DATA SHEET

# ARUBA 360 SERIES OUTDOOR ACCESS POINTS

Entry-level outdoor and warehouse connectivity with Wi-Fi 5 (802.11ac Wave 2)

Multi-functional 360 Series 802.11ac Wave 2 outdoor access points deliver cost-effective wireless connectivity to mobile and IoT devices in a wide range of outdoor and warehouse environments.

With a maximum aggregate data rate of 1.2 Gbps (1.167 Gbps), the 360 Series comes with multi-user MIMO (MU-MIMO), 2 spatial streams (2SS), and optional 80MHz channel bandwidth (VHT80) to quickly add performance and capacity to existing or wireless networks.

## **EXTREME WEATHER RESILIENCY**

Able to survive in harsh outdoor environments and provide connectivity in warehouses and distribution centers, the 360 Series can withstand exposure to high and low temperature extremes, wind speeds up to 165 mph, and tolerate persistent moisture, precipitation, and dust and salt sprays for extended periods of time. All electrical interfaces include industrial strength surge protection.

#### **MU-MIMO AWARE CLIENT OPTIMIZATION**

The 360 Series includes Aruba's patented ClientMatch technology to eliminate sticky client issues while optimizing 802.11ac Wave 2 performance. These APs continuously gather session performance metrics to steer mobile devices to the best-available AP - even while users roam. With MU-MIMO awareness, ClientMatch can group MU-MIMO capable devices together to increase network capacity and efficiency. ClientMatch also participates in Aruba's **AI-powered Mobility** solution.

## **IOT-READY**

The 360 Series includes an integrated Bluetooth Low Energy radio to simplify the deployment and management of location services, asset tracking services, security solutions and IoT sensors. This allows organizations to leverage the 360 Series as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources.



#### **KEY FEATURES**

- Deliver gigabit Wi-Fi to outdoor and extreme environments.
- 1.2 Gbps of maximum throughput
- WPA3 and Enhanced Open security
- Patented ClientMatch technology resolves sticky client issues and optimizes Wave 2 performance
- Al-powered AirMatch automates RF optimization
- IoT-ready with integrated Bluetooth Low Energy (BLE)
- Participates in Aruba's Dynamic Segmentation solution

## ARUBA SECURE INFRASTRUCTURE

The Aruba 360 Series includes components of Aruba's 360 Secure Fabric to help protect user authentication and wireless traffic. Select capabilities include:

#### WPA3 and Enhanced Open

Support for stronger encryption and authentication is provided via the latest version of WPA for enterprise protected networks.

Enhanced Open offers seamless new protection for users connecting to open networks where each session is automatically encrypted to protect user passwords and data on guest networks.

#### WPA2-MPSK

MPSK enables simpler passkey management for WPA2 devices – should the Wi-Fi password on one device or device type change, no additional changes are needed for other devices. Requires ClearPass Policy Manager.

#### **VPN Tunnels**

In Remote AP (RAP) and IAP-VPN deployments, the Aruba 360 Series can be used to establish a secure SSL/IPSec VPN tunnel to a Mobility Controller that is acting as a VPN concentrator.

#### Trusted Platform Module (TPM)

For enhanced device assurance, all Aruba APs have an installed TPM for secure storage of credentials and keys, and boot code.

## SIMPLE AND SECURE ACCESS

To simplify policy enforcement, the Aruba 360 Series uses Aruba's policy enforcement firewall (PEF) feature to encapsulate all traffic from the AP to the Mobility Controller (or Gateway) for end-to-end encryption and inspection. Policies are applied based on user role, device type, applications, and location. This reduces the manual configuration of SSIDs, VLANs and ACLs. PEF also serves as the underlying technology for Aruba <u>Dynamic Segmentation</u>.

## **FLEXIBLE OPERATION AND MANAGEMENT**

A unique feature of Aruba APs is the ability to operate in either controllerless (Instant) or controller-based mode.

#### Controller-less (Instant) mode

In controllerless mode, one AP serves as a virtual controller for the entire network. Learn more about Instant mode in this technology brief.

#### Mobility Controller mode

For optimized network performance, roaming and security, APs tunnel all traffic to a mobility controller for centrally managed traffic forwarding and segmentation, data encryption, and policy enforcement. Learn more in the <u>ArubaOS datasheet</u>.

#### Management options

Available management solutions include Aruba Central (cloud-managed) or Aruba AirWave – a multi-vendor onpremises management solution.

For large installations across multiple sites, APs can be factory-shipped and can be activated with Zero Touch Provisioning through Aruba Central or AirWave. This reduces deployment time, centralizes configuration, and helps manage inventory.

#### **ADDITIONAL FEATURES**

#### Zero Touch Provisioning

APs can be factory-shipped and zero-touch provisioned through Aruba Central or AirWave using a cloud-based service to reduce deployment time, centralize configuration, and manage inventory.

