-2	172.16.30.135	a4-67-06-99-dx-a8	33.5 MB	normal	Apple

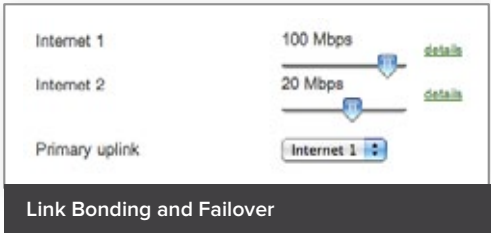
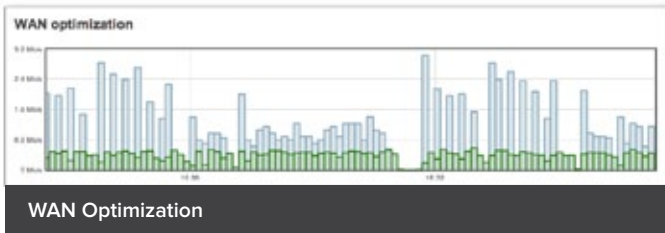
Active Directory servers

Short domain	Server IP	Domain admin	Password	Actions
COMP	172.16.30.12	admin	*****	X

[Add an Active Directory domain server](#)

Group policies

LDAP membership	Blocked web content	Actions
CONTRACTOR	Pornography X	± X
EMPLOYEE	Chat X Social networking X	± X



Increased Reliability for Distributed Networks

The multiple WAN ports with balancing and failover enable the use of redundant commodity Internet connections, providing additional bandwidth and higher reliability at a fraction of the cost. For remote sites where multiple wireline providers are difficult to provision, the Meraki MX can fail over to 3G/4G wireless Internet connections.

Reduce Bandwidth Costs with WAN Optimization

WAN optimization uses a combination of techniques to dramatically improve application performance and reduce bandwidth requirements at remote sites. All Meraki MX appliances include WAN optimization at no additional charge.

The MX60 features basic WAN optimization, while the MX80, MX90, MX400, and MX600 feature advanced WAN optimization. Basic WAN optimization includes link compression and protocol optimization.

Advanced WAN optimization adds data redundancy elimination and caching for additional performance improvements. Meraki optimizes a number of protocols, including Windows File Sharing (CIFS), FTP, HTTP, and generic TCP traffic. Meraki uses a universal data store to maximize the effectiveness of the cache.

Simplified Management and Operations

The MX was designed for ease of use, even in branches without on-site IT. An intuitive interface, contextual help, and real-time support from the cloud eliminate specialized training. To deploy the MX in remote locations, simply connect the MX to the Internet, and it will securely self-provision from the cloud. Firmware upgrades, security patches, and signature updates are all delivered seamlessly from the cloud, ensuring that the MX is always up to date, and integrating broad security and networking features into a single intuitive device drastically reduces complexity in the branch.

By providing a complete, powerful set of management functions over the web, Meraki's browser-based cloud management eliminates the need for proprietary command line configuration interfaces, training, or added staff. Meraki MX appliances can be fully deployed and provisioned in minutes, without requiring any local configuration or staging. Additional or replacement gateways can be sent to remote offices and installed by non-technical staff, saving thousands of dollars in time and travel expense.

Lifetime Warranty with Next-day Advanced Replacement

Meraki MX appliances include a limited lifetime hardware warranty that provides next-day advance hardware replacement as long as the original purchaser owns the product. 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 www.meraki.com/support.

Accessories

The Meraki MX90, 400 and 600 models support pluggable optics for high-speed backbone or link aggregation connections between wiring closets or to aggregation switches. Meraki offers several standards-based Gigabit and 10 Gigabit pluggable modules. Each appliance has also been tested for compatibility with several third-party modules.



Interface Modules for MX400 and MX600



Pluggable Optics for MX90, MX400, MX600

Accessories / Optics

Supported Meraki accessory modules for MX90, MX400 and MX600. Additional third-party optics supported for other applications.

Model	Description	Standard	Range
SFP-1GB-SX	Meraki 1 GbE SFP SX Fiber Module	1000BASE-SX	550m
SFP-10GB-SR	Meraki 10 GbE Short Range SFP+ Module	10GBASE-SR	400m
CBL-TA-1M	Meraki 10 GbE Twinax Cable with SFP+ Connectors	—	1m

Note: Meraki SFP-1GB-SX and SFP-10GB-SR use LC connectors.

