



Dell Networking 300 Series Access Points Installation Guide

The Dell Networking 300 Series wireless access points (W-AP304, W-AP305, W-IAP304 and W-IAP305) support IEEE 802.11ac standards for high-performance WLAN, and are equipped with two radios, which provide network access and monitor the network simultaneously. These access points deliver high-performance 802.11n 2.4 GHz and 802.11ac 5 GHz functionality, while also supporting 802.11a/b/g wireless services. Multi-user Multiple-in, Multiple-output (MU-MIMO) is enabled when operating in 5GHz mode for optimal performance.

The W-AP304 and W-AP305 access points work in conjunction with a Dell controller, while the W-IAP304 and W-IAP305 access points can be configured using a built-in virtual controller.

The 300 Series wireless access points provide the following capabilities:

- IEEE 802.11a/b/g/n/ac operation as a wireless access point
- IEEE 802.11a/b/g/n/ac operation as a wireless air monitor
- IEEE 802.11a/b/g/n/ac spectrum monitor
- Compatible with IEEE 802.3at PoE+ and IEEE 802.3af PoE
- Centralized management configuration and upgrade
- Integrated Bluetooth Low Energy (BLE) Radio

Package Contents

- 300 Series access point
- 9/16" and 15/16" Ceiling Rail Adapters
- *Dell Networking 300 Series Access Points Installation Guide* (printed version)
- *Dell Networking 300 Series Access Points Regulatory Compliance and Safety Information Guide*
- *Dell Networking W-Series Instant Quick Start Guide* (W-IAP304 and W-IAP305 only)
- *Dell Networking W-Series Instant Access Point Professional Installation Guide Supplement* (W-IAP304 only)

Note: Inform your supplier if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use these materials to repack and return the unit to the supplier if needed.



Software

The W-AP304 and W-AP305 access points require AOS 6.5.1 or higher. For additional information, refer to the AOS User Guide and AOS Quick Start Guide.

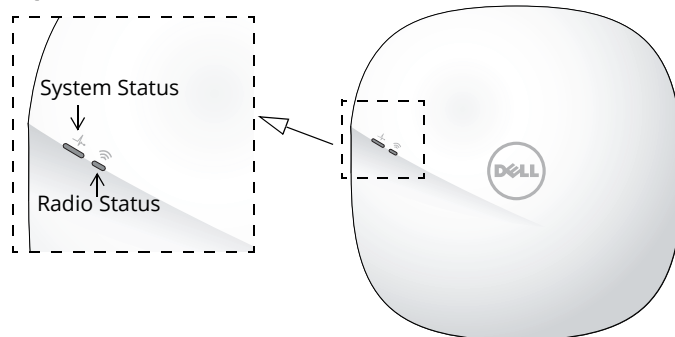
The W-IAP304 and W-IAP305 access points require Instant 4.3.1 or higher. For additional information, refer to the Instant User Guide and Instant Quick Start Guide.

CAUTION: Dell access points are classified as radio transmission devices, and are subject to government regulations of the host country. The network administrator(s) is/are responsible for ensuring that configuration and operation of this equipment is in compliance with their country's regulations. For the complete list of country-approved channels and devices, refer to the *Dell Networking W-Series Downloadable Regulatory Table (DRT) Release Notes* at download.dell-pcw.com.



Hardware Overview

Figure 1 Status LEDs on AP Front (305 shown)



LEDs

The 300 Series access points have two LEDs that indicate the system and radio status of the device. These two LEDs can be configured via AOS (for W-AP304 and W-AP305) or Instant (for W-IAP304 and W-IAP305) software for three separate modes:

- Normal mode (by default): See the following LED table.
- Off mode: LEDs are off
- Blink mode: Both LEDs blink green (synchronized)

LED	Color/State	Meaning
System Status (Left)	Off	Device powered off
	Green-Blinking*	Device booting, not ready for use
	Green- Solid	Device ready for use, no restrictions
	Green-Flashing**	Device ready for use, uplink negotiated in sub optimal speed (<1Gbps)
	Amber- Solid	Device ready for use; power-save mode (802.3af PoE)
	Amber-Flashing	Device ready for use; power-save mode (802.3af PoE), uplink negotiated in sub optimal speed (<1Gbps)
	Red- Solid	System error condition
Radio Status (Right)	Off	Device powered off, or both radios disabled
	Green- Solid	Both radios enabled in access mode
	Green-Blinking	One radio enabled in access mode
	Amber- Solid	Both radios enabled in monitor mode
	Amber-Blinking	One radio enabled in monitor mode
	Alternating	One radio enabled in access mode, other in monitor mode

