



Ruckus Q910 LTE Access Point Quick Setup Guide

Introduction

This Quick Setup Guide provides step-by-step instructions on how to set up your Ruckus Q910 LTE Access Point (AP). After completing the steps described in this guide, you will be able to place the Q910 at your site and provide LTE wireless network access to users.

Before You Begin

Before deploying the Ruckus Q910, verify that all items listed in Package Contents are included in the package. If any item is damaged or missing, notify your authorized Ruckus Wireless sales representative. Also, make sure that you have the all the hardware and tools mentioned in the [Required Hardware and Tools](#) on page 1.

You can check for the latest information and release documentation at

<http://support.ruckuswireless.com/documents>

Software License and Limited Warranty are available at <http://support.ruckuswireless.com/warranty>

Required Hardware and Tools

- 1/2" (13mm) flat-blade screwdriver or equivalent
- No. 2 Phillips screw driver
- Small flat-blade screwdriver
- Torque wrench or torque screwdriver with sockets
- Long-nose pliers
- Electrical wire stripping and terminal crimping pliers
- Pipe or pole--OR--a sturdy flat surface
- Electric drill with drill bits and customer-supplied wall anchors, flat washers, and hex nuts for flat-surface mount
- Four factory-supplied 1/2" (12.7mm) wide stainless steel adjustable clamps, 2.5" (63.5mm) diameter, for mounting bracket on smaller poles
- Ruler

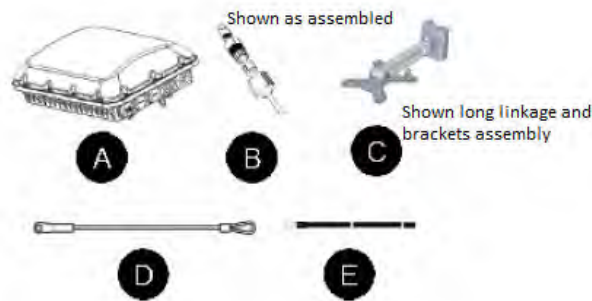
Package Contents

A complete Q910 field installation package includes all of the items listed below (see Figure 1 for illustrations):

- Q910 LTE Access Point (A)
- Two M25 data cable glands (B), packed in the Safety Cable kit
- Outdoor AP Mounting Bracket Kit (C), the box consists of:

- Mounting bracket
- U-joint bracket
- Long (175mm) linkage bracket
- Short (100mm) linkage bracket
- AP bracket (set of two pieces)
- Four (4) hose clamps
- Packet of screws, washers, and other hardware
- Safety Cable kit (D) and Quick Setup guide
- One ground wire with lug (E), packed in the Safety Cable kit
- Ruckus End User License Agreement/Limited Warranty Statement
- Regulatory Statement
- This Quick Setup Guide

FIGURE 1 Package Contents



Mounting Instructions

The following section provides instructions for connecting, attaching, and mounting the LTE Access Point.

Step 1: Connecting and Sealing the RJ45 Cables

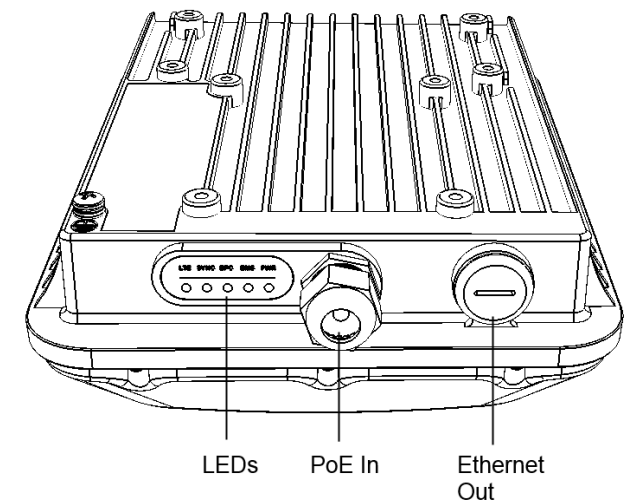
The Q910 may use one or two RJ-45 cables, one for Ethernet and Power (PoE IN), and another when the Q910 is optionally supplying Ethernet out to a peripheral device, such as a small camera or blackhaul radio. Connect and seal the RJ-45 cables using the M25 data cable glands as shown in Figure 3.

