The Aruba IAP-205H access point is a high-performance dual-radio wired and wireless 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. IEEE 802.11a/b/g/n/ac Multi-Input Multi-Output (MIMO) technology enables the IAP-205H access point to provide wireless 2.4 GHz 802.11n and 5 GHz 802.11ac network functionality, while simultaneously supporting existing IEEE 802.11a/n wireless services.

The IAP-205H access point 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 IAP-205H access point works in conjunction with a built-in virtual controller and provides the following capabilities:

- Dual wireless transceivers
- IEEE 802.11a/b/g/n/ac operation as a wireless access point
- Support for IEEE 802.11ac
- Central management configuration and upgrades through an Aruba Instant wireless air monitor, spectrum analyzer
- Supports 802.11ac on the E0 port (only) and PoE out on E0 port (only)
- Compatibility with IEEE 802.3af (PoE)
- Support for selected USB peripherals

Package Contents
- IAP-205H Access Point
- Single Gang Wall-box Mounting Bracket
- 2x 8x32 Machine Screw
- T52L Tera Security Screw
- Aruba Instant Quick Start Guide
- Regulatory Compliance and Safety Information Guide
- Installation Guide (this document)

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.

Hardware Overview

Figure 1 Front View

The Aruba IAP-205H access point is equipped with two LEDs indicating System Status and Power Sourcing Equipment (PSE).

Table 1: LED Status

<table>
<thead>
<tr>
<th>LED</th>
<th>Color/State</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>AP powered off, or LED switched to 'off mode'</td>
<td></td>
</tr>
<tr>
<td>Amber - Solid</td>
<td>AP ready, restricted mode</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100 Mbps data negotiated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Either radio in non-HT mode</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Virtual AP not enabled</td>
<td></td>
</tr>
<tr>
<td>Amber - Flashing</td>
<td>AP in Air Monitor or Spectrum Analyzer mode</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>Error condition</td>
<td></td>
</tr>
<tr>
<td>Green - Flashing</td>
<td>AP booting, not ready</td>
<td></td>
</tr>
<tr>
<td>Green - Solid</td>
<td>AP ready</td>
<td></td>
</tr>
</tbody>
</table>

Ethernet Ports

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

USB Port

The IAP-205H access point is equipped with a USB port that is compatible with cellular modems and Bluetooth Low Energy (BLE) dongles. When powered by an 802.3af source, the USB port on the IAP-205H is enabled, allowing for an output of up to 5W.

Push Button

The push button located on the side of the IAP-205H access point can be used to reset the AP to factory default settings or turn off 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.
  5. 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 the system status LED:
  1. During the 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 immediately.

PoE

The IAP-205H access point has a single 802.3af power connector to support powering through an AC-to-DC power adapter (AP-AC-48V36) and adapter sold separately.

The IAP-205H access point supports both PoE+ and PoE-out functionality. The PoE+ (PoE+) port allows the E0 port to draw power from an 802.3af (preferred) or 802.3at (optional) source.

When operating in 802.3at mode, the PoE-out (PoE-PSE) functionality is enabled on the E0 port, allowing a maximum output of 15.4W. If a device attempts to exceed the 10W power limit, the E0 port is temporarily disabled. The port will automatically reactivate after being disabled.

When powered by an 802.3af source, power for PoE+ and USB is disabled.

Table 2: Maximum Power Outputs

<table>
<thead>
<tr>
<th>Power Source</th>
<th>Restrictions</th>
<th>USB</th>
<th>PoE-PSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC (AP-AC-48V36)</td>
<td>None (USB and PoE-PSE enabled)</td>
<td>5W</td>
<td>15.4W</td>
</tr>
<tr>
<td>802.3af</td>
<td>None (USB and PoE-PSE enabled)</td>
<td>5W</td>
<td>10W</td>
</tr>
<tr>
<td>802.3at</td>
<td>USB and PoE-PSE disabled</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

After installing your AP-205H 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
  - Aruba AP-AC-ADAPctor kit (sold separately)

Summary of the Setup Process

Complete each task of the below in the order listed to setup your AP-205H access point:

1. Identify the specific installation location for each AP.
2. Install each AP.
4. Configure the virtual controller. Refer to the Aruba Instant Quick Start Guide.

Before You Begin

FCC Statement: Improper termination of access points installed in the United States (non-US Regulatory Domain model) will be in violation of the FCC's 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).

EU Statement: Low-power radio LAN product operating in 2.4 GHz and 5 GHz bands. Please refer to the Aruba Instant User Guide for details on restrictions.

Pre-Installation Network Requirements

Pre-Installation Checklist

- Before installing your AP-205H 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
    - Aruba AP-AC-ADAPctor kit (sold separately)

Identifying Specific Installation Locations

When installing the IAP-205H access point must be secured to an Aruba approved wall or to a desk mount kit, which can be purchased separately.
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 Bones—Fish tanks, water fountains, ponds, and trees
- Back
- Electrical
- Metal Objects—Metal pans between floors, rebar, fire doors, air conditioning/heating ducts, mesh windows, blinds, chain link fences (depending on aperture size), refrigerators, ovens, 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)
  - Metal Objects—Metal pans between floors, rebar, fire doors, air conditioning/heating ducts, mesh windows, blinds, chain link fences (depending on aperture size), refrigerators, ovens, 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)
    - Metal Objects—Metal pans between floors, rebar, fire doors, air conditioning/heating ducts, mesh windows, blinds, chain link fences (depending on aperture size), refrigerators, ovens, 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 IAP-205H is designed to mount into a variety of electrical gang boxes.

1. Remove the existing data wall plate (if applicable).
2. Remove any existing RJ-45 connectors (typically snap-in) or cut/remove the UTP cable.

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

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 IAP-205H 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 60834-1, GB1488, BB54602 and DIN40771 for Worldwide
- ANSI/NEMA O 6 1 and O 8 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)

6. Connect 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 7.
8. Push the AP against the posts and downward until the posts engage the slots at the top of the slots.

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

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 bottom of the IAP-205H.

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 (see Figure 1). Refer to the Aruba Instant Quick Start Guide for further details on verifying post-installation network connectivity.

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 (EI PT and FT)
- MDI/MDX
- IEEE 802.11b (11Base-T), IEEE 802.11a (100Base-T), IEEE 802.11g (540Base-T)
- Power over Ethernet (IEEE 802.3af and 802.3at compliant), 48VDC (nominal) and 52VDC (maximum) 350mA (see Figure 4 for pin configuration)