# QuickSpecs

### Overview

# **Aruba 330 Series Access Points**

The Aruba 330 Series access points provide the fastest gigabit data speeds and superb user experience for mobile devices and applications in a digital workplace. Designed with an integrated HPE Smart Rate port to scale up to 2.5Gbps Ethernet, the 330 Series allows enterprises to leverage their multi-gigabit Ethernet wired network infrastructures to eliminate bottlenecks.

Thanks to ClientMatch technology, ArubaOS enables the 330 series to automatically detect and classify 802.11ac Wave 2 capable mobile devices. This allows ClientMatch to automatically collect Wave 2 capable devices under a single Wave 2 radio so that performance benefits of multi-user MIMO can be realized — without the adverse effects of slower 802.11ac and traditional 802.11n capable mobile devices. This means increased network capacity and a boost in network efficiency.

With a maximum concurrent data rate of 1,733 Mbps in the 5 GHz band and 600 Mbps in the 2.4 GHz band (for an aggregate peak data rate of 2.3Gbps), the 330 Series APs deliver a best-in-class, next-generation 802.11ac Wi-Fi infrastructure that is ideal for lecture halls, auditoriums, public venues, and high-density office environments.

The high performance and high density 802.11ac 330 Series APs support 160 MHz channel bandwidth (VHT160), 4-stream multi-user MIMO (MU-MIMO) and 4 spatial streams (4SS).

They provide simultaneous multicast data transmission to multiple devices, maximizing data throughput and improving network efficiency.



**Aruba 330 Series Access Points** 



# **Standard Features**

# **Unique Benefits**

- Dual Radio 802.11ac access point with Multi-User MIMO
  - Supports up to 1,733 Mbps in the 5 GHz band (with 4SS/VHT80 or 2SS/VHT160 clients) and up to 600 Mbps in the 2.4 GHz band (with 4SS/HT40 clients)
- Antenna polarization diversity for optimized RF performance
  - Each 5 GHz radio chain has a switch and two antennas
    - Software controlled; Horizontally and vertically polarized
- HPE Smart Rate uplink port that scales up to 2.5Gbps
  - Supports up to 2.5Gpbs with NBase-T 802.3bz Ethernet compatibility
  - Backwards compatible with 100/1000Base-T
  - Adds support for hitless PoE failover between the HPE Smart Rate port and the secondary 1000Base-T port when both ports are powered
- Support for additional 5 GHz bands
  - Supports software upgrade to enable additional 5 GHz spectrum when governments expand available frequencies
- 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
- Advanced Cellular Coexistence (ACC)
  - Minimizes interference from 3G/4G cellular networks, distributed antenna systems and commercial small cell/femtocell equipment
- Quality of service for app visibility and control
  - 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 thousands of applications in a range of categories
- 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, highperformance WLANs
  - The Aruba 330 Series 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
- 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 from HT20 through VHT160 operation
- Aruba Secure Infrastructure
  - 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 and keys
  - SecureJack-capable for secure tunneling of wired Ethernet traffic
- Intelligent Power Monitoring (IPM)
  - Enables the AP to continuously monitor and report its actual power consumption and optionally make autonomous decisions to disable certain capabilities based on the amount of power available to the unit
  - Software configurable to disable capabilities in certain orders. For the 330 Series APs, by default, the USB
    interface will be the first feature to turn off if the AP power consumption exceeds the available power budget



# **Standard Features**

# **IoT Platform Capabilities**

Like all Aruba Wi-Fi 6 APs, the 330 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.

# **Specifications**

- AP-334 (controller-managed) and IAP-334 (Instant):
  - 5GHz 802.11ac 4x4 MIMO (1,733 Mbps max rate) and 2.4 GHz 802.11n 4x4 MIMO (600 Mbps max rate) radios, with a total of four dual-band RP-SMA connectors for external antennas
- AP-335 (controller-managed) and IAP-335 (Instant):
  - 5GHz 802.11ac 4x4 MIMO (1,733 Mbps max rate) and 2.4 GHz 802.11n 4x4 MIMO (600 Mbps max rate) radios, with a total of twelve integrated omni-directional downtilt dual- band antennas

# **Choose your Operating Mode**

The Aruba 330 Series APs offer a choice of operating modes to meet your unique management and deployment requirements.

