QuickSpecs

Overview

Aruba 103 Series Access Points

Cost effective dual-band coverage in medium- density enterprise Wi-Fi environments

Product overview

Multifunctional and affordable Aruba 103 series wireless access points (APs) maximize mobile device performance in medium-density Wi-Fi environments while minimizing interference from cellular networks.

These compact and cost-effective APs deliver wireless data rates up to 300 Mbps per radio employing 802.11n technology with two spatial MIMO streams.

The AP-103 and Instant IAP-103 models feature a 2.4-GHz and a 5-GHz radio, each with 2x2:2 MIMO and two integrated dual-band omni-directional downtilt antennas.

Features and Benefits

Advanced Cellular Coexistence (ACC)

Aruba's Advanced Cellular Coexistence (ACC) feature enables WLANs to perform at peak efficiency by minimizing interference from 3G/4G LTE networks, distributed antenna systems and commercial small cell/femtocell equipment.

WI-FI Client Optimization

To eliminate sticky client behavior while users roam, the Aruba 103 series APs feature Aruba's patented ClientMatch technology, which continuously gathers session performance metrics from mobile devices.
If a mobile device moves away from an AP or if RF interference impedes performance, ClientMatch automatically steers the device to a better AP.

Quality of Service for Lync

Aruba 103 series APs additionally support priority handling and policy enforcement for individual Microsoft Lync media on the same device, including encrypted videoconferencing, voice, chat and desktop sharing.

Choose your Operating Mode

Hewlett Packard Enterprise

Overview

Aruba 103 series APs offer a choice of operating modes to meet your unique management and deployment requirements

- **Controller-managed mode**. When managed by Aruba Mobility Controllers, the AP-103 offers centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding. Please refer to the **Aruba Mobility Controller** data sheets for more details.
- **Aruba Instant mode**. In Aruba Instant mode, a single IAP-103 automatically distributes the network configuration to other Instant APs in the WLAN. Simply power-up on Instant AP, configure it over the air, and plug in the other APs – the entire process takes about five minutes

For large installations across multiple sites, the Aruba Activate service significantly reduces deployment time by automating device provisioning, firmware upgrades, and inventory management. With Aruba Activate, Instant APs are factory- shipped to any site and configure themselves when powered up.

If WLAN and network requirements change, a built-in migration path allows Aruba Instant APs to become part of a WLAN that is centrally managed by a Mobility Controller.

Advanced Features

- Spectrum analysis
    - Capable of part-time or dedicated air monitoring, the spectrum analyzer remotely scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference
- Security
    - Integrated wireless intrusion protection offers thread protection and mitigation, and eliminates the need for separate RF sensors and security appliances
    - IP reputation and security services identify, classify, and block malicious files, URL and IPs, providing comprehensive protection against advanced online threats
    - Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys
    - SecureJack-capable for secure tunneling of wired Ethernet traffic

Operating Modes

- 802.11a/b/g/n Aruba Instant AP
- 802.11a/b/g/n Mobility Controller-managed AP
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer
- Secure enterprise mesh
- Remote AP (RAP) when used with a Mobility Controller

Wireless Radio Specifications

- AP type: Indoor, dual radio, 5-GHz and 2.4-GHz 802.11n 2x2:2
- Software-configurable dual radio supports 5-GHz (Radio 0) and 2.4-GHz (Radio 1)
- 2x2 MIMO with two spatial streams and up to 300 Mbps wireless data rate
- Supported frequency bands (country-specific restrictions apply):
    - 2.4000 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 5.850 GHz
- Support for up to 255 associated client devices per radio, and up to 16 BSSIDs per radio
- Available channels: Dependent on configured regulatory domain
- Dynamic frequency selection (DFS) optimizes the use of available RF spectrum
- Supported radio technologies:

Overview

- 802.11b: Direct-sequence spread-spectrum (DSSS)
- 802.11a/g/n: Orthogonal frequency-division multiplexing (OFDM)
- 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, conducted total) transmit power (limited by local regulatory requirements):
    - 2.4-GHz band: +21 dBm (18 dBm per chain)
    - 5-GHz band: +21 dBm (18 dBm per chain)
- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) 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
- Low-density parity check (LDPC) for high-efficiency error correction and increased throughput
- Supported data rates (Mbps):
    - 802.11b: 1, 2, 5.5, 11
    - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
    - 802.11n: 6.5 to 300 (MCS0 to MCS15)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11n packet aggregation: A-MPDU, A-MSDU

Power

- Maximum power consumption: 9.5W (POE) or 8W (DC)
- Power sources sold separately
- Direct DC source: 12 Vdc nominal, +/- 5%
- Power over Ethernet (PoE): 48 Vdc (nominal) 802.3af or 802.3at-compliant source

Antennas

- Two integrated dual-band downtilt omni-directional antennas for 2x2 MIMO with maximum antenna gain of 4.0 dBi in 2.4 GHz and 4.5 dBi in 5 GHz. Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP. The downtilt angle for maximum gain is approximately 30 degrees.

