Z3C Installation Guide

This document describes how to install and set up the Z3C teleworker gateway. Additional reference documents are available online at: www.meraki.com/library/products.

Z3C Overview

The Meraki Z3C is 802.11a/b/g/n/ac Wireless Security Appliance designed for telecommuting employees and IT staff. It is also a great all-in-one device to test the capabilities of Meraki's cloud-managed networking. This gateway provides the following features:

- 4 wired ports with one PoE-powered port, ideal for phones
- 1 GbE WAN port, 4 GbE LAN ports
- 3G / 4G failover via CAT 3 LTE or USB modem
- Dual-band 802.11ac Wave 2 radios
- 2x2 MU-MIMO, up to 1.3 Gbps data rate
- Wall screws and anchors for mounting to a drywall surface, either vertically or horizontally

Package contents

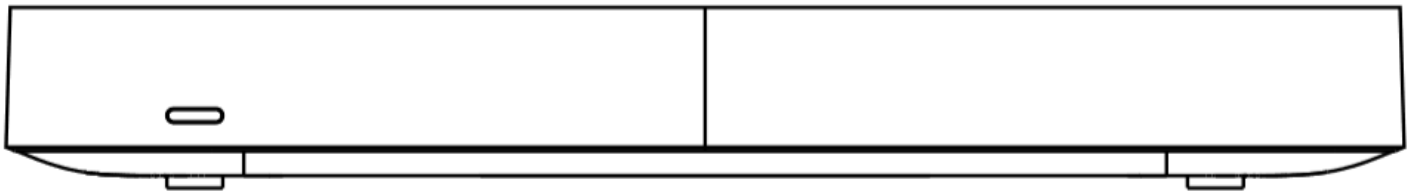
In addition to the Z3C, the following are provided.

Power Adapter

CAT5 Ethernet Cable

Wall Screws & Anchors

The Z3C front panel

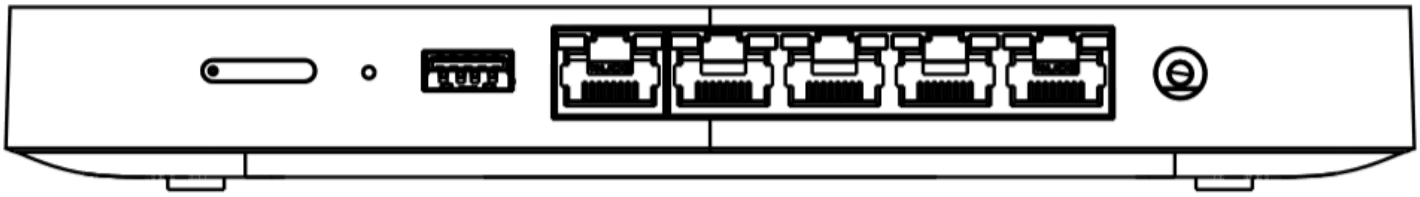


Ports and Status Indicators

The Z3C uses a single LED to inform the user of the device's status.

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/connected, uplink actively using wired WAN
Solid Purple	Fully operational/connected, uplink actively using cellular failover