WARNING! Do not use any PoE Injector that is not tested and approved by Ruckus Wireless to power the Q910 Access Point.

WARNING! Do not plug PoE IN power into the Ethernet OUT port. See Figure 2.

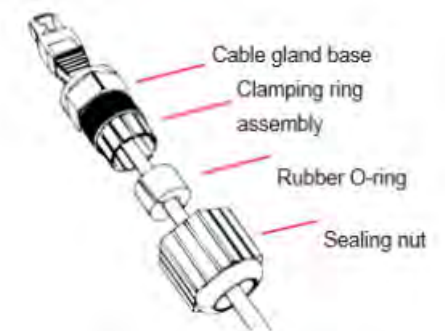
WARNING! If using a PoE switch to supply power to the Q910, 30W MUST be reserved for the Q910 on the switch. Failure to ensure a 30W supply may result in unpredictable operation of the access point.

FIGURE 2 LEDs, PoE IN and Ethernet OUT Ports



1. Feed the end of the cable through the sealing nut, rubber O-ring, clamping ring assembly and cable gland base as shown in Figure 3.

FIGURE 3 RJ-45 Cable and Cable Gland Assembly



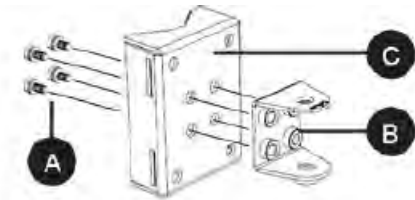
2. Connect the cable to the Ethernet port in the Q910.
3. Tighten the cable gland base into the Q910 chassis to 7 N.m or 62 in-lbs.
4. Wrap the clamping ring assembly around the rubber O-ring. Make sure that the clamping ring assembly fully encloses the rubber O-ring.
5. Seat the clamping ring assembly and rubber O-ring in the cable gland base.
6. Hand-tighten the sealing nut.

Step 2: Attaching the U-Joint bracket to the Mounting Bracket

1. Position the U-joint bracket on the mounting bracket.

NOTE: Mount the U-joint bracket in any direction on the mounting bracket, preferably to allow AP azimuth adjustments. Then the AP bracket allows AP elevation adjustments.

FIGURE 4 U-joint bracket attached horizontally to the mounting bracket

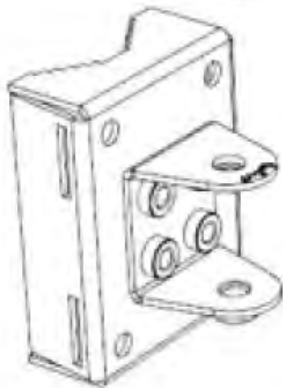


2. Use four 1/4-28 bolt and washer sets (A) to mount the U-joint bracket (B) to the mounting bracket (C). Tighten the bolts to 9.5 N.m (7 ft-lbs.)
3. Continue with [Step 3A: Attaching the Mounting Bracket to a Flat Surface](#) on page 2 or [Step 3B: Attaching the Mounting Bracket to a Metal Pole](#) on page 2.

Step 3A: Attaching the Mounting Bracket to a Flat Surface

1. Place the mounting bracket at the location on the flat surface where you want to mount the AP. Use the holes on the mounting bracket as a template to mark the locations of the mounting holes.

FIGURE 5 Mounting bracket flat surface holes



2. Remove the mounting bracket from the flat surface.
3. Drill holes required for the mounting hardware.

NOTE: The hardware required for mounting to a wall are not included in the mounting kit.

4. Attach the mounting bracket to the flat surface using the mounting hardware.
5. Using the mounting hardware instructions, tighten the hardware to secure the mounting bracket.
6. Continue with [Step 4: Mounting the Linkage Bracket to the U-Joint Bracket](#) on page 2.

