QuickSpecs

Overview

Aruba 518 Series Hardened Access Points

The hardened, Aruba 518 Series access point delivers high Wi-Fi 6 performance in harsh, weather-protected environments such as warehouses, industrial freezers or enclosures in extreme environments such as stadiums It delivers 4x4:4SS MU-MIMO capability, Aruba's advanced ClientMatch and integrated Bluetooth to enable Aruba location services.

Purpose-built to survive in the harshest outdoor environments, 518 Series APs withstand exposure to extreme high and low temperatures, persistent (non-precipitant) moisture, and are sealed to keep out airborne contaminants. All electrical interfaces include industrial strength surge protection.

Aruba Wi-Fi 6 access points provide high-performance connectivity for any organization experiencing growing numbers of IoT and mobility requirements. With maximum aggregate on air data rate of 3 Gbps (HE80/HE40) the 518 Series delivers the speed and reliability needed for any environment.

High-performance Wi-Fi 6 (802.11ax) for harsh weather environments

Hewlett Packard Enterprise

Standard Features

Incredible Efficiency
The 518 Series APs are also designed to optimize user experience by maximizing Wi-Fi efficiency and dramatically reducing airtime contention between clients.

Features include Uplink and Downlink Orthogonal Frequency Division Multiple Access (OFDMA), Downlink Multi-User MIMO (MU MIMO) and cellular co-location. With up to 4 spatial stream and 160 MHz channel capability the 518 provides groundbreaking wireless capabilities for any application.

Read the Multi-User 802.11ax white paper for further information.

Advantages of OFDMA
This capability allows Aruba Wi-Fi 6 APs to handle multiple Wi-Fi 6 enabled client simultaneously on a single radio. Channel utilization is optimized by handling each transaction by matching allocated bandwidth in a channel to the offered user load. These sub divisions of the channel are referred to as Resource Units (RU).

Aruba Air Slice for Extended OFDMA Assurance
APs in controller-less mode (Instant) can provide SLA-grade performance by allocating RUs to specific traffic types. By combining Aruba's Policy Enforcement Firewall (PEF) and Layer 7 deep packet inspection (DPI) to identify user roles and applications, the APs will dynamically allocate the bandwidth needed. Non-Wi-Fi 6 clients can also benefit.

Multi-User MIMO (MU-MIMO)
The 518 Series APs support downlink MU-MIMO similar to Wi-Fi 5 (802.11ac Wave 2) APs. With the introduction OFDMA in Wi-Fi 6 the overhead for this capability is reduced and MU-MIMO effectiveness is substantially improved for large client counts.

Wi-Fi 6 and MU-MIMO aware client optimization
Aruba's patented AI-powered ClientMatch technology ensures that all clients are attached to their best serving access point. Session metrics, network metrics, applications, client type, are used to identify and maintain best connection.

Aruba Advanced Cellular Coexistence (ACC)
This feature uses built in filtering to automatically minimize the impact of interference of high power cellular base stations, in building distributed antenna systems as well as small cell and femtocell equipment.

Intelligent Power Monitoring (IPM)
Aruba APs continuously monitor and report hardware energy consumption. APs can be configured to enable or disable capabilities based on the available PoE power – ideal when wired switches have exhausted their power budget.

Green AP energy efficiency
Aruba Wi-Fi 6 APs utilize analytics from Aruba Central to automatically transition in and out of a sleep mode.

IoT Platform Capabilities
Aruba Wi-Fi 6 APs include an integrated Bluetooth 5 and 802.15.4 radio (for Zigbee support) to simplify deploying and managing IoT-based location services, asset tracking services, security solutions and IoT sensors. This allow organizations to leverage the 518 as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources..

Target Wake Time (TWT)
Ideal for IoT solutions that communicate infrequently, this Wi-Fi 6 capability allows IoT devices to use 802.11ax protocol. TWT coordinates with client devices to allow them to sleep for extended periods use shorter wake times to communicate before returning to sleep. This substantially extends the useful operating life of Wi-Fi 6 based battery powered sensors.

