Overview

Aruba 303 Series Campus Access Points

Low-cost 802.11ac wave 2 enterprise connectivity

The affordable mid-range Aruba 303 Series campus access point delivers high performance 802.11ac with MU-MIMO (wave 2) for medium density enterprise environments. With the integrated BLE and supporting 802.3af power, the Aruba 303 Series AP enables enterprises to improve their work efficiency and productivity with the lowest TCO.

The compact Aruba 303 Series AP delivers a maximum concurrent data rate of 867 Mbps in the 5GHz band and 300 Mbps in the 2.4GHz band (for an aggregate peak data rate of 1.2Gbps). Featuring 2x2:2SS, the Aruba 303 is designed for medium device density environments, such as schools, retail branches, warehouses, hotels and enterprise offices, where the environment is cost sensitive.

Aruba 303 Series Campus Access Points

Standard Features

IoT platform capabilities

Like all Aruba Wi-Fi 6 APs, the 303 Series includes an integrated Bluetooth 5 and 802.15.4 radio (for Zigbee support) to simplify deploying and managing Meridian and IoT-based location services, asset tracking services, security solutions and IoT sensors. This allows organizations to leverage the AP as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources.

Unique Benefits

- Unified AP - deploy with or without controller
  - The 303 Series access points can be deployed in either controller-based (ArubaOS) or controller-less (InstantOS) deployment mode
- Dual Radio 2x2 802.11ac access point with Multi-User MIMO (wave 2)
  - Supports up to 867Mbps in the 5GHz band (with 2SS/VHT80 client devices) and up to 300Mbps in the 2.4GHz band (with 2SS/HT40 clients)
- Built-in Bluetooth Low-Energy (BLE) radio
  - Enables location based services with BLE-enabled mobile devices receiving signals from multiple Aruba Beacons at the same time
  - Enables asset tracking when used with Aruba Asset Tags
- Advanced Cellular Coexistence (ACC)
  - Minimizes interference from 3G/4G cellular networks, distributed antenna systems and commercial small cell/femtocell equipment
- Quality of service for unified communications applications
  - Supports priority handling and policy enforcement for unified communication apps, including Skype for Business with encrypted videoconferencing, voice, chat and desktop sharing
- Aruba AppRF technology leverages deep packet inspection to classify and block, prioritize or limit bandwidth for over 2,500 enterprise apps or groups of apps
- RF Management
  - Adaptive Radio Management (ARM) technology with AirMatch automatically assigns channel, width and power settings based on environment and client density. It also provides airtime fairness and ensures that APs stay clear of all sources of RF interference to deliver reliable, high-performance WLANs
  - The Aruba 303 Series Access Points 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
- Spectrum analysis
  - Capable of part-time or dedicated air monitoring, the spectrum analyzer remotely scans the 2.4GHz and 5GHz radio bands to identify sources of RF interference from HT20 through VHT80 operation
- Aruba Secure Infrastructure
  - Device assurance: Use of Trusted Platform Module (TPM) for secure storage of credentials and keys as well as secure boot
  - 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 les, URLs and IPs, providing comprehensive protection against advanced online threats
- Daisy-chain your wired network
  - Connect and power any network device (IP camera, IOT gateway, or even a second access point) to the E1 Ethernet port of the AP-303P. Simplify and cost-reduce the installation of multiple devices by sharing switch ports and cabling.

WI-FI Antennas

Standard Features

- AP-303: Internal antenna models.
  - Two vertically polarized dual-band downtilt omni-directional antennas for 2x2 MIMO with peak antenna gain of 3.3dBi (2.4GHz) and 5.9dBi (5GHz) per antenna.
  - The antennas are optimized for horizontal ceiling mounted orientation of the AP. The downtilt angle for maximum gain is roughly 30 degrees.
  - Combining the patterns of both antennas per radio, the peak gain of the average (effective) pattern is 2.1dBi in 2.4GHz and 4.6dBi in 5GHz.

