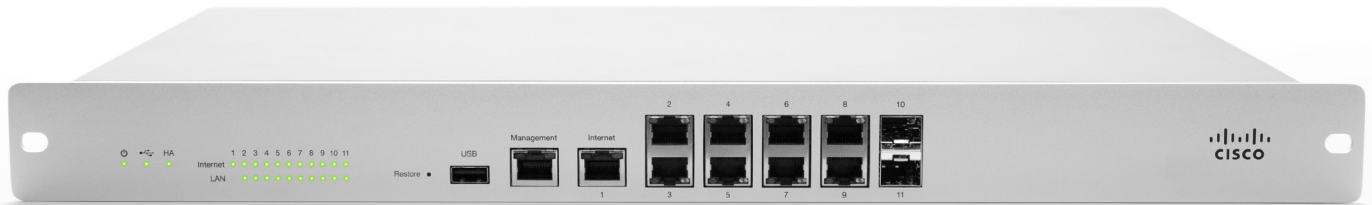


# MX Cloud Managed Security Appliance Series



## Overview

Cisco Meraki MX Security Appliances are ideal for organizations with 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. These services include Layer 7 application firewall, content filtering, web search filtering, SNORT® based intrusion prevention, web caching, Intelligent WAN with multiple uplinks and 4G failover.

### FEATURE-RICH UNIFIED THREAT MANAGEMENT (UTM) 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, safe-search enforcement (Google/Bing), and YouTube for Schools.
- Intrusion prevention: PCI-compliant IPS sensor using industry-leading SNORT® signature database from Cisco Sourcefire.
- Anti-virus and anti-phishing: flow-based protection engine powered by Kaspersky.
- Identity-based security policies and application management.

### INDUSTRY-LEADING CLOUD MANAGEMENT

- Unified firewall, switching, wireless LAN, and mobile device management through an intuitive web-based dashboard.
- Template based settings scale easily from small deployments to tens of thousands of devices.
- Role-based administration, configurable email alerts for a variety of important events, and easily auditable change logs.
- Summary reports with user, device, and application usage details archived in the cloud.

### INTELLIGENT SITE-TO-SITE VPN WITH CISCO IWAN

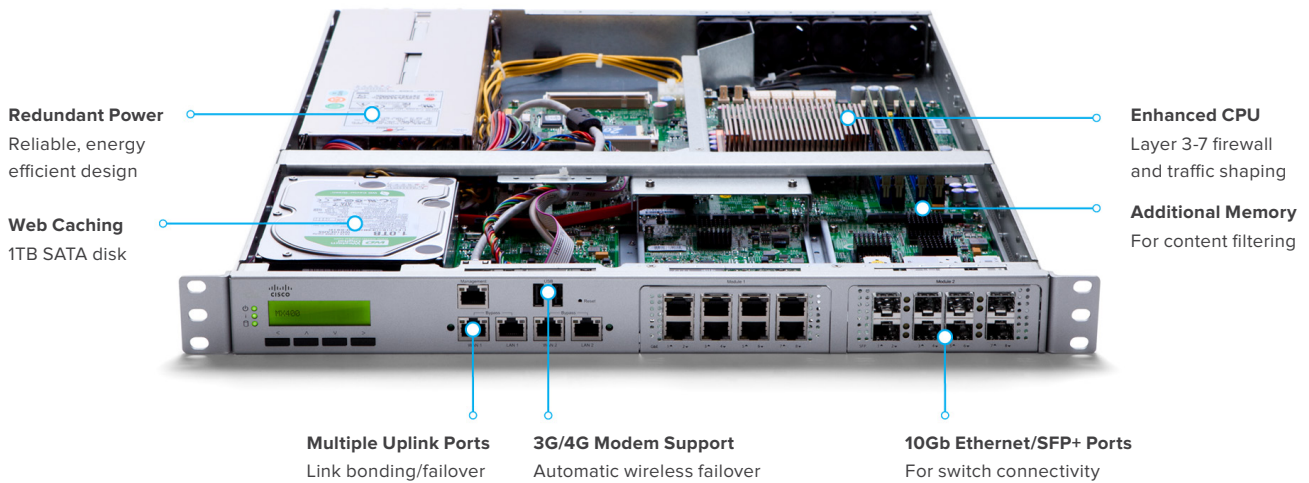
- Auto VPN: automatic vpn route generation, IKE/IPsec setup and key exchange via Cisco Meraki's secure cloud.
- Intelligent WAN with active / active VPN, policy-based-routing, and dynamic VPN path selection.
- Interoperates with standards-based IPsec VPNs.
- Automated MPLS to VPN failover.
- Client VPN: 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.
- Load balancing: combines multiple WAN links into a single high-speed interface, with policies for QoS, traffic shaping, and failover.
- Smart connection monitoring: automatic detection of layer 2 and layer 3 outages and fast failover, including 3G/4G USB modems.

