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MX67/MX68 Installation Guide

This document describes how to install and set up the MX67 and MX68 security appliance. Additional reference documents are available online at: www.meraki.com/library/products.

MX67/MX68 Overview

The Meraki MX67 and MX68 are enterprise security appliances 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. A full overview of the appliances' features can be found in the MX67 and MX68 Overview and Specifications.

Package Contents

In addition to the MX device, the following are provided:

| MX67/MX68	MX67W/MX68W
Power Adapter (No Power Cable)	Power Adapter (No Power Cable)
2x CAT5 Ethernet Cables	2x CAT5 Ethernet Cables
Wall Screws and Anchors	Wall Screws and Anchors
	2x WiFi Antennae
MX67C	**MX68CW**
Power Adapter (No Power Cable)	Power Adapter (No Power Cable)
2x CAT5 Ethernet Cables	2x CAT5 Ethernet Cables
Wall Screws and Anchors	Wall Screws and Anchors

MX67/MX68	MX67W/MX68W
2x LTE Antennae	2x Attached (Non-Removeable) Hybrid WiFi+LTE Antennae

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Front Panels

### MX67/67C/67W
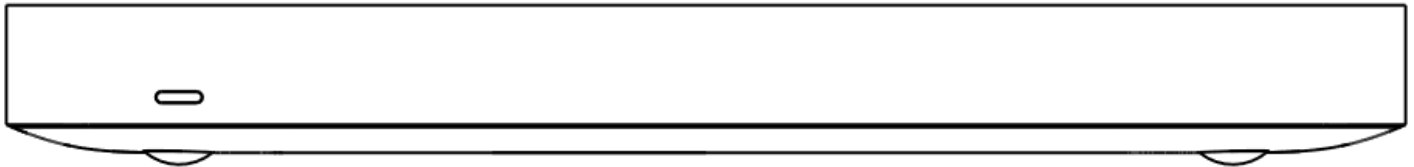
MX68/68W/68CW
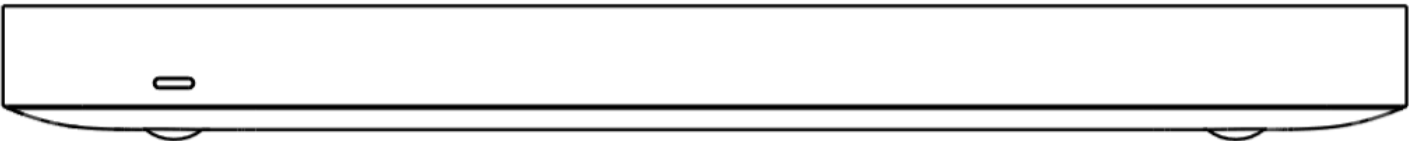
Status Indicator

The MX67/MX68 series devices uses an LED to inform the user of the device's status. LED patterns and their meanings are described below.

