

MX Cloud Managed Security Appliance Series



Overview

Cisco Meraki MX Security Appliances make it easy to deploy high quality network infrastructure to large numbers of distributed sites. Since the MX is 100% cloud managed, installation and remote management is simple. The MX has a comprehensive suite of network services, eliminating the need for multiple appliances. Services include a next-generation firewall, content filtering, web search filtering, intrusion detection, web caching, WAN optimization, and link bonding with failover.

Next Generation Firewall Capabilities

- Application-aware traffic control: set bandwidth policies based on Layer 7 application type (e.g., YouTube, Skype, P2P).
- Content filtering: CIPA-compliant content filter, web (Google/Bing) search filtering, and YouTube for Schools.
- Intrusion detection: PCI-compliant IDS sensor using industry-leading Snort database from Sourcefire.
- Anti-virus and anti-phishing: flow-based protection engine powered by Kaspersky.
- Identity-based filtering and application bandwidth management

Industry-leading Cloud Management

- Unified WAN, LAN, and wireless LAN management through a web-based dashboard. Scales easily from small deployments to large, multi-site deployments with tens of thousands of devices.
- Role-based administration, email alerts on configuration change, connectivity issues and power loss, 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 Cisco Meraki cloud.

Auto VPN

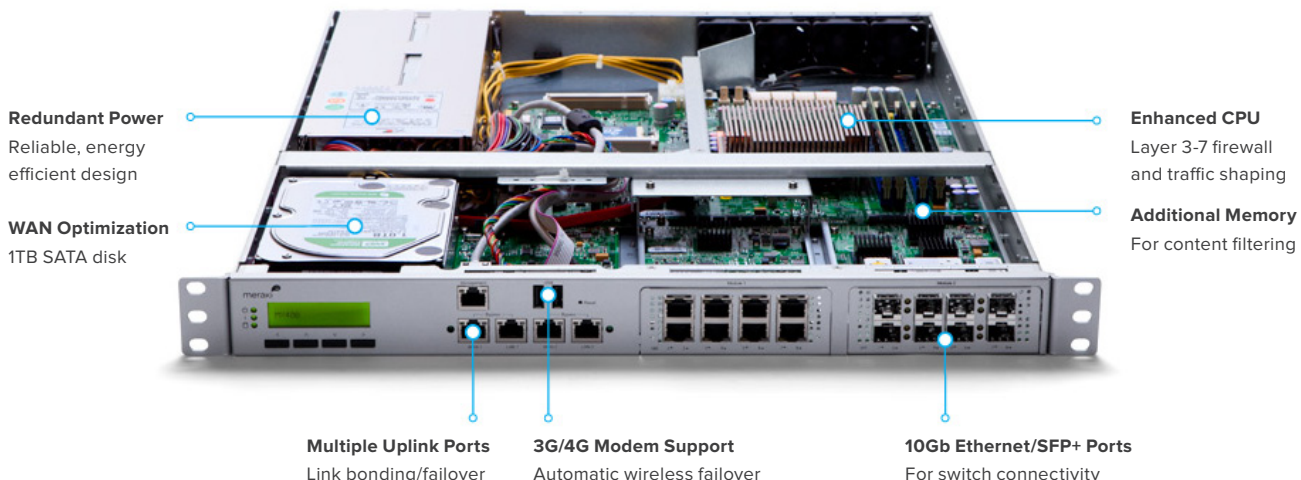
- Site-to-site VPN: automatic routing table generation, provisioning and key exchange via Cisco Meraki's secure cloud.
- Interoperates with standards-based IPsec VPNs.
- Client VPN: L2TP IPsec support for native Windows, Mac OS X, iPad and Android clients with no per-user licensing fees.

Branch Gateway Services

- Built-in DHCP, NAT, QoS, and VLAN management services.
- Web caching: accelerates frequently accessed content.
- 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%.

Inside the Cisco Meraki MX

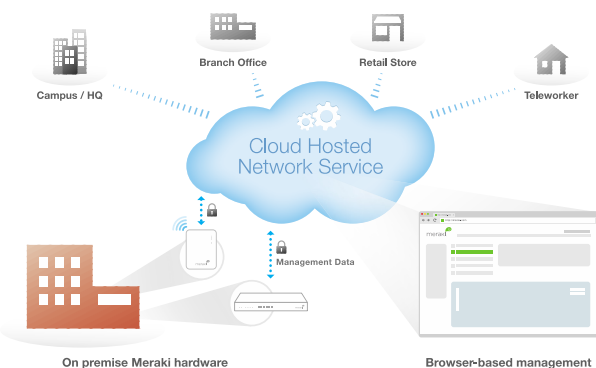
MX400 shown, features vary by model



Cloud Managed Architecture

Built on Cisco Meraki's award-winning cloud-managed architecture, the MX is the only 100% cloud-managed networking and security appliance. MX appliances self-provision, automatically pulling policies and configuration settings 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.