Choose your Operating Mode

The Aruba 303 Series Access Points offer a choice of deployment and operating modes to meet your unique management and deployment requirements:

- The 303 Series AP is a 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 303 Series Access Points 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
- Spectrum analyzer (SA), dedicated or hybrid, for identifying sources of RF interference
- Secure enterprise mesh portal or point

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, the APs can be factory-shipped to any site and configure themselves when powered up.

Specifications

Hardware Variants

- AP-303 models: single Ethernet port
- AP-303P models: second Ethernet port with POE out.

Other interfaces

- E0: One 10/100/1000BASE-T Ethernet network interface (RJ-45)
  - Auto-sensing link speed and MDI/MDX
  - POE-PD: 48Vdc (nominal) 802.3af POE

- E1 (AP-303P models only): One 10/100/1000BASE-T Ethernet network interface (RJ-45)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
  - PoE-PSE (output): 48Vdc (nominal) 802.3af/at PoE

- DC power interface
- Bluetooth Low Energy (BLE) radio
- Visual indicators (tri-color LEDs): for system and radio status
  - Zigbee 802.15.4 radio (AP-303P models only)

- Reset button: factory reset (during device power-up), LED mode control (normal/off)
- Serial console interface (proprietary, USB physical jack)
- Kensington security slot

Standard Features

WI-FI Radio Specifications

- AP type: Indoor, dual radio, 5GHz 802.11ac 2x2 MIMO and 2.4GHz 802.11n 2x2 MIMO
- 5GHz (radio 0):
  - Two spatial stream Single User (SU) MIMO for up to 867Mbps wireless data rate to individual 2SS VHT80 client devices
  - Two spatial stream Multi User (MU) MIMO for up to 867Mbps wireless data rate to two 1SS MU-MIMO capable client devices simultaneously
- 2.4GHz (radio 1):
  - Two spatial stream Single User (SU) MIMO for up to 300Mbps wireless data rate to individual 2SS HT40 client devices
- Support for up to 256 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: BPSK, QPSK, CCK
  - 802.11a/g/n/ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5dBm
- Maximum (aggregate, conducted total) transmit power (limited by local regulatory requirements):
  - 2.4GHz band: +21dBm (18dBm per chain)
  - 5GHz band: +21dBm (18dBm per chain)

    Notes: conducted transmit power levels exclude antenna gain. For total (EIRP) transmit power, add antenna gain.
- Advanced Cellular Coexistence (ACC) minimizes the impact of 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)
  - 802.11n high-throughput (HT) support: HT20/40
  - 802.11ac very high throughput (VHT) support: VHT20/40/80
  - 802.11n/ac packet aggregation: A-MPDU, A-MSDU

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)

Standard Features

Power Sources and Consumption

- The AP supports direct DC power and Power over Ethernet (POE)
- When both power sources are available, DC power takes priority over POE
- Power sources are sold separately

AP-303 Models:

- Direct DC source: 12Vdc nominal, +/- 5%
- DC power interface accepts 2.1/5.5-mm center-positive circular plug with 9.5-mm length
- Power over Ethernet (PoE): 48Vdc (nominal) 802.3af compliant source
- Maximum (worst-case) power consumption: 10.1W (PoE) or 8.8W (DC)
- Maximum (worst-case) power consumption in idle mode: 4.2W (PoE) or 4.0W (DC)

AP-303P Models:

- Direct DC source: 48Vdc nominal, +/- 5%
- DC power interface accepts 1.35/3.5-mm center-positive circular plug with 9.5-mm length
- Power over Ethernet (PoE-PD) on E0: 48Vdc (nominal) 802.3af/at/bt compliant source
- PoE-PSE function on E1 disabled when powered by 802.3af PoE
- Maximum (worst-case) power consumption: 11.3 (PoE) or 11.5 (DC)
- Maximum (worst-case) power consumption in idle mode: 6.8 (PoE) or 7.0 (DC)
- Power consumption numbers exclude power to support PoE-PSE function on E1

Mounting

- The AP ships with a (black) mount clips to attach to a 9/16-inch or 15/16-inch flat T-bar drop-tile ceiling.
- Several optional mount kits are available to attach the AP to a variety of surfaces; see the Ordering Information section below for details

