

# Dell Networking W-AP205H Access Point

## Installation Guide

The Dell Networking W-AP205H access point is a high-performance dual-radio wireless and wired access point for hospitality and branch deployments.

This device combines high-performance wireless mobility with Gigabit wired local access to deliver secure network access to dormitories, hotel rooms, classrooms, medical clinics, and multi-tenant environments. MIMO (Multiple-Input, Multiple-Output) technology enables the W-AP205H access point to provide wireless 2.4 GHz 802.11n and 5 GHz 802.11n/ac functionality, while simultaneously supporting existing 802.11a/b/g wireless services.

The W-AP205H access point can be attached to a wall box using the bracket provided, or converted into a desk-mounted remote access point for branch office deployments using the AP-205H-MNTR desk mount kit (sold separately).

The W-AP205H access point works in conjunction with a Dell Networking W-Series controller.

The W-AP205H access point provides the following capabilities:

- Dual wireless transceivers
- 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, spectrum analyzer
- Centralized management configuration and upgrades through a Dell Controller
- Compatibility with IEEE 802.3af/at PoE
- Supports PoE-in on E0 port (only)/PoE-out on E3 port (only)
- Support for selected USB peripherals

**NOTE:** The W-AP205H access point requires ArubaOS 6.4.3.0 or later version.

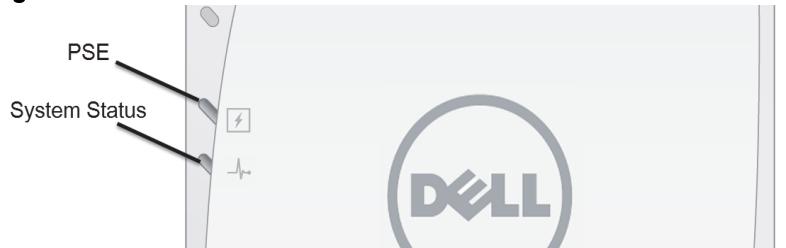
### Package Contents

- W-AP205H Access Point
- Single Gang Wall-box Mounting Bracket
- 2x #6-32 Machine Screw
- TSH Torx Security Screw
- Installation Guide (this document)

**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.

### Hardware Overview

**Figure 1** Front View of AP



#### LED

The W-AP205H access point is equipped with two LEDs in the front. The top LED indicates the status of the AP as Power Sourcing Equipment (PSE) enabling PoE-out on the E3 port. The bottom LED indicates the operational status of the AP.

LED	Color/State	Meaning
System Status	Off	AP powered off, or LED switched to 'off mode'
	Amber- Solid	AP ready, restricted mode: <ul style="list-style-type: none"><li>• 10/100Mbps uplink negotiated</li><li>• Either radio in non-HT mode</li><li>• Virtual AP not enabled</li></ul>
	Amber- Flashing	AP in Air Monitor or Spectrum Analyzer mode
	Red	Error condition
	Green - Flashing	AP booting, not ready
	Green - Solid	AP ready
PSE Status	Off	AP powered off, or PoE capability disabled
	Green - Solid	PoE power enabled
	Red	PoE power sourcing error or overload condition

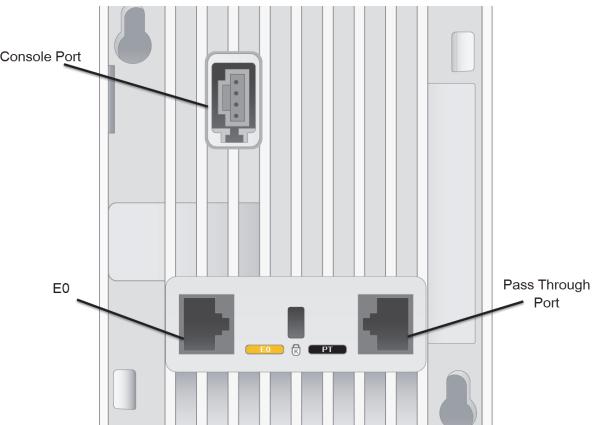
#### Console Port

The W-AP205H access point is equipped with a serial console port at the back (Figure 2). The port allows connecting the AP to a serial terminal or a laptop for direct local management. This port located at the back of the W-AP205H access point is a 4-pin connector with removable dust cover. An optional serial adapter cable (AP-CBL-SER) compatible with the W-AP205H access point is sold separately.