Aruba Secure Infrastructure
The 518 Series is an integral part of Aruba's 360 Secure Fabric to help protect user authentication and wireless traffic. Select capabilities include:

Standard Features

WPA3 and Enhanced Open
With the introduction of WPA3 and Enhanced open a Wi-Fi 6 certified client will never send unencrypted traffic over the air. Even with an open authenticated network enhanced open still provides strong encryption over the air.
In all Wi-Fi 6 user sessions each user is uniquely encrypted and if they disconnect and reconnect the encryption changes from session to session.

WPA2-MPSK
MPSK enables simpler passkey management for WPA 2 devices – should the Wi-Fi password on one device change, no additional changes are needed for other devices. This feature is enabled when networks are deployed with ClearPass Policy Manager.

VPN Tunnels
In Remote AP (RAP) and IAP-VPN deployments, the Aruba 518 can be used to establish a secure SSL/IPSec VPN tunnel to a Mobility Controller that is configured as a VPN concentrator.

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

Simple and Secure Access
To simplify policy enforcement, the Aruba 518 uses Aruba's policy enforcement firewall (PEF) features to encapsulate all traffic from the AP to the Mobility Controller (Gateway) for end-to-end encryption and inspection. Policies are applied based on context including: user role, device type, application, and location. This reduces the manual configuration of SSIDs, VLANs, and ACLs. PEF also serves as the underlying technology for Aruba Dynamic Segmentation.

High-Density Connectivity
Each 518 Series AP provides connectivity for a maximum of 512 associated clients per radio (1,024 total).

Flexible Operation and Management
A unique feature of Aruba APs is the ability to operate in either controller less or controller-based mode.

Controller-less (Instant) Mode
In controller-less 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 central management of traffic forwarding, segmentation, encryption, and policy enforcement. Learn more in the ArubaOS datasheet.

Management Options
Available management solution include Aruba Central, cloud based, or Aruba AirWave, a multi-vendor, on-premises, management solution.
For large installations across multiple sites, Aruba APs can be shipped and activated with Zero Touch Provisioning through Aruba Central or AirWave. This reduces deployment time, centralizes configuration, and provide inventory visibility.

Additional Wi-Fi Features
- Transmit Beamforming (TxBF): Increased signal reliability and range
- Passpoint Release 2: Seamless cellular-to-Wi-Fi carryover for guests
- Dynamic Frequency Selection (DFS): Optimized use of available RF spectrum
- Maximal Ratio Combining (MRC): Improved receiver performance for multi antenna access points.
- Cyclic Delay/Shift Diversity (CDD/CSD): Enable use of multiple transmit antennas
- Space-Time Block Coding (STBC): Increased connection robustness
- Low-Density Parity Check (LDPC): High performance error detection and correction coding for enhanced receiver performance.

Configuration Information

BTO Models

Remarks	Description	SKU
	518 Unified Hardened Access Points	
	Aruba AP-518 (RW) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H02A
	Aruba AP-518 (US) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H03A
	Aruba AP-518 (EG) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4G99A
	Aruba AP-518 (IL) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H00A
	Aruba AP-518 (JP) 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H01A
	518 Unified Hardened Access Points TAA	
	Aruba AP-518 (RW) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H07A
	Aruba AP-518 (US) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H08A
	Aruba AP-518 (EG) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H04A
	Aruba AP-518 (IL) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H05A
	Aruba AP-518 (JP) TAA 802.11ax 2x2:2/4x4:4 Dual Radio 6xRPSMA Connectorized Indoor Hardened AP	R4H06A

Notes: OCA Only Model Selection Form - Aruba > Wireless > Access Points > Outdoor / Rugged:
Aruba 518 Series Access Points

