ARUBA 318 SERIES RUGGEDIZED ACCESS POINTS

Wi-Fi 5 (802.11ac Wave 2) for harsh, weather-protected environments

The ruggedized Aruba 318 Series access points deliver Wi-Fi 5 (802.11ac Wave 2) gigabit performance for client devices in harsh, weather-protected environments such as warehouses, industrial freezers or stadiums.

With a maximum concurrent data rate of 2 Gbps (5GHz: 1,733 Mbps and 2.4GHz: 300 Mbps), the 318 Series can quickly add capacity to existing or new wireless networks in temperature-sensitive, dust-ridden, or other extreme environments. The 318 Series also comes with multi-user MIMO (MU-MIMO), 4 spatial streams (4SS), and optional 160 MHz channel bandwidth (VHT160) for the highest performance and density applications.

MU-MIMO AWARE CLIENT OPTIMIZATION

The 318 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 318 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 318 Series as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources.

KEY FEATURES

- Deliver high performance to harsh, weather-protected environments
- 2 Gbps of maximum throughput
- WPA3 and Enhanced Open security
- Patented ClientMatch technology resolves sticky client issues and optimizes Wave 2 performance
- AI-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 318 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.

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VPN Tunnels

In Remote AP (RAP) and IAP-VPN deployments, the Aruba 318 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 318 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 Dynamic Segmentation.

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 ArubaOS datasheet.

Management options

Available management solutions include Aruba Central (cloud-managed) or Aruba AirWave – a multi-vendor on-premises 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

ARUBA 318 SERIES SPECIFICATIONS

- 5 GHz 802.11ac 4x4 MU-MIMO (1,733 Mbps max rate)
  - Four RP-SMA connectors for external antenna operation
- 2.4 GHz 802.11n 2x2 MIMO (300 Mbps max rate) radios
  - Two RP-SMA connectors for external antenna operation at 2.4 GHz

WI-FI RADIO SPECIFICATIONS

- AP type: Indoor hardened, dual radio, 5 GHz 802.11ac 4x4 MIMO and 2.4 GHz 802.11n 2x2 MIMO
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)
- 5 GHz: 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
- 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
- 2.4 GHz: Two spatial stream Single User (SU) MIMO for up to 300 Mbps wireless data rate to individual 2x2 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 2.4835 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) maximizes 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 (conducted) transmit power (limited by local regulatory requirements):
  - 2.4 GHz band: +22 dBm per chain, +25dBm aggregate (2x2)
  - 5 GHz band: +22 dBm per chain, +28dBm aggregate (4x4)
  - Note: 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 (2.4GHz): 6.5 to 300 (MCS0 to MCS15)
  - 802.11n (5GHz): 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

POWER
- Worst-case power consumption from the AP: 23W
- Power sources sold separately
- Power over Ethernet (PoE+): 802.3at-compliant

WI-FI ANTENNA PORTS
- 5 GHz
  - Four RP-SMA connectors for external antenna operation
- 2.4 GHz
  - Two RP-SMA connectors for external antenna operation

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)
- One 1000BASE-X SFP Port
- Bluetooth Low Energy (BLE) radio
  - Up to 4 dBm transmit power (class 2) and -91 dBm receive sensitivity
- Visual indicator (multi-color LED): For system and radio status
- Reset button: Factory reset (during device power up)
- Micro USB console interface
- Kensington security slot

MOUNTING
- Optional mounting kits:
  - AP-220-MNT-W1 are directly compatible
  - 270 Series outdoor AP mounts (AP-270-MNT-V1, AP-270-MNT-V2, AP-270-MNT-H1, AP-270-MNT-H2) are compatible when the AP-270-MNT-ADP adapter is utilized

MECHANICAL
Dimensions/weight (unit, excluding mount accessories):
- 15 cm (W) x 22.2 cm (D) x 7.5 cm (H)
  6" (W) x 8.5" (L) x 2.5" (H)
- 1.225 kg/2.7 lbs

ENVIRONMENTAL

- Operating Temperature:
  - Temperature: -40° C to +60° C (-40° F to +140° F)
  - Humidity: 5% to 95% non-condensing
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158° F)
- Operating Altitude: 3,000 m
- Water and Dust
  - IP55

REGULATORY/COMPLIANCE

- FCC/ISED
- CE Marked
- RED Directive 2014/53/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- UL/IEC/EN 60950
- EN 60601-1-1, EN60601-1-2
- 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 NUMBER

- APIN0318

CERTIFICATIONS

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance certified 802.11a/b/g/n
- WPA, WPA2 and WPA3 – Enterprise with CNSA option, Personal (SAE), Enhanced Open (OWE)
- Wi-Fi CERTIFIED™ ac (with Wave 2 features)

WARRANTY

- Limited lifetime warranty

MINIMUM OPERATING SYSTEM SOFTWARE

- ArubaOS & Aruba InstantOS 8.3.0.0

RF PERFORMANCE TABLE		
	Maximum transmit power (dBm) per transmit chain	**Receiver sensitivity (dBm) per receive chain**
802.11b 2.4 GHz		
1 Mbps	22	-95
2 Mbps	22	-93
5.5 Mbps	22	-90
11 Mbps	22	-88
802.11g 2.4 GHz and 802.11a 5 GHz 2.4 GHz and 802.11a 5 GHz		
6 Mbps	22	-93
54 Mbps	19	-75
802.11n HT20 2.4 GHz and 5 GHz		
MCS0/8	22	-93
MCS7/15	18	-71
802.11n HT40 2.4 GHz and 5 GHz		
MCS0/8	22	-90
MCS7/15	18	-68
802.11ac VHT20 5 GHz		
MCS0	22	-93
MCS9	16	-68
802.11ac VHT40 5 GHz		
MCS0	22	-90
MCS9	15	-63
802.11ac VHT80 5 GHz		
MCS0	22	-87
MCS9	15	-61
802.11ac VHT160 5 GHz		
MCS0	22	-86
MCS9	15	-57

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

DATA SHEET
ARUBA 318 SERIES RUGGEDIZED ACCESS POINTS

ORDERING INFORMATION

Part Number	Description
Aruba 318 Unified Hardened Access Points	
JZ152A	Aruba AP-318 (RW) 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
JZ153A	Aruba AP-318 (US) 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
JZ149A	Aruba AP-318 (EG) 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
JZ150A	Aruba AP-318 (IL) 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
JZ151A	Aruba AP-318 (JP) 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
Aruba 318 Unified Hardened Access Points TAA	
JZ157A	Aruba AP-318 (RW) TAA 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
JZ158A	Aruba AP-318 (US) TAA 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
JZ154A	Aruba AP-318 (EG) TAA 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
JZ155A	Aruba AP-318 (IL) TAA 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP
JZ156A	Aruba AP-318 (JP) TAA 802.11n/ac Dual 2x2:2/4x4:4 Radio 6xRPSMA Connectors Indoor Hardened AP

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

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