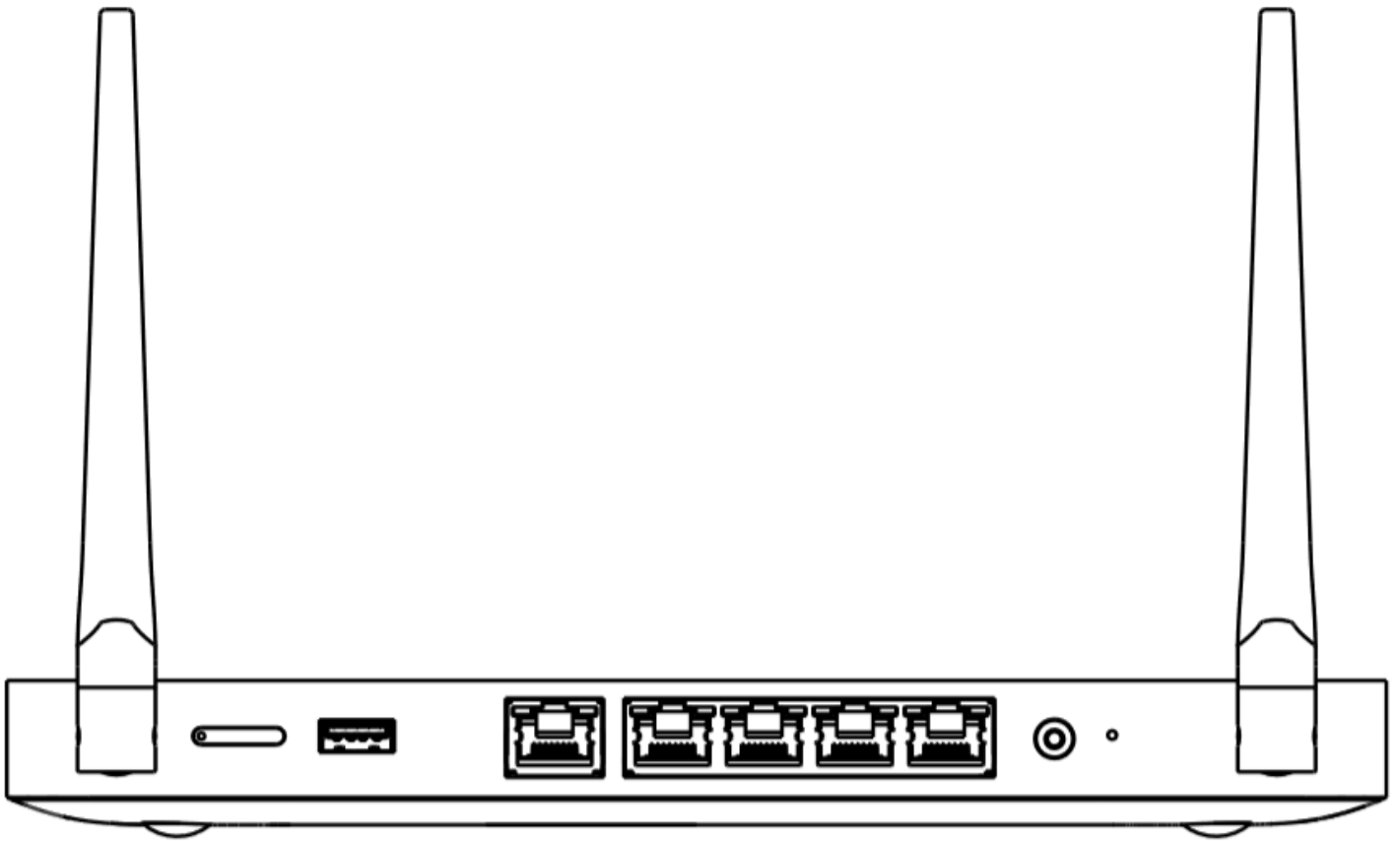| LED Status	Meaning
Solid orange	Power is applied but the appliance is not connected to the Meraki Dashboard
Alternating Colors	The appliance is attempting to connect to Meraki Dashboard