Mechanical

- Dimensions and weight (unit, excluding mount accessories):
  - 150mm (W) x 150mm (D) x 35mm (H) or 5.9" (W) x 5.9" (D) x 1.4" (H)
  - AP-303 models: 260g or 9.2oz
  - AP-303P models: 280g or 9.9oz
- Dimensions and weight (shipping):
  - 190mm (W) x 180mm (D) x 60mm (H) or 7.4" (W) x 7.0" (D) x 2.4" (H)
  - AP-303 models: 410g or 14.5oz
  - AP-303P models: 430g or 15.2oz

Reliability

- AP-303 models MTBF: 795khrs (91yrs) at +25C operating temperature
- AP-303P models MTBF: 518khrs (59yrs) at +25C operating temperature

Regulatory

- FCC/ISED
- CE Marked
- RED Directive 2014/53/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU

Standard Features

- UL/IEC/EN 60950
- EN 60601-1-1 and EN 60601-1-2

Regulatory Model Numbers

- AP-303: APIN0303
- AP-303P: APINP303

Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance (WFA) certified 802.11a/b/g/n/ac
- Wi-Fi Alliance certified (WFA) 802.11ac with Wave 2 features

Warranty

- **Aruba limited lifetime warranty**

Minimum Software Versions

- AP-303 models: ArubaOS and Aruba InstantOS 8.3.0.0
- AP-303P models: ArubaOS and Aruba InstantOS 8.4.0.0

Configuration Information

Build To Order: BTO is a standalone unit with no integration. BTO products ship standalone are not part of a CTO or Rack-Shippable solution.
Highest performance 802.11ax Enterprise Access Points for Extremely High-density Campus deployments

Step 1: Select AP Model

Remarks	Description	SKU
	303 Unified Access Points	
Notes:	Add POE or DC power source	
	Aruba AP-303 (EG) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP	JZ317A
	Aruba AP-303 (IL) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP	JZ318A
	Aruba AP-303 (JP) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP	JZ319A
	Aruba AP-303 (RW) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP	JZ320A
	Aruba AP-303 (US) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP	JZ321A
	303P Unified Access Points	
Notes:	Add POE or DC power source	
	Aruba AP-303P (EG) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R0G65A
	Aruba AP-303P (IL) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R0G66A
	Aruba AP-303P (JP) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R0G67A
	Aruba AP-303P (RW) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R0G68A
	Aruba AP-303P (US) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R0G69A
	303 Central Managed Unified Access Points	
	Aruba CM AP-303 (RW) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP	JZ320ACM
	Aruba CM AP-303 (US) Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP	JZ321ACM
	303P TAA Unified Access Points	
	Aruba AP-303P (EG) TAA Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R2H41A
	Aruba AP-303P (IL) TAA Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R2H42A
	Aruba AP-303P (JP) TAA Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R2H43A
	Aruba AP-303P (RW) TAA Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R2H44A
	Aruba AP-303P (US) TAA Dual 2x2:2 MU-MIMO Radio Internal Antennas Unified Campus AP Dual Ethernet	R2H45A
Notes:	All models ship with suspended ceiling rail adapter in the box (for 9/16" and 15/16" flat rails).	
	For all 303 AP:	
	Bypass Country Holds when either of the following CID numbers are present on the order:	
	OEM Customer: AGFA	
	a. CID: 830094828	

Configuration Information

Step 2: Add powering accessories (optional)

For 303, 303P, 303P TAA Std (Min 0 // max 1) User Selection (min 0 // max 1)

