

# Meraki MX65W-HW Installation Guide

This document describes how to install and set up the MX65W-HW security appliance. Additional reference documents are available online at: [www.meraki.com/library/products](http://www.meraki.com/library/products).

## MX65W-HW Overview

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The Meraki MX65W-HW (model: MX65W-HW) 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

MX65W-HW Operational Temperature: 32 ° F to 104 ° F (0 ° C to 40 ° C)

## Package Contents

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In addition to the MX65W-HW, the following are provided.



Power Adapter



CAT5 Ethernet Cables



Wall Screws & Anchors

## The MX65W-HW front panel

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### Ports and Status Indicators

The MX65W-HW 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                              |

## The MX65W-HW back panel

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

|                |                                                                                                                                                                                                                                                                                                                                                                |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LAN ports      | <p>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.</p> <p>Two LEDs -- one for activity, another for connectivity. A steady green LED indicates bidirectional connectivity while a flashing green LED indicates traffic.</p> |
| 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 MX65W-HW side panel

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|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Restore button           | Insert a paper clip if a reset is required.<br>A brief, momentary press: To delete a downloaded configuration and reboot.<br>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 MX65W-HW bottom panel

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Please note that the serial number is located on the product label, which is located on the bottom of the MX65W-HW. The blank region in the center of the label will be populated with regulatory marks on commercial units.

## Mounting hardware

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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 3/4-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 the WAN

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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

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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

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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

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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

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### 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.

### 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 not 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 20 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 device complies with RSS-247 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 CNR-247 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.

#### **Avertissement:**

(i) les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

#### **Industry Canada Radiation Exposure Statement**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

#### **Déclaration d'exposition aux radiations**

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.