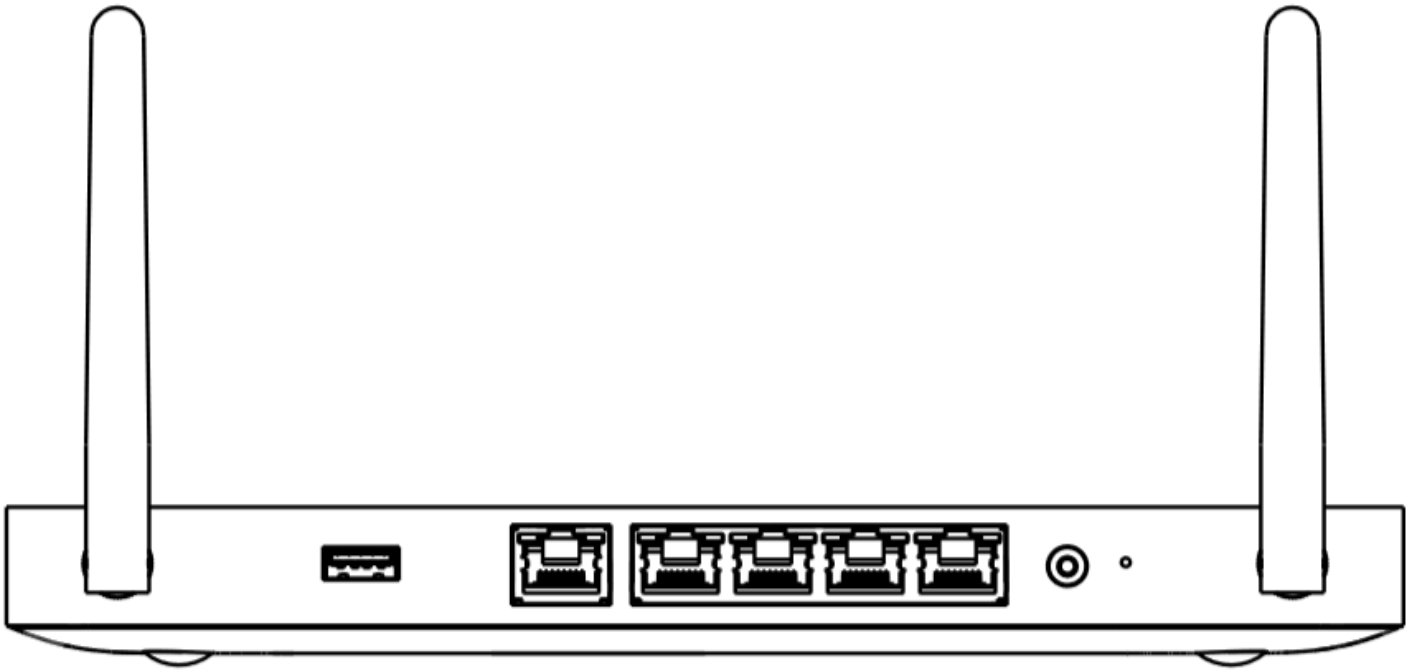| Flashing White	Firmware upgrade in progress
Solid White	Fully operational

Back Panels
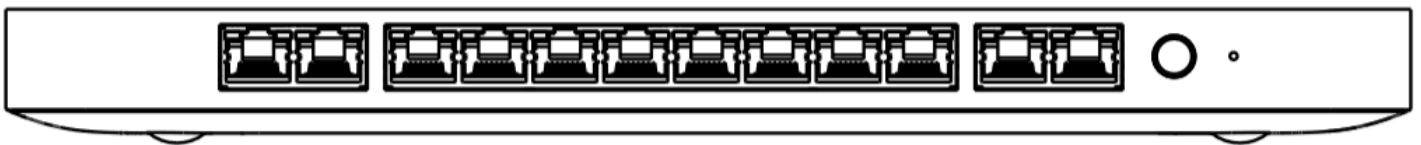
MX67
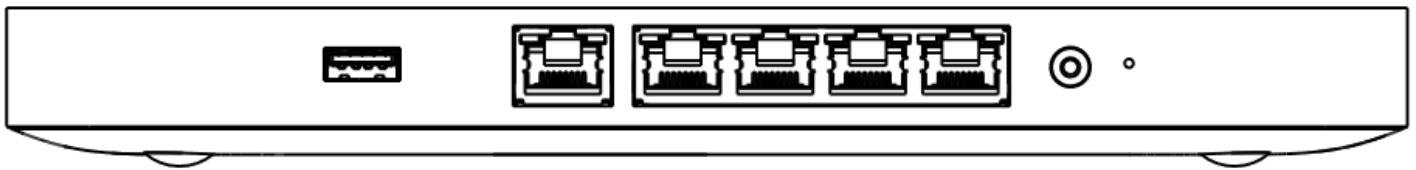
MX67C