Interface modules for Meraki MX400 and MX600.

Model	Description
IM-8-CU-1GB	Meraki 8 x 1 GbE Copper Interface Module for MX400 and MX600
IM-8-SFP-1GB	Meraki 8 x 1 GbE SFP Interface Module for MX400 and MX600
IM-2-SFP-10GB	Meraki 2 x 10 GbE SFP+ Interface Module for MX400 and MX600

Product Options

	MX60	MX80	MX90	MX400	MX600
Recommended use cases	Small office / retail branch (approx. 20 users)	Mid-sized office (approx. 100 users)	Mid-sized office (approx. 250 users)	Large office / concentrator (approx. 2,000 users)	Large office / concentrator (approx. 10,000 users)
Stateful Firewall Throughput	100 Mbps	250 Mbps	500 Mbps	1 Gbps	2 Gbps
Advanced Security Throughput	50 Mbps	125 Mbps	225 Mbps	325 Mbps	650 Mbps
Maximum site-to-site VPN sessions	20	100	200	2,000	5,000
WAN Interfaces	1 x GbE	2 x GbE	2 x GbE	2 x GbE	2 x GbE
LAN Interfaces	4 x GbE	4 x GbE	8 x GbE 2 x GbE (SFP)	8 x GbE 8 x GbE (SFP) 4 x 10GbE (SFP+) (2 module bays)	8 x GbE 8 x GbE (SFP) 4 x 10GbE (SFP+) (2 module bays)
WAN Optimization	Basic	Advanced	Advanced	Advanced	Advanced
WAN Optimization Cache	100 MB	1 TB	1 TB	1 TB	4 x 1 TB (RAID)
USB for 3G/4G Failover*	yes	yes	yes	yes	yes
Mounting	Desk / Wall	1U rack	1U rack	1U rack	2U rack
Dimensions	9.75" x 6.75" x 1.25" (248 mm x 171 mm x 32 mm)	19.0" x 10.0" x 1.75" (483 mm x 254 mm x 44 mm)	19.0" x 10.0" x 1.75" (483 mm x 254 mm x 44 mm)	19.0" x 22.0" x 1.75" (483 mm x 559 mm x 44 mm)	19.0" x 22.0" x 3.5" (483 mm x 559 mm x 89 mm)
Weight	4 lb (1.8 kg)	8 lb (3.6kg)	9 lb (4.1kg)	33 lb (15.0 kg)	53 lb (24.0 kg)
Power Supply	15W DC (included)	100-220V 50/60Hz AC	100-220V 50/60Hz AC	100-220V 50/60Hz AC (dual)	100-220V 50/60Hz AC (dual)
Power Load (idle / max)	4W / 10W (MX60) 6W / 13W (MX60W)	26W / 32W	28W / 35W	123W / 215W	132W / 226W
Operating Temperature	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Humidity	5% to 95%	5% to 95%	5% to 95%	5% to 95%	5% to 95%

Specifications

Management

Managed via the Web using the Meraki Cloud Controller

Single pane of glass into wired and wireless networks

No-touch remote deployment (no staging needed)

Automatic firmware upgrades and security patches

Centralized policy management

Org-level two-factor authentication and single sign-on

Role based administration with change logging and alerts

Monitoring and Reporting

Throughput, connectivity monitoring and email alerts

Detailed historical per-port and per-client usage statistics

Application usage statistics

Org-level change logs for compliance and change management

VPN tunnel and latency monitoring

Network asset discovery and user identification

Periodic emails with key utilization metrics

Syslog integration

Remote Diagnostics

Live remote packet capture

Real-time diagnostic and troubleshooting tools

Aggregated event logs with instant search

Network and Security Services

Stateful firewall, 1:1 NAT, DMZ

Site-to-site (IPsec) VPN

Multiple WAN IP, PPPoE, NAT

VLAN support and DHCP services

Static routing

User and device quarantine

WAN Performance Management

WAN link aggregation

Automatic Layer 3 failover (including VPN connections)

3G / 4G USB modem failover (Sprint, Verizon, AT&T)*

Application level (Layer 7) traffic analysis and shaping

Ability to choose WAN uplink based on traffic type

WAN Optimization

Byte-level caching

Universal datastore with data redundancy elimination

TCP transport compression and optimization

Layer 7 protocol optimization (CIFS, HTTP, FTP)

Note: Not available in passthrough mode. MX60 has basic WAN optimization, which includes protocol optimization and link compression, but not caching.

