The multifunctional Aruba RAP-100 series delivers secure 802.11n wireless and wired networking to SMBs and access to corporate resources from branch and home offices.

With unmatched deployment flexibility, the RAP-100 series can operate in Aruba Instant mode controlled by the AirWave management platform or in controller-managed mode where all network services are centralized by Aruba Mobility Controllers.

In Aruba Instant mode, traffic is locally bridged but it still provides the flexibility of secure tunneling to Mobility Controllers.

To eliminate client stickiness, the RAP-100 series includes integrated ClientMatch technology, which continuously gathers session performance metrics and uses this data to every device to the best AP and radio on the WLAN, even while users roam and RF conditions change.

The RAP-100 series also offers a wide range of enterprise-class features, including role-based network access, policy-based forwarding, and Adaptive Radio Management (ARM), which optimizes Wi-Fi client performance and ensures that Aruba APs stay clear of interference.

At locations that require greater coverage, the RAP-100 can join an Aruba Instant WLAN cluster. Simply install additional RAP-100s or any Aruba Instant AP and the entire cluster is managed as one. If one Aruba Instant AP fails, another AP automatically takes over with no disruption.

With a wireless data rate up to 300 Mbps in the 2.4-GHz and 5-GHz radio bands, the RAP-100 series has one 10/100/1000BASE-T Ethernet uplink, one 10/100BASE-T local Ethernet port and one USB port to connect to 3G and 4G networks.

When operating in Aruba Instant mode, the cloud-based Aruba Activate service dramatically reduces RAP-100 series deployment time by performing zero-touch provisioning, firmware upgrades and inventory management. With Aruba Activate, RAP-100s are factory-shipped to remote deployment sites and obtain their configurations automatically when powered up.

ADVANCED FEATURES

- ClientMatch technology eliminates sticky clients by continuously gathering session performance metrics and using this information to steer them to the best AP and radio.
- ARM technology delivers best-in-class RF management, including automatic transmit power and channel control with auto coverage-hole correction.
- Zero-touch provisioning as well as automated firmware upgrades and inventory management with the cloud-based Aruba Activate service.
- Spectrum analyzer remotely scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference.
- Security:
  - With an OpenDNS service subscription, Aruba Instant RAPs delivers integrated web filtering, malware and botnet protection to every device connected to the WLAN
  - Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys
  - SecureJack-capable for secure tunneling of wired Ethernet traffic
VPN configuration functionality enables the Instant AP to create a single VPN tunnel to an Aruba Mobility Controller in the data center. The Mobility Controller acts solely as a VPN end-point and does not supply the Instant AP with any configuration.

WIRELESS RADIO SPECIFICATIONS

- AP type: Dual-radio, dual-band 802.11n indoor
- Software-configurable dual radio supports 2.4 GHz and 5 GHz
- 2x2 MIMO with two spatial streams and up to 300 Mbps wireless data rate per radio
- Supported frequency band (country-specific restrictions apply):
  - 2.4000 GHz to 2.4835 GHz
  - 5.150 to 5.250 GHz
  - 5.250 to 5.350 GHz
  - 5.470 to 5.725 GHz
  - 5.725 to 5.875 GHz
- Available channels: Managed by Aruba Instant or Mobility Controller, depending upon the configured regulatory domain
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n: Orthogonal frequency-division multiplexing (OFDM)
  - 802.11n: 2x2 MIMO with two spatial streams
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (aggregate) transmit power (limited by local regulatory requirements):
  - 2.4-GHz band: +21 dBm
  - 5-GHz bands: +21 dBm
- Advanced Cellular Coexistence (ACC) feature to effectively deal with interference from cellular systems
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay diversity (CDD) for improved downlink RF performance
- Short guard interval for 20-MHz and 40-MHz channels
- Space-Time Block Coding (STBC) for increased range and improved reception

POWER

- Supported power sources:
  - 802.3af (PoE) or 802.3at (PoE+) on uplink Ethernet port
  - 12 volts from external power adapter (sold separately)
- Maximum power consumption:
  - Without USB device connected: 12.5 watts
  - With USB device: 15 watts