MX67W

MX67/MX67W/MX67C Back Panel Functions

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

SIM Card Slot (MX67C)	Active, supported SIM cards can be inserted into this slot to enable cellular capabilities.
USB port	USB 3.0 for external 3G/4G wireless modems. Traffic status is indicated by the USB LED.
WAN / Internet port	This port provides connectivity to the WAN.
LAN ports	These 4 ports provide connectivity to computers, printers, access points, or Ethernet switches. A steady green LED indicates bidirectional connectivity, and flashing green indicates traffic.
PoE+ Ports	These 2 LAN ports provide connectivity to computers, printers, access points, or Ethernet switches. Each port outputs up to 30W of PoE power.

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	A steady green LED indicates bidirectional connectivity, and flashing green indicates traffic.
Power input	Designed for use only with the unit's power supply.
Reset button	Insert a paper clip if a reset is required. Press for 1 second to delete a downloaded configuration and reboot. Press and hold for more than 10 seconds to force a full factory reset.

MX68

MX68W
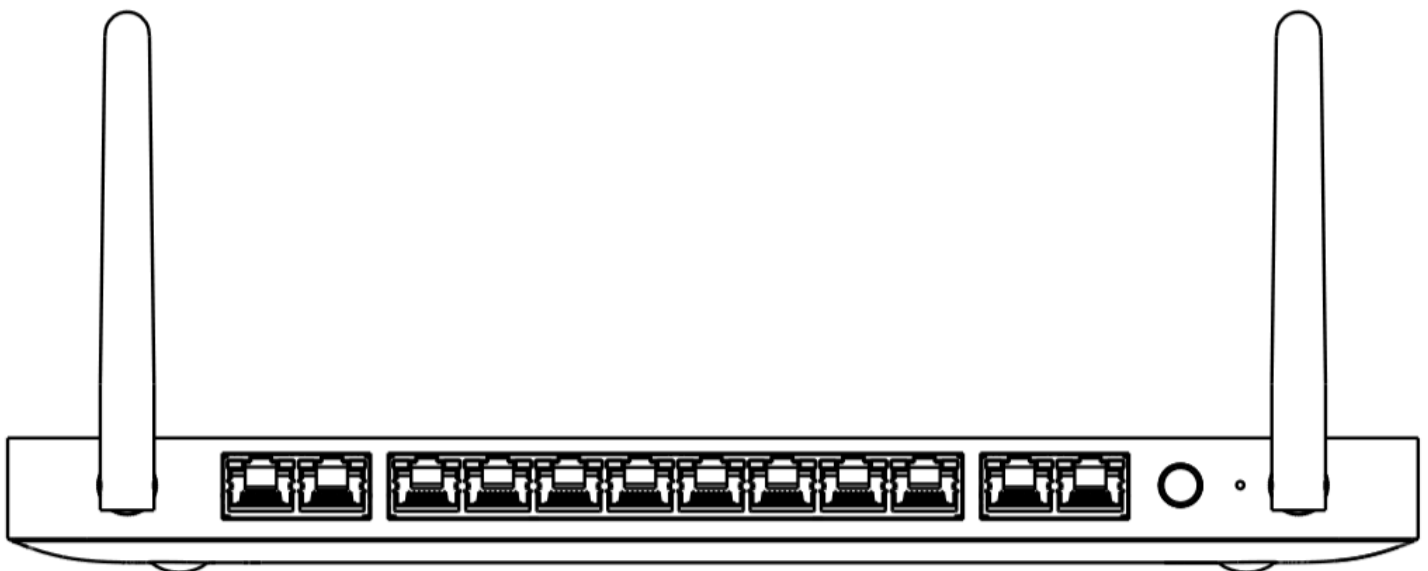
MX68CW
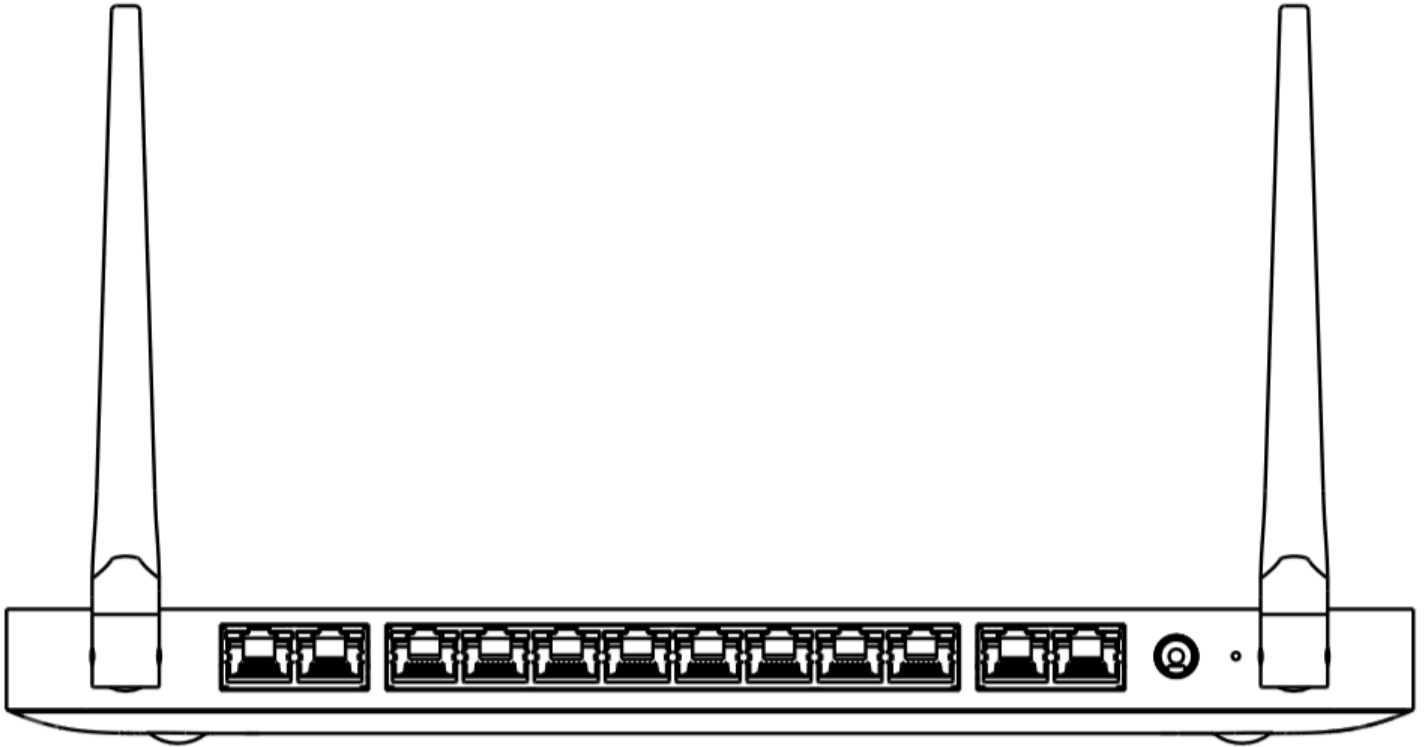
MX68/MX68W/MX68CW Back Panel Functions

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

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WAN / Internet ports	These two ports provide connectivity to the WAN.
LAN ports	These 8 ports provide connectivity to computers, printers, access points, or Ethernet switches. A steady green LED indicates bidirectional connectivity, and flashing green indicates traffic.
PoE+ Ports	These 2 LAN ports provide connectivity to computers, printers, access points, or Ethernet switches.