#### Advanced Cellular Coexistence (ACC)

Minimizes interference from 3G/4G LTE cellular networks, distributed antenna systems (DAS), and commercial small cell or femtocell equipment

#### Hardened, industrial design

Extends the temperature range capabilities of indoor access points for environments that lack heating and cooling. It also provides sealed connector interfaces to protect against dust and moisture

## **AP-360 SERIES SPECIFICATION**

- AP-365
  - 2.4-GHz (300 Mbps max) and 5-GHz (867 Mbps max) radios, each with 2x2 MIMO and integrated omnidirectional antennas.
- AP-367
  - 2.4-GHz (300 Mbps max) and 5-GHz (867 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
- 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: +26 dBm (23 dBm per chain)
  - 5-GHz bands: +25 dBm (22 dBm per chain)
- Maximum EIRP (limited by local regulatory requirements):
  - 2.4 GHz band
    - > 365 28.7 dBm EIRP
  - > 367 32.3 dBm EIRP
  - 5 GHz Band
  - > 365 29.3 dBm EIRP
  - > 367 31.5 dBm EIRP
- 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 867 (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-OUT-MNT-V1A: Outdoor Pole/Wall Long Mount Kit
  - AP-270-MNT-V2: Outdoor Pole/Wall Short Mount Kit
  - AP-270-MNT-H1: Outdoor AP Hanging or Tilt Install Mount Kit
  - AP-270-MNT-H2: Outdoor Flush Wall or Ceiling Mount
  - AP-270-MNT-H3: Outdoor AP Hanging or Dual-Tilt Install Mount Kit

## 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)
  - 807g/1.78lbs (AP-365)
  - 815g/1.80lbs (AP-367)
- Dimensions/weight (shipping):
  - 198mm (W) x 200mm (D) x 128mm (H),
  - 7.8" (W) x 7.9" (D) x5.0" (H)
  - 1,115g/2.46lbs (AP-365)
  - 1,123g/2.48lbs (AP-367)

## **ENVIRONMENTAL**

- Operating:
  - Temperature: -40° C to +55° C (-40° F to +131°F) ambient in full sun
  - Humidity: 5% to 95% non-condensing
- Max Elevation 3000m
- 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
  - Wind Survivability: Up to 165 mph
  - IP66/67
  - ASTM B117-07A: Salt spray testing per UL50 NEMA  $4 \mathrm{x}$
  - EN 300 019 Environmental testing
  - » Non-weather protected locations
  - » Full solar exposure

## **REGULATORY/COMPLIANCE**

- FCC/Industry of Canada
- CE Marked
- RED Directive 2014/53/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- EN 300 328
- EN 301 489
- EN 301 893
- UL/IEC/EN 60950
- EN 60601-1-1, EN60601-1-2
- AP-365:
  - EN 50121-1
  - EN 50121-3-2
  - EN 50121-4
  - EN-50155

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<sup>™</sup> ac (with wave 2 features)
- WPA, WPA2 and WPA3 Enterprise with CNSA option, Personal (SAE), Enhanced Open (OWE)

## WARRANTY

· Limited lifetime warranty

# MINIMUM OPERATING SYSTEM SOFTWARE VERSION

- Unified ArubaOS and InstantOS 6.5.2.0 and 8.2.0
- ArubaOS 10.0.0.0

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## **RF PERFORMANCE TABLE**

	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
802.11b 2.4 GHz		
1 Mbps	23.0	-91.0
11 Mbps	18.0	-88.0
802.11g 2.4 GHz		
6 Mbps	23.0	-91.0
54 Mbps	18.0	-73.0
802.11n HT20 2.4 GHz		
MCS0/8	23.0	-91.0
MCS7/15	18.0	-72.0
802.11n HT40 2.4 GHz		
MCS0/8	18.0	-88.0
MCS7/15	18.0	-69.0
802.11ac VHT20 2.4 GHz		
MCS0 Nss1&Nss2	23.0	-91.0
MCS8 Nss1&Nss2	18.0	-67.0
802.11ac VHT40 2.4 GHz		
MCS0 Nss1&Nss2	18.0	-88.0
MCS9 Nss1&Nss2	17.0	-63.0
802.11a VHT80 5 GHz		
6 Mbps	22.0	-91.0
54 Mbps	20.0	-74.0
802.11n HT20 5 GHz		
MCS0/8	22.0	-91.0
MCS7/15	20.0	-72.0
802.11n HT40 5 GHz		
MCS0/8	22.0	-88.0
MCS7/15	20.0	-69.0
802.11ac VHT20 5 GHz (SU-MI	MO)	
MCS0 Nss1&Nss2	22.0	-91.0
MCS8 Nss1&Nss2	19.0	-68.0
802.11ac VHT40 5 GHz (SU-MIN	MO)	
MCS0 Nss1&Nss2	22.0	-87.0
MCS9 Nss1&Nss2	19.0	-63.0
802.11ac VHT80 5 GHz (SU-MI	MO)	
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	
AP-360 Series Access	Points	
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) TAA 802.11n/ac Dual 2x2:2 Radio Integrated Omni Antenna Outdoor AP	
JX969A	Aruba AP-365 (US) 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) TAA 802.11n/ac Dual 2x2:2 Radio Integrated Direct Antenna Outdoor AP	
JX976A	Aruba AP-367 (US) TAA 802.11n/ac Dual 2x2:2 Radio Integrated Direct Antenna Outdoor AP	
JX966ACM	Aruba CM AP-365 (RW) 802.11n/ac Dual 2x2:2 Integ Omni Antenna Outdoor AP	
JX967ACM	Aruba CM AP-365 (US) 802.11n/ac Dual 2x2:2 Integ Omni Antenna Outdoor AP	
JX973ACM	Aruba CM AP-367 (RW) 802.11n/ac Dual 2x2:2 Integ Directional Antenna Outdoor AP	
JX974ACM	Aruba CM AP-367 (US) 802.11n/ac Dual 2x2:2 Integ Directional Antenna Outdoor AP	

For more ordering information and compatible accessories, please refer to the ordering guide.



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