M510 Access Point Quick Setup Guide

NOTE: The minimum software revision for the M510 is SmartZone (SZ) 5.0 or later, or standalone AP firmware 110.0 or later.

This Quick Setup Guide provides step-by-step instructions on how to set up your Ruckus M510 Dual Band 802.11ac Wi-Fi + LTE Access Point. After completing the steps described in this guide, you will be able to place the Access Point (AP) at your site and provide wireless network access to users. For detailed information on planning the installation, performing a site survey and operating the M510, refer to the *Ruckus Wireless Indoor Access Point User Guide*, available at *https://support.ruckuswireless.com*.

This Guide in Other Languages

- 请从以下网站获得该指南的简体中文版 https://support.ruckuswireless.com.
- Vous trouverez la version française de ce guide à l'adresse suivante https://support.ruckuswireless.com.
- このガイドの日本語版は https://support.ruckuswireless.com でご覧ください。
- 이 가이드의 한국어 버전은 웹 사이트 (https://support.ruckuswireless.com) 에서 확인하시기 바랍니다.
- Veja a versão em português (Brasil) deste guia em https://support.ruckuswireless.com.
- Puede ver la versión en español (América Latina) de esta guía en https://support.ruckuswireless.com.

Before You Begin

Before deploying Ruckus products, please check for the latest software and the release documentation.

- Release Notes and other user documentation are available at http://support.ruckuswireless.com/documents.
- Software upgrades are available at http://support.ruckuswireless.com/software.
- Open source information is available at http://opensource.ruckuswireless.com.
- Software license and limited warranty information are available at http://support.ruckuswireless.com/warranty.

Before deploying your Ruckus Access Point, verify that all items listed in *Package Contents* are included in the package. If any item is damaged or missing, notify your authorized Ruckus sales representative. Also, make sure that you have the required hardware and tools.

NOTE: If you plan to connect the M510 to a SmartZone controller using LTE backhaul, please ensure the SmartZone has a public facing IP address.

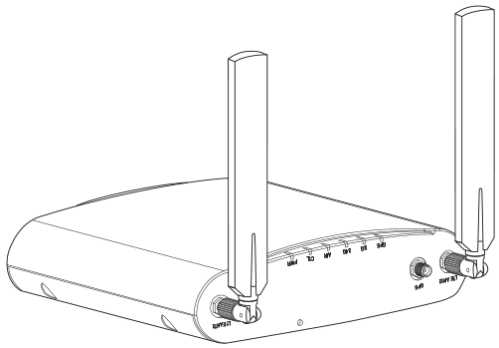
NOTE: Please check that you are using the correct SIM card for your AP, according to your region.

M510 Package Contents

The M510 Access Point installation package includes all of the following:

- M510 Dual-Band 802.11ac Wave 2 Access Point with LTE Backhaul
- GPS antenna
- 2 LTE antennas
- T-bar mounting bracket and T-bar mounting clip
- Service Level Agreement/Limited Warranty Statement
- Declaration of Conformity, Regulatory Statement
- Cloud Management Insert
- Ruckus Wireless AP Getting Started Guide
- This Quick Setup Guide

FIGURE 1 M510 Access Point



Sold Separately

The following optional accessories are sold separately.

- 12V DC power supply
- Flange Mount Bracket Kit

Required Hardware and Tools

- No. 2 Phillips screwdriver and T8 Torx driver for wall mounting anchor kit
- an 802.3af or 802.3at -compliant Power over Ethernet (PoE) switch or PoE injector
- Electric drill with drill bits and customer-supplied wall anchors, flat washers, and hex nuts for flat-surface mounting

Initial Setup

Perform the initial setup depending on your deployment scenario.

The M510 can be connected to WAN via LTE or via Ethernet (with the LTE connection as a backup for WAN failover).

If the AP detects both methods are available, Ethernet will have higher priority over LTE. When the Ethernet WAN link goes down, LTE will take over. If the WAN Ethernet port is not connected, the LTE interface will be the default uplink.