Mounting Accessories

AP Mount Kits

For 518 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)

Rule #	Description	SKU
	AP-MNT-A Campus AP mount bracket kit (individual) type A: suspended ceiling rail flat 9/16	R3J15A
	AP-MNT-B Campus AP mount bracket kit (individual) type B: suspended ceiling rail flat 15/16	R3J16A
	AP-MNT-C Campus AP mount bracket kit (individual) type C: suspended ceiling rail profile 9/16	R3J17A
	AP-MNT-D Campus AP mount bracket kit (individual) type D: solid surface	R3J18A
	AP-MNT-E Campus AP mount bracket kit (individual) type E: wall-box	R3J19A
	AP-270-MNT-ADP AP-228 to AP-270-MNT-XX Outdoor Mount Adapter	JW056A
*	Aruba AP-OUT-MNT-V1A Outdoor AP Pole/Wall Long Mount Kit v2	R9H97A
*	AP-270-MNT-V2 AP-270 Series Outdoor Pole/Wall Short Mount Kit	JW053A
*	AP-270-MNT-H1 AP-270 Series Outdoor AP Hanging or Tilt Install Mount Kit	JW054A
*	AP-270-MNT-H2 AP-270 Series Access Flush Wall or Ceiling Mount	JW055A
	AP-270-MNT-H3 AP-270 Series Outdoor AP Hanging or Dual-Tilt Install Mount Kit	R6W11A
	Configuration Rules	

Notes:
– *If this AP Mount is selected, then add Qty 1 of JW056A
– AP-270-MNT-XX or AP-OUT-MNT-XX requires that AP-270-MNT-ADP (JW056A) be ordered.
– AP-270-MNT-XX or AP-OUT-MNT-XX requires that the common rail be removed before attaching the AP AP-270-MNT-ADP (JW056A).

Power Options

Rule #	Description	SKU
	PoE Power Options	
	For 518 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)	
	PD-9501-5GCO-AC 60W 802.3bt Smart Rate Outdoor Surge Protection Midspan Injector	R7T40A
	PD-9501-5GCO-DC 60W 802.3bt Smart Rate Outdoor Surge Protection Midspan Injector	R7T41A
*	AP-POE-ATSR 1-Port Smart Rate 802.3at 30W midspan injector	R6P67A
*	AP-POE-BTSR 1-Port Smart Rate 802.3bt 60W midspan injector	R1C73A

Notes:
– *If this Power Supply is selected, bring in (Min 1 // Max 1) Localized power cord based on the Aruba Localization Menu
– Indoor Injector provides no surge protection

Configuration Information

   - Indoor injector requires indoor AC power cord
   - AP-518 may be powered by PoE Only
   - Power Cord for JW630A, R7T40A, R7T41A should be provided by installer
   - R7T40A and R7T41A do not include a power cord, power cord must be constructed by installer using the included power connector parts and assembled per the user guide by a certified installer

Power Injector Mounts

For 518 Std (Min 0 // max 1) User Selection (min 0 // max 1)

Description	SKU
Aruba PD-MOUNT-OD Outdoor PoE Midspan Injectors Pole/Mast Mount Kit	JW620A