Cisco Meraki Cloud Management Architecture

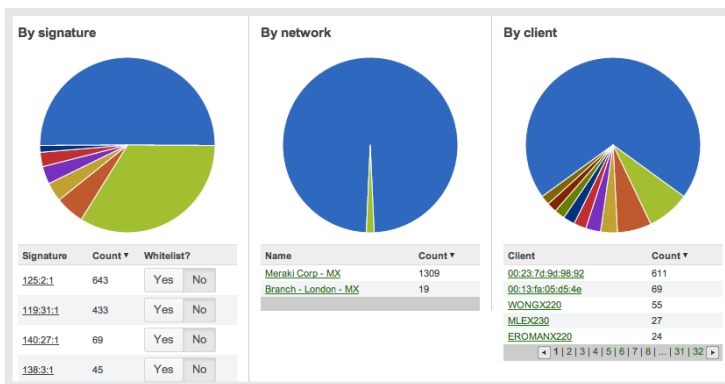
Ironclad Security for Edge Networks

The MX hardware platform is purpose-built for Layer 7 deep packet inspection, with advanced security features including intrusion detection (IDS), content filtering, web search filtering, anti-virus / anti-phishing, and IPsec VPN connectivity, while providing the throughput and capacity for modern, bandwidth-intensive networks.

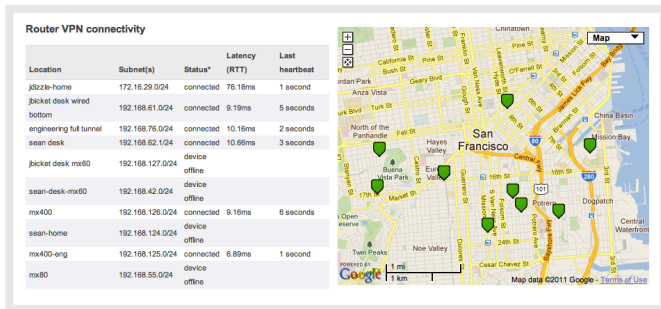
Layer 7 fingerprinting technology lets administrators identify unwanted content and applications and prevent recreational apps like BitTorrent from wasting precious bandwidth.

The integrated Sourcefire® Snort® engine delivers superior intrusion detection coverage, a key requirement for PCI 2.0 compliance. The MX also uses the Webroot® BrightCloud URL categorization database for CIPA / IWF compliant content-filtering, and Kaspersky® SafeStream engine for anti-virus / anti-phishing filtering.

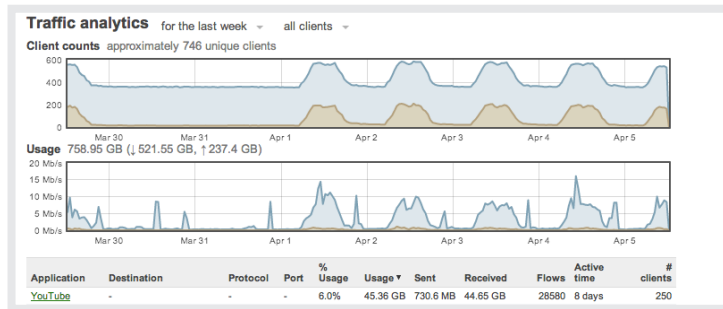
Best of all, these industry-leading Layer 7 security engines and signatures are always kept up-to-date via the cloud, simplifying network security management and providing peace-of-mind to IT administrators.