If you are using Ethernet as the primary WAN link with LTE as a backup, perform the tasks below with one extra step: connect an Ethernet cable to your local network, and configure that port as the WAN port.

Attach the two LTE antennas and (optionally) the GPS antenna, and perform the initial setup according to your deployment scenario:

- Standalone AP
- Manual Controller Discovery
- Cloud Managed AP

NOTE: Write down the IMEI number of the M510, printed on the gift box, and also on the AP. This may be required by your mobile service provider to activate your data plan. You can also use the SWIPE mobile app (downloadable from the Apple App Store/Google Play Store) to scan and save the IMEI number to the SZ controller.

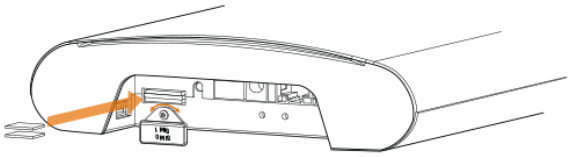
Standalone AP Initial Setup

To perform initial setup to run the AP in standalone mode:

1. Plug an activated SIM card into the primary slot, and optionally, a second SIM card into secondary slot for redundancy.

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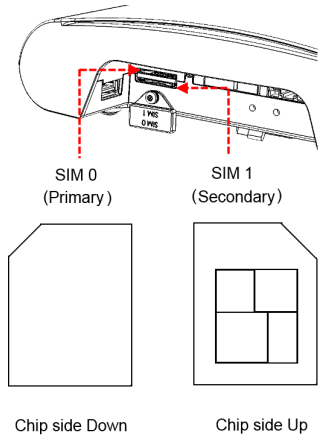
FIGURE 2 Rotate SIM card cover, insert SIM card(s)



a) Insert the Primary SIM card into the top slot (when the AP is upright). Ensure that you insert the Primary SIM card with the copper side facing *down*, and the notch to the *left* side.

b) Insert the Secondary SIM card into the bottom slot. Ensure that you insert the secondary SIM card with the copper side facing *up*, and the notch to the *right* side.

FIGURE 3 The orientation of the two SIM cards is reversed, be sure to insert them correctly



NOTE: The M510 supports Micro-SIM sized SIM cards only. The orientation of the SIM cards is different, be sure to insert the SIM cards correctly. Inserting the SIM cards incorrectly will result in the inability to use the LTE functionality.

2. Connect the M510 to a 12V DC power source. Two DC power options are available: barrel connector for power supply accessory, or terminal block.
3. After bootup, the AP starts to broadcast a "Configure.Me" SSID.
4. Connect to the "Configure.Me" SSID. The password for the Configure.Me SSID is the AP serial number. Then point a web browser to the AP's IP address (default: 192.168.0.1).

NOTE: If LTE service does not come up, you may need to check with the LTE service provider and enter the APN settings in the AP configuration.

5. Log into the AP using the default login credentials (default: super/sp-admin) to configure a new username and password, WLAN settings, and any other settings as needed.

Initial Setup - Manual Controller Discovery

The M510 can be configured for manual controller discovery using the following procedure:

1. Perform the LTE and power connection tasks as in the standalone AP initial setup procedure.
2. The LTE module connects to cellular network, and the AP starts to broadcast a "Configure.Me" SSID.
3. Connect to the "Configure.Me" SSID and point a web browser to the AP's default IP address.

NOTE: Alternatively, you can download the SWIPE mobile app from the Apple App Store/Google Play Store, log in to your SmartZone, and onboard the M510 into SZ using the SWIPE app.

4. Log into the AP using the default login credentials to configure controller discovery settings.
5. Enter the public IP address of the controller.
6. The AP discovers the controller, downloads controller-compatible firmware to the AP, and then the AP reboots as a controller-managed AP.

Initial Setup - Cloud Managed AP

Before deployment, the admin creates an entry in the AP registrar for a specific M510 unit and controller.

NOTE: The AP registrar does not apply only to Ruckus Cloud-managed APs. SmartZone discovery can also be achieved with AP registrar.

