Overview

Aruba 560EX Series Hazardous Location Access Points

Entry-level Wi-Fi 6 (802.11ax) for outdoor and hazardous location environments

Weatherproof and temperature hardened, Aruba 560EX Series Hazardous Location Access Points deliver cost-effective Wi-Fi 6 wireless connectivity in outdoor and environmentally challenging hazardous locations.

Purpose-built to survive in the harshest outdoor environments, Aruba 560EX series can withstand exposure to extreme 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.

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 1.49 Gbps (HE80/HE20), they deliver the speed and reliability needed for most environments.

The Aruba advanced ClientMatch technology and an integrated Bluetooth beacon can help enable Aruba location services.



Aruba 560EX Series Hazardous Location Access Points

Standard Features

Incredible Efficiency

The Aruba 560EX Series Hazardous Location Access Points (APs) are 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 filtering. With up to 2 spatial streams, Aruba 560EX Series provides reliable connectivity for most any application. Read the **Multi-User 802.11ax white paper** for further information.

Advantages of OFDMA

OFDMA capability allows Aruba APs to handle multiple Wi-Fi 6 capable clients on each channel simultaneously, regardless of device or traffic type. Channel utilization is optimized by handling each transaction via smaller sub-carriers or resource units (RUs), which means that clients are sharing a channel yet not competing for airtime and bandwidth.

Aruba Air SliceTM for Extended OFDMA Assurance

Initially, APs in controller-less mode (Instant) can provide SLA-grade performance by allocating radio resources, such as time, frequency, and spatial streams, to specific traffic types. By combining the Aruba 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. For APs, Air Slice uses Aruba Central for management. Controller-based APs will be supported in a future software release.

Multi-User MIMO (MU-MIMO)

The Aruba 560EX Series APs support downlink MU-MIMO just like Wi-Fi 5 (802.11ac Wave 2) APs. The added benefit is the ability to multiply the number of clients that can now send traffic, thus optimizing client-to-AP spatial stream diversity.

Wi-Fi 6 and MU-MIMO-aware Client Optimization

The Aruba patented AI-powered ClientMatch technology eliminates sticky client issues by placing Wi-Fi 6 capable devices on the best available AP. Session metrics are used to steer mobile devices to the best AP based on available bandwidth, types of applications being used and traffic type - even as users roam.

Aruba Advanced Cellular Coexistence (ACC)

The ACC feature uses built-in filtering to automatically minimize the impact of interference from cellular networks, distributed antenna systems (DAS), and commercial small cell or femtocell equipment.

Intelligent Power Monitoring (IPM)

Aruba APs continuously monitor and report hardware energy consumption. They can also be configured to enable or disable capabilities based on available PoE power - ideal when wired switches have exhausted their power budget.

IoT Platform Capabilities

Like all Aruba Wi-Fi 6 APs, the Aruba 560EX Series includes 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 allows organizations to leverage the Aruba 560EX Series as an IoT platform, which eliminates the need for an overlay infrastructure and additional IT resources.

Standard Features

Target Wake Time (TWT)

Ideal for IoTs that communicate infrequently, TWT establishes a schedule for when clients need to communicate with an AP. This helps improve client power savings and reduces airtime contention with other clients.

Simple and Secure Access

To simplify policy enforcement, the Aruba 560EX Series uses the Aruba 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.

Aruba Secure Infrastructure

The Aruba 560EX Series includes components of Aruba's Zero Trust Security 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 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 Aruba ClearPass
Policy Manager

VPN Tunnels

In Remote AP (RAP) and IAP-VPN deployments, the Aruba 560EX 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 chip for secure storage of credentials and keys, and boot code.

Flexible Operation and Management

• 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 <u>Aruba Central</u> (cloud- managed) or <u>Aruba AirWave</u> - 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 Wi-Fi Features

Each AP also includes the following standards-based technologies:

Standard 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.