Other Interfaces

- 10/100/1000BASE-T Ethernet network interface (RJ-45)
    - Auto-sensing link speed and MDI/MDX
    - 802.3az Energy Efficient Ethernet (EEE)
    - PoE-PD: 48 Vdc (nominal) 802.3af PoE or 802.3at PoE+
- DC power interface, accepts 1.7/4.0-mm center-positive circular plug with 9.5-mm length
- Serial console interface (proprietary; optional adapter cable available)
- Visual indicators (LEDs):
    - Power/system status
    - Ethernet link status (ENET)
    - Radio status (two; RAD0, RAD1)
- Kensington security slot
- Reset button

Mounting

Overview

- Included with AP:
    - Mounting brackets (2) for attaching to 9/16-inch or 15/16-inch T-bar drop-tile ceiling
- Spare mounting kit:
    - AP-220-MNT-C1: Aruba AP mount kit contains two ceiling-grid rail adapters for flat rails
- Optional mounting kits:
    - AP-220-MNT-C2: Aruba AP mount kit contains two ceiling-grid rail adapters for Interlude and Silhouette style rails
    - AP-220-MNT-W1: Aruba AP mount kit contains one basic flat-surface wall/ceiling mount bracket
    - AP-200-MNT-W2: Aruba AP mount kit contains one secure flat-surface wall/ceiling mount cradle

Mechanical

- Dimensions/weight (unit, excluding mount accessories):
    - 150 mm (W) x 150 mm (D) x 41.5 mm (H)
    - 5.9" (W) x 5.9" (D) x 1.63" (H)
    - 300 g (0.66 lbs)
- • Dimensions/weight (shipping):
    - 192 mm (W) x 178 mm (D) x 68 mm (H)
    - 7.6" (W) x 7.0" (D) x 2.68" (H)
    - 500 g (1.10 lbs)

Environmental

- Operating:
    - Temperature: 0° C to +40° C (+32° F to +104° F)
    - Humidity: 5% to 95% non-condensing
- Storage and transportation:
    - Temperature: -40° C to +70° C (-40° F to +158° F)

Regulatory

- FCC/Industry of Canada
- CE Marked
- R&TTE Directive 1995/5/EC
- Low Voltage Directive 72/23/EEC
- EN 300 328
- EN 301 489
- EN 301 893
- 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.

Regulatory Model Number

- AP-103 and IAP-103: APIN0103

Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating

Overview

- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n

Warranty

- **<u>Limited lifetime warranty</u>**

Minimum software Versions

- ArubaOS 6.4.0.0
- Aruba InstantOS 4.1.0.0 (planned availability mid 2014)

Configuration

Ordering Guide

Step 1: Select AP Model

Description	Part Number
Controller-Managed Access Points	
Aruba AP-103 802.11n Dual 2x2:2 Radio Integrated Antenna AP	JW156A
Aruba Instant Access Points	
Aruba Instant IAP-103 (RW) 802.11n Dual 2x2:2 Radio Integrated Antenna AP	JW190A
Aruba Instant IAP-103 (US) 802.11n Dual 2x2:2 Radio Integrated Antenna AP	JW191A
Aruba Instant IAP-103 (JP) 802.11n Dual 2x2:2 Radio Integrated Antenna AP	JW189A
Aruba Instant IAP-103 (IL) 802.11n Dual 2x2:2 Radio Integrated Antenna AP	JW188A
Aruba Instant IAP-103 (EG) 802.11n 2x2:2 Dual Radio Integrated Antenna AP	JY855A

NOTE: All models ship with ceiling-rail adapters (for flat rails) in the box.