## INSIDE THE CISCO MERAKI MX

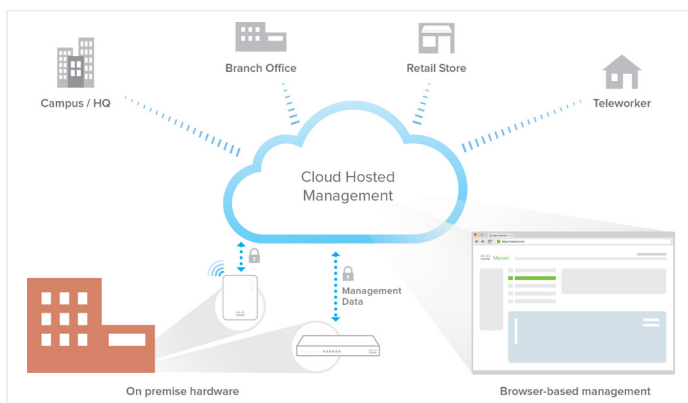
MX400 shown, features vary by model



## Cloud Managed Architecture

Built on Cisco Meraki's award-winning cloud-managed architecture, the MX is the industry's only 100% cloud-managed Unified Threat Management appliance. MX appliances self-provision, automatically pulling policies and configuration settings from the cloud. Powerful remote management tools provide network-wide visibility and control, and enable administration without the need for 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 intuitive browser-based management interface removes the need for expensive and time-consuming training.



Cisco Meraki Cloud Management Architecture

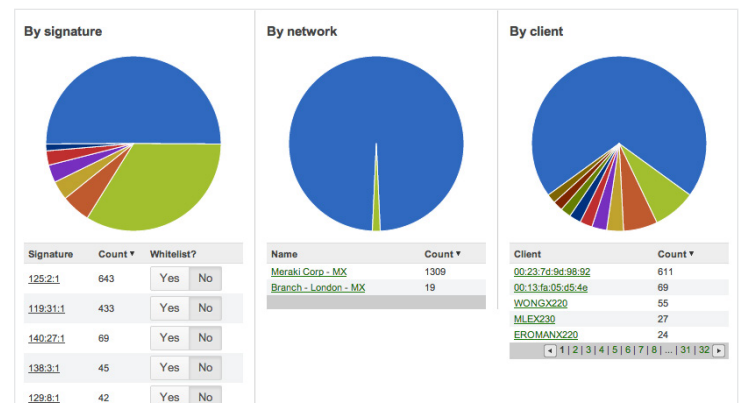
## Ironclad Security

The MX platform has an extensive suite of security features including IPS, content filtering, web search filtering, anti-virus / anti-phishing, geo-IP based firewalling and IPsec VPN connectivity, while providing the performance required for modern, bandwidth-intensive networks.