**CAUTION:** The back panel of the W-AP205H access point may become hot after extended use.

**Figure 2** Back View of AP



**NOTE:** Hot-plug operation is not recommended for the console port.

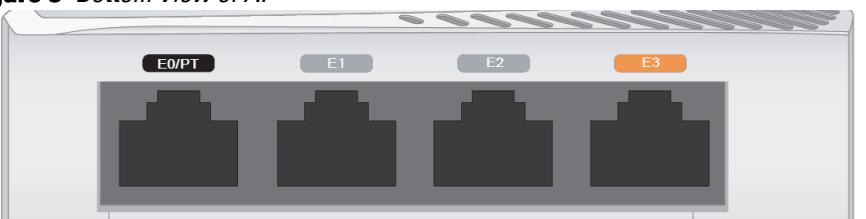
#### Ethernet Ports

The W-AP205H access point is equipped with a total of four active Ethernet ports (E0-E3). E0 port, located at the back of the AP (Figure 2), is a 10/100/1000 Base-T (RJ-45) auto-sensing, MDI/MDX wired-network uplink connectivity port. It supports IEEE 802.3af/802.3at Power over Ethernet (PoE), accepting 48VDC (nominal) as a standard defined Powered Device (PD) from a Power Sourcing Equipment (PSE) such as a PoE midspan injector or network infrastructure that supports PoE.

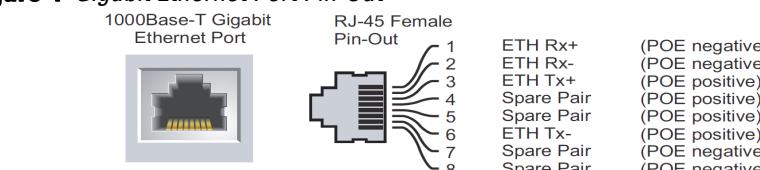
E1-E3 ports, located at the bottom of the AP (Figure 3), are 10/100/1000 Base-T (RJ-45) auto-sensing, MDI/MDX wired-network downlink connectivity ports. They are used to provide secure network connectivity to wired devices. Only the E3 port supports PoE-out functionality, supplying a maximum power of 10W when the AP is operating in 802.3at PoE mode.

Additionally, the W-AP205H access point has a Pass-Through (PT) port at the back (Figure 2) and an E0/PT port at the bottom (Figure 3). The E0/PT port acts primarily as a Pass-Through (PT) port. Alternatively, the E0/PT port can serve as an E0 uplink port and accepts 802.3af/802.3at PoE power when the E0 and PT ports at the back of the AP are physically bridged by an Ethernet cable (AP-CBL-ETH10 sold separately with the AP-205H-MNTR desk mount kit).

**Figure 3** Bottom View of AP



**Figure 4** Gigabit Ethernet Port Pin-Out



#### USB Port

The W-AP205H access point is equipped with a USB port on the right side. The USB port is compatible with cellular modems and Bluetooth Low Energy (BLE) dongles. When active, the USB port can supply up to 5W (1A).



**NOTE:** USB port does not supply power while operating in 802.3af mode.

#### Push Button

The push button located on the side of the W-AP205H access point can be used to reset the AP to factory default settings or turn off/on the LED display.

- To reset the AP to factory default settings:
  1. Power off the AP.
  2. Press and hold the push button using a small, narrow object, such as a paperclip.
  3. Power-on the AP without releasing the push button. The system status LED will flash within 5 seconds.
  4. Release the push button.

The system status LED will flash again within 15 seconds indicating that the reset is completed. The AP will now continue to boot with the factory default settings.

- To turn off/on the system status LED:

During normal operation of the AP, press the push button using a small, narrow object, such as a paperclip. The system status LED will be turned off/on immediately.

#### Power

The W-AP205H access point has a single 48VDC power connector to support powering through an AC-to-DC power adapter (AP-AC-48V36 sold separately).

The W-AP205H access point supports both PoE-in and PoE-out functionality. The PoE-in (PoE-PD) allows the E0 port to draw power from an 802.3at (preferred) or 802.3af (optional) source.

When powered by an 802.3at source, the PoE-out (PoE-PSE) functionality is enabled on the E3 port, allowing a maximum output of 10W. If a powered device (PD) connected to the E3 port attempts to exceed the 10W power limit, the E3 port is temporarily disabled. The port will automatically reactivate after being disabled.