	Each port outputs up to 30W of PoE power. A steady green LED indicates bidirectional connectivity, and flashing green indicates traffic.
Power input	Designed for use only with the unit's power supply.
Reset button	Insert a paper clip if a reset is required. Press for 1 second to delete a downloaded configuration and reboot. Press and hold for more than 10 seconds to force a full factory reset.

Side Panels

MX68

MX68W
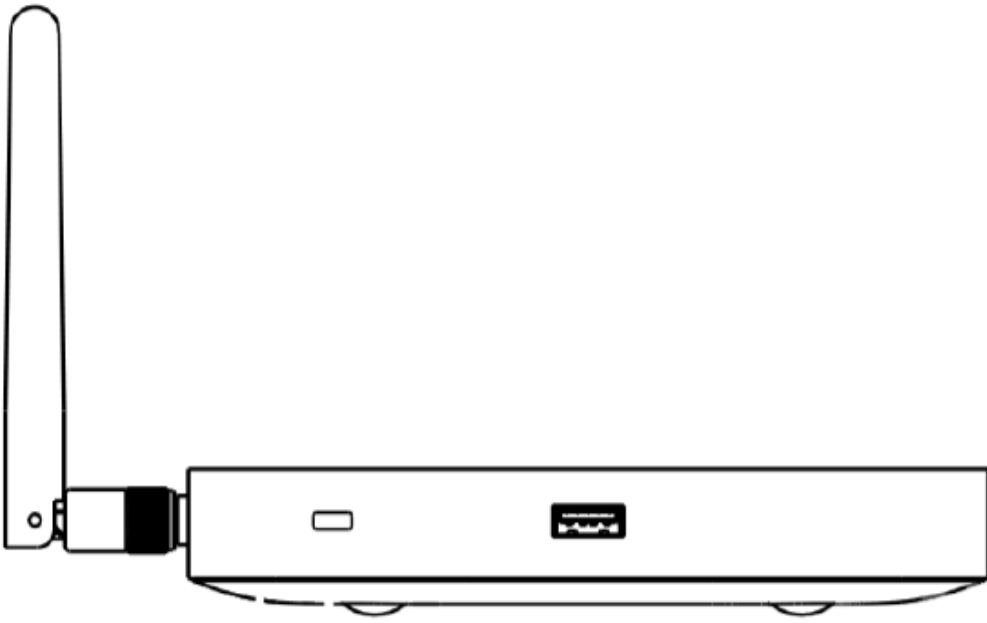
MX68CW
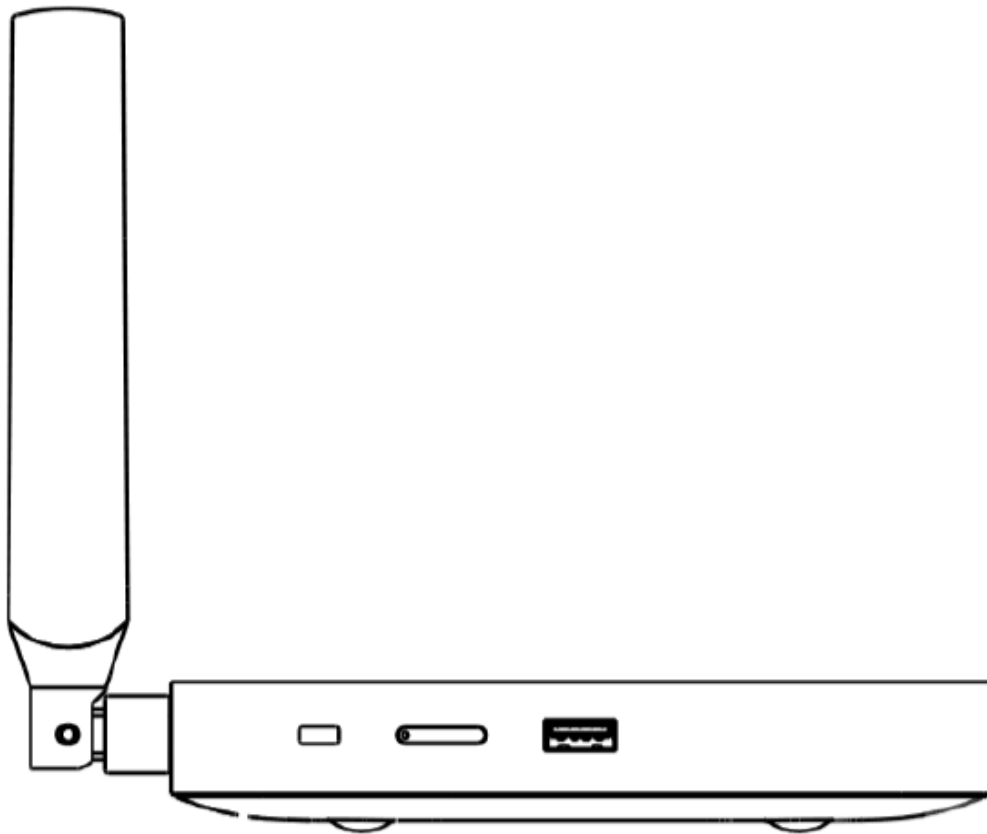
MX68/MX68W/MX68CW Side Panel Functions

