Unleashed T710s Access Point
Quick Setup Guide

This *Quick Setup Guide* provides step-by-step instructions on how to install your Ruckus Wireless Unleashed T710s access point (AP).

For detailed information on configuration and administration of your Unleashed T710s, refer to the *Unleashed Online Help,* available at docs.ruckuswireless.com/unleashed/200.2/index.html.

WARNING: *Only trained and qualified personnel should be allowed to install, replace, or service this equipment.*

WARNING: *Installation of this equipment must comply with local and national electrical codes.*

CAUTION: *Make sure that you form a 80mm - 130mm (3"-5") drip loop in any cable that is attached to the AP or the building. This will prevent water from running along the cable and entering the AP or the building where the cable terminates.*

CAUTION: *Be sure that grounding is available and that it meets local and national electrical codes. For additional lightning protection, use lightning rods and lightning arrestors.*

CAUTION: *Make sure that proper lightning surge protection precautions are taken according to local electrical code.*

WARNING: *Ruckus Wireless strongly recommends that you wear eye protection before mounting the Unleashed T710s.*

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 your Ruckus Wireless Unleashed T710s, 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 required hardware and tools.

Required Hardware and Tools

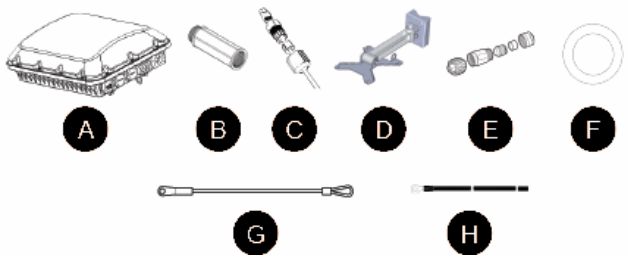
- Customer-supplied outdoor-rated three-wire (1-2mm^2 or 14-18AWG) AC cable
- 1/2" (13mm) flat-blade screwdriver or equivalent
- No. 2 Phillips screwdriver
- Small flat-blade screwdriver
- Torque wrench or torque screwdriver with sockets
- Long-nose pliers
- Electrical wire stripping and terminal crimping 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 main mounting bracket on smaller poles
- Ruler

Package Contents

A complete Unleashed T710s field installation package includes all of the items listed below (see Figure 1for illustrations):

- Unleashed T710s Access Point (A)
- M25 data cable gland extender (B)
- Three M25 data cable glands (C)
- Outdoor AP Mounting Bracket (D)
- AC Power Cable End Connector (E)
- Cable Gland Extender Flat Gasket (F)
- Safety cable kit (G)
- One ground wire with lug (H)
- Service Level Agreement/Limited Warranty Statement
- Regulatory Statement
- *Ruckus Wireless AP Getting Started Guide*
- Declaration of Conformity
- This *Quick Setup Guide*

Figure 1: Package Contents



Unleashed T710s Sector Antenna Coverage

The Unleashed T710s 120-Degree Sector AP is best deployed where internal-antenna beamforming can provide extended reach and throughput to a 120-degree coverage area. See Figure 2 for the azimuth coverage pattern, and see Figure 3 for the elevation coverage pattern.

Figure 2: Typical AP sector azimuth plane coverage, top view

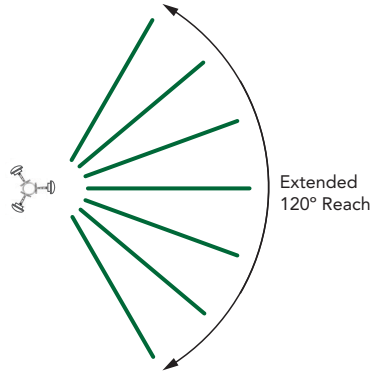
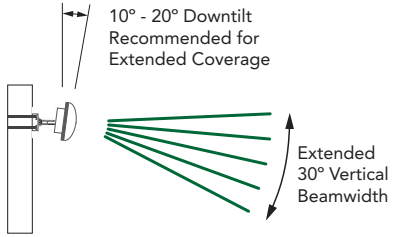


Figure 3: Typical AP sector elevation plane coverage, side view



Configuring the AP

If you will be installing the AP before configuring, then skip to Physical Installation. If you will be configuring the AP first before physical installation, then continue with this section.