Step 2: Add Powering Accessories (Optional)

Description	Part Number
Select one of the following:	
PD-3510G-AC 15.4W 802.3af PoE 10/100/1000Base-T Ethernet Midspan Injector	JW627A
AP-AC-12V30A 12V/30W AC/DC Desktop Style 1.7/4.0/9.5mm Circular 90 Deg Plug DoE Level VI Adapter	JX989A
AP-DC-CAR 12V/18W Indoor AP Car Power US Only Adapter Kit	JW631A
Select three-prong AC power cord for injector or AC adapter (no power cable needed for universal adapter):	
PC-AC-ARG Argentina 220V AC 10A 2-meter AC Power Cord	JW113A
PC-AC-AUS Australian AC Power Cord	JW114A
PC-AC-BR Brazil AC Power Cord	JW115A
PC-AC-CHN China AC Power Cord	JW116A
PC-AC-DEN Denmark 220V AC 10A 2-meter AC Power Cord	JW117A
PC-AC-EC Continental European/Schuko AC Power Cord	JW118A
PC-AC-IN India AC Power Cord	JW119A
PC-AC-IL Israel 250V AC 10A 2-meter AC Power Cord	JW120A
PC-AC-IT Italian AC Power Cord	JW121A
PC-AC-JP Japanese AC Power Cord	JW122A
PC-AC-KOR Korea AC Power Cord	JW123A
PC-AC-NA North America AC Power Cord	JW124A
PC-AC-SWI Switzerland 220V AC 10A 2-meter AC Power Cord	JW125A
PC-AC-TW Taiwan AC Power Cord	JW126A
PC-AC-UK UK AC Power Cord	JW127A
PC-AC-ZA South Africa 250V AC 10A 2-meter AC Power Cord	JW128A

Step 3: Add Mount Accessories (Optional)

Description	Part Number
AP-220-MNT-C2 2x Ceiling Grid Rail Adapter for Interlude and Silhouette Mt Kit	JW045A
AP-MNT-CM1 Industrial Grade Indoor Access Point Metal Suspended Ceiling Rail Mount Kit	JX961A
AP-220-MNT-W1 Flat Surface Wall/Ceiling Black AP Basic Flat Surface Mount Kit	JW046A
AP-220-MNT-W1W Flat Surface Wall/Ceiling White AP Basic Flat Surface Mount Kit	JW047A
AP-200-MNT-W2 AP AP-200 Series Flat Surface Mount Kit	JW038A
AP-200-MNT-W3 White Low Profile Box Style Secure Small AP Flat Surface Mount Kit	JY705A

Configuration

AP-200-MNT-W3 White Low Profile Box Style Secure Small AP Flat Surface Mount Kit   JY705A

Step 4: Add Other (Optional)

Description	Part Number
AP-CBL-SER AP Proprietary DB9 Female Serial Adapter Cable	JW071A

Technical Specifications

Rf Performance Table		
	Maximum transmit power (dBm) per transmit chain	**Receiver sensitivity (dBm) per receive chain**
2.4 GHz		
802.11b		
1 Mbps	18.0	-93.0
11 Mbps	18.0	-91.0
802.11g		
6 Mbps	18.0	-88.0
54 Mbps	16.0	-76.0
802.11n HT20		
MCS0/8	18.0	-88.0
MCS7/15	14.0	-73.0
802.11n HT40		
MCS0/8	18.0	-86.0
MCS7/15	14.0	-70.0
5 GHz		
802.11b		
6 Mbps	18.0	-92.0
54 Mbps	16.0	-76.0
802.11b		
6 Mbps	18.0	-92.0
54 Mbps	16.0	-76.0