Notes: This is optional but recommended for outdoor injectors

Antennas

Rule #	Description	SKU
	5 GHz Antennas	
	For 518 Std (Min 0 // max 1) User Selection (min 0 // max 1)	
1	AP-ANT-1W 2.4-2.5GHz (4dBi)/4.9-5.875GHz (6dBi) Hi Gain Dual-band Omni-Dir Indoor Antenna	JW009A
1	AP-ANT-13B 2.4-2.5GHz (2.3dBi)/4.9-5.9GHz (4.0dBi) Downtilt Smallest Omni-Dir Single Ant	JW001A
1	AP-ANT-19 2.4/5G Dual Band Omni-Dir 3dBi/6dBi Indr/Otdr RPSMA Cnctr Ant w/36in Intgrtd Cable	JW004A
1	AP-ANT-20W 2.4-2.5GHz (2dBi)/4.9-5.875GHz (2dBi) Compact Omni-Dir DMt Indr White Antenna	JW011A
2	AP-ANT-22 Dual Band 2/4dBi Omni RPSMA Low Profile 2-pk Omni Antenna	Q8N49A
	AP-ANT-40 Dual Band Downtilt Omni 4dBi 4 Elmt MIMO Ceiling Mount 4xRPSMA Pigtail Antenna	JW017A
	AP-ANT-45 Dual Band 90x90deg 5dBi 4 Element MIMO 4xRPSMA Pigtail Antenna	JW018A
	AP-ANT-48 Dual Band 60x60deg 8.5dBi 4 Element MIMO 4xRPSMA Pigtail Antenna	JW019A
	ANT-3x3-5712 4.9-5.9GHz 12.0dBi 75x25deg +/- 45deg and V Pol 3 MIMO High Gain Dir Antenna	JW033A
	ANT-4x4-5314 5.15-5.9GHz 14dBi 30x30deg Dual Pol MIMO Hi Gain Dir N-Type Outdoor Antenna	JX988A

Configuration Rules

Rule #	Description
1	Must select Qty 0 or Qty 4
2	Must select Qty 0 or Qty 2

Notes:
   - AP-ANT-1W, AP-ANT-20W and AP-ANT-22 are usually direct connect to the chassis
   - AP-ANT-40 ships with its mounting bracket
   - AP-ANT-45,-48 ship only with hardware for flush mount to a flat surface
   - AP-518 has 4x RPSMA female for 5 GHz
   - ANT-3x3-5712 (JW033A) requires qty3 of AFCSJMTM-00 (JW067A)
   - ANT-4x4-5314 (JX988A) requires qty4 of AFCSJMTM-00 (JW067A)

2.4 GHz Antennas

For 518 Std (Min 0 // max 1) User Selection (min 0 // max 1)

	Description	SKU
*	AP-ANT-1W 2.4-2.5GHz (4dBi)/4.9-5.875GHz (6dBi) Hi Gain Dual-band Omni-Dir Indoor Antenna	JW009A
*	AP-ANT-13B 2.4-2.5GHz (2.3dBi)/4.9-5.9GHz (4.0dBi) Downtilt Smallest Omni-Dir Single Ant	JW001A
	AP-ANT-16 2.4-2.5Ghz (3.9dBi)/4.9-5.9GHz (4.7dBi) 3 Elmt MIMO Ant w/Downtilt Omni-Dir Antenna	JW003A
*	AP-ANT-19 2.4/5G Dual Band Omni-Dir 3dBi/6dBi Indr/Otdr RPSMA Cnctr Ant w/36in Intgrtd Cable	JW004A
*	AP-ANT-20W 2.4-2.5GHz (2dBi)/4.9-5.875GHz (2dBi) Compact Omni-Dir DMt Indr White Antenna	JW011A
	AP-ANT-22 Dual Band 2/4dBi Omni RPSMA Low Profile 2-pk Omni Antenna	Q8N49A
	AP-ANT-25A Dual Band 90x90deg 5dBi +/- 45 Pol 2 Element MIMO 2xRPSMA Pigtail Antenna	JW012A
	Aruba AP-ANT-28a Dual Band 7dBi +/- 45 2 Element MIMO 2xRPSMA Pigtail Antenna	S0A66A
	ANT-2x2-2314 2.4 GHz 14dBi 30x30deg Dual Pol MIMO High Gain Dir N-Type Outdoor Antenna	JW024A

Notes:
   - *Must select Qty 0 or Qty 2
   - AP-ANT-1W, AP-ANT-20W and AP-ANT-22 are usually direct connect to the chassis
   - AP-ANT-25A,-28 ship only with hardware for flush mount to a flat surface
   - AP-518 has 2x RPSMA female for 2.4 GHz
   - ANT-2x2-2314 (JW024A) requires qty2 of AFCSJMTM-00 (JW067A)