Step 1: Configure Your Unleashed Network

Unleashed can be deployed using either a Mobile App, available for both iOS and Android, or using your PC's web browser. Refer to the relevant section depending on which method you prefer to use:

- Step 1a: Setup Using the Unleashed Mobile App
- Step 1b: Setup Using a Web Browser

Step 1a: Setup Using the Unleashed Mobile App

To perform setup using the Unleashed Mobile App, download the iOS or Android app from the app store.

1 As soon as the Unleashed AP is powered on and connected to the local network, it boots up and begins broadcasting a temporary unencrypted WLAN named "Configure.Me-[xxxxxx]" from both radios.

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2 Using your client's Wi-Fi connection settings, select and associate to the "Configure.Me-[xxxxxx]" WLAN.
3 Launch the app, and follow the on-screen instructions to configure your Unleashed network(s).

Figure 1. Unleashed Mobile App for iOS and Android

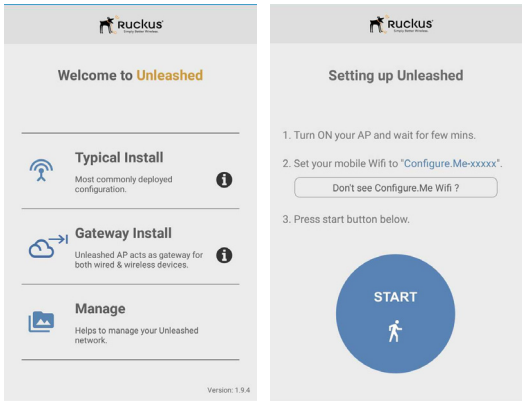
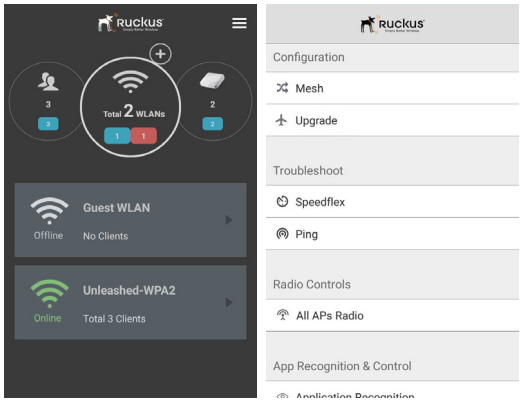


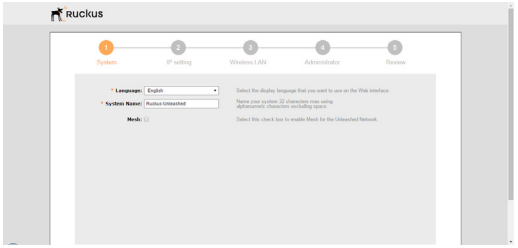
Figure 2. Configuring Unleashed from the Mobile App



Step 1b: Setup Using a Web Browser

1 As soon as the Unleashed AP is powered on and connected to the local network, it boots up and begins broadcasting a temporary unencrypted WLAN named "Configure.Me-[xxxxxx]" from both radios.
2 Using your client's Wi-Fi connection settings, select and associate to the "Configure.Me-[xxxxxx]" WLAN.
3 Launch a web browser and enter the following into the browser's URL bar: unleashed.ruckuswireless.com, and press **Enter**.
4 You will be redirected to the Setup Wizard. Complete the steps in the Setup Wizard and click **Finish**.

Figure 3. Complete the Setup Wizard to set up your Unleashed network



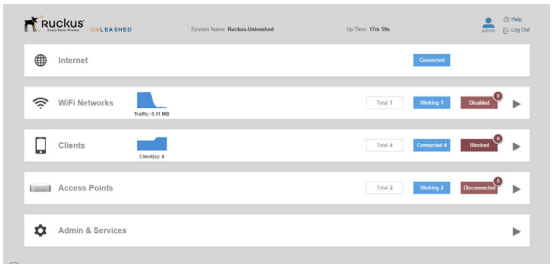
5 Once the Setup Wizard is finished, a "Configuring system settings and rebooting" progress screen appears. Wait until the process is complete.
6 Connect to the WLAN that you configured in the Setup Wizard, and click **OK** to reconnect. You will be redirected to the Unleashed login screen.
7 Enter your **Admin Name** and **Password** to login.

