

COMMSCOPE® RUCKUS®

T750SE Access Point Quick Setup Guide

NOTE: The minimum software revision for the T750SE is ZoneDirector (ZD) 10.4.1 or later, or SmartZone (SZ) 5.2 or later, or standalone AP firmware 114.X or later.

This Quick Setup Guide provides step-by-step instructions on how to field-install the RUCKUS WIRELESS T750SE access point (AP). For detailed information on planning the installation, performing a site survey, and operating the T750SE, refer to the *RUCKUS WIRELESS Outdoor Access Point User Guide*, available at <https://support.ruckuswireless.com>.

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 T750SE.

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> をご覧ください。
- 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 WIRELESS 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>.
- Software license and limited warranty information are available at <http://support.ruckuswireless.com/warranty>.

Before deploying your RUCKUS WIRELESS 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 WIRELESS sales representative. Also, make sure that you have the required hardware and tools.

Required Hardware and Tools

- 1/2" (13 mm) 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, 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

Package Contents

A complete T750SE field installation package includes all of the items listed below :

- T750SE Access Point
- M25 data cable gland extender
- Three M25 data cable glands
- Outdoor AP Mounting Bracket kit
- One ground wire with lug
- Cloud Management Statement
- Cable gland extender gasket
- AC Connector
- Zipcord cable gland grommet
- Four 1/2" (12.7 mm) wide adjustable clamps, 2.5" (63.5 mm) diameter, for main mounting bracket on smaller poles
- Safety cable kit
- Service Level Agreement/Limited Warranty Statement
- Declaration of Conformity
- Regulatory Statement
- RUCKUS WIRELESS AP Getting Started Guide
- This Quick Setup Guide

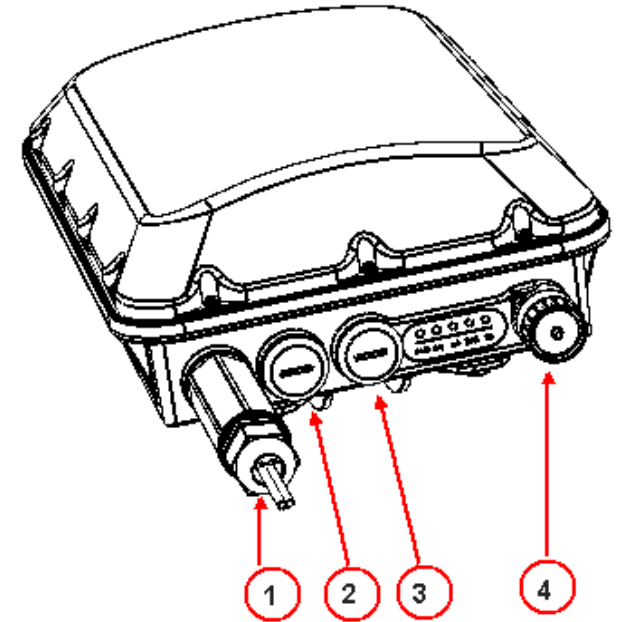
Mounting Instructions

Connecting and Sealing the RJ-45 Cables

The T750SE may use zero, or one or two RJ-45 cables, one for Ethernet when configured as a Root AP (RAP), and another when the T750SE is supplying PoE out to a peripheral device, such as a small cell or micro cell radio, and zero when using the SFP as a backhaul alternate with AC power.

When the T750SE uses RJ-45 cables, connect and seal the cables using the M25 data cable glands as shown in Figure 2.

FIGURE 1 T750SE AP PoE IN and PoE OUT ports



- | | |
|-------------|------------|
| 1. SFP port | 3. PoE OUT |
| 2. PoE IN | 4. AC port |

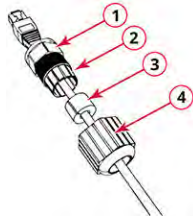
WARNING! Do not use any PoE injector not tested and approved by RUCKUS WIRELESS to power the T750SE Access Point.

WARNING! Do not plug PoE IN power into the PoE OUT port. See Figure 1.

1. Feed the end of the cable through the gland dome, rubber grommet, clamping ring assembly and cable gland base, as shown in Figure 2.

NOTE: Do not seat the clamping ring and rubber grommet into the cable gland base until the cable gland base has been torqued to specifications.

FIGURE 2 RJ-45 Cable and Cable Gland Assembly



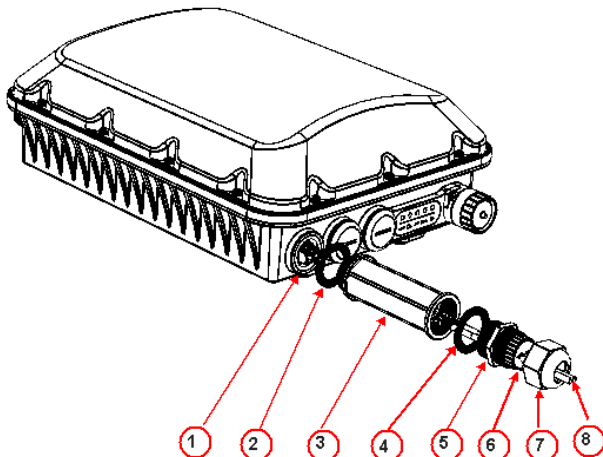
- | | |
|---------------------|-------------------|
| 1. Cable gland base | 3. Rubber grommet |
| 2. Clamping ring | 4. Gland dome |

- Use a wide flat-blade screwdriver to remove the required (PoE OUT or PoE IN) blanking cap from the T750SE.
- Connect the cable to the Ethernet port in the AP.
- Tighten the cable gland base to 7 N.m (62 in-lbs).
- Wrap the clamping ring assembly around the rubber grommet. Make sure that the clamping ring assembly fully encloses the rubber grommet.
- Seat the clamping ring assembly and rubber grommet in the cable gland base.
- Hand-tighten the gland dome.

