Ruckus
Simply Better Connections.

T301n Access Point
Mounting Guide

CAUTION! The minimum software revision for the T301n AP is ZoneFlex (ZF) 9.8.1, or SmartCell Gateway (SCG) 3.0 or later.

Do not connect the T301n AP to a Ruckus Wireless Controller with ZF 9.8.0 or earlier, or to SCG 2.x or earlier.

This *Mounting Guide* provides step-by-step instructions on how to field-install the Ruckus Wireless T301n 30-Degree Narrow Sector 802.11ac outdoor access point (AP). Unless specifically indicated, the rest of this document refers to the T301n as an AP.

For detailed information on planning the installation, pointing the internal GPS antenna, performing a site survey, preparing the AP at the depot and shipping to the field, refer to the *T301n 802.11ac Outdoor Access Point Installation Guide*. For information on configuring and operating the AP, refer to the *ZoneFlex Outdoor Access Point User Guide*. Both documents are 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 AP.*

Before You Begin

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

- User Guides and Release Notes 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 available at http://support.ruckuswireless.com/warranty

Required Hardware and Tools

- Torque wrench or torque screwdriver with sockets and bits
- Wide flat-blade screwdriver

If you are mounting the AP on a flat surface, then you will also need:

- Customer-supplied wall anchors rated to withstand 128 N or 28.8 lbf (required to withstand wind loads of 266km/h or 165mph)
- Electric drill with drill bits and customer-supplied wall anchors, flat washers, and hex nuts for flat-surface mount

If you are mounting the AP on a pipe or pole, then you will also need:

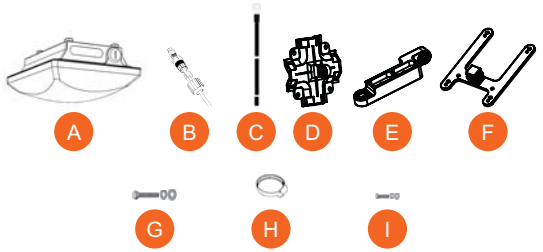
- A 30mm to 60mm (1.18" to 2.36") pipe or pole
- Four factory-supplied steel clamps

Package Contents

Before deploying your AP in the field, verify that all items listed below 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.

- One T301n AP (A in Figure 1); includes one 12mm M6x1 earth ground screw with split lock and flat washers
- One M25 data cable gland (B in Figure 1)
- One green/yellow earth ground wire with ring terminal (C in Figure 1)
- One wall- or pole-mount hanger mount (D in Figure 1)
- One extension bracket (E in Figure 1)
- One AP mounting bracket (F in Figure 1)
- Two sets 40mm M8x1.25 hex bolt with split lock and flat washers (G in Figure 1)
- Four SAE32-sized stainless steel clamps, 2.5-inch diameter (H in Figure 1)
- Four sets 0.250-28 x 0.625-inch hex bolt with split lock and flat washers (I in Figure 1)

Figure 1: AP field-installation package contents



The field installation package can also include:

- Service Level Agreement/Limited Warranty Statement
- Regulatory Statement
- Registration card
- Declaration of Conformity, if required
- This *Mounting Guide*

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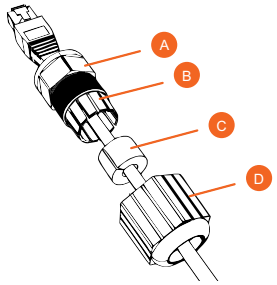
Step 1: Connecting and Sealing the RJ-45 Cable

The AP uses one RJ-45 cable for Power over Ethernet (PoE). Connect and seal the cable using the M25 data cable gland (B in Figure 1).

1. Feed the end of the RJ-45 cable through the sealing nut (D in Figure 2), rubber sealing insert (C in Figure 2), clamping ring assembly (B in Figure 2) and cable gland base (A in Figure 2).

Figure 2: RJ-45 cable and cable gland assembly

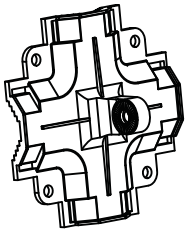


2. Use a wide flat-blade screwdriver to remove the blanking cap from the AP.
3. Connect the cable to the Ethernet port in the AP.
4. Tighten the cable gland base into the AP chassis to 7 N.m or 62 in-lbs.
5. Wrap the clamping ring assembly around the rubber sealing insert. Make sure that the clamping ring assembly fully encloses the rubber sealing insert.
6. Seat the clamping ring assembly and rubber sealing insert in the cable gland base.
7. Hand-tighten the sealing nut.
8. Continue with Step 2a: Attaching the Hanger Mount to a Flat Surface or Step 2b: Attaching the Hanger Mount to a Metal Pole.

Step 2a: Attaching the Hanger Mount to a Flat Surface

1. Hold the hanger mount (D in Figure 1) at the location on the mounting surface where you want to mount the AP. Use the holes on the hanger mount as a template to mark the locations of the mounting holes.
2. Remove the hanger mount from the mounting surface.
3. Drill holes required for the customer-supplied mounting hardware.
4. Attach the hanger mount to the flat surface using the mounting hardware.
5. Using the mounting hardware instructions, tighten the hardware to secure the hanger mount.