Figure 4. The Login page



8 Upon successful login you will be presented with the Unleashed Dashboard, which displays an overview of your Ruckus Unleashed network.

Figure 5. The Unleashed Dashboard



9 Click **OK** to save your changes.

Your changes are put into effect immediately. Continue with Step 2: Customize Your Wireless LANs.

Step 2: Customize Your Wireless LANs

Once the Unleashed Master AP has been initialized, you can fine-tune the settings of your first WLAN (that you created during the setup wizard), and create any additional WLANs needed prior to attaching additional Unleashed member APs. Then, when you deploy additional member APs in whatever order you prefer, they will automatically retrieve all WLAN configuration settings (and any other settings you have configured) from the Unleashed Master AP.

1 From the Dashboard, click anywhere in the WiFi Networks section to expand the display of your deployed WLANs.
2 On the left side of the screen, select the WLAN box for the WLAN you would like to configure, and click the Edit button to edit the configuration; or click Create to create a new WLAN.
3 If you made any changes to the original WLAN, you will be disconnected and will need to reconnect once the changes have been deployed on the AP radios.

Congratulations! Your Unleashed network is now configured and ready for use. You may now proceed to Step 3: Deploy Additional Unleashed Access Points.

Step 3: Deploy Additional Unleashed Access Points

Deploying additional Unleashed member APs is simply a matter of connecting them to the same Layer 2 network (subnet) and providing power. They will discover the Unleashed Master and join automatically. No additional steps are necessary.

Physical Installation

Step 1: Connecting and Sealing the RJ-45 Cables

The Unleashed T710s may use zero, or one or two RJ-45 cables, one for Ethernet when configured as a Root AP (RAP), and another when the Unleashed T710s is supplying PoE out to a peripheral device, such as a small cell or micro cell radio. When the Unleashed T710s uses RJ-45 cables, connect and seal the cables using the M25 data cable glands as shown in Figure 5.

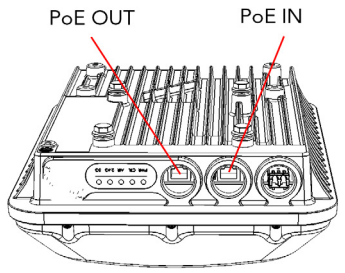
WARNING: *Do not use any PoE injector not tested and approved by Ruckus Wireless to power the Unleashed T710s Access Point.*

WARNING: Do not plug PoE IN power into the PoE OUT port. See Figure 4.

WARNING: *If using PoE OUT, it is MANDATORY to use the custom Ruckus supplied 60W PoE injector (part #902-0180-XX00), or to use AC power.*

WARNING: If using a PoE switch to supply power to the Unleashed T710s, 30W MUST be reserved for the Unleashed T710s on the switch. Failure to ensure a 30W supply may result in unpredictable operation of the access point. Additionally, if using a PoE switch, the Unleashed T710s's PoE OUT port cannot be used to power additional devices.

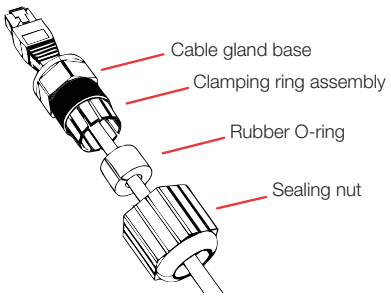
Figure 4: PoE IN and PoE OUT ports



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 5.

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Figure 5: RJ-45 cable and cable gland assembly



2 Use a wide flat-blade screwdriver to remove the required (RESET/PoE OUT or PoE IN) blanking cap from the Unleashed T710s.
3 Connect the cable to the Ethernet port in the Unleashed T710s.
4 Tighten the cable gland base into the Unleashed T710s chassis to 7 N.m or 62 in-lbs.
5 Wrap the clamping ring assembly around the rubber O-ring. Make sure that the clamping ring assembly fully encloses the rubber O-ring.
6 Seat the clamping ring assembly and rubber O-ring in the cable gland base.
7 Hand-tighten the sealing nut.