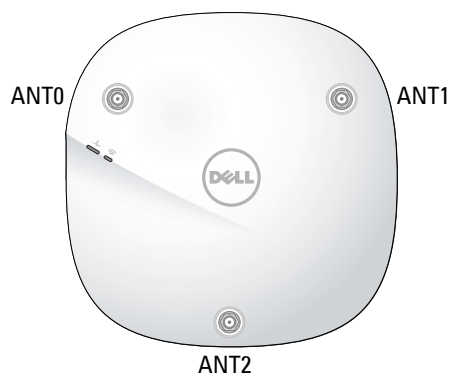
* Blinking: 1s on/1s off

**Flashing: off a fraction of a second every 2s

External Antenna Connectors

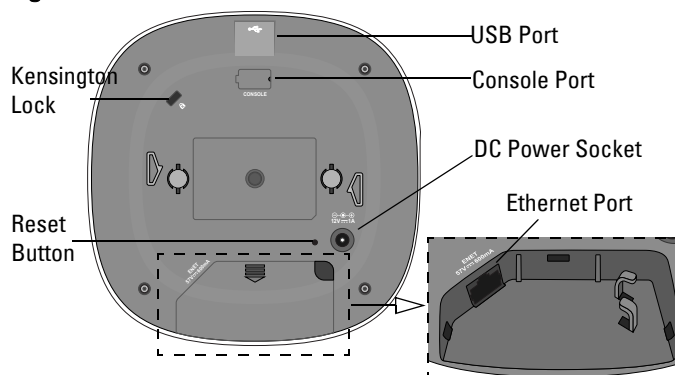
The W-AP304 and W-IAP304 access points are equipped with three external antenna connectors on the front corners of the access point.

Figure 2 External Antenna Connectors



Note: The Equivalent Isotropically Radiated Power (EIRP) levels for all external antenna devices must not exceed the regulatory limit set by the host country/domain. Installers are required to record the antenna gain for this device in the system management software.

Figure 3 Back Panel



USB Port

The 300 Series is equipped with a USB port for connectivity with cellular modems and other USB client devices. When powered by an 802.3at PoE or DC power source, the USB port can supply power up to 5W/1A. The USB interface is disabled when the access point is powered by an 802.3af PoE source (power-save mode).

Console Port

The serial console port is a 4-pin connector covered by a dust cover. An optional serial adapter cable (AP-CBL-SER) is sold separately to connect the device to a serial terminal or a laptop for direct local management.

Ethernet Port

The 300 Series access points are equipped with one 10/100/1000Base-T auto-sensing MDI/MDX Ethernet port. This port supports wired-network connectivity, in addition to Power over Ethernet (PoE) from IEEE 802.3af and 802.3at compliant power sources.

This device accepts 56V DC (802.3at), or 48V DC (802.3af) nominal as a standard powered device (PD) from power sourcing equipment, including PoE midspan injector or a PoE-sourcing network infrastructure.

Kensington Lock Slot

The 300 Series access points are equipped with a Kensington lock slot for additional security.

Reset Button

To reset the 300 Series access points to factory default settings, press and hold down the reset button using a small,

narrow object such as a paper clip while the access points are powered on.

DC Power Socket

If PoE is not available, an optional AP-AC-12V30B power adapter kit (sold separately) can be used to power the 300 Series access points.

Additionally, a locally-sourced AC-to-DC adapter (or any DC source) can be used to power this device, as long as it complies with all applicable local regulatory requirements and the DC interface meets the following specifications:

- 12 Vdc (+/- 5%) and at least 18W
- Center-positive 2.1/5.5 mm circular plug, 9.5 mm length

Before You Begin

CAUTION: FCC Statement: Improper termination of access points installed in the United States configured to non-US model controllers will be in violation of the FCC grant of equipment authorization. Any such willful or intentional violation may result in a requirement by the FCC for immediate termination of operation and may be subject to forfeiture (47 CFR 1.80).