Configuration Information

Rule #	Description	SKU
	Antenna Mount Kits	
	For 518 Series Std (Min 0 // max 1) User Selection (min 0 // max 1)	
1	AP-ANT-MNT-3 AP-ANT-25A/28/35A/38 Azimuth and Elevation Adjustable Mount Kit	JW020A
Notes:	Only compatible with JW017A	
2	AP-ANT-MNT-4 AP-ANT-48 Azimuth and Elevation Adjustable Mount Kit	JW021A
Notes:	Only compatible with JW018A	
3	AP-ANT-MNT-5 AP-ANT-45 Azimuth and Elevation Adjustable Mount Kit	JW022A
Notes:	Only compatible with JW019A	
Notes:	– AP-ANT-MNT-3 compatible with AP-ANT-25A and AP-ANT-28	
	– AP-ANT-MNT-4 compatible with AP-ANT-48	
	– AP-ANT-MNT-5 compatible with AP-ANT-45	

Cables

	RF Jumper Cables	
	For 518 Series Std (Min 0 // max 6) User Selection (min 0 // max 6)	
	AFC2DL60-00 Indoor AP RPSMAm to Nf 60cm Flexible Indoor Rated RF Cable	JW066A
1, 2, 3	AFCSJMTM-00 Indoor AP RPSMAm to Nm 60cm Flexible Indoor Rated RF Cable	JW067A
	Configuration Rules	
1	For Antenna JW024A - ANT-2x2-2314 2.4G 14dBi Panel is selected, then must select qty 0 or qty 2 of this jumper cable.	
2	For Antenna JW033A - ANT-3x3-5712 5G 12dBi Sector is selected, then must select qty 0 or qty 3 of this jumper cable.	
3	For Antenna JX988A - ANT-4x4-5314 5G 14dBi Panel is selected, then must select qty 0 or qty 4 of this jumper cable.	
Notes:	– Not usually required	
	– Radio 0 (5 GHz) has 4 connectors	
	– Radio 1 (2.4 GHz) has 2 connectors	
	– No cables required for direct connect omnis or antennas with pigtails	
	– AFC2DL60-00 used to adapt from RPSMA to Nf for connection to longer Nm to Nm jumpers	
	– AFCSJMTM-00 used to adapt from RPSMA to Nm for connection to antennas with Nf connectors	

Accessories

Spare Items	
For 518 Series Std (Min 0 // max 99) User Selection (min 0 // max 99)	
AP-MNT-MP10-A Campus AP mount bracket kit (10-pack) type A: suspended ceiling rail flat 9/16	JZ370A
AP-MNT-MP10-B Campus AP mount bracket kit (10-pack) type B: suspended ceiling rail flat 15/16	Q9G69A
AP-MNT-MP10-C Campus AP mount bracket kit (10-pack) type C: suspended ceiling rail profile 9/16	Q9G70A
AP-MNT-MP10-D Campus AP mount bracket kit (10-pack) type D: solid surface	Q9G71A
AP-MNT-MP10-E Campus AP mount bracket kit (10-pack) type E: wall-box	R1C72A
AP-MNT-MP10-X Campus AP mount adapter kit (10-pack)	R3T20A
AP-MNT-MP10-B1 Campus AP mount bracket kit (10-pack) type B1 - suspended ceiling rail thick 15/16	R6T34A

Configuration Information

Software

Remarks	Description	SKU
	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	

Technical Specifications

Aruba 518 Series Specifications
- 5 GHz: Four RP-SMA connectors for external antenna operation
- 2.4 GHz: Two RP-SMA connectors for external antenna operation

Dimensions and weight
- 220 (W) x 220 (D) x 75 mm (H) / 8.5 (W) x 8.5 (D) x 2.5 in (H)
- 1.5 kg / 3.3 lbs