Organization Level Threat Assessment



Auto Configuring Site-to-Site VPN



Next Gen Application Firewall and Traffic Visibility

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8 matches in 299 [Columns...](#) | [Download as XML](#)

	Description	IP address	MAC address	Usage	Access	Manufacturer
<input type="checkbox"/>	1 Bobby-Longs-iPad	172.16.30.51	a4:d1:d2:10:f0:9d	11.3 MB	normal	Apple
<input type="checkbox"/>	2 Brian-Tobins-iPad	172.16.30.142	7c:6d:62:d7:91:58	853 KB	normal	Apple
<input type="checkbox"/>	3 iPad	172.16.30.49	70:de:e2:40:f3:02	145.8 MB	normal	Apple
<input type="checkbox"/>	4 Meraki-Marketing-iPad	172.16.30.67	b8:ff:61:b8:78:8d	331.3 MB	normal	Apple
<input type="checkbox"/>	5 PCC-iPad-1	172.16.30.183	7c:6d:62:db:32:f5	8.5 MB	normal	Apple
<input type="checkbox"/>	6 Wilson-John-Chans-iPad-2	172.16.30.135	a4:67:06:99:da:a8	33.5 MB	normal	Apple

User and Device Fingerprints

Group policies - Students

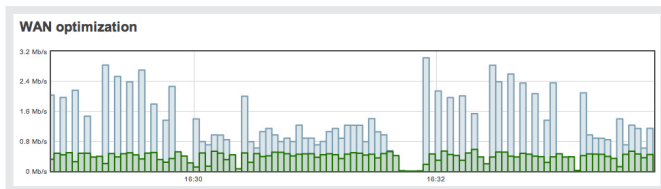
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Bandwidth: [details](#)

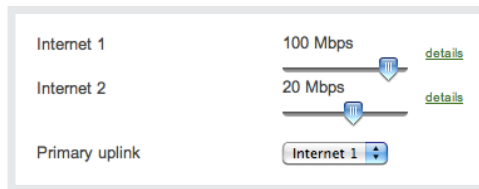
Firewall and traffic shaping Custom network firewall & shaping rules

Layer 3 firewall	#	Policy	Protocol	Source	Src port	Destination	Dest port	Comment	Actions
		Allow	Any	Any	Any	Any	Any	Default rule	
Add a firewall rule									
Layer 7 firewall	#	Policy	Application						Actions
	1	Deny	Peer-to-peer (P2P)			BitTorrent			↕ ✕
	2	Deny	Online backup			All Online backup			↕ ✕
Add a layer 7 firewall rule									

Identity Based Policy Management



WAN Optimization



Link Bonding and Failover

Increased Reliability with Multiple WAN Links and 3G/4G Failover

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

Reduce Bandwidth Costs with Web Caching and WAN Optimization

Web caching temporarily stores video, media, and web documents, lowering bandwidth usage and accelerating the download speed of Internet content like YouTube videos and other media.

WAN optimization dramatically improves application performance and reduce bandwidth requirements at remote sites. All Cisco Meraki MX appliances include WAN optimization at no additional charge. The MX60 and MX60W feature basic WAN optimization, while the MX80, MX90, MX400, and MX600 feature advanced WAN optimization.

Basic WAN optimization includes link compression and protocol optimization. Link compression reduces TCP traffic by 20% - 30%, and protocol optimization accelerates Windows File Sharing (CIFS), FTP, and HTTP transfers.

Advanced WAN optimization adds high-capacity byte-level caching for additional performance improvements, employing a universal data store to maximize the effectiveness of the cache.

MX60W with Integrated Wireless

The MX60W integrates Cisco Meraki's award-winning wireless technology with the powerful MX network security features in a compact form factor ideal for branch offices or small enterprises:

- 1x 802.11b/g/n or 802.11a/n radio, 3x3 MIMO with 3 spatial streams
- Unified management of network security and wireless
- Integrated enterprise security and guest access
- Application-aware traffic analysis and traffic shaping



MX60W Security Appliance

Z1 Telecommuter Gateway



Z1 Telecommuter Gateway

The Z1 Telecommuter Gateway extends the power of the Cisco Meraki dashboard and cloud-based centralized management to employees, IT staff and executives working from home.

Using the patent-pending Cisco Meraki Auto VPN, Administrators can extend network services including VoIP and remote desktop (RDP) to remote employees with a single-click, provide wired and wireless access, and increase end-user productivity through Layer 7 traffic shaping and prioritization.

- 1 x 802.11b/g/n radio, 1 x 802.11a/n radio, 2x2 MIMO with 2 spatial streams
- Site-to-site (IPsec) VPN using Cisco Meraki Auto VPN
- Layer 7 application visibility and traffic shaping

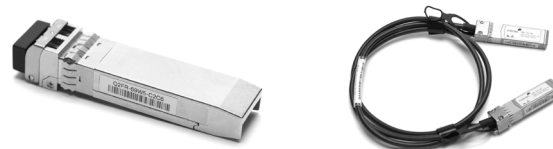
For detailed specs, please see the Z1 datasheet

Accessories

The Cisco Meraki MX90, MX400, and MX600 models support pluggable optics for high-speed backbone or link aggregation connections between wiring closets or to aggregation switches. Cisco 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 (SFP) Optics for MX90, MX400, MX600

Accessories / Optics

Supported Cisco Meraki accessory modules for MX90, MX400 and MX600.