Remarks	Description	SKU
	Compatible with the AP-303 models	
Notes:	Add AC power cord	
	AP-POE-AFGE 1-Port GbE 802.3af 15.4W midspan injector	R6P68A
	Aruba PD-3510G-AC 15.4W 802.3af PoE 10/100/1000Base-T Ethernet Midspan Injector	JW627A
	AP-AC-12V30B 12V/30W AC/DC Desktop Style 2.1/5.5/9.5mm Circular 90 Deg Plug DoE Level VI Adapter	JX990A
	AP-AC2-12B 12V/36W AC/DC desktop style power adapter with type B connector	R3K00A
	Compatible with the AP-303P models	
Notes:	Add AC power cord	
	Aruba PD-3510G-AC 15.4W 802.3af PoE 10/100/1000Base-T Ethernet Midspan Injector	JW627A
Notes:	Use of this injector disables POE-PSE capability of AP-303P	
	AP-POE-ATSR 1-Port Smart Rate 802.3at 30W midspan injector	R6P67A
	Aruba PD-9001GR-AC 30W 802.3at PoE+ 10/100/1000 Ethernet Indoor Rated Midspan Injector	JW629A
	AP-AC2-48C 48V/50W AC/DC desktop style power adapter with type C connector	R3K01A
	Compatible with the AP-303C models	
	Aruba CM PD-3501G-AC 15.4W 802.3af PoE 10/100/1000Base-T Ethernet Midspan Injector	JW627ACM
	Aruba CM AP-AC-12V30B 12V/30W AC/DC desktop style power adapter with type B connector	JX990ACM
	Aruba CM AP-AC2-12B 12V/48W AC/DC desktop style power adapter with 2.1/5.5mm connector	R3K00ACM
	Add 3-prong AC power cord for injector or AC adapter:	
	PC-AC-ARG AC power cord 250V/10A 1.8m C13 to IRAM 2073	JW113A
	PC-AC-AUS AC power cord 250V/10A 1.8m C13 to AS3112	JW114A
	PC-AC-BR AC power cord 250V/10A 1.8m C13 to NBR 14136	JW115A
	PC-AC-CHN AC power cord 250V/10A 1.8m C13 to GB2099	JW116A
	PC-AC-DEN AC power cord 250V/10A 1.8m C13 to AFSNIT 107-2-D1	JW117A
	PC-AC-EC AC power cord 250V/10A 1.8m C13 to CEE7/7	JW118A
	PC-AC-IN AC power cord 250V/6A 1.8m C13 to IS1293	JW119A
	PC-AC-IL AC power cord 250V/10A 1.8m C13 to SI32	JW120A
	PC-AC-IT AC power cord 250V/10A 1.8m C13 to CEI 23-50	JW121A
	PC-AC-JPN AC power cord 125V/12A 1.8m C13 to JISC 8303	JW122A
	PC-AC-KOR AC power cord 250V/7A 1.8m C13 to KSC 8305	JW123A
	PC-AC-NA AC power cord 125V/10A 1.8m C13 to NEMA 5-15P	JW124A
	PC-AC-SWI AC power cord 220V/10A 1.8m C13 to SEV 1011	JW125A
	PC-AC-TW AC power cord 125V/7A 1.8m C13 to CNS 10917	JW126A
	PC-AC-UK AC power cord 250V/10A 1.8m C13 to BS1363	JW127A
	PC-AC-ZA AC power cord 250V/10A 1.8m C13 to SANS 164-1	JW128A

Configuration Information

Step 3: Add mount accessories (optional)

Compatible with the AP-303 and 303P models

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-W3 White Low Profile Box Style Secure Small Indoor AP Flat Surface Mount Kit	JY705A
AP-MNT-W4 White Low Profile Basic AP Flat Surface Mount Kit	Q9U25A

Compatible with the AP-303C models

Aruba CM AP-220-MNT-C2 2x Ceiling Grid Rail Adapter for Interlude and Silhouette Mt Kit	JW045ACM
Aruba CM AP-MNT-CM1 Metal Suspended Ceiling Rail Mount Kit	JX961ACM
Aruba CM AP-220-MNT-W1 Flat Surface Wall/Ceiling Black AP Basic Flat Surface Mount Kit	JW046ACM
Aruba CM AP-220-MNT-W1W Flat Surface Wall/Ceiling White AP Basic Flat Surface Mount Kit	JW047ACM
Aruba CM AP-200-MNT-W3 White Low Profile Box Style Secure Small AP Flat Surface Mount Kit	JY705ACM
Aruba CM AP-MNT-W4 White Low Profile Basic AP Flat Surface Mount Kit	Q9U25ACM

