Overview

Aruba 203H Series Hospitality Access Points

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

Product overview

This cost-effective IEEE 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 Unified Hospitality Access Point 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.

Features and Benefits

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 controller-less (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

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  - 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 thousands of applications in a range of categories.
- **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 Operating Mode

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 controller-less 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.
- Controller-less (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

WIFI Radio Specifications

- AP type: Indoor, flexible radio:
  - 5GHz 802.11ac 2x2 MIMO OR 2.4GHz 802.11n 2x2 MIMO1, or
  - 5GHz 802.11ac 1x1 AND 2.4GHz 802.11n 1x11
- 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):

[1] 256-QAM modulation (802.11ac) supported by the 2.4GHz radio as well

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  - 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: 6.5 to 300 (MCS0 to MCS15)
  - 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

WIFI 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.

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-BT1USB BLE radio modules only

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- 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)

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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 Numbers

- 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
- Aruba InstantOS™ 6.5.3.0/8.2.0.0

Configuration

Ordering Information

Step 1: Select AP model

Description	Part number	Comment
Aruba AP-203H (RW) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY693A	Add POE power source
Aruba AP-203H (RW) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY694A	Add POE power source
Aruba AP-203H (US) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY695A	Add POE power source
Aruba AP-203H (US) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY696A	Add POE power source
Aruba AP-203H (JP) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY697A	Add POE power source
Aruba AP-203H (JP) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY698A	Add POE power source
Aruba AP-203H (IL) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY699A	Add POE power source
Aruba AP-203H (IL) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY700A	Add POE power source
Aruba AP-203H (EG) Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY974A	Add POE power source
Aruba AP-203H (EG) FIPS/TAA Flex-radio 802.11ac 2x2 Unified Hospitality AP with Internal Antennas	JY975A	Add POE power source

NOTE: All models ship with a single gang wall-box mount bracket in the box
NOTE: All models are orderable in multiples of 10 units only

Step 2: Add powering accessories (optional)

Description	Part number	Comment
PD-3501G-AC POE midspan injector, 10/100/1000 802.3af (15.4W)	JW627A	Add AC power cord
Add 3-prong (C13) AC power cord for POE injector or AC adapter:		
PC-AC-ARG Argentina AC power cord (C13, 2m)	JW113A	
PC-AC-AUS Australia AC power cord (C13, 2m)	JW114A	
PC-AC-BR Brazil AC power cord (C13, 2m)	JW115A	
PC-AC-CHN China AC power cord (C13, 2m)	JW116A	
PC-AC-DEN Denmark AC power cord (C13, 2m)	JW117A	
PC-AC-EC Europe AC power cord (C13, 2m)	JW118A	
PC-AC-IN India AC power cord (C13, 2m)	JW119A	
PC-AC-IL Israel AC power cord (C13, 2m)	JW120A	
PC-AC-IT Italy AC power cord (C13, 2m)	JW121A	
PC-AC-JPN Japan AC power cord (C13, 2m)	JW122A	
PC-AC-KOR Korea AC power cord (C13, 2m)	JW123A	
PC-AC-NA North America AC power cord (C13, 2m)	JW124A	
PC-AC-SWI Switzerland AC power cord (C13, 2m)	JW125A	
PC-AC-TW Taiwan AC power cord (C13, 2m)	JW126A	
PC-AC-UK United Kingdom AC power cord (C13, 2m)	JW127A	

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PC-AC-ZA South Africa AC power cord (C13, 2m)	JW128A

Step 3: Add mount accessories (optional)

Description	Part number	Comment
AP-203H-MNT1 Kit with Spare Single-gang Wall-box Mount Adapter for 203H Series AP	JY701A	Spare for what ships with AP
AP-203H-MNTW Kit with Optional Wall or Dual-gang Box Mount Adapter for 203H Series AP	JY703A	
AP-203H-MNTD Kit with Optional Desk Mount Adapter for 203H Series AP	JY704A	

Step 4: Add USB BLE radio module (optional)

Description	Part number	Comment
Aruba LS-BT1USB-5 Bluetooth 5pk USB	JW315A	
Aruba LS-BT1USB-50 Bluetooth 50pk USB	JW316A	

Step 5: Add other accessories (optional)

Description	Part number	Comment
AP-CBL-SERU Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable	JY728A	Custom console port adapter

Technical Specifications

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

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

Summary of Changes

Date	Version History	Action	Description of Change
18-Dec-2017	From Version 4 to 5	Changed	Minor changes made on Features and Benefits
16-Oct-2017	From Version 3 to 4	Changed	Minor edits on Features and Benefits
27-Jun-2017	From Version 2 to 3	Changed	Features and Benefits updated
13-Feb-2017	From Version 1 to 2	Change	Changes made in Configuration section
06-Feb-2017	Version 1	Created	Document creation.

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