

## DATA SHEET

# ARUBA 360 SERIES OUTDOOR ACCESS POINTS

Low-cost 802.11ac Wave 2 outdoor access points

Multifunctional 360 Series outdoor 802.11ac Wave 2 access points deliver cost-effective wireless connectivity for mobile and IoT devices in educational, enterprise, retail, and industrial settings.

By supporting dual radio operation, the 360 Series APs deliver a maximum data rate of 866 Mbps in the 5-GHz band and 400 Mbps in the 2.4-GHz band, while supporting MU-MIMO operation for simultaneous transmission for up to two 802.11ac Wave 2 devices.

Able to survive in harsh outdoor environments, the 360 Series can withstand exposure to high and low temperatures, persistent moisture and precipitation, and are fully sealed to keep out airborne contaminants. All electrical interfaces include industrial strength surge protection.

The outdoor 360 Series have integrated Aruba ClientMatch™ technology to eliminate sticky clients and enhanced Wave 2 WLAN performance. These outdoor APs continuously gather session performance metrics and utilize the data to steer mobile devices to the best AP and radio on the WLAN, even while users roam. The enhanced ClientMatch technology enables the 360 Series to automatically detect, classify and group 802.11ac Wave 2 capable mobile devices under a single Wave 2 radio, increasing network capacity and efficiency.

Like all Aruba Wave 2 access points, the outdoor 360 Series APs have an integrated Bluetooth Aruba Beacon that simplifies remote management for a network of large-scale battery-powered Aruba Beacons, while also providing advanced location and indoor wayfinding and proximity-based push notification capabilities. This enables businesses to leverage mobility context for developing applications that deliver an enhanced user experience – thus increasing the value of the wireless network for organizations.



## UNIQUE BENEFITS

- Delivers 1.27 Gbps aggregate throughput
- 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 communication apps
  - Supports priority handling and policy enforcement for unified communication apps, including cellular Wi-Fi calling and Microsoft Skype for Business with encrypted videoconferencing, voice, chat and desktop sharing
- Best-in-class RF management
  - Integrated Adaptive Radio Management™ technology manages the 2.4-GHz and 5-GHz radio bands and ensures that APs stay clear of RF interference
- Built-in Bluetooth Low-Energy (BLE) radio
  - Enables proximity-based push notifications and location-based services for BLE-enabled mobile devices
  - Enables management for deployment of battery powered Aruba Beacons
- 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
- Wireless mesh
  - Wireless mesh connections are convenient where Ethernet drops are not available

## CHOOSE YOUR OPERATING MODE

The 360 Series APs offer a choice of operating modes to meet your unique management and deployment requirements.

- Controller-managed AP or Remote AP (RAP) running ArubaOS™ – When managed by Aruba Mobility Controllers, 360 Series APs offer centralized configuration, data encryption, policy enforcement and network services, as well as distributed and centralized traffic forwarding. Please refer to the [Aruba Mobility Controller](#) data sheets for more details.
- Aruba 360 Series APs running InstantOS™ – In Aruba Instant mode, a single AP automatically distributes the network configuration with other APs in Instant mode in the WLAN.
- Air monitor
- Hybrid WLAN AP and air monitor
- 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, Aruba APs in Instant mode are factory shipped to any site and configure themselves when powered up.

If WLAN and network requirements change, a built-in migration path allows 360 Series APs in Instant mode to become part of a WLAN that is centrally managed by a Mobility Controller.

## AP-360 SERIES SPECIFICATION

- AP-365
  - 2.4-GHz (400 Mbps max) and 5-GHz (866 Mbps max) radios, each with 2x2 MIMO and integrated omnidirectional antennas.
- AP-367
  - 2.4-GHz (400 Mbps max) and 5-GHz (866 Mbps max) radios, each with 2x2 MIMO and integrated directional antennas.

## WIRELESS RADIO SPECIFICATIONS

- AP type: outdoor, dual radio, 5 GHz 802.11ac and 2.4 GHz 802.11n
  - In addition to 802.11n data rates, the 2.4-GHz radio supports 802.11ac data rates using 256-QAM modulation.
- 2x2 MIMO with two spatial streams and up to 1,266 Mbps wireless data rate

