Meraki MX Family

Cloud Managed Security Appliances

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).

• Prioritize critical applications and throttle recreational traffic.

• Content filtering: CIPA compliant category-based content filters, configurable for classes of users user based on Active Directory user/group membership.

• Stateful firewall: set firewall policies through an intuitive graphical interface.

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.
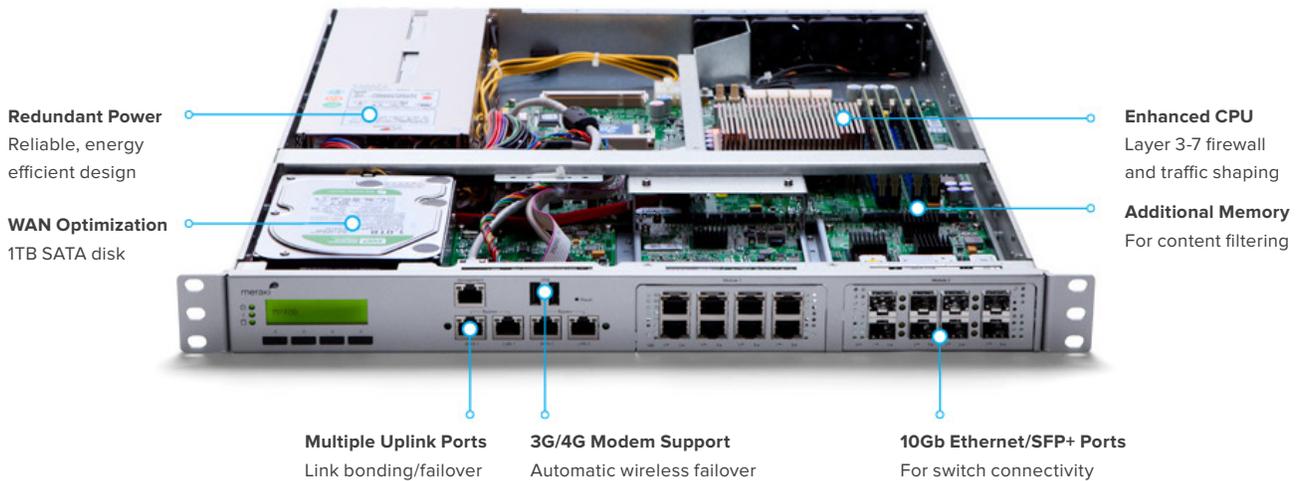
Branch Gateway Services:

• Built-in DHCP, NAT, QoS and VLAN management services.

• 1:1 NAT and DMZ configured and updated from the cloud.

• Link bonding: combines multiple WAN connections into a single high-speed interface, with policies for QoS, traffic shaping and link 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.

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.

• E-mail alerts upon power loss or configuration changes.

Model	Recommended Use Cases	WAN	LAN	WAN Optimization Cache
MX60	Small office / retail branch (approx. 20 users)	1 x GbE	4 x GbE	100 MB
MX80	Mid-sized office (approx. 100 users)	2 x GbE	4 x GbE	1 TB
MX90	Mid-sized office (approx. 250 users)	2 x GbE	8 x GbE	1 TB
MX400	Large office / concentrator (approx. 2,000 users)	2 x GbE	8 x GbE, 8 x SFP, 2 x 10G	1 TB
MX600	Large office / concentrator (approx. 10,000 users)	2 x GbE	8 x GbE, 8 x SFP, 2 x 10G	4 x 1 TB

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

- Role-based administration, configuration change alerts and auditable configuration 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.

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.