- Controller-managed mode When managed by Aruba Mobility Controllers, Aruba 330 Series APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding.
- Aruba Instant mode In Aruba Instant mode, a single AP automatically distributes the network configuration to other Instant APs in the WLAN. Simply power-up one
- Instant AP, configure it over the air, and plug in the other APs the entire process takes about five minutes. If WLAN
  requirements change, a built-in migration path allows the 330 Series Instant APs to become part of a WLAN that is
  managed by a Mobility Controller.
- Remote AP (RAP) for branch deployments
- Air monitor (AM) for wireless IDS, rogue detection and containment
- Spectrum analyzer, dedicated or hybrid, for identifying sources of RF interference
- 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, the Instant APs are factory-shipped to any site and configure themselves when powered up.

# WI-FI Antennas

- AP-334/IAP-334: Four RP-SMA connectors for external dual band antennas. Internal loss between radio interface and external antenna connectors (due to diplexing circuitry): 2.3 dB in 2.4 GHz and 1.2 dB in 5 GHz.
- AP-335/IAP-335
  - Four integrated 2.4 GHz downtilt omni-directional antennas for 4x4 MIMO with maximum antenna gain of 4.3 dBi per antenna.
  - Each 5 GHz radio chain has both a vertically and a horizontally polarized antenna element; AP software
    automatically and dynamically selects the best set of elements for each data packet transmitted or received.
  - Eight integrated 5 GHz downtilt omni-directional antennas for 4x4 MIMO with maximum antenna gain of 5.4 dBi (vertical)/4.2 dBi (horizontal) per antenna.
  - Built-in antennas are optimized for horizontal ceiling mounted orientation of the AP. The downtilt angle for maximum gain is roughly 30 degrees.
  - The maximum gain of the combined (summed) antenna patterns for all elements operating in the same band is
     8.6 dBi in 2.4 GHz and 8.5 dBi (vertical)/8.1 dBi (horizontal) in 5 GHz

# Mounting

- The AP ships with two (black) mounting 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



# **Standard Features**

### Warranty

#### <u>Aruba Limited lifetime warranty</u>

### **Other Interfaces**

- One HPE Smart Rate port (RJ-45, maximum negotiated speed 2.5 Gbps)
  - Auto-sensing link speed (100/1000/2500BASE-T) and MDI/MDX
  - 2.5Gbps and 5Gbps speeds comply with NBase-T and 802.3bz specifications
  - PoE-PD: 48 Vdc (nominal) 802.3at PoE
- One 10/100/1000BASE-T Ethernet network interface (RJ-45)
  - Auto-sensing link speed and MDI/MDX
  - PoE-PD: 48 Vdc (nominal) 802.3at PoE
- DC power interface, accepts 1.35/3.5-mm center-positive circular plug with 9.5-mm length
- USB 2.0 host interface (Type A connector)
- Bluetooth Low Energy (BLE) radio
  - Up to 4 dBm transmit power (class 2) and -91 dBm receive sensitivity
  - Integrated antenna with roughly 30 degrees downtilt and peak gain of 5.1 dBi (AP-334/IAP-334) or 2.2 dBi (AP-335/IAP-335)
- Visual indicators (tri-color LEDs): for System and Radio status
- Reset button: factory reset (during device power up)
- Serial console interface (RJ-45, RS232)
- Kensington security slot