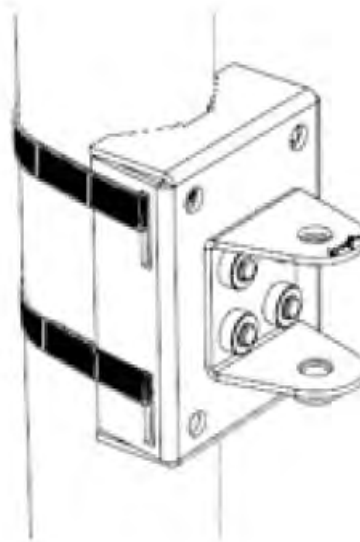
Step 3B: Attaching the Mounting Bracket to a Metal Pole

1. Insert the open end of one steel clamp into the upper two slots on Insert the open end of one steel clamp into the upper two slots on the mounting bracket.
2. Take the other steel clamp and insert it into the lower two slots on the mounting bracket.

NOTE: The clamps can be daisy-chained together to accommodate larger poles.

3. Use the clamps to attach the mounting bracket to the pole. Tighten the clamps to 3 N.m or 27 in-lbs., or per manufacturer's specifications.

FIGURE 6 Attaching the mounting bracket to a vertical pole



4. Continue with [Step 4: Mounting the Linkage Bracket to the U-Joint Bracket](#) on page 2.

Step 4: Mounting the Linkage Bracket to the U-Joint Bracket

The linkage bracket attaches to the U-joint bracket using an M8 bolt and washer set. The linkage bracket is symmetrical, and either end can be attached to the U-joint bracket.

NOTE: If you are mounting Q910 horizontally, use the longer (175 mm) linkage bracket. If you are mounting Q910 vertically, use the shorter (100 mm) linkage bracket.

FIGURE 7 Vertical mounting with Short Linkage Arm

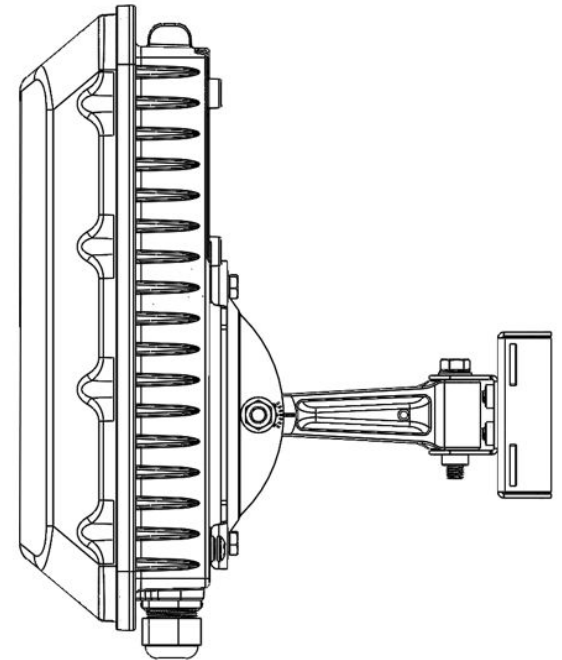
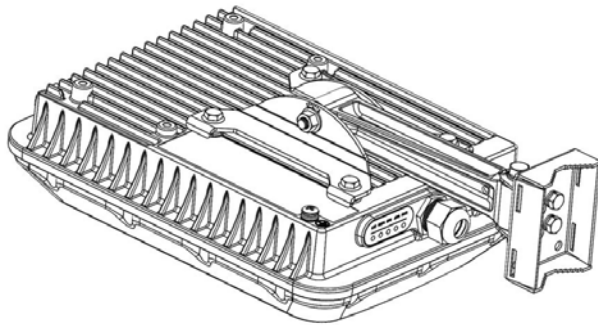


FIGURE 8 Horizontal mounting with Long Linkage Arm



1. Loosely assemble the linkage bracket (A), the U-joint bracket (C), one serrated external-tooth lock washer (B), and one M8 bolt and washer set (D).