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

SIM Card Slot (MX68CW)	Active, supported SIM cards can be inserted into this slot to enable cellular capabilities.
USB port	USB 2.0 for 3G/4G wireless cards. Traffic status is indicated by the USB LED.

Bottom Panel
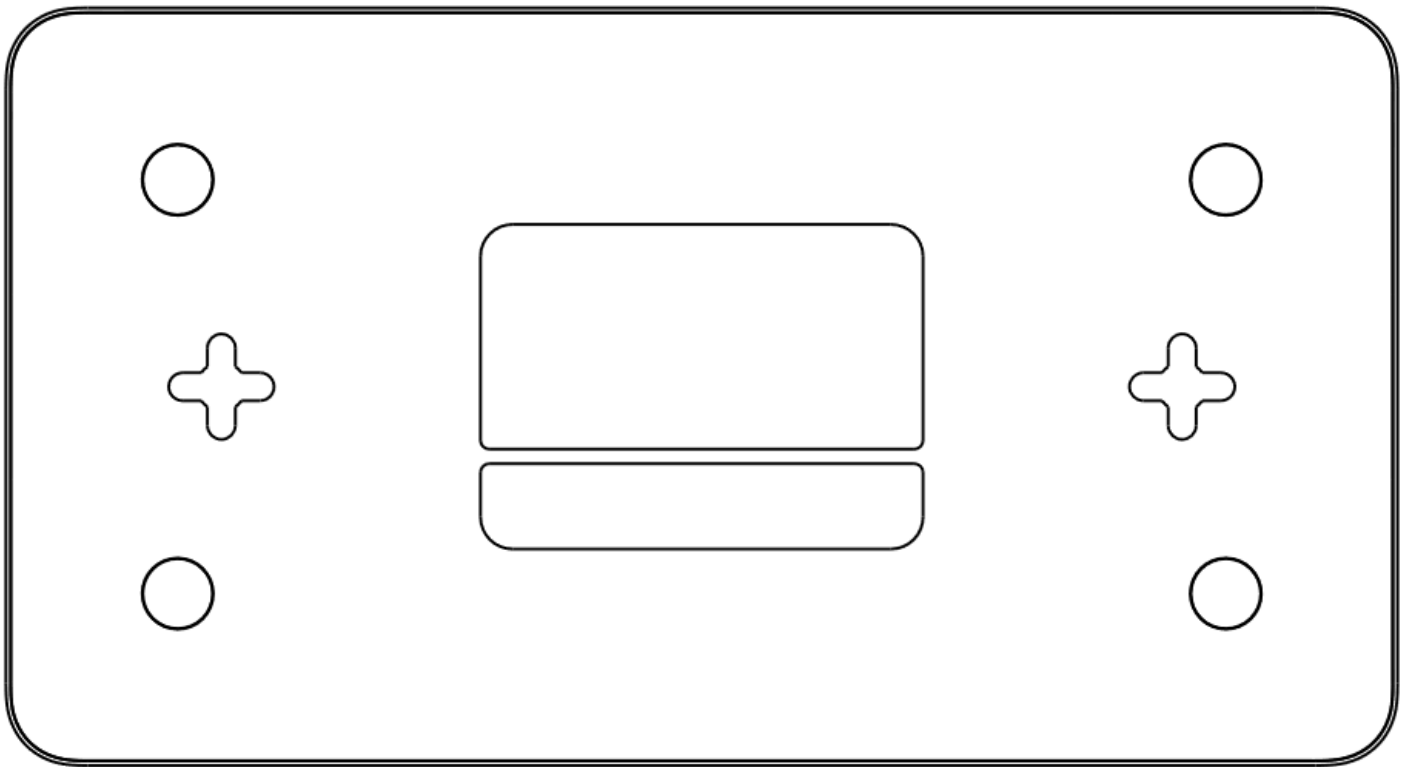
Please note that the serial number is located on the product label at the bottom panel of MX67/MX68 devices