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

Power
- Worst-case power consumption from the AP: 25.6W
- Power sources sold separately
- Power over Ethernet (PoE+): 802.3at-compliant

Certifications
- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance certified 802.11a/b/g/n
- Wi-Fi CERTIFIED™ 6 (802.11ax)
- Wi-Fi CERTIFIED™ ac (with Wave 2 features)
- Passpoint® (Release 2) with ArubaOS and Instant

Environmental
- Operating:
    - Temperature: -40° C to +55° C (-40° F to +140° F)
    - Humidity: 5% to 95% non-condensing internal to chassis.
- Storage and transportation:
    - Temperature: -40° C to +70° C (-40° F to +158° F)
- Operating altitude: 3,000 m
- Water and dust: IP55
- Shock and vibration: ETSI 300-19-2-4

WI-FI Radio Specifications
- AP type: Indoor hardened, Wi-Fi 6 dual-radio, 5 GHz 4x4 MIMO and 2.4 GHz 2x2 MIMO
- 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 4.8 Gbps wireless data rate to individual 4SS HE160 Wi-Fi 6 client device (max)
- Two spatial stream Single User (SU) MIMO for up to 1.2 Gbps wireless data rate to individual 2SS HE80 Wi-Fi 6 client device (typical)
- Four spatial stream Multi User (MU) MIMO for up to 4.8 Gbps wireless data rate to up to four 1SS or two 2SS HE160 Wi-Fi 6 DL-MU-MIMO capable client devices simultaneously (max)
- Four spatial stream Multi User (MU) MIMO for up to 2.4 Gbps wireless data rate to up to four 1SS or two 2SS Wi-Fi 6 DL-MU-MIMO capable client devices simultaneously (typical)

Technical Specifications

WI-FI Radio Specifications

2.4 GHz

- Two spatial stream Single User (SU) MIMO for up to 575 Mbps wireless data rate to individual 2SS HE40 Wi-Fi 6 client device (max)
- Two spatial stream Single User (SU) MIMO for up to 287 Mbps wireless data rate to individual 2SS HE20 Wi-Fi 6 client device (typical)
- Two spatial stream Multi User (MU) MIMO for up to 575 Mbps wireless data rate to up to two 1SS HE40 Wi-Fi 6 DL- MU-MIMO capable client devices simultaneously (max)
- Two spatial stream Multi User (MU) MIMO for up to 287 Mbps wireless data rate to up to two 1SS HE20 Wi-Fi 6 DL- MU-MIMO capable client devices simultaneously (typical)

- Support for up to 512 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
  - 5.850 to 5.925 GHz
  - 5.825 to 5.875 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)
  - 802.11ax: Orthogonal frequency-division multiple access (OFDMA) with up to 16 resource units (RU)
  - Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM (proprietary extension)
  - 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM,1024 QAM (proprietary extension)
  - 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM , 1024 QAM
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11ac very high throughput (VHT) support: VHT 20/40/80/160
- 802.11ax high efficiency (HE) support: HE20/40/80/160
- 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, HT20 to HT40)
  - 802.11n (5GHz): 6.5 to 600 (MCS0 to MCS31, HT20 to HT40)
  - 802.11ac: (5 GHz): 6.5 to 3,467 (MCS0 to MCS9, NSS = 1 to 4 for VHT20 to VHT160)
  - 802.11ax (2.4GHz): 3.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40)
  - 802.11ax (5GHz): 3.6 to 4803 (MCS0 to MCS11, NSS = 1 to 4, HE20 to HE160)
- 802.11n/ac packet aggregation: A-MPDU, A-MSDU
- 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)
  - **Notes:** conducted transmit power levels exclude antenna gain
- Maximum EIRP (limited by local regulatory requirements):
  - 2.4 GHz band: 518: 25 + antenna gain + TxBF gain
  - 5 GHz band: 518: 28 + antenna gain + TxBF gain
- Advanced Cellular Coexistence (ACC) minimizes interference from cellular networks
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay/shift diversity (CDD/CSD) to enable the use of multiple transmit antennas