### **Minimum Software Versions**

- ArubaOS 6.5.0.0
- Aruba InstantOS 4.3.0.0

# **Configuration Information**

Step 1:	Select AP Model	
-	5 Description	SKU
	334/335 Controller-Managed Access Points	
	Aruba AP-334 802.11n/ac 4x4:4 MU-MIMO Dual Radio Antenna Connectors 2.5+1 GbE AP	JW799A
	Aruba AP-335 802.11n/ac 4x4:4 MU-MIMO Dual Radio Integrated Antenna 2.5+1 GbE AP	JW801A
	334/335 Instant Access Points	
	Aruba Instant IAP-334 (RW) 802.11n/ac Dual 4x4:4 MU-MIMO Radio Antenna Connectors 2.5+1 GbE AP	JW817A
	Aruba Instant IAP-334 (US) 802.11n/ac Dual 4x4:4 MU-MIMO Radio Antenna Connectors 2.5+1 GbE AP	JW819A
	Aruba Instant IAP-334 (JP) 802.11n/ac Dual 4x4:4 MU-MIMO Radio Antenna Connectors 2.5+1 GbE AP	JW816A
	Aruba Instant IAP-335 (RW) 802.11n/ac Dual 4x4:4 MU-MIMO Radio Integrated Antenna 2.5+1 GbE AP	JW823A
	Aruba Instant IAP-335 (US) 802.11n/ac Dual 4x4:4 MU-MIMO Radio Integrated Antenna 2.5+1 GbE AP	JW825A
	Aruba Instant IAP-335 (JP) 802.11n/ac Dual 4x4:4 MU-MIMO Radio Integrated Antenna 2.5+1 GbE AP	JW822A
	335 Central Managed Instant Access Points	
	Aruba CM Instant IAP-335 (RW) 802.11n/ac Dual 4x4:4 MU-MIMO Radio Integrated Antenna AP	JW823ACM
	Aruba CM Instant IAP-335 (US) 802.11n/ac Dual 4x4:4 MU-MIMO Radio Integrated Antenna AP	JW825ACM
	334/335 TAA Controller-Managed Access Points	114/0004
	Aruba AP-334 TAA-compliant 802.11n/ac Dual 4x4:4 MU-MIMO Dual Radio Ant Connectors 2.5+1 GbE AP	JW800A
	Aruba AP-335 TAA-compliant 802.11n/ac Dual 4x4:4 MU-MIMO Dual Radio Integrated Ant 2.5+1 GbE AP	JW802A
	334/335 TAA Instant Access Points	
	Aruba Instant IAP-334 (RW) TAA 802.11n/ac Dual 4x4:4 MU-MIMO Radio Ant Connectors 2.5+1 GbE AP	JW818A
	Aruba Instant IAP-334 (US) TAA 802.11n/ac Dual 4x4:4 MU-MIMO Radio Ant Connectors 2.5+1 GbE AP	JW820A
	Aruba Instant IAP-335 (RW) TAA 802.11n/ac Dual 4x4:4 MU-MIMO Radio Integrated Ant 2.5+1 GbE AP	JW824A
Matan	Aruba Instant IAP-335 (US) TAA 802.11n/ac Dual 4x4:4 MU-MIMO Radio Integrated Ant 2.5+1 GbE AP	JW826A
Notes:	<ul> <li>Add POE injector or AC adapter</li> <li>Add antenas if they are not integrated</li> </ul>	
Step 2	: Add Mount Accessories (Optional)	
Remark	s Description	SKU
	Compatible with the 334, 335 AP 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	JW040A JW047A
	-	
	AP-220-MNT-W3 White Low Profile Box Style Secure Large Indoor AP Flat Surface Mount Kit	JY706A
	AP-MNT-W4 White Low Profile Basic AP Flat Surface Mount Kit	Q9U25A
	Compatible with the 335C AP	
	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-220-MNT-W3 White Low Profile Box Style Secure Large AP Flat Surface Mount Kit	JY706ACM
	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-MNT-W4 White Low Profile Basic AP Flat Surface Mount Kit	Q9U25ACM
Notes:	Unit ships with basic suspended ceiling rail clips	

# Step 3: Add Powering Accessories (Optional)

Remarks Description	SKU
Compatible with the 334/335 AP models	
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



Notes:

# **Configuration Information**

	AP-AC2-48C 48V/50W AC/DC desktop style power adapter with 1.35/3.5mm connector	R3K01A		
	Compatible with the 335C AP models	TOTO I		
	Aruba CM PD-9001GR-AC 802.3at PoE+ 10/100/1000 Ethernet Indoor Rated Midspan Injector	JW629ACM		
	Aruba CM AP-AC2-48C 48V/50W AC/DC desktop style power adapter with 1.35/3.5mm connector	R3K01ACM		
Notes:	<ul> <li>Add AC power cable</li> </ul>			
	<ul> <li>Most devices are PoE powered from switch so these are optional</li> </ul>			
	<ul> <li>If this Power Supply is selected, bring in (Min 1 // Max 1) Localized power cord based on the Aruba Localization Menu</li> </ul>			
	Select three-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			
	PC-AC-IN AC power cord 250V/6A 1.8m C13 to IS1293			
	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		
Stop /.	Add Antonno Mount Kit (Onting)			
-	Add Antenna Mount Kit (Optional) Series Std (Min 0 // max 1) User Selection (min 0 // max 1)			
	Benes Sid (Min O // Max 1) Oser Selection (Min O // Max 1)	SKU		
	AP-ANT-MNT-4 AP-ANT-48 Azimuth and Elevation Adjustable Mount Kit	JW021A		

	AP-ANT-MNT-5 AP-ANT-45 Azimuth and Elevation Adjustable Mount Kit
Notes:	Compatible with antenna AP-ANT-45

Compatible with antenna AP-ANT-48

JW022A

Notes:

# **Configuration Information**

#### Step 5: Add Cosmetic Snap-on Cover (AP-335 Only, Optional)

For 335 Series Std (Min 0 // max 99) User Selection (min 0 // max 99)