Model	Description
IM-8-CU-1GB	Cisco Meraki 8 x 1 GbE Copper Interface Module for MX400 and MX600
IM-8-SFP-1GB	Cisco Meraki 8 x 1 GbE SFP Interface Module for MX400 and MX600
IM-2-SFP-10GB	Cisco Meraki 2 x 10 GbE SFP+ Interface Module for MX400 and MX600
SFP-1GB-SX	Cisco Meraki 1 GbE SFP SX Fiber Module (1000BASE-SX, range: 550m)
SFP-10GB-SR	Cisco Meraki 10 GbE Short Range SFP+ Module (10GBASE-SR, range: 400m)
CBL-TA-1M	Cisco Meraki 10 GbE Twinax Cable with SFP+ Connectors (10GSFP+Cu, range: 1m)

Note: Please refer to meraki.com for additional single-mode and multi-mode fiber transceiver modules

Lifetime Warranty with Next-day Advanced Replacement

Cisco Meraki MX appliances include a limited lifetime hardware warranty that provides next-day advance hardware replacement. Cisco 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.

Product Options

	MX60 / MX60W	MX80	MX90	MX400	MX600
Recommended use cases	Small retail branch, small clinic (approx. 20 users)	Mid size branch, (approx. 100 users)	Large branch, 8 LAN ports, 2 SFP (approx. 250 users)	K-12 firewall / VPN concentrator (approx. 2,000 users)	Large K-12 firewall, VPN 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	50	125	2,000	5,000
Interfaces	5 x GbE	5 x GbE	9 x GbE 2 x GbE (SFP)	4 x GbE	4 x GbE
Additional Interface Modules	N/A	N/A	N/A	8 x GbE (RJ45) 8 x GbE (SFP) 4 x 10GbE (SFP+) (2 modules max)	8 x GbE (RJ45) 8 x GbE (SFP) 4 x 10GbE (SFP+) (2 modules max)
Web Caching	N/A	Yes	Yes	Yes	Yes
WAN Optimization	Basic	Advanced	Advanced	Advanced	Advanced
Hard Drive*	N/A	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	9.5" x 6.7" x 1.14" (239mm x 170mm x 34mm)	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	3.04 lb (1.4 kg)	8 lb (3.6kg)	9 lb (4.1kg)	33 lb (15.0 kg)	53 lb (24.0 kg)
Power Supply	18W 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%

*Note: Hard drive is used for web caching and advanced WAN Optimization, which includes byte-level object caching.

Specifications

Management

Managed via the web using the Cisco Meraki dashboard

Single pane-of-glass into managing 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

Identity-based policies

Auto VPN: Automated site-to-site (IPsec) VPN, for hub-and-spoke or mesh topologies

Client (IPsec L2TP) VPN

Multiple WAN IP, PPPoE, NAT

VLAN support and DHCP services

Static routing

User and device quarantine

WAN Performance Management

Web caching

WAN link aggregation

Automatic Layer 3 failover (including VPN connections)

3G / 4G USB modem failover

Application level (Layer 7) traffic analysis and shaping

Ability to choose WAN uplink based on traffic type

Note: Web caching is not available on the MX60 or MX60W models.

WAN Optimization

Byte-level caching

Universal datastore with data redundancy elimination

TCP transport compression and optimization

Protocol optimization (CIFS, HTTP, FTP)

Note: MX60 / MX60W have basic WAN optimization, which includes protocol optimization and link compression, but limited caching.

Advanced Security Services

Content filtering (Webroot BrightCloud CIPA compliant URL database)

Web search filtering (including Google / Bing SafeSearch)

YouTube for Schools

Intrusion-detection sensor (Sourcefire SNORT® based)

Anti-virus engine and anti-phishing filtering (Kaspersky SafeStream II engine)

Note: Advanced security services require Advanced Security license.

Integrated Wireless

1 x 802.11a/b/g/n (2.4 GHz or 5 GHz)

Max data rate 450 Mbit/s

3x3 MIMO with 3 spatial streams, beamforming

3 external dual-band dipole antennas (connector type: RP-SMA)

Antenna gain: 3.0s dBi @ 2.4 GHz, 3.5 dBi @ 5 GHz

WEP, WPA, WPA2-PSK, WPA2-Enterprise with 802.1X authentication

Regulatory: FCC (US), IC (Canada), CE (Europe), C-Tick (Australia/New Zealand), RoHS

Note: Integrated wireless is only available on the MX60W model.