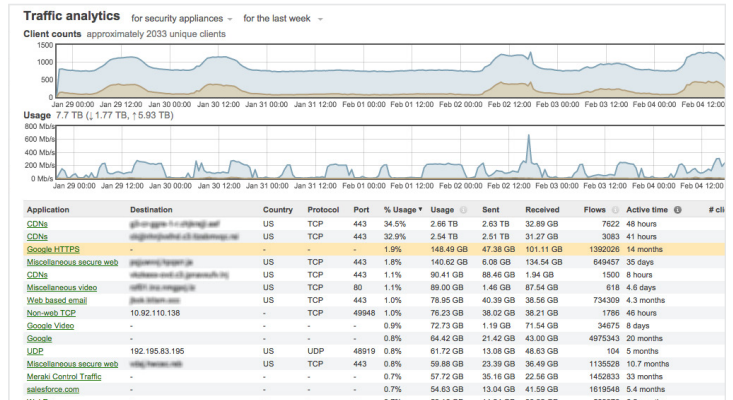
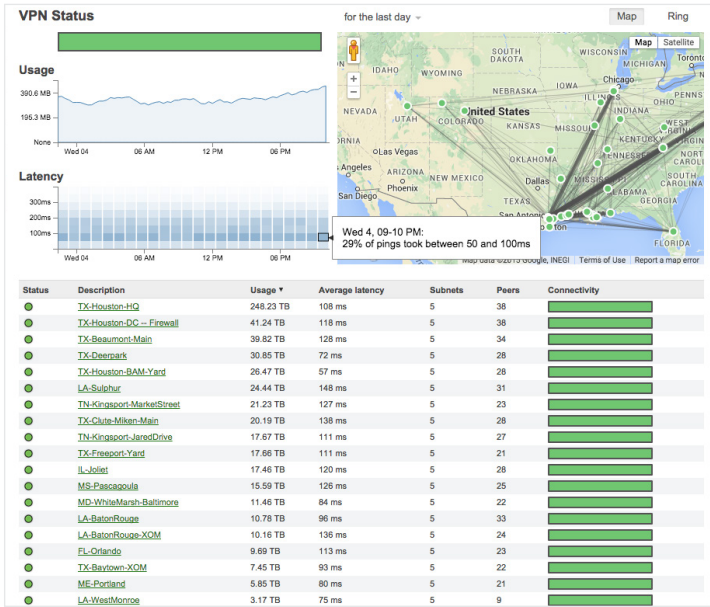
Layer 7 fingerprinting technology lets administrators identify unwanted content and applications and prevent recreational apps like BitTorrent from wasting precious bandwidth.

The integrated Sourcefire SNORT® engine delivers superior intrusion prevention coverage, a key requirement for PCI 3.0 compliance. The MX also uses the Webroot BrightCloud® URL categorization database for CIPA / IWF compliant content-filtering, Kaspersky Safestream II® engine for anti-virus / anti-phishing, and MaxMind for geo-IP based security rules.

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



Next Gen Application Firewall and Traffic Visibility

Auto Configuring Site-to-Site VPN

**Group policies > Students**

Name: Students

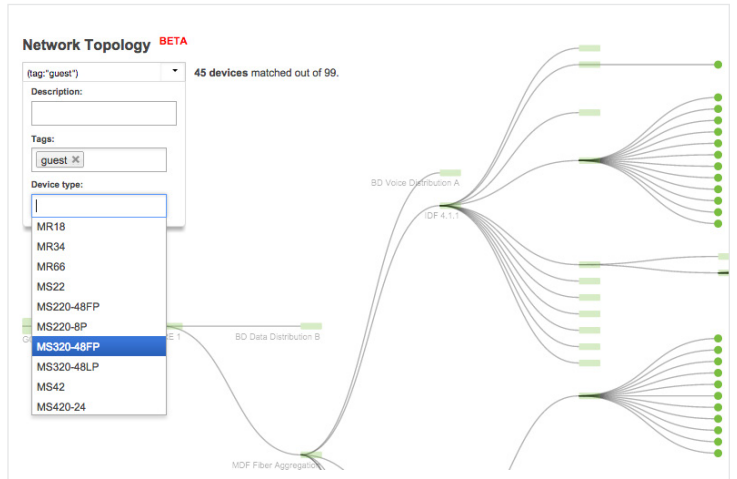
Bandwidth: Use custom bandwidth limit: unlimited

Firewall and traffic shaping: Custom network firewall & shaping rules

Layer 3 firewall	#	Policy	Protocol	Source	Src port	Destination	Dst port	Comment	Actions
		Allow	Any	Any	Any	Any	Any	Default rule	

Layer 7 firewall	#	Policy	Application	Actions
	1	Deny	Peer-to-peer (P2P)	BitTorrent
	2	Deny	Online backup	All Online backup

Identity Based Policy Management



End-to-End Network Visibility and Troubleshooting

Intelligent WAN Made Simple

Transport independence

Dual WAN ports with load balancing and failover enable the use of MPLS and redundant, commodity Internet connections, providing additional bandwidth and higher reliability.

3G / 4G failover

The Cisco Meraki MX supports 3G/4G service providers globally for WAN connection failover. Web caching temporarily stores video, media, and web documents, lowering bandwidth usage and accelerating the download speed of Internet content.