Connecting the SFP Optic Module Using a Single Diameter Cable

You can use a single diameter cable to connect to the SFP optic module.

FIGURE 3 SFP module cable gland assembly



- | | |
|-------------------------|--|
| 1. SFP transceiver | 6. Cable gland grommet / zipcord cable gland grommet |
| 2. Cable gland gasket | 7. Gland dome |
| 3. Cable gland extender | 8. Fibre cable |
| 4. Cable gland gasket | |
| 5. Clamping ring | |

WARNING! The fiber cable is extremely fragile and must be handled with care.

NOTE: Do not insert the cable gland base/grommet/dome into the extender until the extender has been tightened. Step 5 must be performed before Step 6, else the fiber cable will twist.

- Place the cable gland base to the cable gland extender and tighten the cable gland base to 7 N.m (62 in-lbs).
- Fix the Cable gland extender gasket to the cable gland extender.
- Feed the fiber cable through the gland dome, cable gland grommet, clamping ring, cable gland base, cable gland extender, and cable gland gasket as shown in Figure 3.
- Connect the fiber cable to the SFP transceiver in the AP.
- Tighten the cable gland extender to 7 N.m (62 in-lbs).
- Insert the cable gland grommet into the clamping ring with the fiber cable in the center.
- Insert the clamping ring into the cable gland base.
- Tighten the cable gland dome to 7 in-lbs.
The SFP module is hot-swappable and can be removed with fingers or simple tools.

Connecting the SFP Optic Module Using a Zipcord Cable

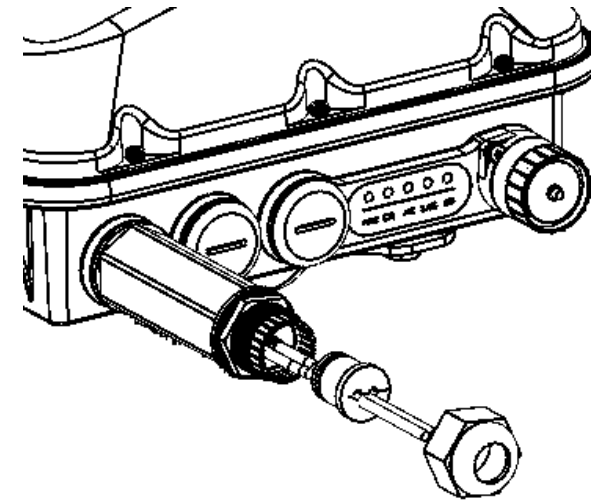
You can use a zipcord cable to connect to the SFP optic module.

WARNING! The zipcord fiber cable is extremely fragile and must be handled with care.

NOTE: Do not insert the cable gland base/grommet/dome into the extender until the extender has been tightened. Step 5 must be performed before Step 6, else the fiber cable will twist.

- Place the cable gland base to the cable gland extender and tighten the cable gland base to 7 N.m (62 in-lbs).
- Fix the Cable gland extender gasket to the cable gland extender.
- Feed the zipcord fiber cable through the gland dome, zipcord cable gland grommet, clamping ring, cable gland base, cable gland extender, and cable gland gasket as shown in Figure 3.
- Connect the zipcord fiber cable to the SFP transceiver in the AP.
- Tighten the cable gland extender to 7 N.m (62 in-lbs).
- Insert the zipcord cable gland grommet into the clamping ring with the zipcord fiber cable in the two holes.

FIGURE 4 Zipcord grommet with cable



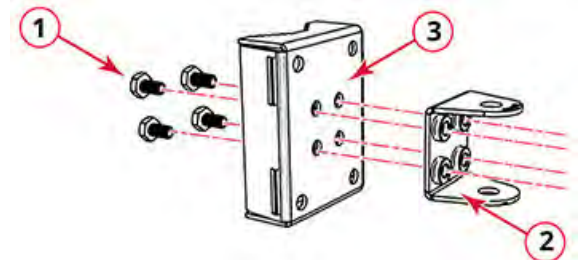
- Insert the clamping ring into the cable gland base.
- Tighten the cable gland dome to 7 in-lbs.
The SFP module is hot-swappable and can be removed with fingers or simple tools.