ENCRYPTED THROUGHPUT

- Max IPsec encrypted wired throughput = 20 Mbps

ANTENNAS

- RAP-108: Two RP-SMA connectors for external dual-band antennas
- RAP-109: Four integrated omni-directional antennas for 2x2 MIMO with maximum antenna gain of 5.0 dBi in both 2.4 GHz and 5 GHz. Built-in antennas are optimized for vertical orientation

INTERFACES

- Network:
  - ENET0 (uplink): One 10/100/1000BASE-T Ethernet (Rj-45), auto-sensing link speed and MDI/MDX
  - ENET1 (local): One 10/100BASE-T Ethernet (Rj-45), auto-sensing link speed and MDI/MDX
- One port for DC power connector
- One USB 2.0 port (Type A connector)
- One serial console interface (Rj-45)
- Visual indicators (LEDs):
  - Power/system status
  - Ethernet link status (2x)
  - Radio status (2x)
- Kensington security slot
- Reset button
MOUNTING
- Desktop (vertical): Using stand supplied with product
- Wall (vertical): Using optional wall mount accessory
- Ceiling (horizontal, not recommended for RAP-109): Using optional ceiling mount accessories

MECHANICAL
- Dimensions (unit):
  - Excluding desk mount:
    > 160 mm (W) x 43 mm (D) x 160 mm (H)
    > 6.30" (W) x 1.69" (D) x 6.30" (H)
  - With desk mount:
    > 181 mm (W) x 72 mm (D) x 160 mm (H)
    > 7.13" (W) x 2.83" (D) x 6.30" (H)
- Weight (unit):
  - Excluding desk mount: 385 g (13.6 oz)
  - With desk mount: 460 g (16.2 oz)
- Dimensions (shipping)
  - 230 mm (W) x 220 mm (D) x 90 mm (H)
  - 9.06" (W) x 8.66" (D) x 3.5" (H)
  - Weight (shipping): 750 g (1.65 lbs)

ENVIRONMENTAL
- Operating:
  - Temperature: 0° C to +40° C (+32° F to +104° F)
  - Humidity: 5% to 93% non-condensing
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158° F)

REGULATORY
- FCC/ISED
- CE Marked
- RED Directive 2014/53/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- UL/IEC/EN 60950
- EN 60601-1-1 and EN 60601-1-2

For more country-specific regulatory information and approvals, please see your Aruba representative.
### RF PERFORMANCE TABLE

<table>
<thead>
<tr>
<th></th>
<th>Maximum transmit power (dBm) per transmit chain</th>
<th>Receiver sensitivity (dBm) per receive chain</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>802.11b 2.4 GHz</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Mbps</td>
<td>18.0</td>
<td>-92.0</td>
</tr>
<tr>
<td>2 Mbps</td>
<td>18.0</td>
<td>-92.0</td>
</tr>
<tr>
<td>5.5 Mbps</td>
<td>18.0</td>
<td>-90.0</td>
</tr>
<tr>
<td>11 Mbps</td>
<td>18.0</td>
<td>-88.0</td>
</tr>
<tr>
<td><strong>802.11g 2.4 GHz and 802.11a 5 GHz</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Mbps</td>
<td>18.0</td>
<td>-88.0</td>
</tr>
<tr>
<td>54 Mbps</td>
<td>16.0</td>
<td>-75.0</td>
</tr>
<tr>
<td><strong>802.11n HT20 2.4 GHz and 5 GHz</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCS0/8</td>
<td>18.0</td>
<td>-88.0</td>
</tr>
<tr>
<td>MCS7/15</td>
<td>14.0</td>
<td>-71.0</td>
</tr>
<tr>
<td><strong>802.11n HT40 2.4 GHz and 5 GHz</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCS0/8</td>
<td>18.0</td>
<td>-85.0</td>
</tr>
<tr>
<td>MCS7/15</td>
<td>14.0</td>
<td>-68.0</td>
</tr>
</tbody>
</table>

