Meraki MX68CW Installation Guide

This document describes how to install and set up the MX68CW security appliance. Additional reference documents are available online at: www.meraki.com/library/products.

MX68CW Overview

The Meraki MX68CW (model: MX68CW-HW-NA & MX68CW-HW-WW) is an enterprise security appliance designed for distributed deployments that require remote administration. It is ideal for network administrators who demand both ease of deployment and a state-of-the-art feature set. This appliance provides the following new features:

- 2.4-Ghz (2 spatial streams) and 5-GHz (2 spatial streams) radios for 802.11abgn/ac support.
- USB port, to support approved 3G/4G cards for failover to cellular networks.
- **Support for 10 LAN connections (2 of 10 offer 802.3at support)**
- Wall screws and anchors for mounting drywall surface, either vertically or horizontally

MX68CW Operational Temperature: 32° F to 104° F (0° C to 40° C)

Package Contents

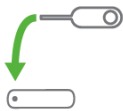In addition to the MX68CW, the following are provided.

Power Adapter

CAT5 Ethernet Cables
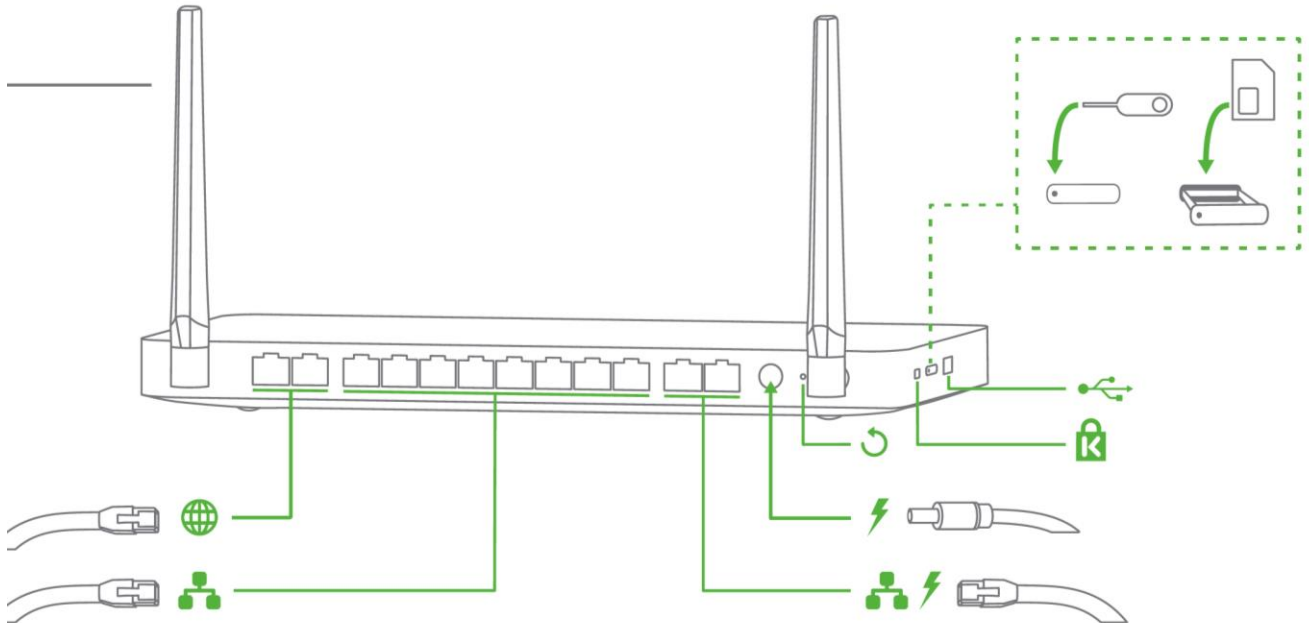

Wall Screws & Anchors

SIM Slot Pin

The MX68CW Ports and Connections

USB, Ethernet (LAN/WAN), SIM, K-Lock, Power, Antennas

The MX68CW front panel

Ports and Status Indicators

The MX68CW uses a single LED to inform the user of the device's status.

Function	LED Status	Meaning
Power Up/Boot	Solid Orange	Power is applied

Connecting	Rainbow	Device in process of connecting to the Meraki Dashboard
Connected	Solid White	Fully operational
Upgrading	Flashing White	During boot or no WAN link
LTE Enabled	Purple	LTE is on and connected

The MX68CW back panel

Additional functions on the back panel are described below, from left to right.

LAN ports	Ten (Ports 3 through 12) provide connectivity to computers, printers, access points, or Ethernet switches. Two of these ten (Ports 11 and 12) also provide PoE+ (802.3at) support.
	Two LEDs -- one for activity, another for connectivity. A steady green LED indicates bidirectional connectivity while a flashing green LED indicates traffic.
Internet ports	Two ports provide connectivity to the WAN.
Power input	Designed for use only with the unit's power supply.
Antenna ports	Two RP-SMA ports for dipole antennas (two antennas included)

The MX68CW side panel

Restore button	Insert a paper clip if a reset is required. A brief, momentary press: To delete a downloaded configuration and reboot. Press and hold for more than 10 sec: To force the unit into a full factory reset.
Kensington Security Slot	The slot is a portion of the Kensington lock system and is compatible with any Kensington cable.

