

## DATA SHEET

# ARUBA 203H HOSPITALITY ACCESS POINT

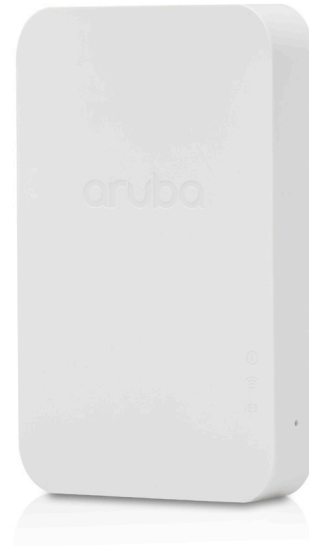
Cost-effective 802.11ac access point for branch offices and hospitality environments

This cost-effective 802.11ac access point with single or dual radio mode delivers high performance Wi-Fi networks for hospitality and branch offices, while minimizing costs for low to moderate density areas.

The compact Aruba 203H AP is software configurable to operate in either 1x1 dual radio mode, or 2x2 single radio mode. It supports up to 867Mbps in the 5GHz band or up to 400Mbps in the 2.4 GHz band in single radio 2x2 mode. In dual radio 1x1 mode, the maximum data rates for the 203H AP are up to 433Mbps in the 5GHz band and 200Mbps in the 2.4GHz band.

The 203H AP can be easily mounted to a standard data wall-box using the existing structured cabling system or converted to a desk mounted AP using an optional mounting kit. With its flexible deployment options, the 203H is designed to deliver high-speed Wi-Fi for cost-sensitive, medium-density environments. It ensures the most cost-effective Wi-Fi connectivity for indoor premises including hotel rooms, dormitories, small offices and remote workstations.

Powered by PoE, the 203H AP minimizes power consumption with rich features that further facilitates a highly efficient and reliable wireless network. The 802.11ac 203H AP combines wireless and wired access in a single compact device. The local Gigabit Ethernet port can securely attach wired devices to your network. Additionally, the USB host interface on the AP allows the plug-in of Aruba BLE radio modules to enable advanced location and indoor wayfinding, and proximity-based push notification services.



Single-gang wall-box (primary hospitality deployment)



Desk mount (primary remote/branch deployment, using optional desk mount accessory)

## UNIQUE BENEFITS

### Two devices in one

- The 203H ships with everything you need to deploy as a wall-mounted (hospitality) AP, attaching directly to a standard single-gang data wall-box. The 203H can also be easily converted to a desk mounted (remote) AP, using an optional accessory stand.

### Deploy with or without controller

- The 203H can be deployed in either controller-based (ArubaOS) or controllerless (InstantOS) deployment mode.

### New 802.11ac flexible radio architecture

- The 203H AP is software configurable to operate in either 1x1 dual radio mode, or 2x2 single radio dual-band mode.
- Supports up to 867Mbps in the 5GHz band (with 2SS/VHT80 clients) or up to 400Mbps in the 2.4 GHz band (with 2SS/VHT40 clients). In 1x1 dual radio mode, these max speeds are up to 433Mbps and 200Mbps respectively.

### Optional Bluetooth Low-Energy (BLE) radio module support

- Enables location-based services and other capabilities.
- USB BLE radio module securely attaches to AP

### RF Management

- Adaptive Radio Management (ARM) technology automatically assigns channel and power settings, provides airtime fairness and ensures that APs stay clear of all sources of RF interference to deliver reliable, high-performance WLANs
- The 203H can be configured to provide part-time or dedicated air monitoring for wireless intrusion protection, VPN tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available.

### Security

- Integrated wireless intrusion protection offers threat 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, URLs and IPs, providing comprehensive protection against advanced online threats.

### Intelligent app visibility and control

- AppRF technology leverages deep packet inspection to classify and block, prioritize or limit bandwidth for over 2,500 enterprise apps or groups of apps.

### Quality of service for unified communication apps

- Supports priority handling and policy enforcement for unified communication apps, including Microsoft Skype for Business with encrypted videoconferencing, voice, chat and desktop sharing.