Maximum capability of the hardware provided. Maximum transmit power will be limited by local regulatory settings.
RAP-109 ANTENNA PATTERN PLOTS

Horizontal or azimuth plane (top view)

Elevation plane (front view)

Elevation plane (side view)
## ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RAP-100 Series Remote Access Points</strong></td>
<td></td>
</tr>
<tr>
<td>JW264A</td>
<td>Aruba RAP-108 (RW) 802.11a/b/g/n Dual 2x2:2 Radio Antenna Connectors Remote AP</td>
</tr>
<tr>
<td>JW267A</td>
<td>Aruba RAP-108 (US) 802.11a/b/g/n Dual 2x2:2 Radio Antenna Connectors Remote AP</td>
</tr>
<tr>
<td>JW265A</td>
<td>Aruba RAP-108 (IL) 802.11a/b/g/n Dual 2x2:2 Radio Antenna Connectors Remote AP</td>
</tr>
<tr>
<td>JW266A</td>
<td>Aruba RAP-108 (JP) 802.11a/b/g/n Dual 2x2:2 Radio Antenna Connectors Remote AP</td>
</tr>
<tr>
<td>JW270A</td>
<td>Aruba RAP-109 (RW) 802.11a/b/g/n Dual 2x2:2 Radio Integrated Antenna Remote AP</td>
</tr>
<tr>
<td>JW273A</td>
<td>Aruba RAP-109 (US) 802.11a/b/g/n Dual 2x2:2 Radio Integrated Ant Remote AP</td>
</tr>
<tr>
<td>JW271A</td>
<td>Aruba RAP-109 (IL) 802.11a/b/g/n Dual 2x2:2 Radio Integrated Antenna Remote AP</td>
</tr>
<tr>
<td>JW272A</td>
<td>Aruba RAP-109 (JP) 802.11a/b/g/n Dual 2x2:2 Radio Integrated Antenna Remote AP</td>
</tr>
<tr>
<td><strong>RAP-100 Series Remote Access Points (FIPS/TAA)</strong></td>
<td></td>
</tr>
<tr>
<td>JW268A</td>
<td>Aruba RAP-108 (RW) FIPS/TAA-compliant 802.11a/b/g/n Dual 2x2:2 Radio Antenna Connectors Remote AP</td>
</tr>
<tr>
<td>JW269A</td>
<td>Aruba RAP-108 (US) FIPS/TAA-compliant 802.11a/b/g/n Dual 2x2:2 Radio Antenna Connectors Remote AP</td>
</tr>
<tr>
<td>JW274A</td>
<td>Aruba RAP-109 (RW) FIPS/TAA-compliant 802.11a/b/g/n Dual 2x2:2 Radio Integrated Antenna Remote AP</td>
</tr>
<tr>
<td>JW275A</td>
<td>Aruba RAP-109 (US) FIPS/TAA-compliant 802.11a/b/g/n Dual 2x2:2 Radio Integrated Antenna Remote AP</td>
</tr>
<tr>
<td>JY749A</td>
<td>Aruba RAP-109 (JP) FIPS/TAA-compliant 802.11a/b/g/n Dual 2x2:2 Radio Antenna Connectors</td>
</tr>
<tr>
<td>JY750A</td>
<td>Aruba RAP-109 (JP) FIPS/TAA-compliant 802.11a/b/g/n Dual 2x2:2 Radio Integrated Antenna</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td></td>
</tr>
<tr>
<td>JW057A</td>
<td>RAP-100-MNT RAP-100 Series AP Wall and Ceiling Mount Kit</td>
</tr>
<tr>
<td>JX989A</td>
<td>AP-AC-12V30A 12V/30W AC/DC Desktop Style 1.7/4.0/9.5mm Circular 90 Deg Plug DoE Level VI Adapter</td>
</tr>
<tr>
<td>JW627A</td>
<td>PD-3510G-AC 15.4W 802.3af PoE 10/100/1000Base-T Ethernet Midspan Injector</td>
</tr>
</tbody>
</table>