USB port	USB 2.0 for 3G/4G wireless cards.

The MX68CW bottom panel

Please note that the serial number is located on the product label, which is located on the bottom of the MX68CW. The blank region in the center of the label will be populated with regulatory marks on commercial units.

Mounting hardware

The supplied wall screws and anchors allow you to mount the appliance on a drywall surface, either vertically or horizontally. The distance between the holes you drill should be 165 mm.

- For mounting on drywall, use a ¼-in drill bit, then insert the plastic and screw assemblies.
- For mounting on wood or a similar surface, use only the screws.
- Allow the heads of the screws to stick out far enough to be inserted securely into the back of the appliance.
- This equipment is only suitable for mounting at heights ≤ 2 m
- Warning: This equipment may not work when mains power fails.

Connecting to the WAN

All Meraki MX devices must have an IP address. This section describes how to configure your local area network before you deploy it. A local management web service, running on the appliance, is accessed through a browser running on a client PC. This web service is used for configuring and monitoring basic ISP/WAN connectivity.

Setting up a static IP address

To ensure that the client PC is redirected to the local web service in the following step, you must disable all other network services (e.g., Wi-Fi) on your client machine.

Do the following to configure basic connectivity and other networking parameters:

1. Using a client machine such as a laptop, connect to one of the ten **LAN** ports of the MX.
2. Using a browser on the client machine, access the appliance's built-in web service by browsing to http://setup.meraki.com. (You do not have to be connected to the Internet to reach this address)
3. Click **Uplink configuration** under the **Local status** tab.
4. Choose **Static** for the **IP Assignment option**.
5. Enter the IP address, subnet mask, default gateway IP and DNS server information.

Setting up a DHCP IP address

By default all MX devices are configured to DHCP from upstream WAN / ISP servers. Simply plug one of the MX's WAN / Internet ports into your upstream circuit and wait a few minutes for the unit to negotiate a DHCP address.
Icon
When the WAN connection is fully enabled, the Internet 1 or 2 LED 1 will turn green.

Additional settings
Please note that all these settings below are accessible only via the local management console.

Setting VLANs
If your WAN uplink is on a trunk port, choose **VLAN tagging > Use VLAN tagging** and enter the appropriate value for **VLAN ID** for your network.

Setting PPPoE

PPPoE authentication may be required if you are connecting the MX to a DSL circuit. You need to know your authentication option and credentials (supplied by your ISP) in order to complete these steps.

- Choose **Connection Type > PPPoE.**
- Select your **Authentication** option.
- If you select **Use authentication**, enter appropriate values for **Username** and **Password**.

Web proxy settings

These settings take effect if the MX device has to fall back to using HTTP to contact the Cloud Controller. By default, web proxy is disabled. To enable web proxy, do the following:

- Choose **Web proxy > Yes**.
- Enter values as appropriate for **Hostname or IP** and **Port**.
- If you require authentication, choose **Authentication > Use authentication**, and enter appropriate values for **Username** and **Password**.

To apply all configuration settings to the appliance, be sure to click **Save Settings** at the bottom of the page.

Configuring physical link settings

To configure physical link settings on the Ethernet ports, click **Local status > Ethernet configuration**. You can enable half duplex, full duplex, and auto-negotiation, as well as set 10- or 100-Mbps data rates.

Regulatory

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Party issuing Supplier's Declaration of Conformity
Cisco Meraki
500 Terry A. Francois Blvd.
San Francisco, CA
94158
USA
compliance@meraki.com

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

Any changes or modifications no expressly approved by Cisco could void the user's authority to operate this equipment. This Transmitter must not be co-located or operation in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 31 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IEEE 802.11b or 802.11g operation of this product in the USA is firmware-limited to channels 1 through 11.

If the device is going to be operated in the 5.15 - 5.25 frequency range, then it is restricted to indoor environment only. This device meets all other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Industry Canada Statement

This MX68CW complies with license-exempt RSSs of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme RSS d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Industry Canada Caution

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

減少電磁波影響，請妥適使用。
無線資訊傳輸設備避免影響附近雷達系統之操作。

低功率射頻設備的管理辦法
第12條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得 擅自變更頻率、加大功率或 變更原設計之特性及功能。
第14條 低功率射頻電機之使用不得影響飛航安全及干擾 合法通信；經發現有干擾現象時，應立即用，並改善 至無干擾時方得繼續使用。
前項合法通信，指依電信法規定作業之無線電通信。
低功率射頻電機須忍受合法通信或工業、科及醫療用電波輻射性電機設備之干擾。

低功率射頻電機技術規範
4.7 無線資訊傳輸設備
4.7.6 無線資訊傳輸設備須忍受合法通信之干擾且不得干擾合法通信；如造成干擾，應立即停用，俟無干擾之 虞，始得 繼續使用。
4.7.7 無線資訊傳輸設備的製造廠商應確保頻率穩定， 如依製造廠商使用手冊上所述正常操作， 發射的信號 應維持於操作帶中。
在5.25-5.35秭赫頻帶內操作之無線資訊傳輸設備，限於室內使用。電磁波曝露量MPE標準值 1mW/cm2，本產品使用時建議應距離人體20cm。

Statement CS-0438 - 台灣 RoHS
台灣 RoHS"限用物質含有情況標示聲明書"網址 www.cisco.com/go/taiwanrohs