Application optimization

Layer 7 traffic shaping, application prioritization optimize the traffic for mission-critical applications and user experience.

Intelligent path control

Use dynamic VPN path selection to choose the best VPN uplink based on packet loss, latency, and jitter. Define policies for sending the right traffic through the appropriate path (e.g., send voice via MPLS, http via VPN over broadband).

Secure connectivity

Cisco Meraki's unique auto provisioning site-to-site VPN (Auto VPN) connects branches securely with unmatched simplicity. MX Security Appliances automatically learn VPN parameters needed to establish and maintain VPN sessions using a 128-bit AES encryption. A unique cloud-enabled discovery mechanism enables automatic interconnection of VPN peers and routes across the WAN, and keeps them updated in dynamic IP environments.

## MX64W with 802.11ac Wireless

The MX64W 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:

- Dual-band 802.11n/ac, 2x2 MIMO with 2 spatial streams
- Unified management of network security and wireless
- Integrated enterprise security and guest access



MX64W Security Appliance

## 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



Z1 Telecommuter Gateway

## Accessories

The Cisco Meraki MX84, MX100, MX400, and MX600 models support pluggable optics for high-speed backbone 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 MX84, MX100, MX400, and MX600

### ACCESSORIES / OPTICS

Supported Cisco Meraki accessory modules for MX100, 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
MA-SFP-1GB-SX	Cisco Meraki 1 GbE SFP SX Fiber Module (1000BASE-SX, range: 550m)
MA-SFP-10GB-SR	Cisco Meraki 10 GbE Short Range SFP+ Module (10GBASE-SR, range: 400m)
MA-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 [meraki.cisco.com/support](http://meraki.cisco.com/support).

## Product Options

	<b>MX64</b> 	<b>MX64W</b> 	<b>MX84</b> 	<b>MX100</b> 	<b>MX400</b> 	<b>MX600</b> 
<b>Recommended use cases</b>	Small retail branch, small clinic	Small retail branch, small clinic	Medium sized branch	Large branch	K-12 firewall / VPN concentrator	Large K-12 firewall, VPN concentrator
<b>Recommended max users</b>	50	50	200	500	2,000	10,000
<b>Stateful Firewall Throughput</b>	250 Mbps	250 Mbps	500 Mbps	750 Mbps	1 Gbps	1 Gbps
<b>Advanced Security Throughput</b>	100 Mbps	100 Mbps	200 Mbps	600 Mbps	1 Gbps	1 Gbps
<b>Maximum VPN sessions</b>	25	25	100	250	1,000	5,000
<b>Interfaces</b>	5 x GbE	5 x GbE	10 x GbE 2 x GbE (SFP)	9 x GbE 2 x GbE (SFP)	4 x GbE	4 x GbE
<b>Additional Interface Modules</b>	N/A	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)
<b>Web Caching</b>	N/A	N/A	Yes	Yes	Yes	Yes
<b>Hard Drive*</b>	N/A	N/A	1 TB	1 TB	1 TB	4 x 1 TB (RAID)
<b>USB for 3G/4G Failover</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Mounting</b>	Desk / Wall	Desk / Wall	1U rack	1U rack	1U rack	2U rack
<b>Dimensions</b>	9.5" x 5.2" x 1" (239mm x 132mm x 25mm)	9.5" x 5.2" x 1" (239mm x 132mm x 25mm)	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)
<b>Weight</b>	3.04 lb (1.4 kg)	3.04 lb (1.4 kg)	9 lb (4.1kg)	9 lb (4.1kg)	33 lb (15.0 kg)	53 lb (24.0 kg)
<b>Power Supply</b>	18W DC (included)	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)
<b>Power Load (idle/max)</b>	4W / 10W	6W / 13W	26W / 32W	30W / 55W	123W / 215W	132W / 226W
<b>Operating Temperature</b>	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)	32°F to 104°F (0°C to 40°C)
<b>Humidity</b>	5% to 95%	5% to 95%	5% to 95%	5% to 95%	5% to 95%	5% to 95%

\*Note: Hard drive is used for web caching.