When powered by an 802.3at source, the USB port on the W-AP205H access point is also enabled, allowing an output of up to 5W.

When powered by an 802.3af source, power for both PoE-PSE and USB are disabled.

Power Source	Restrictions	USB	PoE-PSE
DC (AP-AC-48V36)	None (USB and PoE-PSE enabled)	5W	15.4W
802.3at	None (USB and PoE-PSE enabled)	5W	10W
802.3af	USB and PoE-PSE disabled	N/A	N/A

**NOTE:** If both PoE and DC power are available, the W-AP205H access point will default to using DC source.

### 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).

**CAUTION: EU Statement:**  
Lower power radio LAN product operating in 2.4 GHz and 5 GHz bands. Please refer to the Dell Networking W-Series ArubaOS 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 Dell Networking W-Series ArubaOS User Guide pour les détails des restrictions.

Low Power FunkLAN Produkt, das im 2.4 GHz und im 5 GHz Band arbeitet. Weitere Informationen bezüglich Einschränkungen finden Sie im Dell Networking W-Series ArubaOS User Guide.

Apparati Radio LAN a bassa Potenza, operanti a 2.4 GHz e 5 GHz. Fare riferimento alla Dell Networking W-Series ArubaOS User Guide per avere informazioni dettagliate sulle restrizioni.

### Pre-Installation Network Requirements

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 APs are deployed.

#### AP Pre-Installation Checklist

Before installing your W-AP205H access point, be sure that you have the following:

- Pre-installed wall box
- Cat5E UTP cable with network access installed in the wall box
- One of the following power sources:
  - IEEE 802.3af-compliant Power over Ethernet (PoE) source
  - Dell AP AC-DC adapter kit (sold separately)
- Dell Controller provisioned on the network:
  - Layer 2/3 network connectivity to your AP

One of the following network services:

- Aruba Discovery Protocol (ADP)
- DNS server with an "A" record
- DHCP Server with vendor-specific options

### Summary of the Setup Process

**NOTE:** It is important that you verify the items listed under AP Pre-Installation Checklist before you attempt to set up and install a W-AP205H access point.

Complete each of the tasks below in the order listed to setup your W-AP205H access point.

1. Verify pre-installation connectivity.
2. Identify the specific installation location for each AP.
3. Install each AP.
4. Verify post-installation connectivity.

5. Configure each AP.

**NOTE:** The W-AP205H access point has been designed to comply with governmental requirements, so that only authorized network administrators can change the settings. For more information about AP configuration, refer to the Dell Networking W-Series ArubaOS Quick Start Guide and Dell Networking W-Series ArubaOS User Guide.

**CAUTION:** Access points are radio transmission devices and as such are subject to governmental regulation. Network administrators responsible for the configuration and operation of access points must comply with local broadcast regulations. Specifically, access points must use channel assignments appropriate to the location in which the access point will be used.

### Verifying Pre-Installation Connectivity

Before you install APs in a network environment, make sure that the APs are able to locate and connect to the controller after power on. In order to successfully setup your network the following conditions must be met:

- When connected to the network, each AP is assigned a valid IP address
- APs are able to locate the controller

Refer to the Dell Networking W-Series ArubaOS Quick Start Guide for instructions on locating and connecting to the controller.

### Identifying Specific Installation Locations

The W-AP205H access point must be secured to a Dell-approved wall or desk mount kit, which can be purchased separately. The AP should be oriented vertically, with Ethernet ports facing downward to facilitate maximum antenna gain. Use the AP placement map generated by the 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. RF absorbers/reflectors/interference sources will impact RF propagation and should be accounted for during the planning phase and adjusted in the VisualRF plan.

### Identifying Known RF Absorbers/Reflectors/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 AP to its fixed location.

RF absorbers include:

- Cement/concrete—Old concrete has high levels of water dissipation, which dries out the concrete, allowing for potential RF propagation. New concrete has high levels of water concentration in the concrete, blocking RF signals.
- Natural Items—Fish tanks, water fountains, ponds, and trees
- Brick

RF reflectors include:

- Metal Objects—Metal pans between floors, rebar, fire doors, air conditioning/heating ducts, mesh windows, blinds, chain link fences (depending on aperture size), refrigerators, racks, shelves, and filing cabinets.
- Do not place an AP between two air conditioning/heating ducts. Make sure that APs are placed below ducts to avoid RF disturbances.