Technical Specifications

- 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

Additional interfaces
- E0: HPE SmartRate port (RJ-45)
  - Auto-sensing link speed (100/1000/2500BASE-T) and MDI/MDX
  - 2.5Gbps speed complies with NBase-T and 802.3bz specifications
  - PoE-PD: 48Vdc (nominal) 802.3af/at/bt (Class 3 or higher)
  - 802.3az Energy Efficient Ethernet (EEE)
- E1: 10/100/1000BASE-T (RJ-45)
  - Auto-sensing link speed and MDI/MDX
  - 802.3az Energy Efficient Ethernet (EEE)
- Link Aggregation (LACP)support between both network ports for redundancy and increased capacity
- Bluetooth 5 and 802.15.4 radio
  - 2.4 GHz
  - Bluetooth 5: up to 8dBm transmit power and -95dBm receive sensitivity
  - Zigbee: up to 8 dBm transmit power and -97dBm receive sensitivity
  - Up to 4dBm 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)
- USB-C console interface

Regulatory
- 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

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

Regulatory Model Numbers
- APIN0518

Warranty
- **Limited lifetime warranty**

Minimum Operating System Software
- ArubaOS and Aruba InstantOS 8.7.0.0

Technical Specifications

RF Performance Table		
	Maximum transmit power (dBm) per transmit chain	**Receiver sensitivity (dBm) per receive chain**
2.4GHz, 802.11b		
1 Mbps	22	-97
11 Mbps	22	-89
2.4GHz, 802.11g		
6 Mbps	22	-94
54 Mbps	20	-76
2.4GHz, 802.11n/ac HT20		
MCS0	22	-93
MCS8	19	-72
2.4GHz, 802.11ax HE20		
MCS0	22	-93
MCS11	17	-62
5GHz, 802.11a		
6 Mbps	22	-95
54 Mbps	20	-76
5GHz, 802.11n/ac HT20/VHT20		
MCS0	22	-94
MCS8	19	-72
5GHz, 802.11n/ac HT40/VHT40		
MCS0	22	-92
MCS9	19	-68
5GHz, 802.11ac VHT80		
MCS0	22	-90
MCS9	19	-65
5GHz, 802.11ac VHT160		
MCS0	22	-84
MCS9	19	-59
5GHz, 802.11ax HE20		
MCS0	22	-94
MCS11	17	-62
5GHz, 802.11ax HE40		
MCS0	22	-91
MCS11	17	-60
5GHz, 802.11ax HE80		
MCS0	22	-87
MCS11	17	-57
5GHz, 802.11ax HE160		
MCS0	22	-85
MCS11	17	-53

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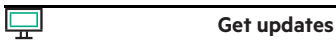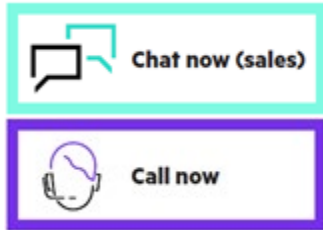
Summary of Changes

Date	Version History	Action	Description of Change
21-Nov-2022	Version 7	Changed	Configuration Information section was updated.
01-Aug-2022	Version 6	Changed	Configuration Information section was updated.
06-Dec-2021	Version 5	Changed	SKUs were added in Configuration Information section.
15-Mar-2021	Version 4	Changed	SKUs were added in Configuration Information section.
02-Nov-2020	Version 3	Changed	Configuration Information section was updated. New SKUs were added.
08-Sep-2020	Version 2	Changed	Configuration Information section was updated. New SKUs were added.
04-May-2020	Version 1	New	New QuickSpecs

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