Regulatory

FCC (US)

CB (IEC)

CISPR (Australia/New Zealand)

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	Cisco Meraki MX60, 1 year Enterprise License and Support
	LIC-MX60-ENT-3YR	Cisco Meraki MX60, 3 year Enterprise License and Support
	LIC-MX60-ENT-5YR	Cisco Meraki MX60, 5 year Enterprise License and Support
	LIC-MX60-SEC-1YR	Cisco Meraki MX60, 1 year Advanced Security License and Support
	LIC-MX60-SEC-3YR	Cisco Meraki MX60, 3 year Advanced Security License and Support
	LIC-MX60-SEC-5YR	Cisco Meraki MX60, 5 year Advanced Security License and Support
MX60W-HW	LIC-MX60W-ENT-1YR	Cisco Meraki MX60W, 1 year Enterprise License and Support
	LIC-MX60W-ENT-3YR	Cisco Meraki MX60W, 3 year Enterprise License and Support
	LIC-MX60W-ENT-5YR	Cisco Meraki MX60W, 5 year Enterprise License and Support
	LIC-MX60W-SEC-1YR	Cisco Meraki MX60W, 1 year Advanced Security License and Support
	LIC-MX60W-SEC-3YR	Cisco Meraki MX60W, 3 year Advanced Security License and Support
	LIC-MX60W-SEC-5YR	Cisco Meraki MX60W, 5 year Advanced Security License and Support
MX80-HW	LIC-MX80-ENT-1YR	Cisco Meraki MX80, 1 year Enterprise License and Support
	LIC-MX80-ENT-3YR	Cisco Meraki MX80, 3 year Enterprise License and Support
	LIC-MX80-ENT-5YR	Cisco Meraki MX80, 5 year Enterprise License and Support
	LIC-MX80-SEC-1YR	Cisco Meraki MX80, 1 year Advanced Security License and Support
	LIC-MX80-SEC-3YR	Cisco Meraki MX80, 3 year Advanced Security License and Support
	LIC-MX80-SEC-5YR	Cisco Meraki MX80, 5 year Advanced Security License and Support
MX90-HW	LIC-MX90-ENT-1YR	Cisco Meraki MX90, 1 year Enterprise License and Support
	LIC-MX90-ENT-3YR	Cisco Meraki MX90, 3 year Enterprise License and Support
	LIC-MX90-ENT-5YR	Cisco Meraki MX90, 5 year Enterprise License and Support
	LIC-MX90-SEC-1YR	Cisco Meraki MX90, 1 year Advanced Security License and Support
	LIC-MX90-SEC-3YR	Cisco Meraki MX90, 3 year Advanced Security License and Support
	LIC-MX90-SEC-5YR	Cisco Meraki MX90, 5 year Advanced Security License and Support
MX400-HW	LIC-MX400-ENT-1YR	Cisco Meraki MX400, 1 year Enterprise License and Support
	LIC-MX400-ENT-3YR	Cisco Meraki MX400, 3 year Enterprise License and Support
	LIC-MX400-ENT-5YR	Cisco Meraki MX400, 5 year Enterprise License and Support
	LIC-MX400-SEC-1YR	Cisco Meraki MX400, 1 year Advanced Security License and Support
	LIC-MX400-SEC-3YR	Cisco Meraki MX400, 3 year Advanced Security License and Support
	LIC-MX400-SEC-5YR	Cisco Meraki MX400, 5 year Advanced Security License and Support
MX600-HW	LIC-MX600-ENT-1YR	Cisco Meraki MX600, 1 year Enterprise License and Support
	LIC-MX600-ENT-3YR	Cisco Meraki MX600, 3 year Enterprise License and Support
	LIC-MX600-ENT-5YR	Cisco Meraki MX600, 5 year Enterprise License and Support
	LIC-MX600-SEC-1YR	Cisco Meraki MX600, 1 year Advanced Security License and Support
	LIC-MX600-SEC-3YR	Cisco Meraki MX600, 3 year Advanced Security License and Support
	LIC-MX600-SEC-5YR	Cisco Meraki MX600, 5 year Advanced Security License and Support

*Note: For each MX product, additional 7 or 10 year Enterprise or Advanced Security licensing options are also available (ex: LIC-MX90-SEC-7YR).