High-Density Connectivity

Each Aruba 560EX Series AP provides connectivity for a maximum of 256 associated clients per radio (512 in total). In real-world scenarios, the maximum recommended client density is dependent on environmental conditions.

Configuration Information

ΓO		

Remarks	Description		
	565 Unified Access Points		
	Aruba AP-565EX (RW) 802.11ax Dual 2x2:2 Radio Internal Omni Antenna Outdoor	R4W62A	
	HazLoc AP		
	Aruba AP-565EX (US) 802.11ax Dual 2x2:2 Radio Internal Omni Antenna Outdoor HazLoc AP	R4W63A	
	Aruba AP-565EX (EG) 802.11ax Dual 2x2:2 Radio Internal Omni Antenna Outdoor Hazloc AP	R4W60A	
	Aruba AP-565EX (IL) 802.11ax Dual 2x2:2 Radio Internal Omni Antenna Outdoor HazLoc AP	R4W28A	
	Aruba AP-565EX (JP) 802.11ax Dual 2x2:2 Radio Internal Omni Antenna Outdoor HazLoc AP	R4W61A	
	567 Unified Access Points		
	Aruba AP-567EX (RW) 802.11ax Dual 2x2:2 Radio Internal Directional Ant Outdoor	R4W66A	
	HazLoc AP	D 4\4\C7.4	
	Aruba AP-567EX (US) 802.11ax Dual 2x2:2 Radio Internal Directional Ant Outdoor HazLoc AP	R4W67A	
	Aruba AP-567EX (EG) 802.11ax Dual 2x2:2 Radio Internal Directional Ant Outdoor HazLoc AP	R4W64A	
	Aruba AP-567EX (IL) 802.11ax Dual 2x2:2 Radio Internal Directional Ant Outdoor HazLoc AP	R4W29A	
	Aruba AP-567EX (JP) 802.11ax Dual 2x2:2 Radio Internal Directional Ant Outdoor HazLoc AP	R4W65A	
Notes:	OCA Only Model Selection Form - Aruba > Wireless > Access Points > Outdoor / Rugged: Aruba 560EX Series Access Points		

Mounting Accessories

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

Outdoor AP Mount Kits

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

Notes: Add mounting bracket

For 565EX:

- o V1A bracket most often used for pole mount.
- o V2 bracket most often used for wall or pole mount.
- o H1 bracket most often used for hanging from inclined or horizontal structure.
- o The AP-56x chassis does not ship with bracket

For 567:

- o H1 bracket most often used for mounting to a wall. Allows chassis tilt.
- o H3 bracket most often used for mounting to a wall. Allows chassis dual-tilt in two axes.
- o V1A and V2 brackets can be used but will result in the AP-367 pointing down.
- o The AP-56x chassis does not ship with bracket.

Configuration Information

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Power C	,,,,,,,,,,,
	<i>-</i>

Remarks Description SKU

PoE Power Options

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

PD-9501-5GCO-AC 60W 802.3bt Smart Rate Outdoor Surge Protection Midspan

R7T40A

njecto

PD-9501-5GCO-DC 60W 802.3bt Smart Rate Outdoor Surge Protection Midspan

R7T41A

Injector

AP-POE-ATSR 1-Port Smart Rate 802.3at 30W midspan injector R6P67A

Notes: If this Power Injector is selected, bring in (Min 1 // Max 1) Localized power cord based

on the Aruba Localization Menu

Aruba PD-9001GO-DC 30W 802.3at PoE+ 10/100/1000 12-24V DC in Outdoor JW630A

Surge Prot Midspan Injector

Aruba PD-9001GO-INTL 30W 802.3at PoE+ 10/100/1000 Outdoor Surge Prot Intl

JW701A

Power Cord Injector

Aruba PD-9001GO-NA 30W 802.3at PoE+ 10/100/1000 Otdr Surge Prot NA Power JW700A

Cord Mdspan Injector

Notes: Add POE accessories for units to be POE powered

Indoor Injector provides no surge protection Indoor injector requires indoor AC power cord