	Compatible with the 335 AP models	
	AP-335-CVR-20 20pk for AP-335 with Holes for LED Indicators White Non-glossy Snap-on Covers	JW828A
	Compatible with the 335C AP models	
	Aruba CM AP-335-CVR-20 20-pk White Non-glossy Snap-on Covers	JW828ACM
:	One kit per 20 access points	

#### Step 6: Select Antennas (AP-334 Only)

For 334 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)

Qty	Interface(s)	Target Environment	Mounting	Description	SKU
4	1x RP-SMA male connector	Indoor	Direct- mount	AP-ANT-1W 2.4-2.5GHz (4dBi)/4.9-5.875GHz (6dBi) Hi Gain Dual-band Omni-Dir Indoor Antenna	JW009A
4	1x RP-SMA male pigtail	Indoor	Direct, using pigtails	AP-ANT-13B 2.4-2.5GHz (2.3dBi)/4.9-5.9GHz (4.0dBi) Downtilt Smallest Omni-Dir Single Ant	JW001A
4	1x RP-SMA male pigtail	Indoor/ outdoor	Direct, using pigtails	AP-ANT-19 2.4/5G Dual Band Omni-Dir 3dBi/6dBi Indr/Otdr RPSMA Cnctr Ant w/36in Intgrtd Cable	JW004A
4	1x RP-SMA male connector	Indoor	Direct- mount	AP-ANT-20W 2.4-2.5GHz (2dBi)/4.9-5.875GHz (2dBi) Compact Omni-Dir DMt Indr White Antenna	JW011A
1	4x RP-SMA male pigtail	Indoor	Direct, using pigtails	AP-ANT-40 Dual Band Downtilt Omni 4dBi 4 Elmt MIMO Ceiling Mount 4xRPSMA Pigtail Antenna	JW017A
1	4x RP-SMA male pigtail	Indoor/ outdoor	Direct, using pigtails	AP-ANT-45 Dual Band 90x90deg 5dBi 4 Element MIMO 4xRPSMA Pigtail Antenna	JW018A
1	4x RP-SMA male pigtail	Indoor/ outdoor	Direct, using pigtails	AP-ANT-48 Dual Band 60x60deg 8.5dBi 4 Element MIMO 4xRPSMA Pigtail Antenna	JW019A

#### Notes:

- AP-ANT-1W, and AP-ANT-20W are usually direct connect to the chassis

- AP-ANT-40, AP-ANT-45, and AP-ANT-48 ship with hardware for flush mount to a flat surface
- AP-334 has 4x RP-SMA female, concurrent dual-band connections

### Step 7: Add Other (Optional)

Compatible with the 334/335 AP

Remarks	Description	SKU
	Aruba AP-USB-ZB External USB based Dongle with Zigbee and BLE for AP	R2X45A
Notes:	Single pack	
	Aruba AP-USB-ZB 10-pk External USB based Dongle with Zigbee and BLE for AP	R2Y09A
Notes:	10-pack	
	Aruba AP-USB-ZB 50-pk External USB based Dongle with Zigbee and BLE for AP	R2Y10A
Notes:	50-pack	

# **Configuration Information**

# Step 8: Add Software (Optional)

Remarks	Description	
		Aruba Central AP Foundation 1 year S
		Aruba Central AP Foundation 3 year S

	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	

SKU

# **Technical Specifications**

RF Performance Ta	ble		
	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain	
802.11b 2.4 GHz			
1 Mbps	18.0	-96.0	
11 Mbps	18.0	-89.0	
802.11g 2.4 GHz			
6 Mbps	18.0	-91.0	
54 Mbps	18.0	-75.0	
802.11n HT20 2.4 GH	Z		
MCS0/8/16	18.0	-90.0	
MCS7/15/23/31	17.0	-71.0	
802.11n HT40 2.4 GH	Z		
MCS0/8/16/24	18.0	-88.0	
MCS7/15/23/31	16.0	-68.0	
<b>802.11a 5 GH</b> z			
6 Mbps	18.0	-88.0	
54 Mbps 16.0		-73.0	
802.11n HT20 5 GHz			
MCS0/8/16/24 18.0		-88.0	
MCS7/15/23/31 16.0		-70.0	
802.11n HT40 5 GHz			
MCS0/8/16/24	18.0	-86.0	
MCS7/15/23/31 16.0		-67.0	
802.11ac VHT20 5 GH	Iz		
MCSO	18.0	-88.0	
MCS9	13.0	-63.0	
802.11ac VHT40 5 GH	łz		
MCSO	18.0	-86.0	
MCS9	13.0	-61.0	
802.11ac VHT80 5 GH	lz		
MCS0	18.0	-83.0	
MCS9	15.0	-58.0	
802.11ac VHT160 5 G	Hz		
MCSO	18.0	-80.0	
MCS9	14.0	-55.0	

