Meraki MX64W Installation Guide

This document describes how to install and set up the MX64W security appliance. Additional reference documents are available online at: www.meraki.com/library/products.

MX64W Overview

The Meraki MX64W (model: MX64W-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:

- USB port, to support approved 3G/4G cards for failover to cellular networks.
- Support for four LAN connections
- Wall screws and anchors for mounting drywall surface, either vertically or horizontally

MX64W Operational Temperature: 32° F to 104° F (0° C to 40° C)

Package Contents

In addition to the MX64W, the following are provided.

Power Adapter

CAT5 Ethernet Cables

Wall Screws & Anchors

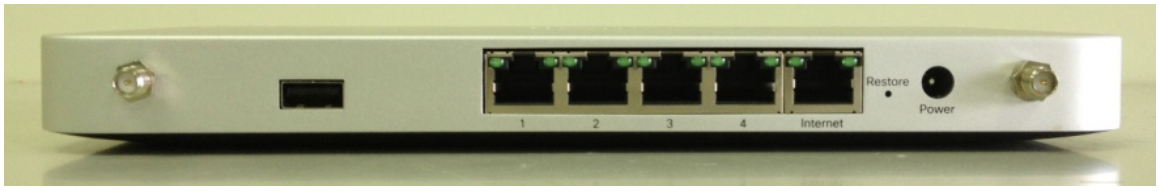
The MX64W front panel

Ports and Status Indicators

The MX64W 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 MX64W back panel



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

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.
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.

	LAN1 port can either be a LAN port or a second Internet port.
Internet port	Provides connectivity to the WAN.
USB port	USB 2.0 for 3G/4G wireless cards.
Power input	Designed for use only with the unit's power supply.

The MX64W bottom panel

Please note that the serial number is located on the product label at the bottom panel of MX64W

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.

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 (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 four **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 the MX's WAN / Internet port to your upstream circuit and wait a few minutes for the unit to negotiate a DHCP address.

Icon

When the WAN connection is fully enabled, Internet 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 up secondary WAN interface (dual WAN)

You can toggle the LAN1 port between **LAN** and **Internet**, through **Uplink configuration** under the **Local status** tab.

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.

Regulatory

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

Radio:	EN 300 328, EN 301 893
EMC:	EN 301 489-1, EN 301 489-17
Safety:	EN 60950-1
Exposure:	EN 505385
Emissions:	EN 55022, EN 61000-3-2, EN 61000-3-3
Immunity:	EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11

AT	BE	BG	CH	CY	CZ	DE	DK
EE	ES	FI	FR	GB	GR	HU	IE
IS	IT	LI	LT	LU	LV	MT	NL
NO	PL	PT	RO	SE	SI	SK	TR

This device is a 2.4 GHz and 5 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries with the following restrictions:

Frequency Band (MHz)	*Max Power Level (EIRP) (mW)*	*Indoor ONLY*	*Indoor and Outdoor*
2400 – 2483.5	100		X
5150 – 5350	200	X	
5470 – 5725	1000		X

See meraki.cisco.com/compliance

Italy
This product meets the National Radio Interface and the requirements specified in the National Frequency allocation Table for Italy. Unless this wireless LAN product is operating within the boundaries of the owner's property, it uses requires a "general authorization".

Questo prodotto è conforme alla specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all 'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN richiede una "Autorizzazione Generale".

Denmark
The band 5150 – 5350 MHz is also allowed for outdoor usage.

I Danmark må frekvensbåndet 5150 –5350 også anvendes udendørs.

Latvia
The outdoor usage of the 2.4 GHz band requires an authorization from the Electronic Communications Office.

2.4 GHz frekvenču joslas izmantošanai ārpus telpām nepieciešama at auja no Elektronisko

sakaru direkcijas.

Български (Bulgarian): Настоящото Cisco Systems, Inc. декларира, че това безжичното устройство е в съответствие със съществените изисквания и другите приложими разпоредби на Директива 1999/5/ЕС.

Česky (Czech): Cisco Systems, Inc. tímto prohlašuje, že tento wireless device je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice.

Dansk (Danish): Undertegnede Cisco Systems, Inc. erklærer herved, at følgende udstyr wireless device overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Deutsch (German): Hiermit erklärt Cisco Systems, Inc. dass sich das Gerät wireless device in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befi ndet.

Eesti (Estonian): Käesolevaga kinnitab Cisco Systems, Inc. seadme wireless device vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele.