FIGURE 9 Attaching the Linkage Bracket to the U-joint Bracket

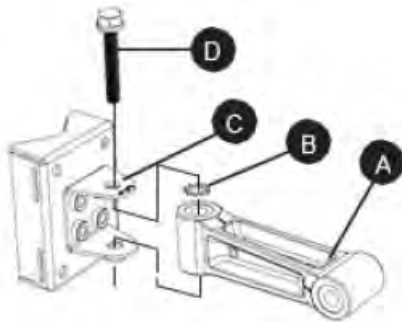
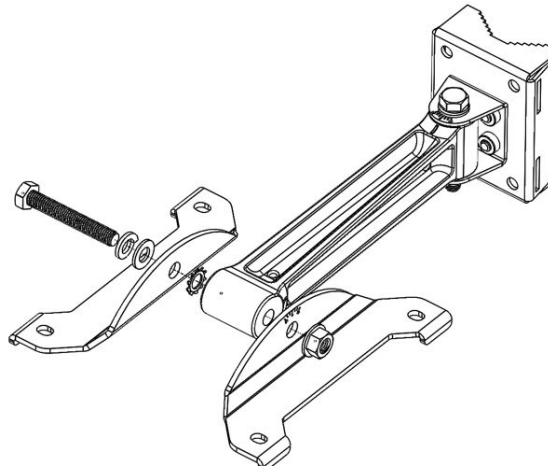


FIGURE 10 Additional Orientation view of the attachment of Linkage Bracket to U-joint Bracket



2. Set the azimuth required by the AP.
3. Tighten the M8 bolt to 13.6 N-m (10 ft-lbs.)
4. Continue with [Step 5: Attaching the AP Bracket to the Linkage Bracket](#) on page 3.

Step 5: Attaching the AP Bracket to the Linkage Bracket

Attach the AP bracket to the linkage bracket using the included bolt, nut, lock washer, flat washer, serrated external-tooth washer shown in Figure 10.

The AP bracket attaches to the linkage bracket using an M8 bolt and washer set. The linkage bracket is symmetrical, and either end can be attached to the AP bracket.

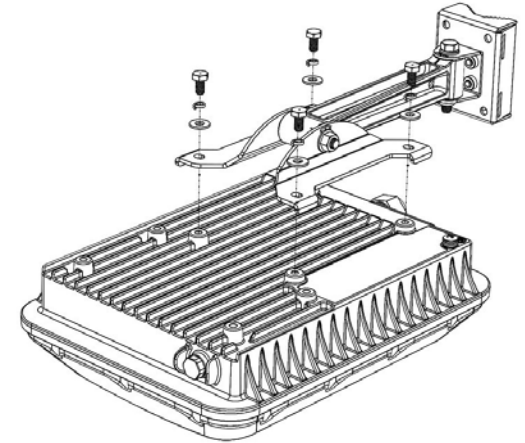
NOTE: Make sure that linkage bracket is installed with its serrated external-tooth lock washer on the inside of the AP bracket flanges. This ensures that the elevation adjustment does not change.

As described in [Step 4: Mounting the Linkage Bracket to the U-joint Bracket](#) on page 2, loosely assemble the AP bracket (shown in Figure 10), the linkage bracket (A in Figure 9), the second serrated external-tooth lock washer (B in Figure 9), and the second M8 bolt and washer set (D in Figure 9).

Step 6: Attaching the AP Bracket to the Access Point

1. Place the AP bracket on to the back side of the AP so that the four larger screw holes on the bracket align with the four screw holes on the AP. Make sure that the end of the AP bracket with the hoisting loop is on the same side as the AP PoE IN port.

FIGURE 11 Attaching the AP bracket to the AP



2. Use four 0.5-inch x 0.250-28 hex bolts with split lock and flat washer sets to mount the AP bracket to the AP. Tighten the bolts to 2.5-3.0 N.m or 22-27 in-lbs.

CAUTION! Make sure that the screws are no longer than 0.5 inch. If a screw is longer than 0.5 inch, it can damage the AP chassis.

3. If required, suspend the AP by attaching a carabiner to the hoisting loop on the AP bracket.

NOTE: This kit may include extra screws, nuts, and washers. You may use the extras wherever required.

4. Continue with [Step 7: Setting the Elevation and Tightening the Elevation Bolt](#) on page 3.

Step 7: Setting the Elevation and Tightening the Elevation Bolt

1. Set the elevation required by the AP.
2. Tighten the M8 bolt to 13.6 N-m (10 ft-lbs.)
3. Continue with [Step 8: Earth Grounding the AP](#) on page 4.

