Overview

Aruba 203R Series Branch Access Points

802.11ac access point for home and small branch offices
The multifunctional Aruba 203R Remote AP delivers secure and fast IEEE 802.11ac wireless and wired network access to corporate resources for branch and home offices.

Unique in the industry, the compact Aruba 203R Unified Remote 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 when operating in single radio 2x2 mode. In dual radio 1x1 mode, the maximum data rates for the 203R AP are 433Mbps in the 5GHz band and 200Mbps in the 2.4GHz band.

The 203R AP offers a variety of enterprise-class features, including role-based network access, policy-based forwarding, and Adaptive Radio Management (ARM), which gives remote workers the same high-quality Wi-Fi experience they get at corporate headquarters. When additional capacity is desired, this low-cost 203R AP can be quickly added to an existing Aruba WLAN to improve network performance.

Managed by the Aruba Mobility Controller, the 203R AP supports centralized configuration, data encryption, policy enforcement and network services. It extends corporate resources to remote locations by establishing site-to-site VPN tunnels to the data center.

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 can configure themselves when powered up, slashing the cost and time to deploy wireless in remote branches and home offices.

Aruba 203R Series Branch Access Points

Standard Features

Unique Benefits

- **Deploy with or without controller**
  - The 203R can be deployed in either controller-based (ArubaOS) or controller-less (InstantOS) deployment mode.
- **New 802.11ac flexible radio architecture**
  - The 203R AP is software configurable to operate in either 1x1 dual radio mode, or 2x2 single radio 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 (5GHz) and 200Mbps (2.4GHz).
- **Built-in Bluetooth Low-Energy (BLE) radio**
  - Delivers location-based services for BLE-enabled mobile devices.
  - Enables management of your deployment of battery- powered Aruba Beacons.
- **Advanced Cellular Coexistence (ACC)**
  - Minimizes the impact from out-of-band interference from sources such as 3G/4G cellular networks.
- **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 203R 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.
  - Integrated Trusted Platform Module (TPM) for secure storage of credentials, certificates and keys.
- **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 deployment and operating modes

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

- The 203R 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

203R Series Remote Access Points Specifications

- Unified flexible radio 802.11ac remote AP with internal antennas.
- Supports wall-box and desk mount deployments.

Standard Features

IoT Platform Capabilities

Like all Aruba Wi-Fi 6 APs, the 203R Series provides integrated Bluetooth capabilities to enable Meridian and IoT-based location services, asset tracking, and mobile engagement services. For expanded use cases, an IoT expansion radio can be added to support the Zigbee protocol. These features allow organizations to leverage the AP as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources.

Other Interfaces

- Uplink: 10/100/1000BASE-T Ethernet (RJ-45, back)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
- Local: Two 10/100/1000BASE-T Ethernet (RJ-45, back)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
  - One port (E2): PoE-PSE (output): 48 Vdc (nominal) 802.3af PoE (AP-203RP models)
- Bluetooth Low Energy (BLE) radio
  - Up to 4dBm transmit power (class 2) and -93dBm receive sensitivity
  - Integrated antenna with moderately directional pattern and peak gain of 1dBi
- USB 2.0 host interface (Type A connector, top)
  - 3G/4G cellular modems
  - Device battery charging port
  - Capable of supplying up to 1A/5 watts of power to an attached device
- AC power interface, 2 prong IEC 60320-1 C8 receptacle (back)
- Visual indicators (LEDs, front):
  - Power/system status
  - Radio status
  - Local network port status (2x)
    - Includes PoE-PSE status (AP-203RP models)
- Reset/LED control button (“paperclip access”, bottom)
  - Factory reset (when activated during device power up)
  - LED control: toggle off/normal
- Serial console interface (custom, uUSB physical jack, bottom)

Minimum Software Versions

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

Mounting

- The AP supports desk mount without additional accessories. A cover ships with the AP to hide connectors, cables and product labels.
- The cover can be used to support wall mounted deployments as well.

Warranty

- **Aruba Limited lifetime warranty**

WIFI Antennas

- Two integrated dual-band omni-directional antennas for 2x2 MIMO with maximum individual antenna gain of 0.9dBi in 2.4GHz and 2.9dBi in 5GHz. Built-in antennas are optimized for vertical orientation of the AP.
  - Combining the patterns of each of the antennas of the MIMO radios, the peak gain of the effective per-antenna pattern is -1dBi in 2.4GHz and 0.9dBi in 5GHz.

