The Aruba AP-205H 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 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 AP-205H to provide wireless 2.4 GHz 802.11n and 1.5 GHz 802.11ac functionality, while simultaneously supporting existing 802.11n/11ac wireless services.

The AP-205H can be attached to a wall using the bracket provided, or converted into a desk-mounted remote access point for branch office deployments using the AP-205H MNTS desk mount kit (sold separately). The AP-205H access point works in conjunction with an Aruba controller, while the IAP-205H variant uses a built-in virtual controller. The AP-205H access point provides the following capabilities:

- Dual wireless transceivers
- IEEE 802.11ac/n/a/b/g operation as a wireless access point
- IEEE 802.11ac/n/a/b/g operation as a wireless air monitor, spectrum analyzer
- Compatibility with IEEE 802.11af PoE
- Central management configurations and upgrades through an Aruba Controller or Aruba Instant virtual controller
- Supports PoE to E0 port (only) or PoE-out from E3 port (only)
- Support for selected USB peripherals

### Package Contents

- **AP-205H Access Point**
- **Single Gang Wall-box Mounting Bracket**
- **2 x 8-32 Machine Screws**
- **T5 Torx Security Screw**
- **Installation Guide (this document)**

### System Status

- Blue - Solid: AP ready (IEEE 802.11a/b/g/n/ac)
- Amber - Flashing: AP ready, restricted mode:
  - Virtual AP not enabled
- Green - Solid: AP ready, restricted mode:
  - Bandwidth limited to 1 network
  - No Gigabit PoE is available, all limited to 15W

### Ethernet Ports

The AP-205H access point is equipped with a total of four active Ethernet ports (E0 - E3).

The E0 port, located at the back of the AP (Figure 2), is 10/100/1000 Base-T (RJ-45) auto-sensing, MDIX/MDIX wired network uplink connectivity port. It supports IEEE 802.3at PoE+ power over Ethernet (PoE+), accepting 48VDC as a standard defined Powered Device (PD) from Power Sourcing Equipment (PSE), such as a modular injector or network infrastructure that supports PoE. The E1-E3 ports, located at the bottom of the AP (Figure 3), are 10/100/1000 Base-T (RJ-45) auto-sensing, MDIX/MDIX wired network downlink connectivity ports. They are used to provide secure network connectivity to wired devices. The E2 port supports PoE+ uplink functionality, supplying a maximum power of 15.4W when the AP is operating on 802.3at PoE mode.

### Power Supply

The AP-205H has a single 48V DC power connector to support powering through an AC-to-DC power adapter. AC-48V36 sold separately. The AP-205H supports both PoE+ and PoE-out functionality. The PoE+ (PoE+) allows the E0 port to draw power from 802.3at (preferred) and 802.3af (optional) sources.

### Push Button

The push button located on the right side of the AP can be used to reset the AP to factory default settings or turn off the LED display.

1. Power off the AP.
2. Press and hold the push button using a small, narrow object, such as a paper clip.
3. Release 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 has been completed. The AP will now continue with its factory default settings.

### Verifying Pre-Installation Connectivity

Before installing your AP-205H access point, be sure that you have the following:

- **Pre-wall mounted box**
  - Cat-6 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
  - Aruba AP-420AC AC-DC adapter kit (sold separately)
- **Aruba Controller provisioned on the network**
- **Layer 2 network connectivity to your access point**
- **One of the following network services**
  - Aruba Discovery Protocol (ADP)
  - L3SN server with an IP address
  - DHCP Server with vendor-specific options

### Summary of the Setup Process

It is important that you verify the items listed under AP Pre-Installation Checklist before you attempt to set up and install an AP-205H.

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.

### Aruba Networks, Inc.

In compliance with governmental regulations, has designed the AP-205H access points so that only authorized network administrators can change the settings. For more information about AP configuration, refer to the ArubaOS Quick Start Guide and ArubaOS User Guide.

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:

- Connected to the network, each AP is assigned a valid IP address
- APs are able to locate and connect to the controller

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

### Identifying Specific Installation Locations

When installing the AP-205H access point must be secured to an Aruba approved wall or a desk mounted, which can be purchased separately. This AP should be oriented vertically, with Ethernet ports facing downward to facilitate and maximize antenna gain. Use the AP placement map generated by Aruba’s RF 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 sources of interference. These RF absorbers/reflectors/interference sources will impact RF propagation and should be accounted for during the planning phase and adjusted for in RF 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:
- Concrete/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)
- Microwaves and other 2.4 or 5 GHz objects (such as cordless phones)
- 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.

Installing the AP

The AP-205H is designed to mount into a variety of electrical gang boxes.

1. Begin by removing the existing data wall plate (if applicable).
2. Remove any existing RJ45 connectors (typically snap-in) or cut/remove the existing RJ45 port. Do the same for the PT port, if used.
3. Align the mounting holes of the AP-205H mounting bracket with mounting holes in your 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, GB1446, BS4662 and EN40973 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.

Verifying Post-Installation Connectivity

The integrated LED on the AP can be used to verify that the AP is receiving power and initializing successfully (see Table 1). Refer to the ArubaOS Quick Start Guide for further details on verifying post-installation network connectivity.

Configuring the AP-205H

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 on the AP itself. Aruba recommends that provisioning settings be configured via the ArubaOS Web UI only. Refer to the ArubaOS User Guide for 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 ArubaOS CLI. Refer to the ArubaOS User Guide for details.

Product Specifications

Electrical
- Ethernet:
  - 4x 10/100/1000 Base-T auto-sensing Ethernet RJ-45 interface (5E-ES)
  - 2x passive RJ-45 Pass-Through interface (5E/PT and PT)
- MIMO:
  - IEEE 802.11a (10Base-T), IEEE 802.3a/e (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 and 802.3at (maximum) 350mA (see Figure 4 for pin configuration)

Environmental
- Operating:
  - Temperature: 0° C to 50° C (+32° F to +122° F)
  - Humidity: 5% to 95% non-condensing
  - Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158° F)
- For additional specifications on this product, please refer to the product data sheet at www.arubanetworks.com.

For further details on verifying post-installation network connectivity, refer to the ArubaOS Quick Start Guide.