Attaching the U-Joint Bracket to the Mounting Bracket

- 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 5 U-joint bracket attached horizontally to the mounting bracket



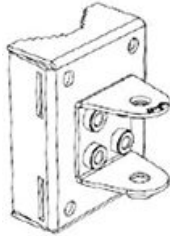
- | | |
|--------------------|---------------------|
| 1. Bolts | 3. Mounting bracket |
| 2. U-joint bracket | |
- Use four 1/4 - 28 bolt and washer sets (1) to mount the U-joint bracket (2) to the mounting bracket (3). Tighten the bolts to 9.5 N.m (84 in-lbs).

- Continue with [Attaching the Mounting Bracket to a Flat Surface on page 3.](#)

Attaching the Mounting Bracket to a Flat Surface

- 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 6 Mounting bracket flat surface holes



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

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

- Attach the mounting bracket to the flat surface using the mounting hardware.
- Using the mounting hardware instructions, tighten the hardware to secure the mounting bracket.
- Continue with [Attaching the Mounting Bracket to a Pole on page 3.](#)

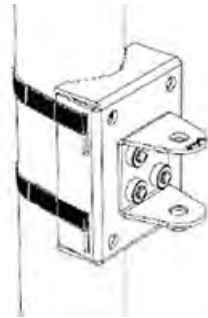
Attaching the Mounting Bracket to a Pole

- Insert the open end of one steel clamp into the upper two slots on the mounting bracket.
- 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.

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

FIGURE 7 Attaching the mounting bracket to a vertical pole



- Continue with [Mounting the Linkage Bracket to the U-Joint Bracket on page 3.](#)

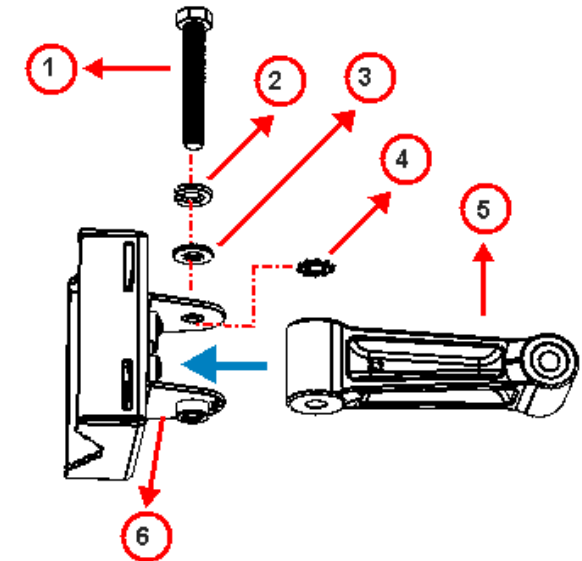
Mounting the Linkage Bracket to the U-Joint Bracket

- 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.

- Loosely assemble the linkage bracket (1), the U-joint bracket (3), one serrated external-tooth lock washer (2), and one M8 bolt and washer set (4).

FIGURE 8 Attaching the linkage bracket to the U-joint bracket



- | | |
|-------------------------------|--------------------|
| 1. M8 bolt | 5. Linkage bracket |
| 2. Lock washer | 6. U-joint bracket |
| 3. Flat washer | |
| 4. External-tooth lock washer | |

- Set the azimuth required by the AP.
- Tighten the M8 bolt to 13.6 N.m (120 in-lbs).
- Continue with [Attaching the AP Bracket to the Linkage Bracket on page 3.](#)

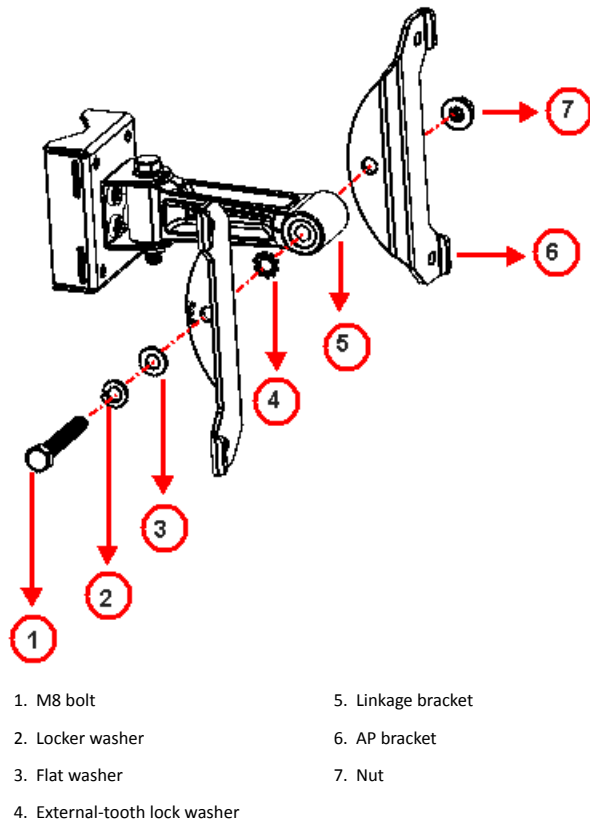
Attaching the AP Bracket to the Linkage Bracket

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

The linkage bracket is symmetrical, and either end can be attached to the AP bracket.

Loosely assemble the AP bracket to the linkage bracket using the M8 bolt, washer and nut set.