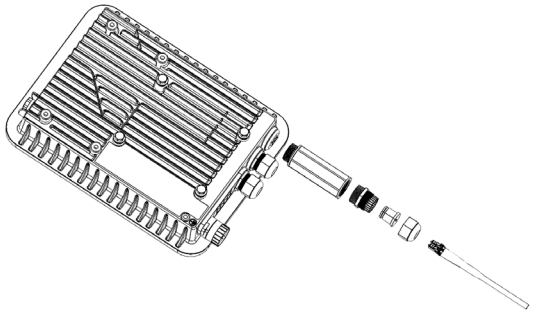
Step 1a: Connecting the SFP Optic Module to the Fiber Port

To connect to fiber backhaul, plug an SFP Optic module into the Fiber port. The SFP module is hot-swappable and can be removed with fingers or simple tools.

NOTE: *Recommended modules specified to work with this system are: Finisar GPON FTGN2117P2TUN, Finisar EPON FTEN2217P1CUN-BC, Finisar 1000BaseLX FTLF1318P3BTL, Xavi XO-3901 GPON ONT.*

NOTE: *The fiber cable must be a single diameter cable, not a zipcord.*

Figure 6: SFP module cable gland assembly

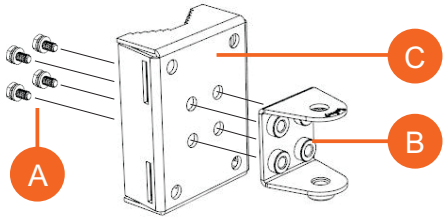


Step 2: Attaching the U-Joint Bracket to the Mounting Bracket

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 7: U-joint bracket attached horizontally to the mounting bracket

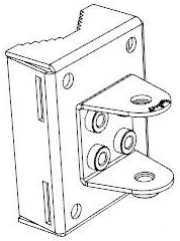


2 Use four 1/4-28 bolt and washer sets (A) to mount the U-joint bracket (B) to the mounting bracket (C). Tighten the bolts to 9.5 N.m (7 ft-lbs).
3 Continue with Step 3a: Attaching the Mounting Bracket to a Flat Surface or Step 3b: Attaching the Mounting Bracket to a Metal Pole.

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 8: 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.

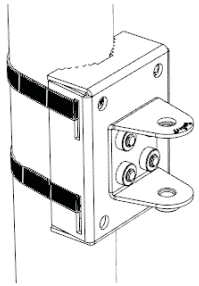
Step 3b: Attaching the Mounting Bracket to a Metal Pole

1 Insert the open end of one steel clamp into the upper two slots on 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 9: Attaching the mounting bracket to a vertical pole



4 Continue with Step 4: Mounting the Linkage Bracket to the U-Joint Bracket.

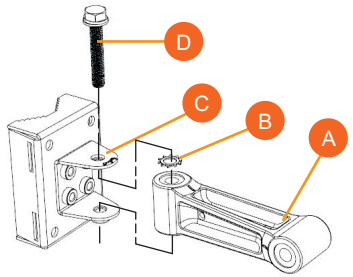
Step 4: Mounting the Linkage Bracket to the U-Joint Bracket

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

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 10: Attaching the linkage bracket to the 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: Attach the AP bracket to the linkage bracket.

Step 5: Attach 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 11.

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.

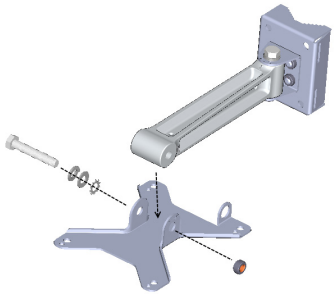
NOTE: *Make sure that linkage bracket is installed with its serrated external-tooth lock washer on the inside of the AP bracket flanges. This ensures that the elevation adjustment does not change.*

1 As described in Step 4: Mounting the Linkage Bracket to the U-Joint Bracket, loosely assemble the AP bracket (shown in Figure 12), the linkage bracket (A in Figure 10),

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the second serrated external-tooth lock washer (B in Figure 10), and the second M8 bolt and washer set (D in Figure 10).