RF interference sources include:

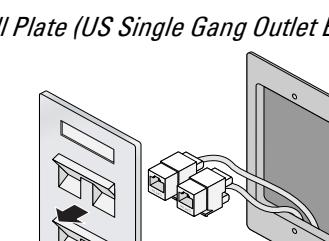
- Microwave ovens and other 2.4 or 5 GHz objects (such as cordless phones)
- Cordless headset such as those used in call centers or lunch rooms

### Installing the AP

The W-AP205H access point is designed to mount into a variety of electrical gang boxes.

1. Begin by removing the existing data wall plate (if applicable).

**Figure 5** Removing Wall Plate (US Single Gang Outlet Box Shown)



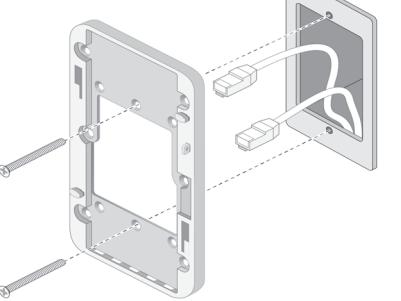
2. Remove any existing RJ-45 connectors (typically snap-in) or cut/remove the UTP cable.
3. Use a short Ethernet cable (sold separately) to connect the E0 port to an RJ-45 connector or crimp an RJ-45 plug (not supplied) on the cable and insert in the E0 port. Do the same for the PT port, if used.
4. Align the mounting holes of the W-AP205H mounting bracket with mounting holes in the gang box, as shown in Figure 6 and Figure 7. For worldwide single gang outlet box, the mounting bracket has two sets of mounting holes to meet the individual installation position requirement. See Figure 7 for details.

The applicable standards for the wall boxes are:

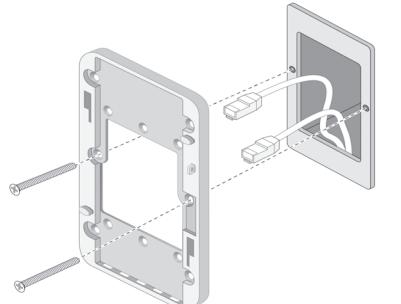
- IEC 60670-1, GB17466, BS4662 and DIN49073 for Worldwide
- ANSI/NEMA OS 1 and OS 2 for US

5. Insert the two included machine screws and tighten them to secure the mounting bracket.

**Figure 6** Bracket to Gang Box (US Single Gang Outlet Box Shown)

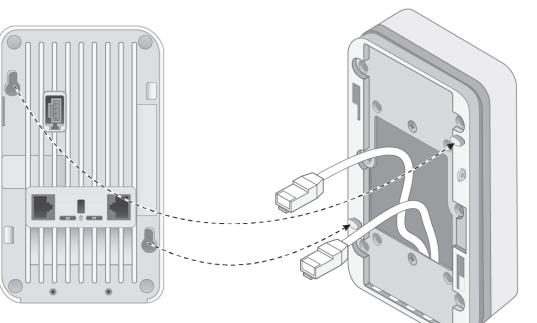


**Figure 7** Bracket to Gang Box (Worldwide Single Gang Outlet Box Shown)



6. Connect the cables to the back of the AP.
7. Align the mounting slots on the back of the AP with the corresponding mounting posts on the wall mount as shown in [Figure 8](#).
8. Push the AP against the posts and downward until the posts engage the slots at the top of the slots.

**Figure 8** AP to Bracket



9. Once the AP is fastened onto the wall mount, insert the T8H Torx Security Screw into the hole located on the upper-right edge of the wall mount and tighten.
10. If not using PoE, connect the AC-DC power adapter (sold separately) to the DC power socket located on the side of the AP.

## Verifying Post-Installation Connectivity

The System Status LED on the AP can be used to verify that the AP is receiving power and initializing successfully ([LED](#)). Refer to the *Dell Networking W-Series ArubaOS Quick Start Guide* for further details on verifying post-installation network connectivity.

## Configuring the AP

### AP Provisioning/Reprovisioning

Provisioning parameters are unique to each AP. These local AP parameters are initially configured on the controller which are then pushed out to the AP and stored on the AP itself. It is recommended that the provisioning settings be configured via the ArubaOS Web UI only. Refer to the *Dell Networking W-Series ArubaOS User Guide* for complete details.