FIGURE 9 Attach the linkage bracket to the AP bracket

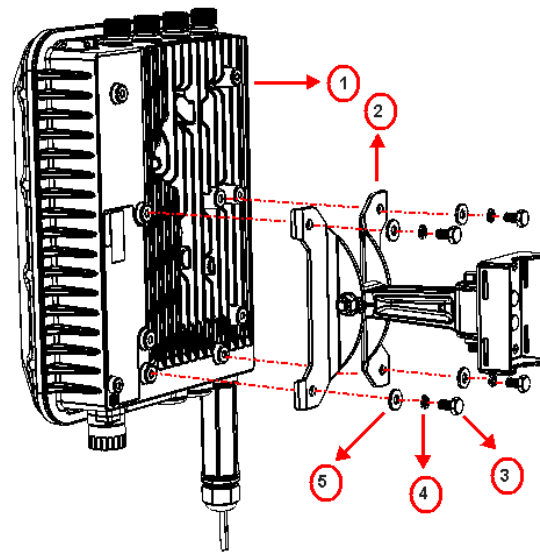


NOTE: Make sure that the linkage bracket is installed with its serrated external-tooth lock washer on the *inside* of the AP bracket flanges. This ensures that the elevation adjustment does not change.

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.

FIGURE 10 Attaching the AP bracket to the AP



- 1. AP
- 2. AP bracket
- 3. Flat washer
- 4. Lock washer
- 5. Hex bolts

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 (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.

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

3. Continue with [Set the Elevation and Tighten the Elevation Bolt](#) on page 4.

Set the Elevation and Tighten the Elevation Bolt

1. Set the elevation required by the AP.
2. Tighten the M8 bolt to 13.6 N.m (120 in-lbs).
3. Continue with [Powering the AP with AC](#) on page 7.

External Antenna and Cabling Need to be Purchased Separately

If the External Antenna option is chosen over the internal sector antenna, the External Antenna and Antenna Cable must be purchased separately.

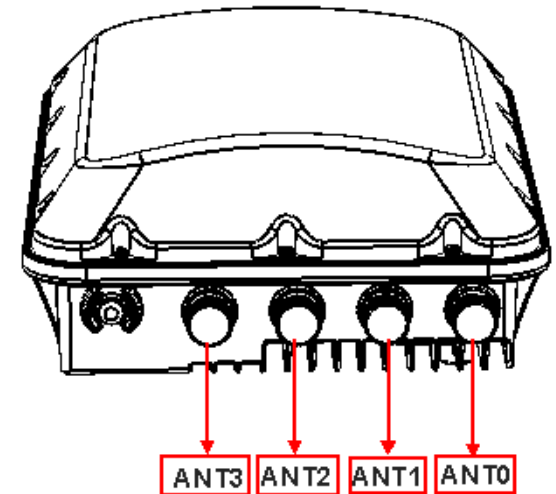
NOTE: Beamflex is not available with external antennas.

Mounting and Connecting 5 GHz and 2.5 GHz External Antennas

NOTE: Mount the external antenna per manufacturer's instructions.

1. Disconnect the AP from all power sources.
2. Unscrew the metal caps that protect the antenna connectors.
3. Connect external antennas to the N-type female antenna connectors on the AP. Use a torque wrench to tighten the connectors to 1.58 N.m (14 in-lb).
4. If the antennas come with RF coaxial cables (for example, a patch antenna), physically mount the antennas at your desired location, preferably on the same mounting structure as the AP.

FIGURE 11 T750SE Rear View



T750SE Connections	External Antenna Connection	
	Vertical	Horizontal
ANT0	X	
ANT1		X
ANT2		X
ANT3	X	

5. Apply weatherproofing tape to the antenna connectors as described in [Connector Sealing Instructions](#) on page 5.

CAUTION! If you are not connecting external antennas to the AP, make sure that the metal caps remain installed and securely fastened to protect the interfaces from elements, such as water and dirt.

Connector Sealing Instructions

NOTE: N-Type connectors shown are representative examples.

NOTE: Applying sealing tape to both ends of the cable is recommended.

Step 1: Cleaning the Connectors and Your Hands

1. Clean all traces of dust, grease, and oil from your hands
2. Clean off any traces of dust, grease, and oil from the N-type bulkhead connector external threads
3. Make sure that the connectors are dry before continuing.

Step 2: Connecting the Cable with the Connector

1. If the AP is powered on, disconnect the AP from the power source.

CAUTION! Make sure that you disconnect the AP from the power source to avoid electrocution or equipment damage.

FIGURE 12 Connecting the Cable with the Connector



2. Unscrew the metal cap that protects the antenna connector. Place the metal cap in a safe place, in case you need it later.
3. Connect the cable to the connector. Use a torque wrench to tighten the cable coupling nut to 1.58 N.m (14 in-lb). If you do not have a torque wrench or if you are tightening a knurled coupling nut (as shown), hand-tighten the cable coupling nut until the internal gaskets are compressed, but do not overtighten.

Step 3: Wrapping the Exposed Connector Threads

1. Depending on the width of the sealing tape, either fold the tape in half or cut it to fit the exposed connector threads
2. Stretch the tape per the manufacturer's instructions
3. Working clockwise, gently stretch the sealing tape as you install it so that it covers the connector thread between the cable coupling nut and the base of the connector.