Advanced Security Services

Client (IPsec) VPN

Content filtering (CIPA compliant)

Anti-virus engine

Anti-phishing filtering

Requires Advanced Security License

Regulatory

FCC (US)

CB (IEC)

CISPR (Australia/New Zealand)

RoHS

Warranty

Full lifetime hardware warranty with next-day advanced replacement included

Ordering Guide

To place an order for an MX appliance, pair a specific hardware model with a single license (which includes cloud services, software upgrades and support). For example, to order an MX90 with 3 years of Advanced Security license, order an MX90-HW with LIC-MX90-SEC-3YR. Lifetime warranty with advanced replacement is included on all hardware at no additional cost.

Model	License	Description
MX60-HW	LIC-MX60-ENT-1YR	Meraki MX60, 1 year Enterprise License and Support
	LIC-MX60-ENT-3YR	Meraki MX60, 3 year Enterprise License and Support
	LIC-MX60-ENT-5YR	Meraki MX60, 5 year Enterprise License and Support
	LIC-MX60-SEC-1YR	Meraki MX60, 1 year Advanced Security License and Support
	LIC-MX60-SEC-3YR	Meraki MX60, 3 year Advanced Security License and Support
	LIC-MX60-SEC-5YR	Meraki MX60, 5 year Advanced Security License and Support
MX80-HW	LIC-MX80-ENT-1YR	Meraki MX80, 1 year Enterprise License and Support
	LIC-MX80-ENT-3YR	Meraki MX80, 3 year Enterprise License and Support
	LIC-MX80-ENT-5YR	Meraki MX80, 5 year Enterprise License and Support
	LIC-MX80-SEC-1YR	Meraki MX80, 1 year Advanced Security License and Support
	LIC-MX80-SEC-3YR	Meraki MX80, 3 year Advanced Security License and Support
	LIC-MX80-SEC-5YR	Meraki MX80, 5 year Advanced Security License and Support
MX90-HW	LIC-MX90-ENT-1YR	Meraki MX90, 1 year Enterprise License and Support
	LIC-MX90-ENT-3YR	Meraki MX90, 3 year Enterprise License and Support
	LIC-MX90-ENT-5YR	Meraki MX90, 5 year Enterprise License and Support
	LIC-MX90-SEC-1YR	Meraki MX90, 1 year Advanced Security License and Support
	LIC-MX90-SEC-3YR	Meraki MX90, 3 year Advanced Security License and Support
	LIC-MX90-SEC-5YR	Meraki MX90, 5 year Advanced Security License and Support
MX400-HW	LIC-MX400-ENT-1YR	Meraki MX400, 1 year Enterprise License and Support
	LIC-MX400-ENT-3YR	Meraki MX400, 3 year Enterprise License and Support
	LIC-MX400-ENT-5YR	Meraki MX400, 5 year Enterprise License and Support
	LIC-MX400-SEC-1YR	Meraki MX400, 1 year Advanced Security License and Support
	LIC-MX400-SEC-3YR	Meraki MX400, 3 year Advanced Security License and Support
	LIC-MX400-SEC-5YR	Meraki MX400, 5 year Advanced Security License and Support
MX600-HW	LIC-MX600-ENT-1YR	Meraki MX600, 1 year Enterprise License and Support
	LIC-MX600-ENT-3YR	Meraki MX600, 3 year Enterprise License and Support
	LIC-MX600-ENT-5YR	Meraki MX600, 5 year Enterprise License and Support
	LIC-MX600-SEC-1YR	Meraki MX600, 1 year Advanced Security License and Support
	LIC-MX600-SEC-3YR	Meraki MX600, 3 year Advanced Security License and Support
	LIC-MX600-SEC-5YR	Meraki MX600, 5 year Advanced Security License and Support

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