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 800 Mbps in the 2.4 GHz band (with 4SS/VHT40 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 5Gbps

- Supports up to 5Gbps with NBase-T 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 over 1,500 enterprise apps or groups of apps

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 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

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 and keys
- SecureJack-capable for secure tunneling of wiredEthernet 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

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.

SPECIFICATIONS

AP-334 (controller-managed) and IAP-334 (Instant):

- 802.11ac – 5 GHz 4x4 MIMO (1,733 Mbps max rate) and 2.4 GHz 4x4 MIMO (800 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):

- 802.11ac – 5 GHz 4x4 MIMO (1,733 Mbps max rate) and 2.4 GHz 2x2 MIMO (800 Mbps max rate) radios, with a total of twelve integrated omni-directional downtilt dual- band antennas

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 800 Mbps wireless data rate to individual 4x4 VHT40 client devices (600 Mbps 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 2.4835 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)
- 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 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

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.

OTHER INTERFACES

One HPE Smart Rate port (RJ-45, maximum negotiated speed 5 Gbps)

- Auto-sensing link speed (100/1000/2500/5000BASE-T) and MDI/MDX
- 802.3az Energy Efficient Ethernet (EEE) - 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
- 802.3az Energy Efficient Ethernet (EEE)
- 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

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)

MOUNTING

The AP ships with two (white) 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

MECHANICAL

Dimensions/weight (unit, excluding mount accessories):

- 225 mm (W) x 224 mm (D) x 52 mm (H), 8.9” (W) x 8.9” (D) x 2.0” (H)
- 1150g/41oz

Dimensions/weight (shipping):

- 335 mm (W) x 290 mm (D) x 76 mm (H), 13.2” (W) x 11.4” (D) x 3.0” (H)
- 1550g/55oz

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)

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

REGULATORY MODEL NUMBERS

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

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 6.5.0.0
Aruba InstantOS 4.3.0.0