Make sure that the final wrap is approximately flush with the cable coupling nut, and then cut the sealing tape.

FIGURE 13 Wrapping the Exposed Connector Threads



NOTE: Cut, do not tear, the sealing tape. If the sealing tape is overstretched, it loses its self-amalgamating properties.

Step 4: Wrapping the Internal Layer of the Electrical Tape

1. Using scissors, cut the end of the electrical tape at an angle. This will allow the electrical tape to be applied with minimal bulk.

FIGURE 14 Cutting the End of the Electrical Tape



2. Wrap the electrical tape clockwise from the beginning of the cable coupling nut to just past the heat shrink tube on the cable. Do not cover the sealing tape installed in [Step 3: Wrapping the Exposed Connector Threads](#) on page 5.

FIGURE 15 Wrapping the Electrical Tape



Step 5: Wrapping the Main Sealing Tape

1. Using scissors, cut the end of the sealing tape at an angle. This will allow the sealing tape to be applied with minimal bulk.

FIGURE 16 Cutting the Sealing Tape at an Angle



2. Working clockwise, gently stretch the sealing tape from the beginning of the sealing tape installed in [Step 3: Wrapping the Exposed Connector Threads](#) on page 5 and continue wrapping to 12 mm (0.5 in.) past the electrical tape installed in [Step 4: Wrapping the Internal Layer of the Electrical Tape](#) on page 5.

NOTE: Cut, do not tear, the sealing tape. If the sealing tape is overstretched, it loses its self-amalgamating properties.

FIGURE 17 Wrapping the Sealing Tape



3. Gently knead the sealing tape from top to bottom to make sure there are no gaps and to amalgamate the sealing tape.

Step 6: Wrapping the Outer Layer of Electrical Tape

1. Using scissors, cut the end of the electrical tape at an angle. This will allow the electrical tape to be applied with minimal bulk.

FIGURE 18 Cutting the Electrical Tape at an Angle



2. Wrap the electrical tape clockwise to completely cover the sealing tape and continue wrapping to 12 mm (0.5 in.) past the sealing tape installed in Step 5: Wrapping the Main Sealing Tape on page 5.

FIGURE 19 Wrapping the Electrical Tape



Step 7: Repeating for the Other Cables

Repeat the connector sealing instructions for the three antenna connectors, as shown in Figure 18.

FIGURE 20 Repeating for Other Cables



Step 8: Creating Cable Drip Loops

Physically mount the AP and antennas at your desired location, preferably on the same mounting structure.

Form 80-mm to 130-mm (3-in. to 5-in.) drip loops with the cables.

FIGURE 21 Creating Cable Drip Loops



Earth Grounding the AP

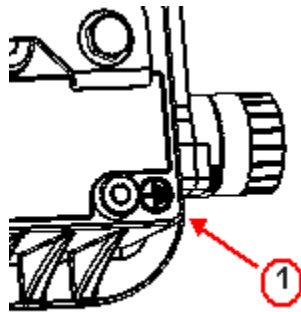
CAUTION! Make sure that earth grounding is available and that it meets local and national electrical codes. For additional lightning protection, use lightning rods and lightning arrestors.

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.

CAUTION! The T750SE AP includes one 9 mm stainless steel M6 x1 earth ground screw with split lock and flat washers. Make sure that any replacement screw is no longer than 9 mm. If a screw is longer than 9 mm, it can damage the AP chassis.

FIGURE 22 Connect good earth ground to AP



1. Earth ground screw

Congratulations! You have mounted your T750SE access point.

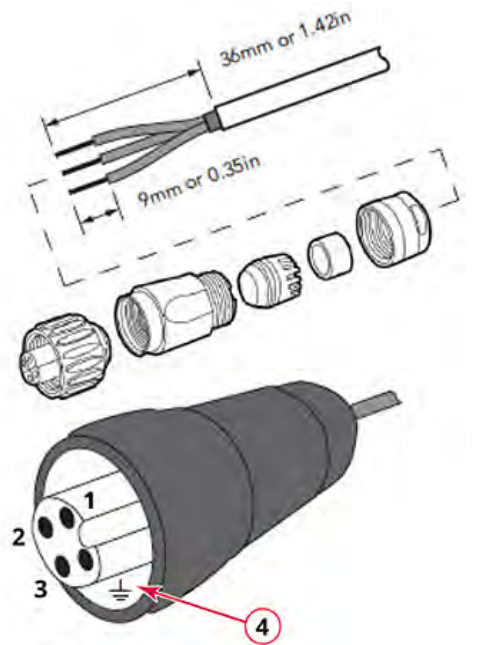
Powering the AP with AC

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 below.

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

FIGURE 23 Assembling the AC power connector

Wire Stripping (Not Actual Size)



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

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.

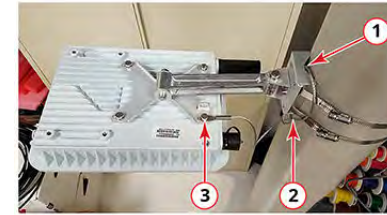
NOTE: Two different-sized grommets are supplied in the AC connector assembly kit. Use the grommet that is appropriate to the diameter of the AC cable that you are using.