Step 8: Earth Grounding the AP

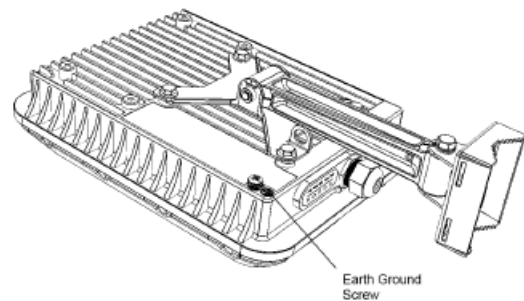
CAUTION! Using the factory-supplied ground wire and ground screw/washer set, connect a good earth ground to the AP chassis ground point (Figure 12).

NOTE: The color coding of ground wires varies by region. Before completing this step, check your local wiring standards for guidance.

Using the factory-supplied ground wire and ground screw/washer set, connect a good earth ground to the AP chassis ground point (Figure 12).

CAUTION! The Q910 AP includes one 12 mm stainless steel M6x1 earth ground screw with split lock and flat washers. Make sure that any replacement screw is no longer than 12 mm. If a screw is longer than 12 mm, it can damage the AP chassis.

FIGURE 12 Connect good earth ground to AP here



Step 9: Installing the Security Cable

- 1. Thread the security cable through the mounting bracket (A) and through the eye on the cable itself (B), as shown in Figure 13.
- 2. Attach the safety cable to the AP (C) in Figure 13.

FIGURE 13 Attaching the Security Cable



Step 10: Checking the LED Lights

The LED lights verify the installation of AP. Once connected, AP will power on and automatically connect to Ruckus Cloud over the Internet to configure itself. You will see some activity and after 5-10 minutes all lights should turn solid Green or solid Amber (LTE LED). If any light is off or flashing, see the following table to help you troubleshoot the issue.

Light	Troubleshooting Action
PWR	Check Power, Ethernet connections and PoE (802.3at Type-2 (PoE+) Certified) switch.
EMS	Check Internet connection and network/firewall settings.
EPC	Check Internet connection and network/firewall settings.
SYNC	Ensure at least one AP in the network is near an unobstructed window for a good GPS signal.
LTE	For additional guidance, use the Ruckus Cloud or contact Customer Support.

For more Information

The AP is now operational and can be further managed by the Ruckus Cloud service. For more information, refer to the appropriate Ruckus Wireless Cloud documentation or visit <http://support.ruckuswireless.com>

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Q910 – LTE Access Point**Ruckus Wireless Inc., an ARRIS Company****Federal Communications Commission Notices**

This product 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.

Warning: Changes or modifications to this equipment that have not been approved by Ruckus Wireless may void the user's authority to operate this equipment.

For Class B Equipment:

Note: 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 try to correct the interference by one or more 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 that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device meets all requirements specified in the FCC Part 96 Rules. This transmitter must not be co-located or operate in conjunction with any other antenna or transmitter.

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 & your body.

Safety Notices and National Restrictions

This product is intended to be installed at a restricted access location and is marked with a visible warning  that the surface may be hot

Professionally Installed Products

The product is to be installed according to the installation instructions. The User/Operator does not have access to the device once the device is installed and in use. Provisions for permanent grounding are provided.

1. Installation personnel: This product is designed for a specific application and is to be installed by qualified personnel with knowledge of RF and applicable rules. General users are not to attempt installation or changing settings.
2. Installation location: The product is to be installed at a location where the radiating antenna can be kept at least 20 cm from any nearby persons in normal operation conditions to meet regulatory RF exposure requirement.
3. Installation procedure: Please refer to installation instructions for details.
4. Warning: Please carefully select the installation position and make sure that the final output power does not exceed the limit set forth in US CFR 47 Part 96. Violation of the rule could lead to serious federal penalty.

Products intended to be powered by an external power supply:

Warning –This product is intended to be supplied by a Listed Direct Plug-In Power Unit marked Class 2 or LPS (sub-clause 2.5 of standard EN 60950-1). Available Ruckus power supplies intended for product operation are identified in the product datasheet. The last two digits of the power supply part number represent the country code. For additional applicable power supplies/options, see user instructions and product datasheet.

Medical Statement

Ruckus Wireless Access Points shall only be used in ME systems where the intended EM ENVIRONMENT does NOT rely on the Wireless radio link for BASIC SAFETY or ESSENTIAL PERFORMANCE of the ME SYSTEM.