## CHOOSE YOUR DEPLOYMENT AND OPERATING MODES

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

- The 203H AP is the unified AP that supports both controller-based and controllerless deployment modes, providing maximum flexibility
- Controller-based mode: When deployed in conjunction with an Aruba Mobility Controller, Aruba APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding.
- Controllerless (Instant) mode: The controller function is virtualized in a cluster of APs in Instant mode. As the network grows and/or requirements change, Instant deployments can easily migrate to controller-based mode.
- Remote AP (RAP) mode for branch deployments
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Secure enterprise mesh

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, APs in Instant mode can configure themselves when powered up.

## 203H ACCESS POINT SPECIFICATIONS

- Unified flexible radio 802.11ac 2x2:2SS hospitality and branch AP with internal antennas
- Supports wall-box and desk mount deployments

## WI-FI RADIO SPECIFICATIONS

- AP type: Indoor, flexible radio:
  - 5GHz 802.11ac 2x2 MIMO OR 2.4GHz 802.11n 2x2 MIMO<sup>1</sup>, or
  - 5GHz 802.11ac 1x1 AND 2.4GHz 802.11n 1x1<sup>1</sup>
- Software-configurable radio supports 5GHz (Radio 0) and/or 2.4GHz (Radio 1)
- 5GHz: Two spatial stream Single User (SU) MIMO for up to 867Mbps wireless data rate to individual 2x2 VHT80 client devices
- 2.4GHz: Two spatial stream Single User (SU) MIMO for up to 400Mbps wireless data rate to individual 2x2 VHT40 client devices (300Mbps for HT40 802.11n client devices)
- Support for up to 32 associated client devices per radio, and up to 8 BSSIDs per radio
- Supported frequency bands (country-specific restrictions apply):
  - 2.400 to 2.4835GHz
  - 5.150 to 5.250GHz
  - 5.250 to 5.350GHz
  - 5.470 to 5.725GHz
  - 5.725 to 5.850GHz
- 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/ac: Orthogonal frequency-division multiplexing (OFDM)
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (conducted) transmit power (limited by local regulatory requirements):
  - 2.4GHz band: +18 dBm per chain, +21 dBm aggregate (2x2 mode)
  - 5GHz band: +16 dBm per chain, +19 dBm aggregate (2x2 mode)
  - Note: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) for improved downlink RF performance
- Short guard interval for 20MHz, 40MHz and 80MHz 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
- Transmit beam-forming (TxBF) for increased signal reliability and range (2x2 mode)
- Supported data rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n (2.4GHz): 6.5 to 300 (MCS0 to MCS15)
  - 802.11n (5GHz): 6.5 to 450 (MCS0 to MCS23)
  - 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2 for VHT20/40/80)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

## WI-FI ANTENNAS

- Two integrated dual-band moderately directional antennas for 2x2 MIMO with maximum individual antenna gain of 4.3dBi in 2.4GHz and 6.3dBi in 5GHz. Built-in antennas are optimized for vertical orientation of the AP. The horizontal beamwidth is roughly 120 degrees.
  - Combining the patterns of each of the antennas of the MIMO radios (in 2x2 mode), the peak gain of the effective per-antenna pattern is 3.8dBi in 2.4GHz and 4dBi in 5GHz.

<sup>1</sup> 256-QAM modulation (802.11ac) supported by the 2.4GHz radio as well

## OTHER INTERFACES

- Uplink: 10/100/1000BASE-T Ethernet (RJ-45, back)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
  - PoE-PD (input): 48 Vdc (nominal) 802.3af/at PoE
- Local: 10/100/1000BASE-T Ethernet (RJ-45, bottom)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
- Passive pass-through interface (two RJ-45, back and bottom)
  - USB host interface (Type A connector)
  - For Aruba LS-BT1 USB BLE radio modules only
- Visual indicators (LEDs):
  - Power/system status
  - Radio status
  - Local network port status
- Reset/LED control button ("paperclip access")
  - Factory reset (when activated during device power up)
  - LED control: toggle off/normal
- Serial console interface (custom, uUSB physical jack)

## ENCRYPTED THROUGHPUT

- Maximum IPsec encrypted wired throughput: 20Mbps

## POWER SOURCES AND CONSUMPTION

- The AP is powered through Power over Ethernet (PoE)
- An optional PoE power injector is sold separately
- Power over Ethernet (PoE): 48 Vdc (nominal) 802.3af/802.3at compliant source
- Maximum (worst-case) power consumption: 7.4W
- Includes up to 100mW for an attached USB BLE module
- Maximum (worst-case) power consumption in idle mode: 3.9W

## MOUNTING

- The AP ships with a mounting plate to attach the AP to a single-gang wall-box (most international variations covered). The AP securely attaches to the plate; a custom security tool to remove the AP from the plate ships with the product.
- Several optional mount kits are available to attach the AP to a dual-gang wall-box, directly to the wall, or to support desk mounting.