English: Hereby, Cisco Systems, Inc. declares that this wireless device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Español (Spanish): Por medio de la presente Cisco Systems, Inc. declara que el wireless device cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Ελληνική (Greek): ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Cisco Systems, Inc. ΔΗΛΩΝΕΙ ΟΤΙ wireless device ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

Français (French): Par la présente Cisco Systems, Inc. déclare que l'appareil wireless device est conforme aux exigencies essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Íslenska (Icelandic): Hér, Cisco Systems, Inc. yfir að þráðlaus tæki er í samræmi við grunnkröfur og önnur viðeigandi ákvæði tilskipunar 1999/5/EB.

Italiano (Italian): Con la presente Cisco Systems, Inc. dichiara che questo wireless device è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva

1999/5/CE.

Latviski (Latvian): Ar šo Cisco Systems, Inc. deklarē, ka wireless device atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių (Lithuanian): Šiuo Cisco Systems, Inc. deklaruoja, kad šis wireless device atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederland (Dutch): Hierbij verklaart Cisco Systems, Inc. dat het toestel wireless device in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

Malti (Maltese): Hawnhekk, Cisco Systems, Inc. jiddikjara li dan wireless device jikkonforma mal-ħtigijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fi d-Dirrettiva 1999/5/EC.

Magyar (Hungarian): Alulírott, Cisco Systems, Inc. nyilatkozom, hogy a wireless device megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.

Norsk (Norwegian): Erklærer herved Cisco Systems, Inc. at denne trådløse enheten er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

Polski (Polish): Niniejszym Cisco Systems, Inc. deklaruje że to urządzenie bezprzewodowe jest zgodne z zasadniczymi wymaganiami oraz pozostalymi stosowynmi postanowieniami Dyrektywy 199/5/WE.

Português (Portuguese): Cisco Systems, Inc. declara que este wireless device está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Română (Romanian): Prin prezenta, Cisco Systems, Inc. declară că acest dispozitiv fără fir este în conformitate cu cerințele esențiale și alte prevederi relevante ale Directivei 1999/5/CE.

Slovensko (Slovenian): Cisco Systems, Inc. izjavlja, da je ta wireless device v skladu z bistvenimi zahtevami in ostalimi relevantnimi dolocili direktive 1999/5/ES.

Slovensky (Slovak): Cisco Systems, Inc. týmto vyhlasuje, že wireless device splna základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi (Finnish): Cisco Systems, Inc. vakuuttaa täten että wireless device tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

Svenska (Swedish): Härmed intygar Cisco Systems, Inc. att denna wireless device står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår direktiv 1995/5/EG.

CE Marking
The following CE Mark is affixed to the equipment and its packaging:

EU Radiation Exposure Statement
This equipment complies with EU 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.

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 Systems, Inc. could void the user's authority to operate this equipment. This Transmitter must not be co-located or operating 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.

The device meets all other requirements specified in part 15E, Section 15.407 of the FCC rules.

Industry Canada Statement

This device complies with RSS-210 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-210 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 (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 and 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.

Australia Radiation Exposure Statement
This equipment complies with Australian 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.

VCCI Statement for Japan
警告　　この装置は、クラスＢ情報技術装置です。この装置は家庭環境で使用することを目的としていますが、こ の装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをしてください。　VCCI-B

Warning　　This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to

the instruction manual.

Taiwan Wireless Statements
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，應立即停用，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、科學及醫療用電波輻射性電機設備之干擾。

Administrative Rules for Low-Power Radio-Frequency Devices

Article 12: For those low-power radio-frequency devices that have already received a type-approval, companies, business units or users should not change its frequencies, increase its power or change its original features and functions.

Article 14: The operation of the low-power radio-frequency devices is subject to the conditions that no harmful interference is caused to aviation safety and authorized radio station; and if interference is caused, the user must stop operating the device immediately and can't re-operate it until the harmful interference is clear.

The authorized radio station means a radio-communication service operating in accordance with the Communication Act.

The operation of the low-power radio-frequency devices is subject to the interference caused by the operation of an authorized radio station, by another intentional or unintentional radiator, by industrial, scientific and medical (ISM) equipment, or by an incidental radiator.

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性，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。**

Low-Power Radio-Frequency Devices Technical Specifications

4.7: Unlicensed National Information Infrastructure

4.7.6: The U-NII devices shall accept any interference from legal communications and shall not interfere with the legal communications. If interference is caused, the user must stop operating the device immediately and must not re-operate it until the harmful interference is clear.

4.7.7: Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user manual.

Brazil Wireless Statement

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

This equipment operates on a secondary basis and consequently must accept harmful interference, including interference from stations of the same kind. This equipment may not cause harmful interference to systems operating on a primary basis.