### AP Configuration

Configuration parameters are network or controller specific and are configured and stored on the controller. Network configuration settings are pushed out to the AP(s) but remain stored on the controller.

Configuration settings can be configured via the ArubaOS Web UI or CLI. Refer to *Dell Networking W-Series ArubaOS User Guide* and/or the *Dell Networking W-Series ArubaOS CLI Reference Guide* for details.

## Product Specifications

### Electrical

- Ethernet:
  - 4x 10/100/1000 Base-T auto-sensing Ethernet RJ-45 Interface (E0-E3)
  - 2x passive RJ-45 Pass-Through interface (EO/PT and PT)
  - MDI/MDX
  - IEEE 802.3 (10Base-T), IEEE 802.3u (100Base-T), IEEE 802.3ab (1000Base-T)
  - Power over Ethernet (IEEE 802.3af and 802.3at compliant), 48VDC (nominal) and 56VDC (maximum)/350mA (see [Figure 4](#) for pin configuration)
- Power:
  - 48VDC power interface, supports powering through an AC-to-DC power adapter
  - PoE support on Ethernet ports: 802.3af-compliant PoE sourcing device

**NOTE:** If a power adapter other than the one provided by Dell is used in US or Canada, it should be NRTL Listed, with an output rated 48VDC, minimum 0.75A, marked "LPS" and "Class 2", and suitable for plugging into a standard power receptacle in the US and Canada.

For additional specifications on this product, please refer to the product data sheet on [dell.com](#).

## Proper Disposal of Dell Equipment

Dispose of Dell products per local regulation. For the most current information about Global Environmental Compliance and Dell products, see our website at [dell.com](#).

## Waste of Electrical and Electronic Equipment



Dell products at end of life are subject to separate collection and treatment in the EU Member States, Norway, and Switzerland and therefore are marked with the symbol shown at the left (crossed-out wheeled bin). The treatment applied at end of life of these products in these countries shall comply with the applicable national laws of countries implementing Directive 2002/96/EC on Waste of Electrical and Electronic Equipment (WEEE).

## India RoHS

This product complies with RoHS requirements as prescribed by E-Waste (Management & Handling) Rules, governed by the Ministry of Environment & Forests, Government of India.

## European Union RoHS

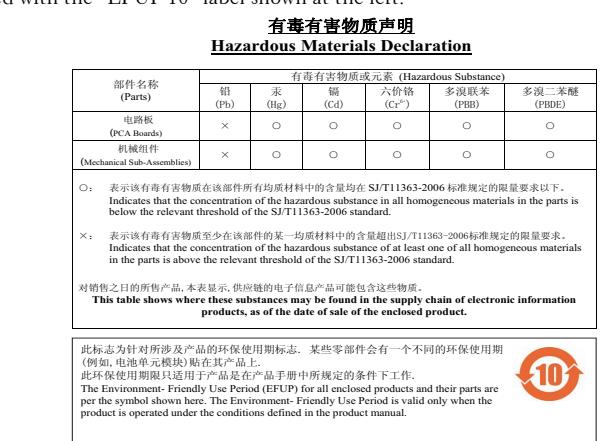


Dell products also comply with the EU Restriction of Hazardous Substances Directive 2011/65/EU (RoHS). EU RoHS restricts the use of specific hazardous materials in the manufacture of electrical and electronic equipment. Specifically, restricted materials under the RoHS Directive are Lead (including Solder used in printed circuit assemblies), Cadmium, Mercury, Hexavalent Chromium, and Bromine. Some Dell products are subject to the exemptions listed in RoHS Directive Annex 7 (Lead in solder used in printed circuit assemblies). Products and packaging will be marked with the "RoHS" label shown at the left indicating conformance to this directive.

## China RoHS



Dell products also comply with China environmental declaration requirements and are labeled with the "EFUP 10" label shown at the left.



## Safety and Regulatory Compliance

**NOTE:** For country specific restrictions and additional safety and regulatory information, refer to the multi-language *Dell Networking W-Series Safety, Environmental, and Regulatory Information* document included with your Dell Networking controller.

### Regulatory Model Name

The regulatory model name of W-AP205H is APINH205

### FCC



**CAUTION:** Dell access points must be installed by a professional installer. The professional installer is responsible for ensuring that grounding is available and it meets applicable local and national electrical codes.