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.

Installing the Security Cable

1. Thread the security cable through the mounting bracket (1 in Figure 12) and through the eye on the cable itself (2 in Figure 12).
2. Attach the safety cable to the AP (3 in Figure 12).

FIGURE 24 Attaching the security cable



Troubleshooting

CAUTION! If required, you can reset the AP to its factory default settings by pressing the reset button located inside the PoE IN port. Use the tip of a pen or a 3mm flat blade screwdriver to press the reset button. Press and hold the reset button for 4+ seconds to restore to factory defaults. **DO NOT RESET THE AP TO FACTORY DEFAULT SETTINGS UNLESS SO INSTRUCTED.** (Doing this resets the AP IP address to 192.168.0.1.)

NOTE: After a reset, you can access the internal AP web interface using <https://192.168.0.1>. Your device must use any other address from 192.168.0.2 through 192.168.0.254, with subnet mask 255.255.255.0. The username is super, and the password is sp-admin. Refer to the *Outdoor Access Point User Guide* for information on configuring and operating the AP. This document is available at <https://support.ruckuswireless.com>.

For More Information

For information on how to configure and manage the AP, refer to the *RUCKUS Access Point User Guide*, available from <https://support.ruckuswireless.com>.

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T750, T750SE – Outdoor Enterprise AP Federal Communications Commission Notices

Ruckus Wireless Inc., a CommScope Company
350 W. Java Dr., Sunnyvale CA 94089

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.

Caution: 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.

Industry Canada Statement

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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; the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and the maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

Le dispositif de fonctionnement dans la bande 5150-5250 MHz est réservé à une utilisation en intérieur pour réduire le risque d'interférences nuisibles à la co-canal systèmes mobiles par satellite. Le gain d'antenne maximal autorisé pour les appareils dans les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la pire limite, et le gain d'antenne maximal autorisé pour les appareils dans la bande 5725-5825 MHz doivent être conformes avec le pire limites spécifiées à point-à-point et non point-à-point de fonctionnement selon qu'il convient.

Operation in the 5600-5650 MHz band is not allowed in Canada. 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. Opération dans la bande 5600-5650 MHz n'est pas autorisée au Canada. Haute puissance radars sont désignés comme utilisateurs principaux (c.-à-d. utilisateurs prioritaires) des bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer des interférences et / ou des dommages à dispositifs LAN-EL.

Radiation Exposure Statement

The device has been found to be compliant to the requirements set forth in CFR 47 Sections 2.1091 and Industry Canada RSS-102 for an uncontrolled environment. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Le dispositif a été jugé conforme aux exigences énoncées dans les articles 47 CFR 2.1091 et Industrie Canada RSS-102 pour un environnement non contrôlé. L'antenne(s) utilisée pour ce transmetteur doit être installée pour fournir une distance de séparation d'au moins 20 cm de toutes les personnes et ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou transmetteur.

Professionally Installed Products

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

1. Installation personal: This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.
2. Installation location: The product shall be installed at a location where the radiating antenna can be kept 20 cm from nearby person in normal operation condition to meet regulatory RF exposure requirement. Additionally, installation locations with 35km of Terminal Doppler Weather Radar locations shall follow instructions below.
 - a. Any installation of either a master or a client device within 35 km of a TDWR location shall be separated by at least 30 MHz center-to-center) from the TDWR operating frequency.
 - b. A voluntary WISPA sponsored database has been developed that allows operators and installers to register the location information of the UNII devices operating outdoors in the 5470 – 5725 MHz band within 35 km of any TDWR location (see <http://www.spectrumbridge.com/uda/home.aspx>). This database may be used by government agencies in order to expedite resolution of any interference to TDWRs.
 - c. Addition information can be obtained from the FCC Knowledge Database, Publication Number 443999. <https://apps.fcc.gov/oetcf/kdb/index.cfm>
3. External antenna: Use only the antennas which have been approved by Ruckus Wireless. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC limit and is prohibited.
4. Installation procedure: Please refer to user's manual for the detail.
5. Warning: Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in US Rule CFR 47 part 15 section 15.247 & 15.407. The violation of the rule could lead to serious federal penalty.

Mexico Statement

"La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada."

Medical Statement

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

Australia and New Zealand Statement

This device complies with the ACMA requirements for a WiFi device namely Radiocommunications (Low Impact Potential Devices) Class Licence 2000 Amd. 1:2007 and Radiocommunications (Compliance Labeling - Electromagnetic Radiation) Notice 2003 and the New Zealand Radiocommunications Regulations (General User Radio Licence for Short-Range Devices). The equipment complies with the ACMA and New Zealand requirements for radiation exposure for a "general user/non-aware user". This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This equipment complies with the Australian and New Zealand safety requirements and should only be used with the specified power adapter carrying a C-tick mark and Electrical Approval No.

