

DATA SHEET

ARUBA INSTANT 103/ HP 103 INSTANT ACCESS POINT

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

Multifunctional and affordable Instant 103 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.

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

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 Instant 103 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

Instant 103 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.



BEST-IN-CLASS RF MANAGEMENT

All Aruba APs include Adaptive Radio Management™ technology, which is essential to creating the most reliable, high-performance WLANs. ARM™ manages the 2.4-GHz and 5-GHz radio bands to optimize Wi-Fi client performance and ensures that APs stay clear of RF interference.

Instant 103 APs can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection, VPN tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available.

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.

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 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
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer
- Secure enterprise mesh

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:
 - 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

- Included with AP:
 - Mounting brackets (2) for attaching to 9/16-inch or 15/16-inch T-bar drop-tile ceiling

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

- APIN0103

CERTIFICATIONS

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n

WARRANTY

- [Limited lifetime warranty](#)

MINIMUM SOFTWARE VERSIONS

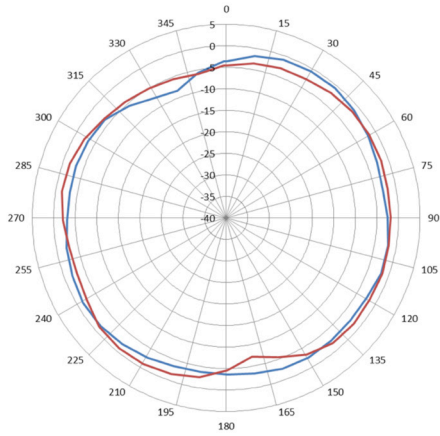
- Aruba InstantOS™ 4.1.0.0

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		
802.11a		
6 Mbps	18.0	-92.0
54 Mbps	16.0	-76.0
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.

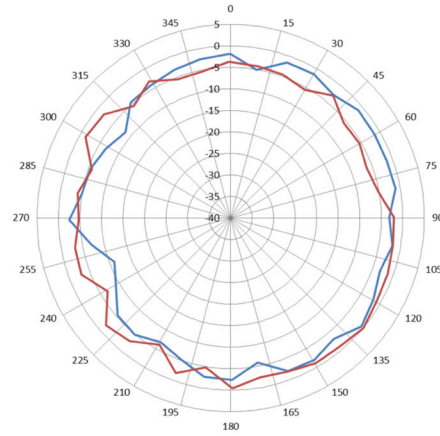
ANTENNA PATTERN PLOTS

Horizontal or Azimuth plane (top view)



2.450 GHz

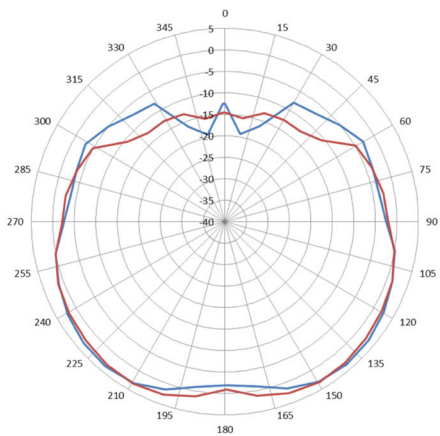
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— 2.450.2



5.550 GHz

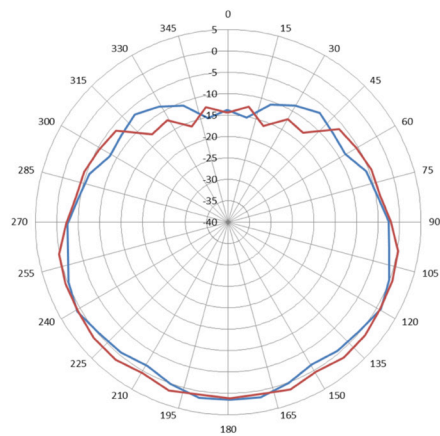
— 5.550.3
— 5.550.4

Elevation plane (side view, 0 degrees angle)



2.450 GHz

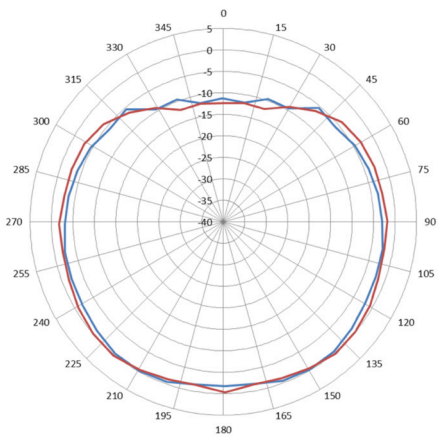
— 2.450.1
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5.550 GHz

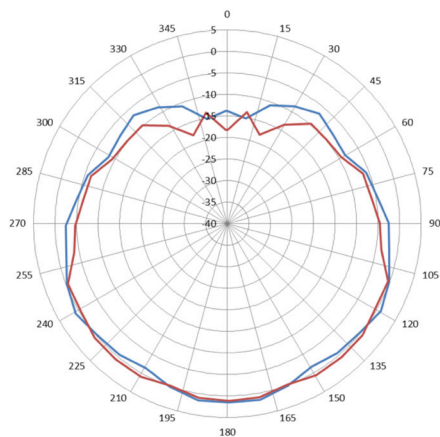
— 5.550.3
— 5.550.4

Elevation plane (side view, 90 degrees angle)



2.450 GHz

— 2.450.1
— 2.450.2



5.550 GHz

— 5.550.3
— 5.550.4

ORDERING INFORMATION

Part Number	Description
Access Points	
JL188A	HP 103 Instant Dual Radio 802.11n (WW) Access Point
JL189A	HP 103 Instant Dual Radio 802.11n (US) Access Point
Accessories	
JL017A	HP 3xx Cloud-Managed Access Point Universal Power Supply
JL018A	HP 350 Cloud-Managed Access Point Wall Mount Kit
J9407B	HP 1-port Power Injector



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