Technical Specifications

802.11n HT20		
MCS0/8	18.0	-92.0
MCS7/15	14.0	-73.0
802.11n HT40		
MCS0/8	18.0	-89.0
MCS7/15	14.0	-69.0

Maximum capability of the hardware provided. Maximum transmit power is limited by local regulatory settings
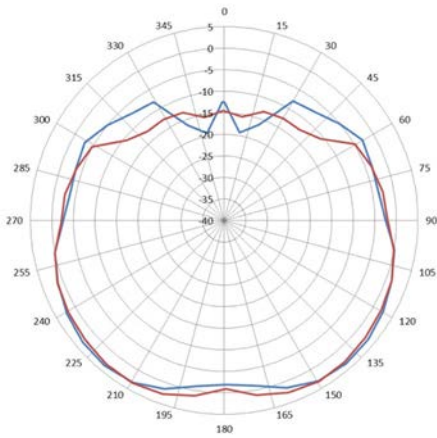
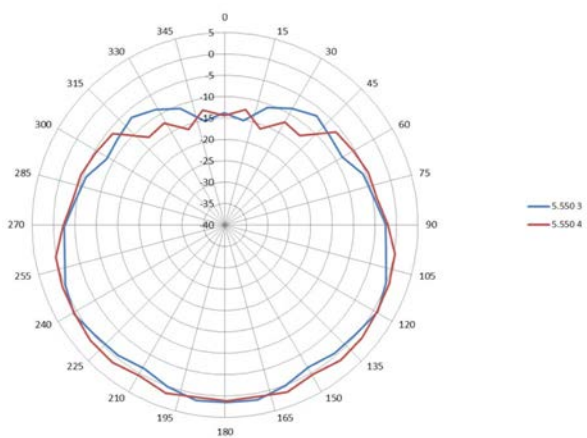**Horizontal or Azimuth plane (top view)**
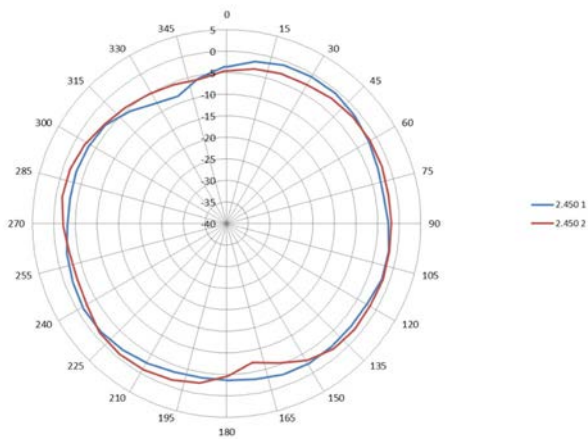
2.450 GHz
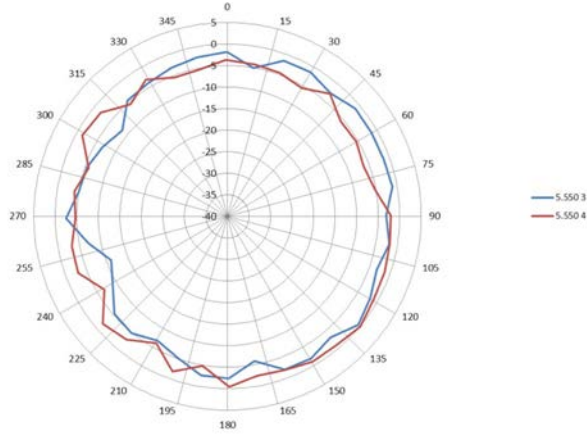
5.550 GHz
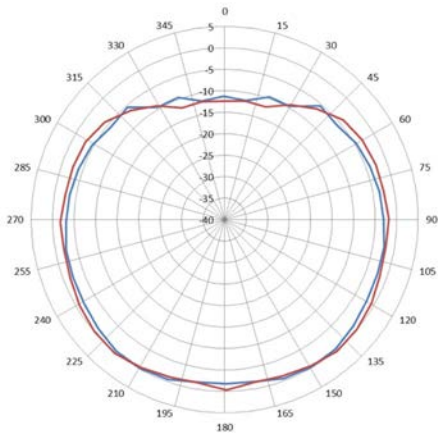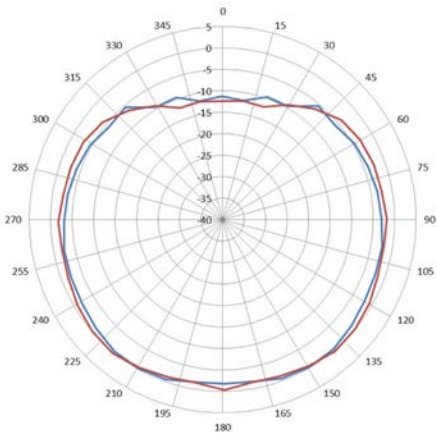
Elevation plane (side view, 0 degrees angle)

2.450 GHz

5.550 GHz

Elevation plane (side view, 90 degrees angle)

Technical Specifications

2.450 GHz

5.550 GHz

Summary of Changes

Date	Version History	Action	Description of Change
06-Mar-2017	From Version 2 to 3	Changed	Updates made on Configuration section
07-Nov-2016	From Version 1 to 2	Added	Models added: JY855A
01-Nov-2016	Version 1	Created	Document creation.

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