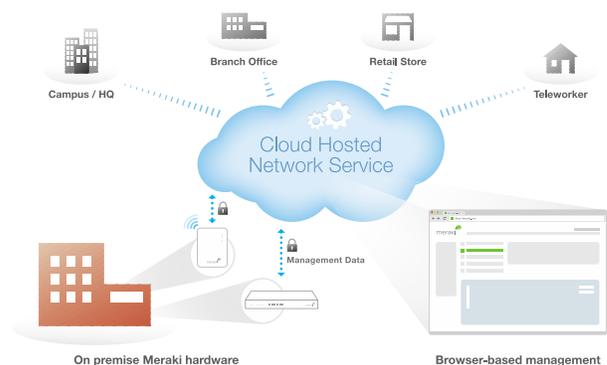## Control Applications, Users and Devices

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

Cisco ISR	Router
Checkpoint	Firewall
Cisco ASA	VPN
F5 Big-IP	Link Balancer
Riverbed	WAN Acceleration
Barracuda	Content Filter

Meraki MX

Campus / HQ

Branch Office

Retail Store

Teleworker

Cloud Hosted
Network Service

Management Data

On premise Meraki hardware
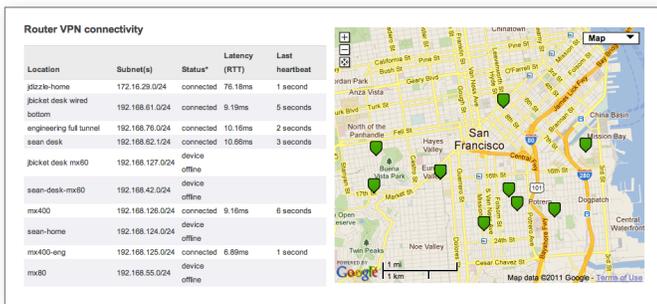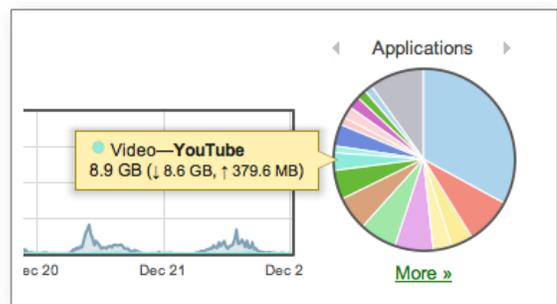
Browser-based management

Consolidate up to six devices with a single Meraki MX appliance

Meraki Cloud Management Architecture

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Auto Configuring Site-to-Site VPN

Application Control

User and Device Fingerprints

Active Directory Integrated Content Filtering
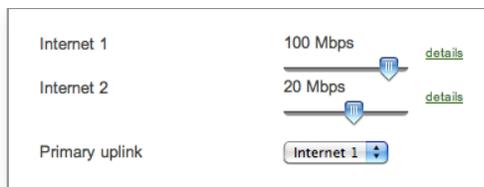
Link Bonding and Failover
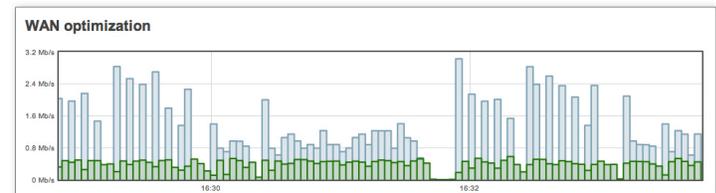
WAN Optimization

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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.

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

Built-in WAN optimization features such as data redundancy elimination, caching, and compression for Windows filesharing

(CIFS), FTP and generic TCP traffic, combined with link compression, help reduce WAN bandwidth by up to 99%.

Meraki MX80, MX90 and MX400 gateways include a 1 TB disk, which acts as a byte-level content cache for office locations, while the MX600 includes 4 TB of storage in a RAID configuration for use in datacenter concentration environments. By eliminating the need for a separate WAN optimization appliance, Meraki MX appliances streamline deployment, can take advantage of user/application policies and simply configuration and management.

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

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Interface Modules for MX400 and MX600

Pluggable Optics for MX90, MX400, MX600

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.

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.

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 / 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

Interface modules for Meraki MX400 and MX600.

Part Number	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

Warranty

Lifetime hardware warranty included.

Specifications

Product Options

	MX60	MX80	MX90	MX400	MX600
Recommended use cases	20 users Small office / Retail	100 users Mid-sized office	250 users Mid-sized office	2,000 users Large branch / concentrator	10,000 users Campus / concentrator
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	yes	yes	yes	yes	yes
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
High Availability	no	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%

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Specifications (continued)

› 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)

› 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

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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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