- Supported frequency bands (country-specific restrictions apply):
  - 2.4000 GHz to 2.4835 GHz
  - 5.150 GHz to 5.250 GHz
  - 5.250 GHz to 5.350 GHz
  - 5.470 GHz to 5.725 GHz
  - 5.725 GHz to 5.875 GHz
- Available channels: Dependent upon configured regulatory domain
- Dynamic Frequency Selection (DFS) compliant to radar coexistence requirements
- Supported radio technologies:
  - 802.11b: Direct-sequence spread-spectrum (DSSS)
  - 802.11a/g/n/ac: Orthogonal frequency-division multiplexing (OFDM)
  - 802.11n/ac: 2x2 MU-MIMO with up to two spatial streams
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
  - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (conducted aggregate) transmit power (limited by local regulatory requirements):
  - 2.4-GHz band: +21 dBm (18 dBm per chain)
  - 5-GHz bands: +25 dBm (22 dBm per chain)
- Advanced cellular coexistence (ACC) feature to effectively deal with interference from cellular systems
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay diversity (CDD) for improved downlink RF performance
- Short guard interval for 20-MHz, 40-MHz and 80-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 reliability in signal delivery
- 802.11ac wave 2 MU-MIMO
- 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 866 (MCS0 to MCS9, NSS = 1 to 2)
- 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 Power
- Maximum power consumption: 12.5 watts
- Power over Ethernet (PoE): 48 Vdc (nominal) 802.3af-compliant source

## ANTENNAS

Supports 802.11ac TxBF which provides an effectively infinite variety of antenna patterns

- AP-365: Integrated Omni antennas (H and V polarized)
  - 2.7 dBi @ 2.4 GHz
  - 4.3 dBi @ 5.x GHz
- AP-367: Integrated Directional antennas (+/-45 polarized)
  - 6.3 dBi @ 2.4 GHz (90° Vertical x 90° Horizontal)
  - 6.5 dBi @ 5.x GHz (90° Vertical x 100° Horizontal)

## OTHER INTERFACES

- One 10/100/1000BASE-T Ethernet network interfaces (RJ-45)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
  - PoE-PD: 802.3af PoE
- Serial console interface (micro USB)
- Reset button
- Visual indicator (LED):
  - Power/system status

## MOUNTING

- Ordered separately
- Optional mounting kits:
  - AP-270-MNT-V1: Outdoor AP long mount kit for pole/wall mounting. Reduces impact of obstruction by pole or extends away from corner
  - AP-270-MNT-V2: Outdoor AP short mount kit for pole/wall mounting
  - AP-270-MNT-H1: Outdoor AP mount kit for hanging from inclined/horizontal structures
  - AP-270-MNT-H2: Outdoor AP flush mount kit for hanging from inclined/horizontal structures

## MECHANICAL

- Dimensions/weight (unit, excluding mount accessories):
  - 165mm (W) x 165mm (D) x 110mm (H), 6.5" (W) x 6.5" (D) 4.3" (H)
  - 800g/1.75lbs
- Dimensions/weight (shipping):
  - 198mm (W) x 198mm (D) x 128mm (H), 7.8" (W) x 7.8" (D) x5.0" (H)
  - 1,000g/2.2lbs

## ENVIRONMENTAL

- Operating:
  - Temperature: -40° C to +55° C (-40° F to +131°F) ambient in full sun
  - Humidity: 5% to 95% non-condensing
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158°F)
  - EN 300 019 Storage and Transportation
- Shock, vibration, and earthquake
  - IEC 60068-2-64/-27/-6
- Weather resistance
  - IP66/67
  - ASTM B117-07A: Salt spray testing per UL50 NEMA 4x
  - EN 300 019 Environmental testing
    - » Non-weather protected locations
    - » Full solar exposure

## 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, EN60601-1-2

For more country-specific regulatory information and approvals, please see your Aruba representative.

## REGULATORY MODEL NUMBERS

- AP-365: APEX0365
- AP-367: APEX0367

## CERTIFICATIONS

- CB Scheme Safety, cTUVus
- Wi-Fi CERTIFIED™ a,b,g,n
- Wi-Fi CERTIFIED™ ac (with wave 2 features)