## MECHANICAL

- Dimensions/weight (unit, including single-gang wall box mount plate):
  - 86mm (W) x 26.5mm (D) x 140mm (H)
  - 225g
- Dimensions/weight (shipping):
  - 115mm (W) x 47mm (D) x 165mm (H)
  - 290g

## 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/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.

## RELIABILITY

- MTBF: 780,000 hours (89 years) at +25C operating temperature

## REGULATORY MODEL NUMBER

- AP-203H-xx (all variants): APINH203

## CERTIFICATIONS

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

## WARRANTY

- [Aruba limited lifetime warranty](#)

## MINIMUM SOFTWARE VERSIONS

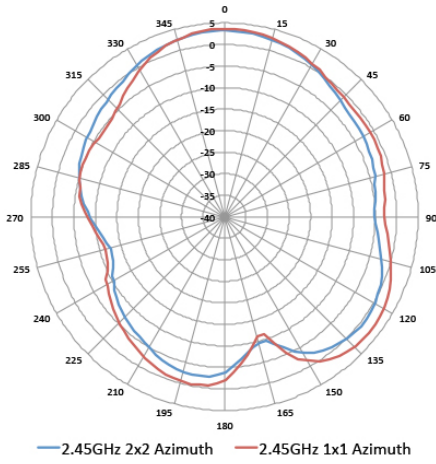
- ArubaOS™: 6.5.2.0/8.2.0.0
- InstantOS™: 6.5.3.0/8.2.0.0

<b>RF PERFORMANCE TABLE</b>		
	<b>Maximum transmit power (dBm) per transmit chain</b>	<b>Receiver sensitivity (dBm) per receive chain</b>
<b>2.4 GHz</b>		
<b>802.11b</b>		
1 Mbps	18.0	-92.0
11 Mbps	18.0	-88.0
<b>802.11g</b>		
6 Mbps	18.0	-88.0
54 Mbps	18.0	-73.0
<b>802.11n HT20</b>		
MCS0/8	17.0	-88.0
MCS7/15	17.0	-71.0
<b>802.11n HT40</b>		
MCS0/8	17.0	-85.0
MCS7/15	17.0	-68.0
<b>5 GHz</b>		
<b>802.11a</b>		
6 Mbps	16.0	-88.0
54 Mbps	16.0	-72.0
<b>802.11n HT20</b>		
MCS0/8	16.0	-88.0
MCS7/15	15.0	-70.0
<b>802.11n HT40</b>		
MCS0/8	16.0	-85.0
MCS7/15	16.0	-67.0
<b>802.11ac VHT20</b>		
MCS0	16.0	-88.0
MCS8	15.0	-65.0
<b>802.11ac VHT40</b>		
MCS0	16.0	-85.0
MCS9	13.0	-62.0
<b>802.11ac VHT80</b>		
MCS0	16.0	-82.0
MCS9	13.0	-59.0

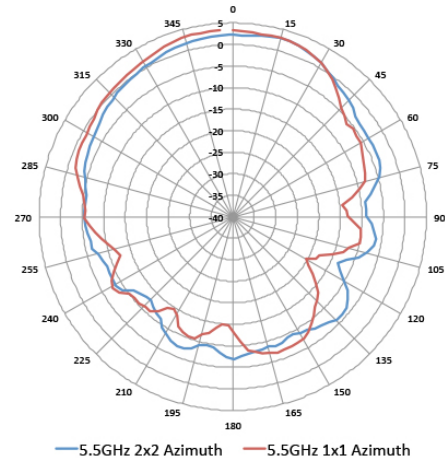
Table shows the maximum capability of the hardware provided (excluding antenna gain). Maximum transmit power is limited by local regulatory settings.