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 5-1/8 inches (13 cm).

- 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.

Connecting to 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 (ex: 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 **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. The default credentials use the device serial number as the username, with a blank password field.
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 the MX's WAN / Internet port to your upstream circuit and wait a few minutes for the unit to negotiate a DHCP address.

> ⓘ When the WAN connection is fully enabled, Internet LED 1 will turn green.

Setting up Cellular Failover

The MX67C and MX68CW have an embedded LTE module for cellular failover connections. The following section will walk through first-time set-up of an MX with an internet connection as a primary connection and cellular as failover.

> ⓘ Note that the IMEI cannot yet be found on the Meraki dashboard, only on the physical label of the device. The IMEI of the MXs with embedded LTE, as well as the serial number and MAC address, can be found on the product label at the bottom of cellular-embedded MX devices.

To set up the cellular failover connection, follow the steps below:

1. For the MX67C, connect the antennas for cellular reception. Antennae are pre-attached for the MX68CW

2. Connect the uplink for the MX device via a wired connection to connect to the Meraki cloud

3. Open the SIM tray using the SIM card removal tool included in the box

4. Insert a nano SIM card (4FF size) and close the SIM tray

5. Check with the carrier of choice if an APN needs to be configured. If so, do that from the Meraki Dashboard under **Security Appliance > Monitor > Appliance Status > Uplink** tab

6. The Meraki dashboard will automatically recognize the new cellular connection and you will be able to see the status on the left hand side of the **Appliance Status** page and in the **Uplink** tab

7. Test the cellular failover connection by unplugging the wired connection or by using the traceroute tool under **Security Appliance > Monitor > Appliance Status** in the Tools tab

8. If, after following the steps above, the SIM card is not detected, please confirm with your carrier that the SIM card is active and has data. You will need the ICCID of the SIM card and IMEI of the device to get troubleshooting help from the carrier

   ◦ A list of certified carriers can be found here

9. Please contact the Meraki Support team if the cellular connection is still not being recognized after following the steps above

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 up a Secondary WAN Interface on the MX68

MX68 devices come with two dedicated Internet ports, which are both configured on the **Security Appliance > Appliance Status > Local Status** under the Uplink Configuration.

Setting up a Secondary WAN interface on the MX67

You can toggle the LAN2 port between **LAN** and **Internet**, through Local Status Page

Setting PPPoE

PPPoE authentication may be required if you are connecting MX device 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 autonegotiation, as well as set 10- or 100-Mbps data rates.