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

# **Technical Specifications**

### **WI-FI Radio Specifications**

- AP type: Indoor, dual radio, 5 GHz 802.11ac 4x4 MIMO and 2.4 GHz 802.11n 4x4 MIMO
  - In addition to 802.11n, the 2.4 GHz radio supports all 802.11ac features as well (proprietary extension)
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)
- 5 GHz:
  - Four spatial stream Single User (SU) MIMO for up to 1,733 Mbps wireless data rate to individual 4x4 VHT80 or 2x2 VHT160 client devices
  - Four spatial stream Multi User (MU) MIMO for up to 1,733 Mbps wireless data rate to up to three MU-MIMO capable client devices simultaneously
- 2.4 GHz: Four spatial stream Single User (SU) MIMO for up to 600 Mbps wireless data rate to individual 4x4 HT40 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 2.4835 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
- 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 (aggregate, conducted total) transmit power (limited by local regulatory requirements):
  - 2.4 GHz band: +24 dBm (18 dBm per chain)
    - 5 GHz band: +24 dBm (18 dBm per chain)
       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 20 MHz, 40 MHz, 80 MHz and 160 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
- 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 600 (MCS0 to MCS31)
    - 802.11ac: 6.5 to 1,733 (MCS0 to MCS9, NSS = 1 to 4 for VHT20/40/80, NSS = 1 to 2 for VHT160)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80/160
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU

# **Technical Specifications**

### Environmental

- Operating:
  - Temperature: 0° C to +50° C (+32° F to +122° F)
  - Humidity: 5% to 95% non-condensing
  - Storage and transportation:
    - Temperature: -40° C to +70° C (-40° F to +158° F)

### Mechanical

- Dimensions/weight (unit, excluding mount accessories):
  - - 225mm (W) x 224mm (D) x 52mm (H) 8.9" (W) x 8.9" (D) x 2.0" (H)
  - 1150g/41oz
- Dimensions/weight (shipping):
  - 335mm (W) x 290mm (D) x 76mm (H) 13.2" (W) x 11.4" (D) x 3.0" (H)
  - 1550g/55oz

### 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
- Direct DC source: 48Vdc nominal, +/- 5%
  - Interface accepts 1.35/3.5-mm center-positive circular plug with 9.5-mm length
  - Power over Ethernet (PoE): 48 Vdc (nominal) 802.3af/802.3at compliant source
    - When using IPM, the AP may enter power-save mode with reduced functionality when powered by a PoE source (see details on Intelligent Power Monitoring in this datasheet)
    - Without IPM the AP will apply some fixed restrictions when using PoE:
    - The USB interface is disabled when using an 802.3at PoE power source
    - The USB interface and second Ethernet port are disabled, and both radios operate in 1x1 mode when using an 802.3af POE power source
- Maximum (worst-case) power consumption: 25.3W (802.3at PoE), 13.2W (802.3af PoE) or 25W (DC)
  - Excludes power consumed by external USB device (and internal overhead); this could add up to 5.9W (PoE or DC) for a 5W/1A USB device
- Maximum (worst-case) power consumption in idle mode: 10.9W (PoE or DC)

# 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-334 and IAP-334: APIN0334
- AP-335 and IAP-335: APIN0335

# **Technical Specifications**

### Reliability

• MTBF: 531,662hrs (61yrs) at +25C operating temperature

### Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- 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 12	Changed	Central software SKUs were added in Configuration Information section.
08-Sep-2020 Version 11 Changed		Changed	Configuration Information section was updated. New SKUs were added. Obsolete SKUs were removed.
09-Dec-2019	Version 10	Changed	Overview and Standard Features sections were updated.
04-Nov-2019	Version 9	Changed Configuration Information section was updated. New SKUs were added.	
07-Oct-2019	Version 8	Changed Standard Features and Configuration Information sections New SKUs were added.	
04-Mar-2019	Version 7	Changed	Configuration section was updated.
		SKU descriptions updated.	
07-May-2018	Version 5	Added	SKU added: Q9U25A
18-Dec-2017	Version 4	Changed	Minor changes made on Features and Benefits
23-Oct-2017	Version 3	Changed	Updates made on Features and Benefits
06-Mar-2017	Version 2	Changed	Updates made on Configuration section
01-Nov-2016	Version 1	New	New QuickSpecs.

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