## WARRANTY

- **Limited lifetime warranty**

## MINIMUM OPERATING SYSTEM SOFTWARE VERSIONS

- ArubaOS 6.5.2.0
- Aruba InstantOS 4.3.2

RF PERFORMANCE TABLE		
	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
<b>802.11b 2.4 GHz</b>		
1 Mbps	18.0	-91.0
11 Mbps	18.0	-88.0
<b>802.11g 2.4 GHz</b>		
6 Mbps	18.0	-91.0
54 Mbps	18.0	-73.0
<b>802.11n HT20 2.4 GHz</b>		
MCS0/8	18.0	-91.0
MCS7/15	18.0	-72.0
<b>802.11n HT40 2.4 GHz</b>		
MCS0/8	18.0	-88.0
MCS7/15	18.0	-69.0
<b>802.11ac VHT20 2.4 GHz</b>		
MCS0 Nss1&Nss2	18.0	-91.0
MCS8 Nss1&Nss2	18.0	-67.0
<b>802.11ac VHT40 2.4 GHz</b>		
MCS0 Nss1&Nss2	18.0	-88.0
MCS9 Nss1&Nss2	17.0	-63.0
<b>802.11a VHT80 5 GHz</b>		
6 Mbps	22.0	-91.0
54 Mbps	20.0	-74.0
<b>802.11n HT20 5 GHz</b>		
MCS0/8	22.0	-91.0
MCS7/15	20.0	-72.0
<b>802.11n HT40 5 GHz</b>		
MCS0/8	22.0	-88.0
MCS7/15	20.0	-69.0
<b>802.11ac VHT20 5 GHz (SU-MIMO)</b>		
MCS0 Nss1&Nss2	22.0	-91.0
MCS8 Nss1&Nss2	19.0	-68.0
<b>802.11ac VHT40 5 GHz (SU-MIMO)</b>		
MCS0 Nss1&Nss2	22.0	-87.0
MCS9 Nss1&Nss2	19.0	-63.0
<b>802.11ac VHT80 5 GHz (SU-MIMO)</b>		
MCS0 Nss1&Nss2	22.0	-85.0
MCS9 Nss1&Nss2	19.0	-59.0

Note: please check with your country manager for regional product schedules.

## ORDERING INFORMATION

Part Number	Description
<b>AP-360 Series Access Points</b>	
JX963A	Aruba AP-365 (EG) 802.11n/ac Dual 2x2:2 Radio Integrated Omni Antenna Outdoor AP
JX964A	Aruba AP-365 (IL) 802.11n/ac Dual 2x2:2 Radio Integrated Omni Antenna Outdoor AP
JX965A	Aruba AP-365 (JP) 802.11n/ac Dual 2x2:2 Radio Integrated Omni Antenna Outdoor AP
JX966A	Aruba AP-365 (RW) 802.11n/ac Dual 2x2:2 Radio Integrated Omni Antenna Outdoor AP
JX967A	Aruba AP-365 (US) 802.11n/ac Dual 2x2:2 Radio Integrated Omni Antenna Outdoor AP
JX968A	Aruba AP-365 (RW) FIPS/TAA 802.11n/ac Dual 2x2:2 Radio Integrated Omni Antenna Outdoor AP
JX969A	Aruba AP-365 (US) FIPS/TAA 802.11n/ac Dual 2x2:2 Radio Integrated Omni Antenna Outdoor AP
JX970A	Aruba AP-367 (EG) 802.11n/ac Dual 2x2:2 Radio Integrated Directional Antenna Outdoor AP
JX971A	Aruba AP-367 (IL) 802.11n/ac Dual 2x2:2 Radio Integrated Directional Antenna Outdoor AP
JX972A	Aruba AP-367 (JP) 802.11n/ac Dual 2x2:2 Radio Integrated Directional Antenna Outdoor AP
JX973A	Aruba AP-367 (RW) 802.11n/ac Dual 2x2:2 Radio Integrated Directional Antenna Outdoor AP
JX974A	Aruba AP-367 (US) 802.11n/ac Dual 2x2:2 Radio Integrated Directional Antenna Outdoor AP
JX975A	Aruba AP-367 (RW) FIPS/TAA 802.11n/ac Dual 2x2:2 Radio Integrated Direct Antenna Outdoor AP
JX976A	Aruba AP-367 (US) FIPS/TAA 802.11n/ac Dual 2x2:2 Radio Integrated Direct Antenna Outdoor AP
<b>AP-360 Series Accessories</b>	
JW627A	PD-3501G-AC 15.4W 802.3af PoE 10/100/1000Base-T Ethernet Midspan Injector
JW630A	PD-9001GO-DC 30W 802.3at PoE+ 10/100/1000 12-24V DC in Outdoor Surge Prot Midspan Injector
JW700A	PD-9001GO-NA 30W 802.3at PoE+ 10/100/1000 Outdoor Surge Prot NA Power Cord Midspan Injector
JW701A	PD-9001GO-INTL 30W 802.3at PoE+ 10/100/1000 Outdoor Surge Prot Intl Power Cord Injector
JW052A	AP-270-MNT-V1 AP-270 Series Outdoor Pole/Wall Long Mount Kit
JW053A	AP-270-MNT-V2 AP-270 Series Outdoor Pole/Wall Short Mount Kit
JW054A	AP-270-MNT-H1 AP-270 Series Outdoor AP Hanging or Tilt Install Mount Kit
JW055A	AP-270-MNT-H2 AP-270 Series Access Flush Wall or Ceiling Mount