The Aruba IAP-92 and IAP-93 are single-radio, dual-band wireless access points that support the IEEE 802.11n standard 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 or 5 GHz functionality while simultaneously supporting existing 802.11a/b wireless services.

The Aruba IAP-92/IAP-93 access point provides the following capabilities:

- Wireless transceiver
- Protocol-independent networking functionality
- IEEE 802.11a/b/g/n operation as a wireless access point
- IEEE 802.11ad operation as a wireless air monitor
- Compatibility with IEEE 802.1af PoE

Package Contents

- IAP-92 or IAP-93 access point
- Installation Guide
- Aruba Instant Quick Start Guide
- Professional Install Guide (IAP-92 only)

For more information about the IAP-92/IAP-93’s behavior, see Table 1.

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**Before You Begin**

FCC Statement: Improper termination of access points installed in the United States (non-DSL Regulatory Domain models) 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).

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**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 IAP to its fixed location.

RF absorbers include:
- Microwave ovens and other 2.4-5 GHz devices (such as cordless phones)
- Cordless headsets placed at call center or lunch room

RF reflectors include:
- Metal Objects—Metal pans between floors, rebar, fire doors, air conditioning/etc. units
- RF absorbers include:
- Natural Items—Fish tanks, water fountains, ponds, and trees
-RF interference sources include:
- Metal Objects—Metal pans between floors, rebar, fire doors, air conditioning/heating ducts, metal windows, metal blinds, metal chain fences (depending on aperture size), refrigerators, shelves, and filing cabinets.

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**Identifying Known Installation Locations**

You can mount the IAP-92/IAP-93 access point on a wall or on the ceiling. 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.

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**Identifying Known Interference Sources**

Identifying known 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 IAP to its fixed location.

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**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 IAP to its fixed location.

RF absorbers include:
- Concrete/stone—Concrete and stone has high levels of water absorption, which heats up the concrete, allowing for potential RF propagation. New concrete has high levels of water content 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, metal windows, metal blinds, metal chain fences (depending on aperture size), refrigerators, shelves, and filing cabinets.
- Do not place an IAP between two air conditioning/heating ducts. Make sure that APs are placed below ducts to avoid RF disturbances.

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**Using the Integrated Ceiling Tile Rail Slots**

The snap-on ceiling tile rail slots on the rear of the IAP can be used to attach the device directly to a ceiling tile rail. This can help prevent RF interference and ensure that the access point is properly aligned with the network.

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**Installing the IAP**

Installation and service of Aruba Networks products should be performed by Professional Installers. Additional antennas and transmit power information for Professional Installers can be found at https://support.arubanetworks.com.

If you are installing an IAP-92, be sure to attach the antennas before mounting the IAP.

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**PWR**: Indicates whether or not the IAP-92/IAP-93 is powered-on
**ENET**: Indicates the status of the IAP-92/IAP-93's Ethernet port
**11A/N**: Indicates the status of the 802.11a/n radio
**11B/G/N**: Indicates the status of the 802.11b/g radio

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**Package Contents**

- IAP-92 or IAP-93 access point
- Installation Guide
- Aruba Instant Quick Start Guide
- Professional Install Guide (IAP-92 only)
Connecting Required Cables
Install cables in accordance with all applicable local and national regulations and practices.

Ethernet Ports
The IAP-92 Ethernet port (ENET) supports 10/100/1000Base-T auto-sensing MDI/MDIX connections. Use these ports to connect the IAP to a twisted pair Ethernet LAN segment. Use a 4- or 8-conductor, Category 5 UTP cable up to 100 m (325 feet) long.

The 10/100/1000 Mbps Ethernet port is on the back of the IAP. The port has an RJ-45 female connector with the pin outs shown in the figure below.

Product Specifications
The IAP-92/IAP-93 has a single 12V DC power jack socket to support powering through an AC-to-DC power adapter.

Power Connection
Use a modular adapter to connect the IAP-92 (female) connector on the IAP to a DB-9 (male) connector, and connect the adapter to a laptop using an RS-232 connector with the pinouts described in Figure 7. Connect this port directly to a terminal or a laptop for direct local management. This port is an RJ-45 female power adapter.

If a power adapter other than the one provided by Aruba Networks is used, ensure that it meets applicable local and national electrical codes.

For additional specifications on this product, please refer to the data sheet. The data sheet can be found at www.arubanetworks.com.

Power Consumption – 48 VDC 802.3af power over Ethernet or 12VDC, 1.25A for 60601-1.

EMC Compliance and Warning Statement
This equipment has been tested and found to comply with the limits of the standard for medical devices, EN 0013-2-2007. The unit also complies with the requirements of EN 0013-2-2007, providing the presumption of compliance to the European Union’s Medical Device Directive 2007/47/EC. The limits are designed to provide reasonable protection against harmful interference in a typical medical installation.

The equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with the manufacturer’s instructions may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. This equipment causes interference with other devices, which may be determined by turning the equipment off and on.

RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits. This equipment is not to be used in conjunction with any other antenna or transmitter.

Proper Disposal of Aruba Equipment
Aruba products at end of life are subject to separate collection and treatment in the EU Member States, Norway, and Switzerland and are marked with the left (cross-out wheelie 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 2002/96EC on Waste of Electrical and Electronic Equipment (WEEE).

For the most current information about Global Environmental Compliance and Aruba products, see our website at www.arubanetworks.com.