ATTENTION: Déclaration FCC l'arrêt incorrect des points d'accès installés aux États-Unis qui sont configurés sur des contrôleurs autres que le modèle agréé aux États-Unis est considéré comme contrevenant à l'homologation FCC. Toute violation délibérée ou intentionnelle de cette condition peut entraîner une injonction d'arrêt immédiat de son utilisation par la FCC et peut déboucher sur la confiscation de l'équipement (47 CFR 1.80).

CAUTION: EU Statement:

Lower power radio LAN product operating in 2.4 GHz and 5 GHz bands. Please refer to the *AOS User Guide/Instant User Guide* for details on restrictions.

Produit réseau local radio basse puissance operant dans la bande fréquence 2.4 GHz et 5 GHz. Merci de vous référer au *AOS User Guide/Instant User Guide* pour les details des restrictions.



Low Power FunkLAN Produkt, das im 2.4 GHz und im 5 GHz Band arbeitet. Weitere Informationen bezüglich Einschränkungen finden Sie im *AOS User Guide/Instant User Guide*.

Apparati Radio LAN a bassa Potenza, operanti a 2.4 GHz e 5 GHz. Fare riferimento alla *AOS User Guide/Instant User Guide* per avere informazioni dettagliate sulle restrizioni.

Access Point Pre-Installation Checklist

Before installing your 300 Series access points, ensure that you have the following:

- Cat5E or better UTP cable of required length
- One of the following power sources:
 - IEEE 802.3af-compliant Power over Ethernet (PoE) source.
 - Dell AP-AC-12V30B power adapter kit (sold separately)

For W-AP304 and W-AP305 only:

- Dell Controller provisioned on the network:
 - Layer 2/3 network connectivity to your access point
- One of the following network services:
 - Aruba Discovery Protocol (ADP)
 - DNS server with an "A" record
 - DHCP Server with vendor-specific options



Note: Dell access points are designed in compliance with governmental requirements, so that only authorized network administrators are permitted to change the settings for this device. For more information about access point configuration, refer to the Quick Start Guide and User Guide for your device.

Verifying Pre-Installation Connectivity



Note: The instructions in this section are applicable to the W-AP304 and W-AP305 only.

Before installing access points in a network environment, make sure that they are able to locate and connect to the controller after power on.

Specifically, you must verify the following conditions:

- When connected to the network, each access point is assigned a valid IP address
- Access points are able to locate the controller

Refer to the AOS Quick Start Guide for instructions on locating and connecting to the controller.

Pre-Installation Network Requirements



Note: The instructions in this section are applicable to the W-AP304 and W-AP305 only.

After WLAN planning is complete and the appropriate products and their placement have been determined, the Dell controller(s) must be installed and initial setup performed before the Dell access points are deployed.

For initial setup of the controller, refer to the AOS Quick Start Guide for the software version installed on your controller.

Identifying Specific Installation Locations

You can mount the 300 Series access point on the ceiling or a wall. Use the access point placement map generated by Dell VisualRF Plan software application to determine the proper installation location(s). Each location should be as close as possible to the center of the intended coverage area and should be free from obstructions or obvious sources of interference. These RF absorbers/reflectors/interference sources will impact RF propagation and should have been accounted for during the planning phase and adjusted for in RF plan.

Identifying Known RF Absorbers, Reflectors and Interference Sources

Identifying known RF absorbers, reflectors, and interference sources while in the field during the installation phase is critical. Make sure that these sources are taken into consideration when you attach an access point to its fixed location. Examples of sources that degrade RF performance include:

- Cement and brick
- Objects that contain water
- Metal
- Microwave ovens
- Wireless phones and headsets

Installing the Access Point

The 300 Series access points ship with two ceiling rail adapters for 9/16" and 15/16" ceiling rails. Additional ceiling rail adapters for other rail styles and wall mount adapters are available as accessory kits.

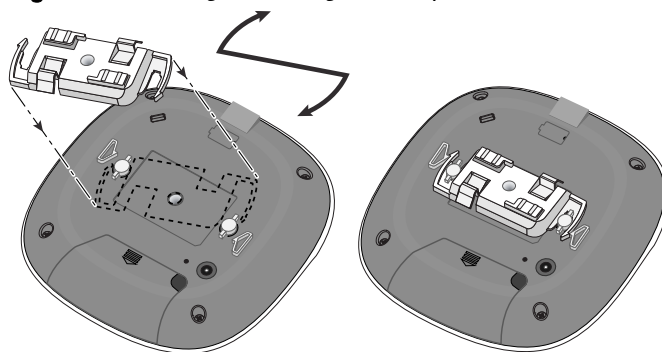
CAUTION: All Dell access points should be professionally installed by certified technician. The technician is responsible for ensuring that grounding is available that meets applicable regional regulatory and electrical standards.