Figure 3: Hanger mount on a flat surface



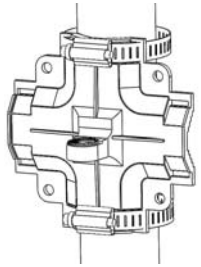
NOTE: *Hanger mount shown attached vertically to allow AP elevation adjustments. Attach the hanger mount vertically to allow AP azimuth adjustments.*

6. Continue with Step 3: Assembling the AP Mounting Bracket and the AP.

Step 2b: Attaching the Hanger Mount to a Metal Pole

1. Insert the open end of one steel clamp (H in Figure 1) into the upper two slots on the hanger mount (D in Figure 1).
2. Take the other steel clamp and insert it into the lower two slots on the hanger mount.
3. Use the clamps to attach the hanger mount to the pole (the clamps can be daisy-chained together to accommodate larger poles). Tighten the clamps to 3 N.m or 27 in-lbs, or per manufacturer's specifications if the supplied clamps are not used.

Figure 4: Hanger mount on a vertical pole



NOTE: *Hanger mount shown attached horizontally to allow AP azimuth adjustments. Attach the hanger mount vertically to allow AP elevation adjustments.*

4. Continue with Step 3: Assembling the AP Mounting Bracket and the AP.

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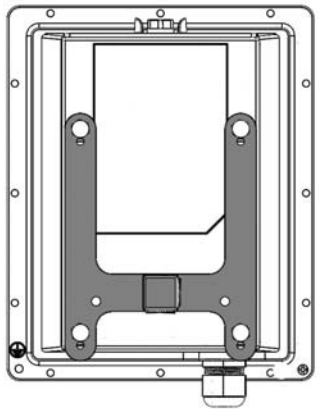
Step 3: Assembling the AP Mounting Bracket and the AP

1 Place the AP mounting bracket (F in Figure 1) onto the back side of the AP so that the four screw holes on the bracket align with the four screw holes on the AP. Make sure that the longer end of the AP mounting bracket points away from the AP connector.

Figure 5: Positioning the AP mounting bracket on the AP



2 Insert the 0.250-28 bolts (I in Figure 1) with washers into the screw holes on the AP mounting bracket. Tighten the bolts to 2.5-3.0 N.m or 22-27 in-lbs.

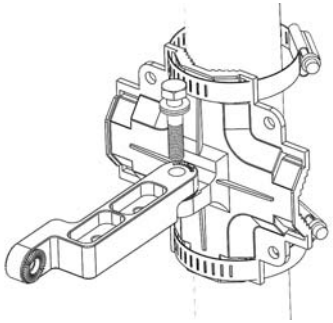
CAUTION: *The mounting bolt length is critical. Do not use bolts longer than the supplied 0.250-28 x 0.625" L parts or the unit may be damaged.*

3 Continue with Step 4: Mounting the AP.

Step 4: Mounting the AP

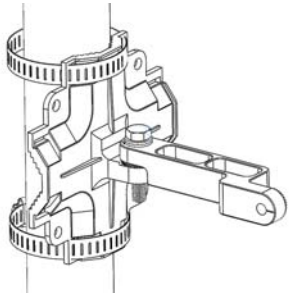
1 Align one of the holes on the extension bracket (E in Figure 1) with the hole on the hanger mount.

Figure 6: Align the extension bracket hole with the hanger mount hole



2 Insert an M8 hex bolt into hole and finger tighten until the bolt passes through the screw hole on the hanger mount.

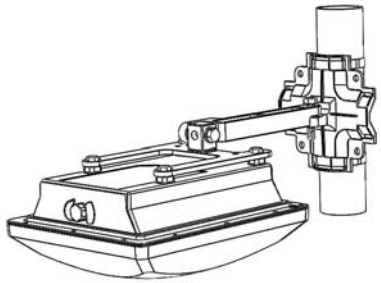
Figure 7: Finger-tightened hex bolt



3 Align the hole on the mounting bracket with the remaining hole on the extension bracket.

4 Insert an M8 hex bolt into the hole and finger tighten until the bolt passes through the extension bracket.

Figure 8: AP mounting



5 Adjust the azimuth and elevation of the AP as required.

6 Using a 13mm wrench, tighten the M8 hex bolts to 13.6 N.m (10 ft-lbs) so the extension bracket is securely fastened to the AP mounting bracket and the hanger mount.

7 Continue with Step 5: Earth Grounding the AP.

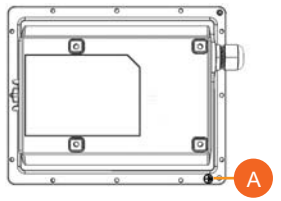
Step 5: Earth Grounding the AP

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, connect a good earth ground to the AP chassis ground point (A in Figure 9).

Figure 9: Connect good earth ground to AP here



Congratulations! You have mounted your T301n access point.

Troubleshooting

CAUTION: *If required, you can reset the AP to its factory default settings by pressing the reset button located inside the PoE OUT/RESET port. DO NOT DO THIS 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 and default gateway 192.168.0.1. The username is* `super`, *and the password is* `sp-admin`. *Refer to the T301n 802.11ac Outdoor Access Point Installation Guide and the ZoneFlex Outdoor Access Point User Guide for information on configuring and operating the AP. Both documents are available at* https://support.ruckuswireless.com.

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