### ANTENNA PATTERN PLOTS

Horizontal or azimuth plane (looking at the top of the AP, front facing up)

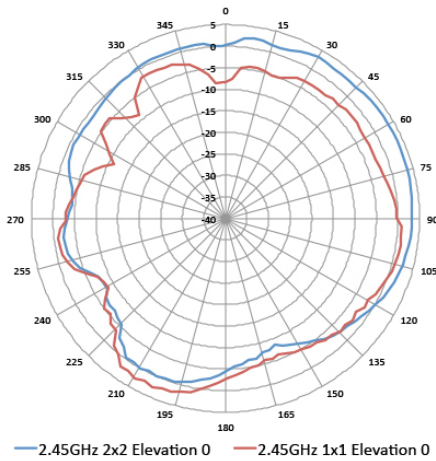


2.45 GHz

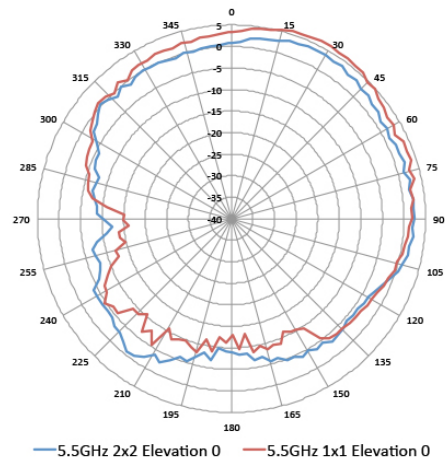


5.5 GHz

Elevation plane 0 (looking at the side of the AP, front facing to the right)

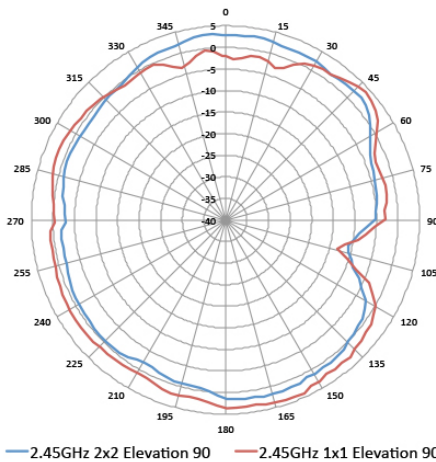


2.45 GHz

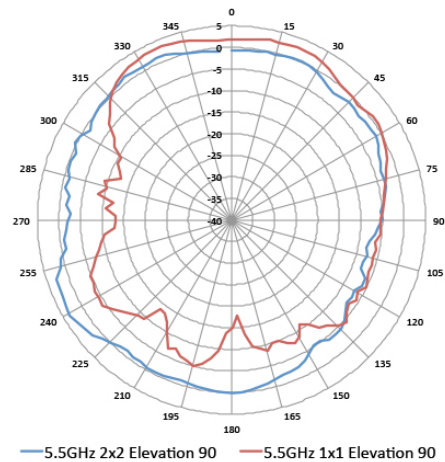


5.5 GHz

Elevation plane 90 (looking at the front of the AP)



2.45 GHz



5.5 GHz

ORDERING INFORMATION	
Part Number	Description
<b>203H Series Access Points</b>	
JY693A	Aruba AP-203H (RW) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY694A	Aruba AP-203H (RW) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY695A	Aruba AP-203H (US) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY696A	Aruba AP-203H (US) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY697A	Aruba AP-203H (JP) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY698A	Aruba AP-203H (JP) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY699A	Aruba AP-203H (IL) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY700A	Aruba AP-203H (IL) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY974A	Aruba AP-203H (EG) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
JY975A	Aruba AP-203H (EG) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas
<b>Mount Kits</b>	
JY701A	AP-203H-MNT1 Kit with Spare Single-gang Wall-box Mount Adapter for 203H Series AP
JY703A	AP-203H-MNTW Kit with Optional Wall or Dual-gang Box Mount Adapter for 203H Series AP
JY704A	AP-203H-MNTD Kit with Optional Desk Mount Adapter for 203H Series AP
<b>USB BLE Radio Module</b>	
JW315A	Aruba LS-BT1USB-5 Bluetooth 5pk USB
JW316A	Aruba LS-BT1USB-50 Bluetooth 50pk USB
<b>Power Accessories</b>	
JW627A	PD-3501G-AC PoE midspan injector, 10/100/1000 802.3af (15.4W)
<b>Other Accessories</b>	
JY728A	AP-CBL-SERU Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable
JW072A	AP-CBL-ETH10 10-pk Short Ethernet Cable