Notes: 303 AP Unit ships with basic suspended ceiling rail clips (JW044A)

Step 4: Add cosmetic snap-on cover (optional)

Compatible with the AP-303 and 303P models

AP-303-CVR-20 20-pack for AP-303 with Holes for LED Indicators White Non-glossy Snap-on Covers	JZ327A

Compatible with the AP-303C models

Aruba CM AP-303-CVR-20 20-pk White Non-glossy Snap-on Covers	JZ327ACM

Notes: One kit per 20 access points

Step 5: Add other accessories (optional)

Compatible with the AP-303 and 303P models

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

Compatible with the AP-303C models

Aruba CM AP-CBL-SERU AP console adapter cable for custom micro-USB console port	JY728ACM

Notes: Adapter cable for custom micro-USB AP console interface. Software driver is available on the HPE Aruba Support website

---

Step 6: Add spare parts (optional)

Compatible with 303, 303P and 303P TAA models

AP-220-MNT-C1 2x Ceiling Grid Rail Adapter for Basic Flat Rails Mount Kit	JW044A

Compatible with the AP-303C models

Aruba CM AP-220-MNT-C1 2x Ceiling Grid Rail Adapter for Basic Flat Rails Mount Kit	JW044ACM

Configuration Information

RF Performance Table		
	Maximum transmit power (dBm) per transmit chain	**Receiver sensitivity (dBm) per receive chain**
802.11b 2.4GHz		
1Mbps	18.0	-93.0
11Mbps	18.0	-87.0
802.11g 2.4GHz		
6Mbps	18.0	-90.0
54Mbps	16.0	-73.0
802.11n HT20 2.4GHz		
MCS0/8	18.0	-90.0
MCS7/15	14.0	-71.0
802.11n HT40 2.4GHz		
MCS0/8	18.0	-87.0
MCS7/15	14.0	-68.0
802.11a 5GHz		
6Mbps	18.0	-90.0
54Mbps	16.0	-73.0
802.11n HT20 5GHz		
MCS0/8	18.0	-90.0
MCS7/15	14.0	-71.0
802.11n HT40 5GHz		
MCS0/8	18.0	-87.0
MCS7/15	14.0	-68.0
802.11ac VHT20 5GHz		
MCS0	18.0	-90.0
MCS9	12.0	-67.0
802.11ac VHT40 5GHz		
MCS0	18.0	-87.0
MCS9	12.0	-62.0
802.11ac VHT80 5GHz		
MCS0	18.0	-84.0
MCS9	12.0	-59.0

Notes: Table shows the maximum hardware capability of the AP (excluding antenna and MIMO/MRC gain). Actual maximum transmit power may be limited below these numbers to ensure compliance with local regulatory requirements.

Summary of Changes

Date	Version History	Action	Description of Change
08-Sep-2020	Version 9	Changed	Configuration Information section was updated. Obsolete SKUs were removed.
04-May-2020	Version 8	Changed	Configuration Information section was updated.
09-Dec-2019	Version 7	Changed	Overview and Standard Features sections were updated.
04-Nov-2019	Version 6	Changed	Configuration Information section was updated. New SKUS were added
06-May-2019	Version 5	Changed	Configuration Information section was updated.
01-Oct-2018	Version 4	Added	SKUs added: R0G65A, R0G66A, R0G67A, R0G68A, R0G69A
07-May-2018	Version 3	Added	SKU added: Q9U25A
18-Dec-2017	Version 2	Changed	Multiple changes made on Technical Specifications
04-Dec-2017	Version 1	New	New QuickSpecs

Copyright

Make the right purchase decision. Contact our presales specialists.

Chat Email Call

Hewlett Packard Enterprise

To learn more, visit: **http://www.hpe.com/networking**

a00029143enw - 16100 - Worldwide - V9 - 08-September-2020