Brazil Statement

For Brazil, those products are designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. Regarding the operation on range of 5150 MHz to 5350 MHz, the average output power of the equipments must be adjusted to the maximum limit of - 0,48 dBm and for 5470 MHz to 5725 MHz, the average output power of the equipments must be adjusted to the maximum limit of 6,44 dBm

Para o Brasil, esses produtos são projetados para aplicações específicas e necessidades a serem instalados por um pessoal qualificado que tenha conhecimento regra RF e afins. Em relação à operação em série de 5150 MHz a 5350 MHz, a potência média de saída dos equipamentos deve ser ajustado para o limite máximo de - 0,48 dBm e para 5470 MHz a 5725 MHz, a potência média de saída dos equipamentos deve ser ajustada ao limite máximo de 6,44 dBm. 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 causa interferência a sistemas operando em caráter primário

Hong Kong Statement

The 5.15 – 5.35 GHz band shall be restricted to indoor operations only. Obey local regulations when using this product.

Taiwan Statement

1. 無線資訊傳輸設備避免影響附近雷達系統之操作

2. 本器材須經專業工程人員安裝及設定，始得設置使用，且不得直接販售給一般消費者

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。

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。

The control, adjustment and on/off operation of this device does not violate the "Administrative regulations on low power radio waves radiated devices". Any adjustments to the device should be carried out or be monitored by a specialist who has expertise on radio frequency devices. Replacement of components which may lead to the violation to the regulations is not allowed. Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to an approved low power radio-frequency devices. The low power radio-frequency device shall not influence aircraft security and interfere with legal communications; if found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications is operated in compliance with the Telecommunications Act. The low power radio-frequency devices must not be susceptible with the interference from legal communications or ISM radio wave radiated devices.

限用物質含有情況標示聲明書**Declaration of the Presence Condition of the Restricted Substances Marking**

設備名稱：無線網路基地台·型號(型式)：T750, T750SE						
Equipment name		Type designation (Type)				
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻Hexavalent chromium (Cr ⁶⁺)	多溴聯苯Polybrominated Biphenyls (PBB)	多溴二苯醚Polybrominated diphenyl ethers (PBDE)
Enclosure - Top 頂部外殼	O	O	O	O	O	O
Enclosure - Bottom 底部外殼	O	O	O	O	O	O
PWB 電路板	-	O	O	O	O	O
Connector and Receptacle 插口	O	O	O	O	O	O
備考1. “超出0.1 wt %”及“超出0.01 wt %”係指限用物質之百分比含量超出百分比含量基準值。 Note 1: “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.						
備考2. “O”係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2: “O” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.						
備考3. “-”係指該項限用物質為排除項目。 Note 3: The “-” indicates that the restricted substance corresponds to the exemption.						

European Union Notices and National Restrictions**EU Declaration of Conformity**

This declaration of conformity is issued under the sole responsibility of the manufacturer (or installer):

Ruckus Wireless, Inc. - 350 West Java Drive, Sunnyvale, CA 94089 USA
+1-650-265-4200



The object of the declaration is in conformity with Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 and Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment. The following standards were applied during the assessment of the product:

- Radio: ETSI EN 300 328, ETSI EN 301 893, ETSI EN 302 502, EN 303 413
- EMC: EN 55032, EN 301 489-1, EN 301 489-17, EN 301 489-19
- Safety: IEC/EN/UL 60950-1, IEC/EN/UL 62368-1, EN 62311, EN 50385, EN 50665



The frequency band 5150 – 5350 MHz is restricted to indoor use. The frequency band 5725 – 5875 MHz are non-harmonized frequencies. Use is restricted to outdoor professionally installed access points as allowed by local authorities.

Maximum output power:

—2400-2483.5MHz: 19.9dBm EIRP

—5150-5350MHz: 22.9dBm EIRP

—5470-5725MHz: 29.9dBm EIRP

—5725-5875MHz: 35.9dBm EIRP



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

Hereby, Ruckus Wireless Inc., declares that the radio equipment types T750 and T750SE is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://www.commscope.com/product-type/enterprise-networking/wi-fi-access-points-accessories/outdoor/t750/>