Configuration Information

Step 1: Select AP Model

Remarks	Description	SKU
	Aruba AP-203R (RW) Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY712A
	Aruba AP-203R (RW) TAA Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY713A
	Aruba AP-203R (US) Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY714A
	Aruba AP-203R (US) TAA Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY715A
	Aruba AP-203R (JP) Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY716A
	Aruba AP-203R (JP) TAA Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY717A
	Aruba AP-203R (IL) Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY718A
	Aruba AP-203R (IL) TAA Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY719A
	Aruba AP-203R (EG) Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY976A
	Aruba AP-203R (EG) TAA Flex-radio 802.11ac 2x2 Unified Remote AP with Internal Antennas	JY977A
	Aruba AP-203RP (RW) Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY720A
	Aruba AP-203RP (RW) TAA Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY721A
	Aruba AP-203RP (US) Flex-radio 802.11ac 2x2 PoE Unified Remote AP and Internal Antennas	JY722A
	Aruba AP-203RP (US) TAA Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY723A
	Aruba AP-203RP (JP) Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY724A
	Aruba AP-203RP (JP) TAA Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY725A
	Aruba AP-203RP (IL) Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY726A
	Aruba AP-203RP (IL) TAA Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY727A
	Aruba AP-203RP (EG) Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY978A
	Aruba AP-203RP (EG) TAA Flex-radio 802.11ac 2x2 PoE Unified Remote AP with Internal Antennas	JY979A

Notes:
- Add AC power cord
- All models ship with a cable cover in the box, which can also be used as a wall mount bracket.

Step 2: Add powering accessories (optional)

AP-MOD-SERU Micro-USB TTL3.3V to RJ45 RS232 AP Console Adapter Module	R6Q99A
AP-CBL-SERU Micro-USB TTL3.3V to USB2.0 AP Console Adapter Cable	JY728A
Aruba AP-USB-ZB External USB based Dongle with Zigbee and BLE for AP	R2X45A
Aruba AP-USB-ZB 10-pk External USB based Dongle with Zigbee and BLE for AP	R2Y09A
Aruba AP-USB-ZB 50-pk External USB based Dongle with Zigbee and BLE for AP	R2Y10A

Notes: Custom console port adapter

Step 3:Add 2-prong (C7) AC power cord for Access Point

Remarks	Description	SKU
	HPE 1.8M C7 to AS/NZS 3112 Power Cord • Australia, New Zealand	J9869A
	HPE 1.8M C7 to BS 1363/A Power Cord • United Kingdom, Malaysia	J9870A
	HPE 1.8M C7 to CEE 7-xvi Power Cord • Europlug: Europe, Switzerland, Denmark, South Africa, Israel	J9871A
	HPE 1.8M C7 to CEI 23-50 Power Cord • Italy, Chile	J9872A
	HPE 1.8M C7 to CNS 690 TYP1 (1) Power Cord • Taiwan	J9873A
	HPE 1.8M C7 to GB 1002 Power Cord • China	J9874A

Configuration Information

HPE 1.8M C7 to IRAM 2063 Power Cord	J9875A
• Argentina	
HPE 1.8M C7 to IS 1293 Power Cord	J9876A
• India	
HPE 1.8M C7 to JIS C 8303 Power Cord	J9877A
• Japan	
HPE 1.8M C7 to KSC 8305 Power Cord	J9878A
• Korea	
HPE 1.8M C7 to NBR 14136 Fig7 Power Cord	J9879A
• Brazil	
HPE 1.8M C7 to NEMA 1-15P 125V Power Cord	J9880A
• North America	
HPE 1.8M C7 to NEMA 1-15P 250V Power Cord	J9881A
• Thailand	

Step 8: Add Software (Optional)

Remarks	Description	SKU
	Aruba Central AP Foundation 1 year Subscription E-STU	Q9Y58AAE
	Aruba Central AP Foundation 3 year Subscription E-STU	Q9Y59AAE
	Aruba Central AP Foundation 5 year Subscription E-STU	Q9Y60AAE
	Aruba Central AP Foundation 7 year Subscription E-STU	Q9Y61AAE
	Aruba Central AP Foundation 10 year Subscription E-STU	Q9Y62AAE
	Aruba Central AP Advanced 1yr Subscription E-STU	Q9Y63AAE
	Aruba Central AP Advanced 3yr Subscription E-STU	Q9Y64AAE
	Aruba Central AP Advanced 5yr Subscription E-STU	Q9Y65AAE
	Aruba Central AP Advanced 7yr Subscription E-STU	Q9Y66AAE
	Aruba Central AP Advanced 10yr Subscription E-STU	Q9Y67AAE
Notes:	Add the Central Cloud Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > Cloud Services	
	Aruba Central On-Premises AP Foundation 1 year Subscription E-STU	R6U63AAE
	Aruba Central On-Premises AP Foundation 3 year Subscription E-STU	R6U64AAE
	Aruba Central On-Premises AP Foundation 5 year Subscription E-STU	R6U65AAE
	Aruba Central On-Premises AP Foundation 7 year Subscription E-STU	R6U66AAE
	Aruba Central On-Premises AP Foundation 10 year Subscription E-STU	R6U67AAE
Notes:	Add the Central On-Prem Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > On-Prem Services	