# Specifications

## Management

Managed via the web using the Cisco Meraki dashboard

Single pane-of-glass into managing wired and wireless networks

Zero-touch remote deployment (no staging needed)

Automatic firmware upgrades and security patches

Templates based multi-network 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 (not available on the MX64 and MX64W)

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

IWAN: Dual active VPN with policy based routing and dynamic VPN path selection

## Advanced Security Services

Content filtering (Webroot BrightCloud CIPA compliant URL database)

Web search filtering (including Google / Bing SafeSearch)

YouTube for Schools

Intrusion-prevention sensor (Sourcefire SNORT® based)

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

Geography based firewall rules (MaxMind Geo-IP database)

Note: Advanced security services require Advanced Security license.

## Integrated Wireless (MX64W)

1 x 802.11a/n/ac (5 GHz) radio

1 x 802.11b/g/n (2.4 GHz) radio

Max data rate 1.2 Gbit/s (aggregate)

2 x 2 MIMO with two spatial streams

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

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

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

FCC (US): 2.412-2.462 GHz, 5.150-5.250 GHz (UNII-1), 5.250-5.350 GHz (UNII-2), 5.470-5.725 GHz (UNII-2e), 5.725 -5.825 GHz (UNII-3)

CE (Europe): 2.412-2.484 GHz, 5.150-5.250 GHz (UNII-1), 5.250-5.350 GHz (UNII-2) 5.470-5.600 GHz, 5.660-5.725 GHz (UNII-2e)

Additional regulatory information: IC (Canada), C-Tick (Australia/New Zealand), RoHS

Note: Integrated wireless is only available on the MX64W 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 MX64 with 3 years of Advanced Security license, order an MX64-HW with LIC-MX64-SEC-3YR. Lifetime warranty with advanced replacement is included on all hardware at no additional cost.

MODEL	LICENSE	DESCRIPTION
MX64-HW	LIC-MX64-ENT-1YR	Cisco Meraki MX64, 1 year Enterprise License and Support
	LIC-MX64-ENT-3YR	Cisco Meraki MX64, 3 year Enterprise License and Support
	LIC-MX64-ENT-5YR	Cisco Meraki MX64, 5 year Enterprise License and Support
	LIC-MX64-SEC-1YR	Cisco Meraki MX64, 1 year Advanced Security License and Support
	LIC-MX64-SEC-3YR	Cisco Meraki MX64, 3 year Advanced Security License and Support
	LIC-MX64-SEC-5YR	Cisco Meraki MX64, 5 year Advanced Security License and Support
MX64W-HW	LIC-MX64W-ENT-1YR	Cisco Meraki MX64W, 1 year Enterprise License and Support
	LIC-MX64W-ENT-3YR	Cisco Meraki MX64W, 3 year Enterprise License and Support
	LIC-MX64W-ENT-5YR	Cisco Meraki MX64W, 5 year Enterprise License and Support
	LIC-MX64W-SEC-1YR	Cisco Meraki MX64W, 1 year Advanced Security License and Support
	LIC-MX64W-SEC-3YR	Cisco Meraki MX64W, 3 year Advanced Security License and Support
	LIC-MX64W-SEC-5YR	Cisco Meraki MX64W, 5 year Advanced Security License and Support
MX84-HW	LIC-MX84-ENT-1YR	Cisco Meraki MX84, 1 year Enterprise License and Support
	LIC-MX84-ENT-3YR	Cisco Meraki MX84, 3 year Enterprise License and Support
	LIC-MX84-ENT-5YR	Cisco Meraki MX84, 5 year Enterprise License and Support
	LIC-MX84-SEC-1YR	Cisco Meraki MX84, 1 year Advanced Security License and Support
	LIC-MX84-SEC-3YR	Cisco Meraki MX84, 3 year Advanced Security License and Support
	LIC-MX84-SEC-5YR	Cisco Meraki MX84, 5 year Advanced Security License and Support
MX100-HW	LIC-MX100-ENT-1YR	Cisco Meraki MX100, 1 year Enterprise License and Support
	LIC-MX100-ENT-3YR	Cisco Meraki MX100, 3 year Enterprise License and Support
	LIC-MX100-ENT-5YR	Cisco Meraki MX100, 5 year Enterprise License and Support
	LIC-MX100-SEC-1YR	Cisco Meraki MX100, 1 year Advanced Security License and Support
	LIC-MX100-SEC-3YR	Cisco Meraki MX100, 3 year Advanced Security License and Support
	LIC-MX100-SEC-5YR	Cisco Meraki MX100, 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-MX100-SEC-7YR).