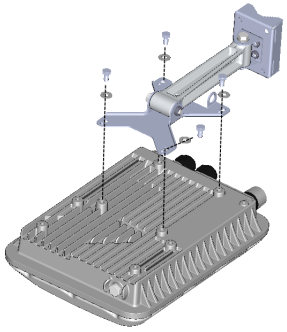
Figure 11: Attach the linkage bracket to the AP bracket



Step 6: Attaching the AP Bracket to the Access Point

1 Place the AP bracket onto 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 12: 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: Set the Elevation and Tighten Elevation Bolt.

Step 7: Set the Elevation and Tighten 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: Powering the AP with AC.

Step 8: Powering the AP with AC

1 Separate the AC cable connector parts by unscrewing the boot from the cable gland and the cable gland from the connector housing.
2 Feed the end of the AC cable through the boot and cable gland.
3 Strip the AC cable as shown.
4 Insert the stripped part of the conductors into the appropriate terminals on the connector housing. The conductors are color-coded and must be connected to the appropriate terminals as shown in Figure 13.

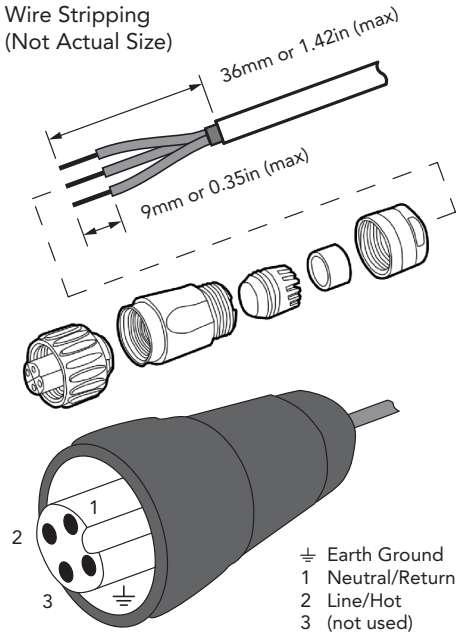
Typical AC wire colors:

- ⏚ (Earth Ground): Green (US), Green/Yellow (EU)
- 1 (Neutral/Return): White or Gray (US), Blue (EU)
- 2 (Line/Hot): Black (US), Brown (EU)
- 3 (not used)

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

5 Using a small screwdriver, tighten the small screws around the connector housing to fix the connector pins into the terminals.
6 Mate the cable gland with the connector housing, and then hand-tighten.

Figure 13: Assembling the AC power connector



Two different-sized grommets are supplied in the AC connector assembly kit. Use the grommet that is appropriate to the diameter of the AC cable that you are using.

7 Mate the boot with the cable gland, and then hand-tighten to seal.
8 Connect the AC cord connector that you have assembled to the AC power socket on the AP.
9 Connect the AC cord to an AC power source.

Step 9: Earth Grounding the AP

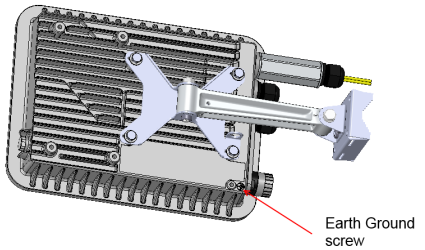
CAUTION: *Make sure that earth grounding is available and that it meets local and national electrical codes. For additional lightning protection, use lightning rods and lightning arrestors.*

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 14).

CAUTION: *The Unleashed T710s AP includes one 12mm stainless steel M6x1 earth ground screw with split lock and flat washers. Make sure that any replacement screw is no longer than 12mm. If a screw is longer than 12mm, it can damage the AP chassis.*

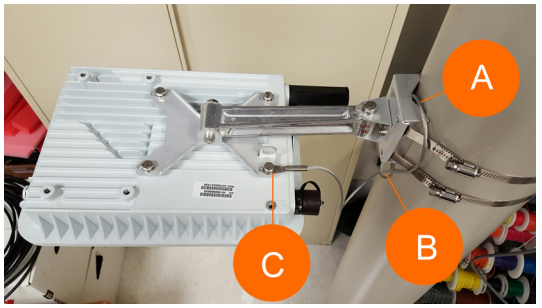
Figure 14: Connect good earth ground to AP here



Step 10: 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 15.
2 Attach the safety cable to the AP (C) in Figure 15.

Figure 15: Attaching the security cable



Congratulations! You have mounted your Unleashed T710s access point.

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