The Aruba IAP-204 and IAP-205 wireless access points support the IEEE 802.11ac and 802.11n standards for high-performance WLAN. These access points use MIMO (Multiple-input, Multiple-output) technology and other high-throughput mode techniques to deliver high-performance, 802.11n 2.4 GHz and 802.11a/n 5 GHz functionality while simultaneously supporting legacy 802.11b/g/n wireless services. The IAP-200 Series access points work only in conjunction with a virtual controller.

The Aruba IAP-200 Series access point provides the following capabilities:

- Wireless transceiver
- Protocol-independent networking functionality
- 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
- Compatibility with IEEE 802.3 af PoE

The IAP-200 Series requires Aruba Instant 4.2 or later.

### Package Contents

- IAP-204 or IAP-205 Access Point
- 5/16" and 15/16" Ceiling Rail Adapters
- Aruba Instant Quick Start 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 if needed.

### IAP-200 Series Hardware Overview

#### Figure 1 IAP-200 Series LEDs

LEDs:

- The IAP-200 Series is equipped with four LEDs that indicate the status of the various components of the AP.
  - PWR: Indicates whether or not the IAP-200 Series is powered on and shows basic system status
  - ENET: Indicates the status of the IAP-200 Series' Ethernet port
  - 5 GHz: Indicates the status of the 802.11a/n/ac radio
  - 2.4 GHz: Indicates the status of the 802.11b/g/n radio

#### Table 1 IAP-200 Series LED Meanings

<table>
<thead>
<tr>
<th>LED</th>
<th>Color/State</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>Off</td>
<td>No power to AP</td>
</tr>
<tr>
<td></td>
<td>Red</td>
<td>Error condition</td>
</tr>
<tr>
<td></td>
<td>Green/Flash</td>
<td>AP booting</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>AP ready</td>
</tr>
<tr>
<td>ENET</td>
<td>Off</td>
<td>Ethernet link unavailable</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Ethernet link established</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Ethernet link established</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>Ethernet link activity</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>5 GHz air or Spectrum Monitor</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>2.4 GHz air or Spectrum Monitor</td>
</tr>
</tbody>
</table>

**Before You Begin**

- Console Port
  - The serial console port allows you to connect the AP to a serial terminal or a laptop for direct local management. This port is an RJ-45 female connector with the pins described in Figure 5. Connect it directly to a terminal or terminal server using an Ethernet cable.

**AP Pre-Installation Checklist**

Before installing your IAP-200 Series AP, ensure that you have the following:

- CAT5e or better UTP cable of required length
- One of the following power sources:
  - IEEE 802.3 af-compliant Power over Ethernet (PoE) source
  - Aruba AP AC-DC adapter kit (sold separately)

**Summary of the Setup Process**

Successful setup of an IAP-200 Series access point consists of five tasks, which must be performed in this order:

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

**IAP-204 Antenna Orientation**

The IAP-204 is equipped with two external antenna connectors. The connectors are labeled ANTD and ANTI, and correspond to radio chains 0 and 1.

For optimal performance when using articulating direct-mount antennas, professional installers must orient the antennas as pictured in Figure 4, below.

**External Antenna Connectors**

The IAP-204 is equipped with two external antenna connectors. The connectors are labeled ANTD and ANTI, and correspond to radio chains 0 and 1.

- Microwave ovens
- Objects that contain water
- Cement and brick
- Ceramic and porcelain
- Wood and particleboard
- Materials that conduct electricity

Other sources that degrade RF performance include:

- Electronic equipment and machinery
- Metal objects
- Microwave ovens
- Wireless phones and headsets

**Using the Ceiling Rail Adapter**

The IAP-200 Series ships with two ceiling rail adapters for 9/16” and 15/16” ceiling rails. Additional wall mount adapters and ceiling rail adapters for other rail styles are available as accessory kits.

**Maximum supported weight of the ceiling rail adapter is 3.75 kg.**

1. Pull the necessary cables through a prepared hole in the ceiling tile near where the AP will be placed.
2. Place the adapter against the back of the AP with the adapter at an angle of approximately 30 degrees to the wall (see Figures 1).
3. Twist the adapter clockwise until it snaps into place in the tabs (see Figures 7).