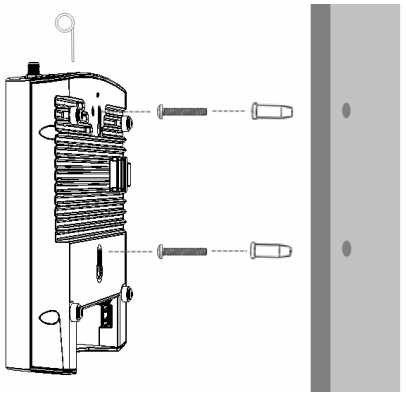
1. Perform the LTE and power connection tasks as in the standalone AP initial setup procedure.
2. Connect to the "Configure.Me" SSID and point a web browser to the AP's default IP address.
3. Log into the AP using the default login credentials to enable cloud controller discovery.
4. The AP contacts the AP registrar and retrieves the IP address of the controller.
5. The AP discovers the controller, the controller pushes new firmware to the AP, and the AP reboots as a controller-managed AP.

Mounting Instructions

Mounting on a Flat Surface

1. Use the Mounting Template on the last page of this Quick Setup Guide as a template to mark the locations for drill holes on the mounting surface.
2. Use a 5mm drill bit to drill holes approximately 25mm into the mounting surface.
3. Insert the anchors and mounting screws into the mounting surface, leaving approximately 1/4" (6 mm) of the screw heads protruding for the AP enclosure.
4. To remove the AP, insert the unit removal pin into the hole on the top of the AP to unlock, then push the AP up to release the AP enclosure from the mounting screws.

FIGURE 4 Flat surface mounting



Mounting on a Recessed Drop-Ceiling T-Bar

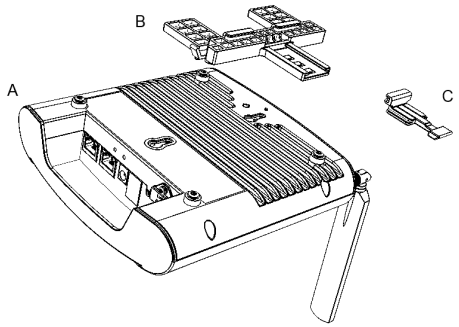
NOTE: This mounting bracket can also be used on a flush drop-ceiling T-bar, so the four rubber feet on the bottom of the AP minimize ceiling tile displacement.

To mount the AP using the external T-bar bracket:

1. Position the studs on the bottom of the T-bar bracket (B) in the mounting holes on the AP enclosure (A), and then slide the T-bar bracket until the studs are in the narrow parts of the AP mounting keyholes. The mounting bracket locks in place on the AP enclosure.

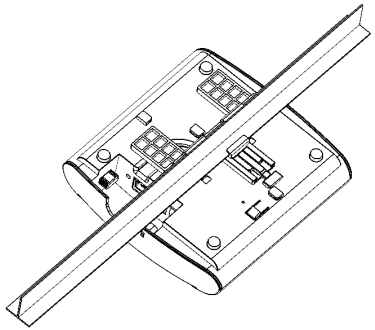
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FIGURE 5 Attaching the external bracket to the AP



2. Attach the locking tab (C) to one side of the T-bar and the bracket (B) to the other side of the T-bar.
3. Slide the locking tab (C) into the bracket (B) so that it locks in place around the T-bar. Make sure that both clasps are gripping the T-bar.

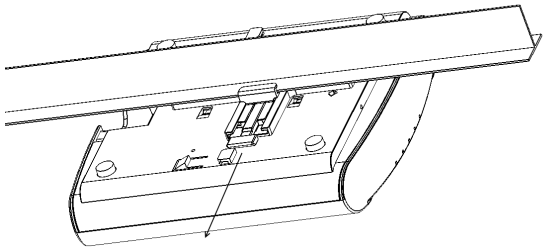
FIGURE 6 Attaching the external bracket to the T-bar



Removing an External Bracket from a T-Bar

1. Move the ceiling tiles out of the way.
2. Slide the locking tab away from the T-bar to release the AP-bracket assembly from the T-bar.
3. The AP bracket assembly comes away from the T-bar.