ATTENTION: Tous les points d'accès Dell doivent impérativement être installés par un professionnel agréé. Ce dernier doit s'assurer que l'appareil est mis à la terre et que le circuit de mise à la terre est conforme aux codes électriques nationaux en vigueur.

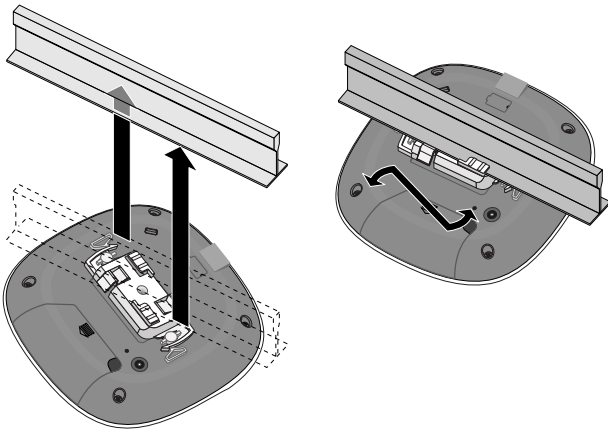
1. Pull the necessary cables through a prepared hole in the ceiling tile near where the access point will be placed.
2. Place the adapter against the back of the access point with the adapter at an angle of approximately 30 degrees to the tabs (see [Figure 4](#)).
3. Twist the adapter clockwise until it snaps into place in the tabs (see [Figure 4](#)).

Figure 4 Attaching the Ceiling Rail Adapter



4. Hold the access point next to the ceiling tile rail with the ceiling tile rail mounting slots at approximately a 30-degree angle to the ceiling tile rail (see [Figure 5](#)). Make sure that any cable slack is above the ceiling tile.
5. Pushing toward the ceiling tile, rotate the access point clockwise until the device clicks into place on the ceiling tile rail.

Figure 5 *Mounting the Access Point*



Connecting Required Cables

Install cables in accordance with all applicable local and national regulations and practices.

Verifying Post-Installation Connectivity

The integrated LEDs on the access point can be used to verify that the access point is receiving power and initializing successfully (see [Figure 1](#)). Refer to the [Quick Start Guide](#) for further details on verifying post-installation network connectivity.

Configuring the 300 Series



Note: The instructions in this section are applicable to the W-AP304 and W-AP305 only.

Access Point Provisioning/Reprovisioning

Provisioning parameters are unique to each access point. These local access point parameters are initially configured on the controller which are then pushed out to the access point and stored on the access point itself. Dell recommends that provisioning settings be configured via the AOS Web UI only. Refer to the AOS User Guide for complete details.

Access Point Configuration

Configuration parameters are network or controller specific and are configured and stored on the controller. Network configuration settings are pushed out to the access point but remain stored on the controller.

Configuration settings can be configured via the AOS Web UI or AOS CLI. Refer to the respective guides for complete details.

Contacting Dell

Website Support

Main Website	dell.com
Contact Information	dell.com/contactdell
Support Website	dell.com/support
Documentation Website	dell.com/support/manuals

Copyright

© Copyright 2016 Hewlett Packard Enterprise Development LP. Dell™, the DELL™ logo, and PowerConnect™ are trademarks of Dell Inc.

All rights reserved. Specifications in this manual are subject to change without notice.

Originated in the USA. All other trademarks are the property of their respective owners.

Open Source Code

This product includes code licensed under the GNU General Public License, the GNU Lesser General Public License, and/or certain other open source licenses. A complete machine-readable copy of the source code corresponding to such code is available upon request.

This offer is valid to anyone in receipt of this information and shall expire three years following the date of the final distribution of this product version by Hewlett-Packard Enterprise Company. To obtain such source code, send a check or money order in the amount of US \$10.00 to:

Hewlett-Packard Enterprise Company
Attn: General Counsel
3000 Hanover Street
Palo Alto, CA 94304
USA