Technical Specifications

RF Performance Table		
	Maximum transmit power (dBm) per transmit chain	**Receiver sensitivity (dBm) per receive chain**
802.11b 2.4GHz		
1Mbps	18.0	-95.0
11Mbps	18.0	-87.0
802.11g 2.4GHz		
6Mbps	18.0	-92.0
54Mbps	16.0	-75.0
802.11n HT20 2.4GHz		
MCS0/8	18.0	-91.0
MCS7/15	14.0	-73.0
802.11n HT40 2.4GHz		
MCS0/8	18.0	-89.0
MCS7/15	14.0	-70.0
802.11a 5GHz		
6Mbps	17.0	-91.0
54Mbps	16.0	-74.0
802.11n HT20 5GHz		
MCS0/8	17.0	-91.0
MCS7/15	14.0	-72.0
802.11n HT40 5GHz		
MCS0/8	16.0	-89.0
MCS7/15	14.0	-70.0
802.11ac VHT20 5GHz		
MCS0	16.0	-91.0
MCS8	13.0	-67.0
802.11ac VHT40 5GHz		
MCS0	16.0	-89.0
MCS9	12.0	-63.0
802.11ac VHT80 5GHz		
MCS0	16.0	-85.0
MCS9	12.0	-60.0

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

Technical Specifications

WIFI Radio Specifications

- AP type: Indoor, flex radio:
  - 5GHz 802.11ac 2x2 MIMO OR 2.4GHz 802.11n 2x2 MIMO
    Notes: 256-QAM modulation (802.11ac) supported by the 2.4GHz radio as well
  - 5GHz 802.11ac 1x1 AND 2.4GHz 802.11n 1x1
- 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 255 associated client devices per radio, and up to 16 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: +18 dBm per chain, +21 dBm aggregate (2x2 mode)
    Notes: Conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain
- 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 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
- 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

Encrypted Throughput

- Maximum IPsec encrypted wired throughput: 20Mbps

Technical Specifications

Mechanical

- Dimensions/weight (unit, with cable cover):
  - 155mm (W) x 50mm (D) x 95mm (H)
  - 320g (AP-203R), 340g (AP-203RP)
- Dimensions/weight (shipping):
  - 224mm (W) x 159mm (D) x 78mm (H)
  - 510g (AP-203R), 590g (AP-203RP)

Power Sources and Consumption

- The AP supports direct AC power: 90V – 265V, 47Hz – 63Hz.
  - Note that the unit does not include an AC power cord (IEC C7 plug). A compatible region-specific cord should be selected and added when ordering the AP.
- Maximum (worst-case) power consumption: 7.5W.
  - Excludes power consumed by external USB and/or PoE-PD device (and internal losses); this could add up to 6W for a 5W/1A USB device and up to 18W for a max load (15.4W) 802.3af PoE-PD device
- Maximum (worst-case) power consumption in idle mode: 4.6W.

Reliability

- MTBF at +25C operating temperature:
  - AP-203R: 324,000 hours (37 years)
  - AP-203RP: 308,000 hours (35 years)

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.

Regulatory Model Numbers

- AP-203R-xx (all variants): APINR203
- AP-203RP-xx (all variants): APINP203

Certifications

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

Summary of Changes

Date	Version History	Action	Description of Change
15-Mar-2021	Version 9	Changed	SKUs added in Configuration Information section.
08-Sep-2020	Version 8	Changed	Configuration Information section was updated. New SKUs were added.
07-Oct-2019	Version 7	Changed	Overview, Standard Features and Configuration Information were updated.
01-Oct-2018	Version 6	Changed	SKU descriptions updated.
18-Dec-2017	Version 5	Changed	Minor changes made on Features and Benefits
16-Oct-2017	Version 4	Changed	Minor edits on Features and Benefits
27-Jun-2017	Version 3	Changed	Features and Benefits updated
07-Apr-2017	Version 2	Changed	Minor edits on Overview and Configuration
06-Feb-2017	Version 1	New	New QuickSpecs

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