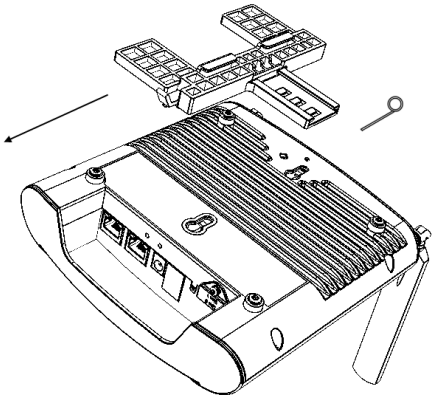
FIGURE 7 Removing the external bracket from the T-bar



Removing the External Bracket from the AP

1. Insert the unit removal pin into the hole on the front of the AP to unlock the mounting bracket from the AP enclosure.
2. Slide the mounting bracket toward the Ethernet ports on the AP until it detaches from the AP.

FIGURE 8 Removing the external bracket from the AP

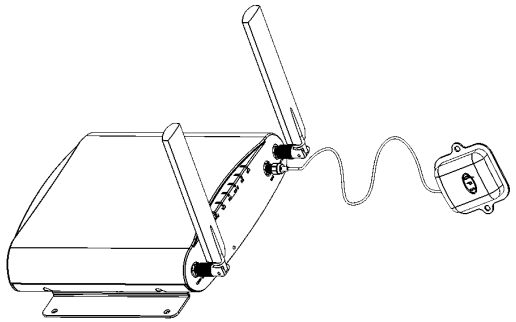


Attaching the GPS Antenna

The M510 includes an external GPS antenna that can be used for device tracking in use cases such as in-vehicle Wi-Fi installations. The GPS antenna has a magnet so that it can be attached anywhere on the vehicle, and receives power through the RF cable connected to the M510.

1. Connect the GPS antenna cable to the **GPS** cable connector on the M510.
2. Mount the GPS antenna to any surface. The antenna can be mounted to the roof of the vehicle for optimal GPS signal reception, or near a window inside the vehicle if roof mounting is impractical.
3. Log into the AP or controller web interface to verify the GPS coordinates.

FIGURE 9 M510 external GPS antenna



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For More Information

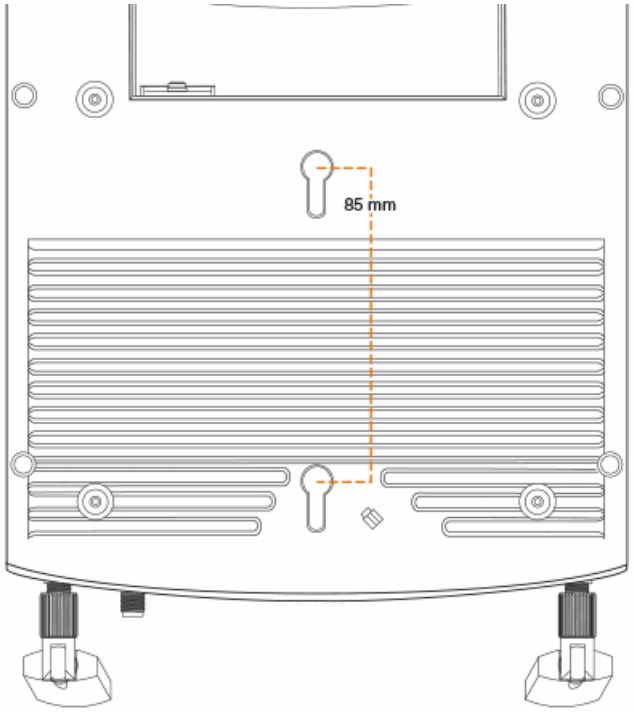
For information on how to configure and manage the AP, refer to the *RUCKUS Access Point User Guide*, available from http://docs.commscope.com/?docs-box.

For the product data sheet, refer to https://www.ruckusnetworks.com/products/wireless-access-points/.

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