**Identifying Specific Installation Locations**

You can mount the IAP-200 Series access point on a wall or on the ceiling. Use the AP placement map generated by Aruba's AirWave GUI 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 absorption/reflection interference sources will impact RF propagation and should have been accounted for during the planning phase and adjusted for in the AirWave GUI 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. Examples of sources that degrade RF performance include:

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

**FCC Statement**

Improper termination of access points installed in the United States (non-US model Regulatory Domain model/s) will be a violation of the FCC’s grant of equipment authorization. Any such willful or intentional violation may result in a requirement by the FCC to forfeit equipment.

**EER Statement**

Lower 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.

**Warning**

Make sure the AP fits securely on the ceiling tile when hanging the AP. Failure to install the AP securely could cause it to fall onto people or equipment.

**AP Configuration**

1. Identify the specific installation location for each AP
2. Install each AP
3. Verify post-installation connectivity
4. Configure the virtual controller. Refer to the Aruba Instant Quick Start Guide
7. On the IAP-204, install the external antennas according to the manufacturer’s instructions, and connect the antennas to the antenna interfaces on the AP.

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

Product Specifications

Electrical
- Ethernet:
  - 1x10/100/1000 auto-negotiating Ethernet RJ-45 Interface
  - MDI/MDX
  - IEEE 802.3ab (1000Base-T), IEEE 802.3z (100Base-TX), IEEE 802.3u (10Base-T)
- Power over Ethernet (PoE compliant), 48V DC (nominal) and 56V DC (maximum)/350mA
- MDI/MDX

RF Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. Therefore, the equipment should be operated, with respect to wireless antenna, with a minimum distance of 20 cm between the antenna and the body of the user. This equipment does not contain any internal antenna which may cause interference. When operated in the bands 5.15 to 5.35 GHz, this equipment is restricted to indoor use to reduce the potential for harmful interference with co-channel Mobile Satellite Services.

FCC Class B 15
This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions:
- This device may not cause harmful interference.
- This device must accept any interference, including interference that may cause undesired operation.

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.

Users are alerted that high power radars are allocated atprimary bands of the bands 5.65-5.85 GHz and 5.7-5.8 GHz, and that these radars could cause interference and/or damage to Personal Exempt (PE) devices and end users of the equipment which is subject to these bands.

Contacting Aruba Networks

For Wireless That Works®, Mobile Edge Architecture, People Move. Networks Must Follow., RFProtect®, The All

EU Regulatory Conformance
This product is CE marked in accordance with the provisions of the R&TTE Directive (1999/5/EC). Aruba Networks, Inc. hereby declares that the APIN0204 / APIN0205 devices are in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The Declaration of Conformity made under Directive 1999/5/EC is available for viewing at the following location: http://support.arubanetworks.com

Canada
This equipment is not intended for use in the bands 5.15-5.35 GHz, 14.1-14.25 GHz, 24.15-24.25 GHz, or 64.8-66.0 GHz. If this equipment is not intended for use in the bands 12.1-12.15 GHz, 12.4-12.5 GHz, 24.5-24.55 GHz, or 64.8-66.0 GHz, and if these bands are to be used at a later date, this equipment must be modified to accommodate future operation. The end user must always contact the supplier of this equipment to ensure that future operation is in accordance with the terms of the supplier’s instructions. If these bands are to be used at a later date, this equipment must be modified to accommodate future operation. The end user must always contact the supplier of this equipment to ensure that future operation is in accordance with the terms of the supplier’s instructions.

Disclaimer concerning the exemption of radiocommunications: This equipment is not intended for use in the bands 5.15-5.35 GHz, 14.1-14.25 GHz, 24.15-24.25 GHz, or 64.8-66.0 GHz. If this equipment is not intended for use in the bands 12.1-12.15 GHz, 12.4-12.5 GHz, 24.5-24.55 GHz, or 64.8-66.0 GHz, and if these bands are to be used at a later date, this equipment must be modified to accommodate future operation. The end user must always contact the supplier of this equipment to ensure that future operation is in accordance with the terms of the supplier’s instructions. If these bands are to be used at a later date, this equipment must be modified to accommodate future operation. The end user must always contact the supplier of this equipment to ensure that future operation is in accordance with the terms of the supplier’s instructions.

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Korean EMC Class B Warning
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