Waste of Electrical and Electronic Equipment
Aruba products are subject to the EU Restriction of Hazardous Substances Directive 2002/95/EC (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 (lead in solder used in printed circuit assemblies), Cadmium, Mercury, Hexavalent Chromium, and Bromine. Some Aruba 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
Aruba products also comply with China environmental declaration requirements and are labeled with the “EPUP 10” label shown at the left.

Table 1

<table>
<thead>
<tr>
<th>LED</th>
<th>Color/State</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A</td>
<td>Off</td>
<td>5 GHz radio in disabled</td>
</tr>
<tr>
<td></td>
<td>Amber</td>
<td>5 GHz radio enabled in WiFi mode</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>5 GHz radio enabled in 3G mode</td>
</tr>
<tr>
<td></td>
<td>Green flashing</td>
<td>5 GHz Air Monitor or RF Protect mode</td>
</tr>
<tr>
<td>11B/G/N</td>
<td>Off</td>
<td>2.4 GHz radio enabled in WiFi mode</td>
</tr>
<tr>
<td></td>
<td>Amber</td>
<td>2.4 GHz radio enabled in 3G mode</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>2.4 GHz radio enabled in 11n mode</td>
</tr>
<tr>
<td></td>
<td>Green flashing</td>
<td>2.4 GHz Air Monitor or RF Protect mode</td>
</tr>
</tbody>
</table>

Serial Console Port
The serial console port (console) allows you to connect the IAP to a serial terminal or laptop for local management. This port is an RJ-45 female connector with the pinouts described in Figure 7. Connect this port directly to a terminal or a laptop for direct local management.

For the most current information about Global Environmental Compliance and Aruba products, please refer to the data sheet. The data sheet can be found at www.arubanetworks.com.

Table 2

<table>
<thead>
<tr>
<th>Web Site Support</th>
<th>Email Support</th>
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<tr>
<td>Asia-Pacific</td>
<td><a href="mailto:emap.asia@arubanetworks.com">emap.asia@arubanetworks.com</a></td>
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<td>Australia</td>
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</tr>
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<td><a href="mailto:nasupport@arubanetworks.com">nasupport@arubanetworks.com</a></td>
</tr>
<tr>
<td>Latin America</td>
<td><a href="mailto:lasupport@arubanetworks.com">lasupport@arubanetworks.com</a></td>
</tr>
<tr>
<td>Other Countries</td>
<td><a href="mailto:ussupport@arubanetworks.com">ussupport@arubanetworks.com</a></td>
</tr>
<tr>
<td>Technical Support</td>
<td><a href="mailto:ustechnical@arubanetworks.com">ustechnical@arubanetworks.com</a></td>
</tr>
</tbody>
</table>

Table 3

<table>
<thead>
<tr>
<th>Product Specifications</th>
<th>Electrical</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ethernet:</td>
<td>• Power over Ethernet (IEEE 802.3af compliant), 48V DC/350mA (see Figure 6 for pin configuration)</td>
</tr>
<tr>
<td>• 1 x 10/100/1000Base-T auto-sensing Ethernet RJ-45 Interfaces</td>
<td>• Power over Ethernet (IEEE 802.3af compliant), 48V DC/350mA (see Figure 6 for pin configuration)</td>
</tr>
<tr>
<td>• IEEE 802.3 (1000Base-T), IEEE 802.3u (100Base-TX), IEEE 802.3ab (1000Base-T)</td>
<td>• Power over Ethernet (IEEE 802.3af compliant), 48V DC/350mA (see Figure 6 for pin configuration)</td>
</tr>
<tr>
<td>• RJ-45 Ethernet port (ENET) supports 10/100/1000Base-T auto-sensing MDI/MDIX connections</td>
<td>• Power over Ethernet (IEEE 802.3af compliant), 48V DC/350mA (see Figure 6 for pin configuration)</td>
</tr>
<tr>
<td>• 6 LEDs: Amber (RF Protect), Green (RF Monitor), Amber (11n Mode), Green (RF Monitor), Green (Radio), Amber (Radio)</td>
<td>• Power over Ethernet (IEEE 802.3af compliant), 48V DC/350mA (see Figure 6 for pin configuration)</td>
</tr>
</tbody>
</table>

EMC Compliance and Warning Statement
This equipment is not to be used in conjunction with any other antenna or transmitter.

RoHS
This equipment is not to be used in conjunction with any other antenna or transmitter.

RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits. This equipment is not to be used in conjunction with any other antenna or transmitter.

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For the most current information about Global Environmental Compliance and Aruba products, please refer to the data sheet. The data sheet can be found at www.arubanetworks.com.

RJ45 to DB-9 (Male) Modular Adapter Conversion
For additional specifications on this product, please refer to the data sheet. The data sheet can be found at www.arubanetworks.com.

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The equipment generates, uses and can radiate radio frequency energy, and, if not installed and used in accordance with the manufacturer’s instructions may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. This equipment causes interference with other devices, which may be determined by turning the equipment off and on.

Environmental: Operating Temp: 0° C to +50° C (+32° F to +122° F); Humidity: 5 to 95% non-condensing. Storage Temp: -40° C to +70° C (-40°F to +158°F).

EMC Compliance and Warning Statement
This equipment has been tested and found to comply with the limits of the standard for medical devices, EN 0013-2-2007. The unit also complies with the requirements of EN 0013-2-2007, providing the presumption of compliance to the European Union’s Medical Device Directive 2007/47/EC. The limits are designed to provide reasonable protection against harmful interference in a typical medical installation.