The Z3C Back Panel

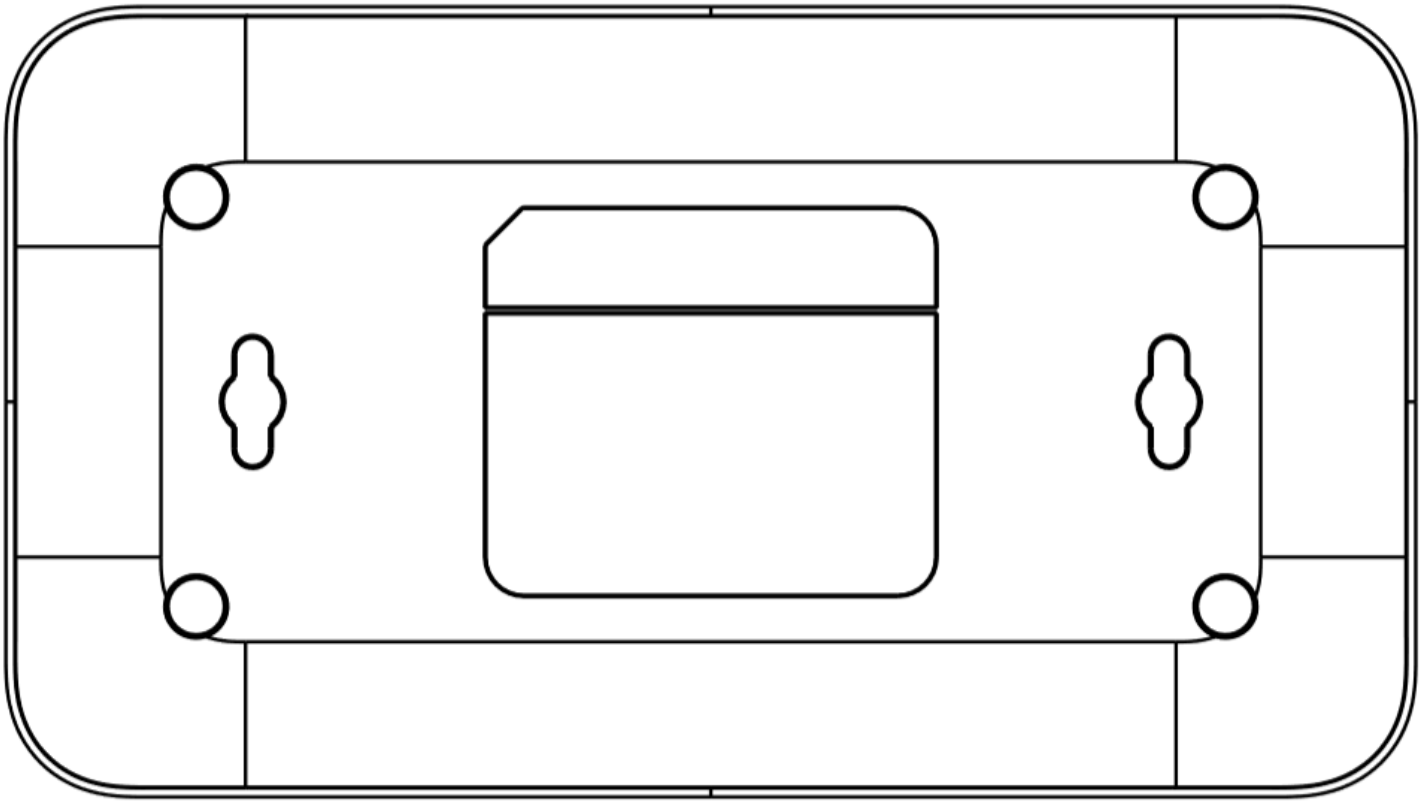


Additional functions on the back panel are described below, from left to right.

SIM Card Slot	Active, supported SIM cards can be inserted into this slot to enable cellular capabilities.

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.
USB port	USB 3.0 for 3G/4G wireless cards. 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+ Port	One of the LAN port provides PoE+ for connectivity to computers, printers, access points, or Ethernet switches, up to 15W 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.

The Z3C Bottom Panel



Please note that the serial number is located on the product label on the bottom panel of the Z3

Mounting Hardware

The supplied wall screws and anchors allow you to mount the gateway on a drywall surface, either vertically or horizontally.

- 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 gateway.

Connecting to WAN

All Meraki Z3C 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 gateway, 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

Note: 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 Z3C.
2. Using a browser on the client machine, access the gateway'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 Z3C devices are configured to DHCP from upstream WAN / ISP servers. Simply plug the Z3C's WAN / Internet port to your upstream circuit and wait a few minutes for the unit to negotiate a DHCP address. If your Z3C device was configured to have a static address (and not attempt to negotiate DHCP), you can held the reset button while the device is powered until the lights on the device turn off. Doing so will return the Z3C device to its default DHCP settings.

Note: When the WAN connection is fully enabled, the device's front LED will be solid white.

Setting up Cellular Failover

The Z3C has an embedded LTE module for cellular failover connections. The following section will walk through first-time set-up of a Z3C 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. Power off the Z3C. Swapping/installing SIM cards while the Z3C is powered on may cause unexpected behavior or errors
2. Open the SIM tray using the SIM card removal tool included in the box
3. Insert a nano SIM card (4FF size) and close the SIM tray
4. Connect the uplink for the Z3C device via a wired connection to connect to the Meraki cloud
5. Power on the Z3C and wait for the Z3C to show as online in the Meraki dashboard
6. Check with the carrier of choice if an APN needs to be configured. If so, do that from the Meraki Dashboard under **Teleworker Gateway > Monitor > Appliance Status > Uplink** tab
7. Navigate to **Teleworker Gateway > Monitor > Appliance Status > Uplink** tab and next to **Status**, select the edit (pencil) button and then select **Enabled**. When the cellular uplink is successfully connected, you will be able to see the status on the left hand side of the **Appliance Status** page and in the **Uplink** tab. The connection will say **Ready** when it is successfully connected
8. Test the cellular failover connection by unplugging the wired connection or by using the traceroute tool under **Teleworker Gateway > Monitor > Appliance Status** in the Tools tab
9. 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 in our Z3/Z3C Overview and Specifications document.
10. Please contact the Meraki Support team if the cellular connection is still not being recognized after following the steps above

Additional Settings

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 Z3C 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 Z3C 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 gateway, 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.

Power Efficiency Modes

The Meraki Z3C Teleworker Appliance has an off mode and a networked standby or efficient idle mode, both with power consumption less than 12W.

In off mode, the power consumption is a measured 0.3W. In the networked standby or efficient idle mode, the power consumption is under that of full operation mode, which is a measured 6.6W. This mode is initiated after treating the last payload packets.

To activate and/or deactivate wireless network ports, you may use the physical on/off switch or deactivate through the Meraki Dashboard.