This device is electronically labeled. To view the FCC ID:

1. Log into the controller WebUI.
2. Navigate to the Maintenance > Controller > About.



**CAUTION: RF Radiation Exposure Statement:** This equipment complies with FCC RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 7.87 inches (20 cm) between the radiator and your body for 2.4 GHz and 5 GHz operations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. When operated in the 5.15 to 5.25 GHz frequency range, this device is restricted to indoor use to reduce the potential for harmful interference with co-channel Mobile Satellite Systems.

Equipment not suitable for use in the presence of flammable mixtures.



**CAUTION: RF Radiation Exposure Statement:** This equipment complies with FCC RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 7.87 inches (20cm) between the radiator and your body for 2.4 GHz and 5 GHz operations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

### FCC Class B Part 15

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.



**CAUTION:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause interference harmful to radio communications. However, there is no guarantee that interference will not occur in a particular

installation. If this equipment does cause interference, 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 to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

## CE ! EU Regulatory Conformance

This product is CE marked according to the provisions of the R & TTE Directive (1999/5/EC) - CE(!). Dell hereby declares that the APINH205 device model is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC - CE(!).

The Declaration of Conformity made under Directive 1999/5/EC is available for viewing at the following location: [dell.com](#).

## Canadian Statement

Complies with the Class B limits for radio noise emissions as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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 necessary for successful communication.

This device complies with Industry Canada license-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.

## Déclaration d'Industrie Canada

Conformément aux réglementations d'Industrie Canada, cet émetteur-récepteur radio doit être utilisé uniquement avec une antenne dont le type et le gain maximal doivent être approuvés par Industrie Canada. Pour réduire les interférences radio potentielles, le type d'antenne et son gain doivent être choisis de façon à ce que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas les valeurs nécessaires à une communication efficace.

Ce périphérique est conforme aux règlements RSS exempts de licence d'Industrie Canada. L'utilisation de ce périphérique est soumise aux deux conditions suivantes : (1) ce périphérique ne doit pas provoquer d'interférences, et (2) ce périphérique doit accepter toute interférence, y compris les interférences susceptibles de provoquer un dysfonctionnement.

De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

## Medical

1. This equipment is not suitable for use in the presence of flammable mixtures.
2. Connect to only IEC 60950-1 or IEC 60601-1 3rd Edition certified products and power sources. The end user is responsible for the overall medical system compliance in accordance with the requirements of IEC 60601-1 3rd edition.
3. Wipe with a dry cloth, no additional maintenance required.
4. No serviceable parts, the unit must be sent back to the manufacturer for repair.
5. No modifications are allowed without Dell approval.

## 第十二條

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。

## 第十四條

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設備之干擾。

**NOTE:** Expected Service Life 5 years.

**NOTE:** For additional compliance information, pull down on the adhesive accordion sticker located on the side of the access point. This sticker may be folded back and resealed to its original position once opened.

# Dell Networking W-AP205H Access Point Installation Guide



## Contacting Dell

### Web Site Support

Main Website	<a href="#">dell.com</a>
Contact Information	<a href="#">dell.com/contactdell</a>
Support Website	<a href="#">dell.com/support</a>
Documentation Website	<a href="#">dell.com/support/manuals</a>

### Copyright

© 2015 Aruba Networks, Inc. Aruba Networks trademarks include Aruba Wireless Networks®, the registered Aruba the Mobile Edge Company logo, and Aruba Mobility Management System™. 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

Certain Aruba products include Open Source software code developed by third parties, including software code subject to the GNU General Public License (GPL), GNU Lesser General Public License (LGPL), or other Open Source Licenses. The Open Source code used can be found at this site:

[http://www.arubanetworks.com/open\\_source](#)

Includes software from Litech Systems Design. The IF-MAP client library copyright 2011 Infoblox, Inc. All rights reserved. This product includes software developed by Lars Fenneberg, et al.

### Legal Notice

The use of Aruba Networks, Inc. switching platforms and software, by all individuals or corporations, to terminate other vendors' VPN client devices constitutes complete acceptance of liability by that individual or corporation for this action and indemnifies, in full, Aruba Networks, Inc. from any and all legal actions that might be taken against it with respect to infringement of copyright on behalf of those vendors.



[www.dell.com](#)

Dell Networking W-AP205H Access Point | Installation Guide  
Part Number 0511784-01 | March 2015



0511784-01