Български [Bulgarian]	С настоящото Ruckus Wireless декларира, че описаното по-горе радиосъоръжение е в съответствие с Директива 2014/53/ЕС.
Česky [Czech]	Ruckus Wireless tímto prohlašuje, že tento Radio LAN je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 2014/53/EU.
Dansk [Danish]	Undertegnede Ruckus Wireless erklærer herved, at følgende udstyr Radio LAN overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EU.
Deutsch [German]	Hiermit erkläre Ruckus Wireless, dass sich das Gerät Radio LAN in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2014/53/EU befindet.
Eesti [Estonian]	Käesolevaga kinnitab Ruckus Wireless seadme Radio LAN vastavust direktiivi 2014/53/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, Ruckus Wireless declares that this Radio LAN is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.
Español [Spanish]	Por medio de la presente Ruckus Wireless declara que el Radio LAN cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/EU.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Ruckus Wireless ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/EU.
Français [French]	Par la présente Ruckus Wireless déclare que l'appareil Radio LAN est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2014/53/EU.
Italiano [Italian]	Con la presente Ruckus Wireless dichiara che questo Radio LAN è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/EU.
Latviski [Latvian]	Ar šo Ruckus Wireless deklarē, ka Radio LAN atbilst Direktīvas 2014/53/EU būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo Ruckus Wireless deklaruoja, kad šis Radio LAN atitinka esminius reikalavimus ir kitas 2014/53/EU Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart Ruckus Wireless dat het toestel Radio LAN in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EU.
Malti [Maltese]	Hawnhekk, Ruckus Wireless, jiddikjara li dan Radio LAN jikkonforma mal-htigijiet essenzjali u ma provwedmenti oħrajn relevanti li hemm fid-Direttiva 2014/53/EU.
Magyar [Hungarian]	Alulírott, Ruckus Wireless nyilatkozom, hogy a Radio LAN megfelel a vonatkozó alapvető követelményeknek és az 2014/53/EU irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym Ruckus Wireless oświadcza, że Radio LAN jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2014/53/EU.
Português [Portuguese]	Ruckus Wireless declara que este Radio LAN está conforme com os requisitos essenciais e outras disposições da Directiva 2014/53/EU.
Slovensko [Slovenian]	Ruckus Wireless izjavlja, da je ta Radio LAN v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 2014/53/EU.
Slovensky [Slovak]	Ruckus Wireless týmto vyhlasuje, že Radio LAN spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2014/53/EU.
Suomi [Finnish]	Ruckus Wireless vakuuttaa täten että Radio LAN tyyppinen laite on direktivin 2014/53/EU oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar Ruckus Wireless att denna Radio LAN står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EU.
Íslenska [Icelandic]	Hér með lýsir Ruckus Wireless yfir því að Radio LAN er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 2014/53/EU.
Norsk [Norwegian]	Ruckus Wireless erklærer herved at utstyret Radio LAN er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 2014/53/EU.

T750 & T750SE, Access Point Installation Addendum

When the frequency band 5150 – 5250 MHz is used outdoors in the U.S.A, the FCC mandates that the energy radiated above 30° from the horizon remains below 21 dBm EIRP. This can be maintained during installation using the following guidance.

When the device is installed level to the horizon, (i.e. – device perpendicular to the surface of the earth, antenna radome pointing horizontal, parallel to the earth), the device operates in compliance with FCC rules without any adjustment of output power.

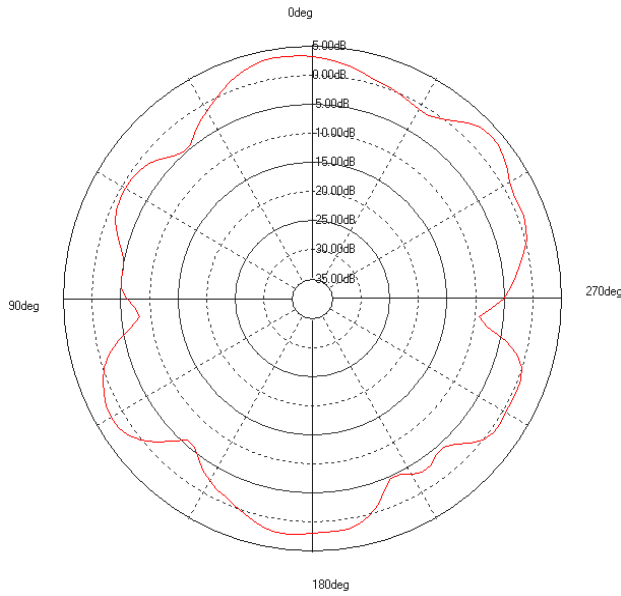
T750 & T750SE – Antennas

When the device is installed outdoors at an angle above the horizon, it may be necessary to reduce output power to insure the energy radiated above 30° from the horizon remains under 21 dBm EIRP. Please see table and elevation plots below.

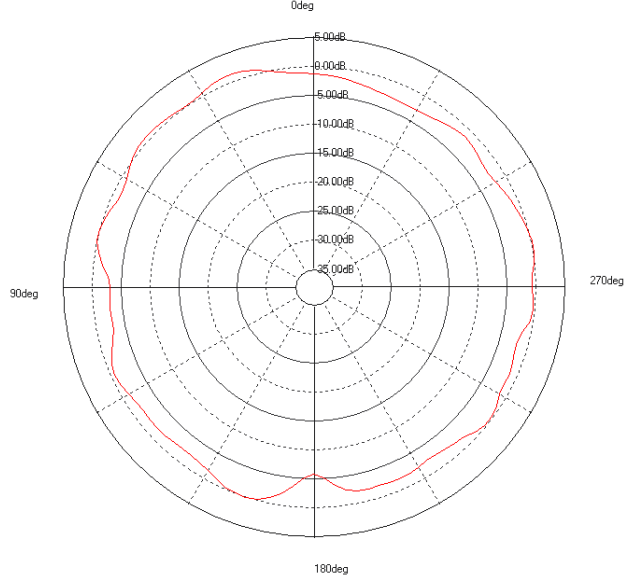
Degree Above Horizon (A)	Output Power Reduction (dBm)
A ≤ 12	0 dBm
12 < A < 15	1 dBm
15 ≤ A < 30	3 dBm
30 ≤ A < 45	6 dBm
A > 45	7 dB

T750 Omni Antenna 3.4dBi

Vertical Polarity Elevation Pattern
5150 – 5875 MHz



Horizontal Polarity Elevation Pattern
5150 – 5875 MHz:



T750SE Sector Antenna 8dBi