AP-56x is powered by PoE only

Power Cord for JW630A, R7T40A, R7T41A should be provided by installer

The listed power injectors are not HazLoc certified and must be located outside of classified areas 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 cerified

installer

Power Injector Mounts

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

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

Notes: Add mounting kit for outdoor poe midspan injector (optional)

This is optional but recommended for outdoor injectors

Accessories

Spare Items

Std (Min 0 // max 99) User Selection (min 0 // max 99)

Outdoor AP Covers and Glands 1-pk M25/5-pk M20 Cover/2-pk M16 Cover/5-pk M20 Q8N47A

Gland/2-pk Ground Kit

Outdoor AP Metric to Standard M20 to 1/2 inch NPT 5-pk Thread Adapter Q8N48A

Notes: – These items are replacement items or special application

-Q8N47A does not include HazLoc glands. Replacements will have to be sourced 3rd party

Configuration Information

Central

Software

		Q9Y58AA
	Aruba Central AP Foundation 1 year Subscription E-STU	E Q9Y59AA
	Aruba Central AP Foundation 3 year Subscription E-STU	E
	Aruba Central AP Foundation 5 year Subscription E-STU	Q9Y60AA E
	Aruba Central AP Foundation 7 year Subscription E-STU	Q9Y61AA E Q9Y62AA
	Aruba Central AP Foundation 10 year Subscription E-STU	E
	Aruba Central AP Advanced 1yr Subscription E-STU	Q9Y63AA E
	Aruba Central AP Advanced 3yr Subscription E-STU	Q9Y64AA E Q9Y65AA
	Aruba Central AP Advanced 5yr Subscription E-STU	E
	Aruba Central AP Advanced 7yr Subscription E-STU	Q9Y66AA E Q9Y67AA
Notes:	Aruba Central AP Advanced 10yr Subscription E-STU Add the Central Cloud Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > Cloud Services	Q9107AA E
	Aruba Central On-Premises AP Foundation 1 year Subscription E-STU	R6U63AA
	Aruba Central On-Premises AP Foundation 3 year Subscription E-STU	E R6U64AA E
	Aruba Central On-Premises AP Foundation 5 year Subscription E-STU	R6U65AA
	Aruba Central On-Premises AP Foundation 7 year Subscription E-STU	R6U66AA
	Aruba Central On-Premises AP Foundation 10 year Subscription E-STU	E R6U67AA E
Notes:	Add the Central On-Prem Skus to the Aruba Catalog as Standalone: Aruba > Network Management > Central > On-Prem Services	L

Technical Specifications

AP- Aruba 560EX Series Specification AP-565

Built-in omni-directional antennas
 5 GHz antennas 5.4 dBi
 2.4 GHz antennas 3.2 dBi
 BLE/802.15.4 antennas 3.3d dBi

AP-567

Built-in 90°H x 90°V directional antennas
 5 GHz antennas 6.8 dBi
 2.4 GHz antennas 7.1 dBi
 BLE/802.15.4 antennas 3.0d dBi

Mechanical AP-565

• Dimensions/weight (excluding mount):

16.5 cm (W) x 16.5 cm (D) x 11 cm (H) 6.5" (W) x 6.5" (D) x 4.3" (H) 1.03 kg/2.27 lbs

AP-567

Dimensions/weight (excluding mount):

16.5 cm (W) x 16.5 cm (D) x 11 cm (H) 6.5" (W) x 6.5" (D) x 4.3" (H) 1.09 kg/2.4 lbs

Regulatory Model Number

AP-565EX: APEX0565AP-567EX: APEX0567

Mounting

- AP-270-MNT-V1
- AP-270-MNT-V2
- AP-270-MNT-H1
- AP-270-MNT-H2
- AP-270-MNT-H3

Wi-Fi Radio Specifications

- AP type: outdoor hardened, Wi-Fi 6 dual radio, 5 GHz 2x2 MIMO and 2.4 GHz 2x2 MIMO
- Software-configurable dual radio supports 5 GHz (Radio 0) and 2.4 GHz (Radio 1)
- 5 GHz:

Two spatial stream Single User (SU) MIMO for up to 1.2 Gbps wireless data rate with individual 2SS HE80 802.11ax client devices, or with two 1SS HE80 802.11ax MU-MIMO capable client devices simultaneously

• 2.4 GHz

Two spatial stream Single User (SU) MIMO for up to 574 Mbps (287 Mbps) wireless data rate with individual 2SS HE40 (HE20) 802.11ax client devices or with two 1SS HE40 (HE20) 802.11ax MU-MIMO capable client devices simultaneously

- Up to 256 associated client devices per radio
- Up to 16 BSSIDs per radio
- Supported frequency bands (country-specific restrictions apply):

2.400 to 2.4835 GHz

Technical Specifications

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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 (RLI)
```

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
- 802.11ax high efficiency (HE) support: HE20/40/80
- 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, HT20 to HT40), 400 with 256-QAM
802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 2, VHT20 to VHT80), 1,083 with 1024-QAM
802.11ax (2.4GHz): 3.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40)
```

- 802.11n/ac/ax 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: +23 dBm per chain, +26 dBm aggregate (2x2) 5 GHz band: +23 dBm per chain, +26 dBm aggregate (2x2)
```

Notes: Conducted transmit power levels exclude antenna gain.

- Maximum EIRP (limited by local regulatory requirements):
 - 2.4 GHz band:

o 565: 29.2 dBm EIRP o 567: 33 dBm EIRP 5 GHz band: o 565: 31.4 dBm EIRP

o 565: 31.4 dBm EIRP o 567: 32.7 dBm EIRP

- 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
- Short guard interval for 20-MHz, 40-MHz, and 80-MHz
- 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

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

Technical Specifications

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

Power

- Maximum (worst-case) power consumption: 15.6W
- Maximum (worst case) power consumption in idle mode: 4.2W
- Maximum (worst case) power consumption in deep-sleep mode: 1.7
- Power sources sold separately
- Power over Ethernet (PoE+): 802.3at-compliant
- When powered by 1x 802.3at, there are no restrictions
- When powered by 1x 802.3af with IPM enabled, the AP will start up in unrestricted mode, but may
 dynamically apply restrictions depending on the POE budget and actual power. The feature restrictions
 can be programmed.
- When powered by 1x 802.3af with IPM disabled, the AP will lower the 2.4Ghz radio to 1x1:1

Additional Interfaces

• E0: 10/100/1000BASE-T (RJ-45)

Auto-sensing link speed and MDI/MDX

PoE-PD: 48Vdc (nominal) 802.3at/bt (Class 3 or higher)

802.3az Energy Efficient Ethernet (EEE)

• Bluetooth 5 and 802.15.4 radio

2.4 GHz

Bluetooth 5: up to 8 dBm transmit power and -95 dBm receive sensitivity Zigbee: up to 8 dBm transmit power and -97 dBm receive sensitivity 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)
- USB-C console interface

Environmental

Operating:

Temperature: -40° C to +55° C (-40° F to +140° F) with full solar loading Humidity: 5% to 95% non-condensing internal

Rated for operation in all weather conditions

• Storage and transportation:

Temperature: -40° C to +70° C (-40° F to +158° F)

- Operating Altitude: 3,000 m
- Water and Dust: IP66/67
- Salt Tolerance: Tested to ASTM B117-07A Salt Spray 200hrs
- Wind Survival: Up to 165 Mph
- Shock and Vibration ETSI 300-19-2-4

Certifications

- CB Scheme Safety, cTUVus
- UL2043 plenum rating
- Wi-Fi Alliance certified 802.11a/b/g/n/
- Wi-Fi Alliance certified Wi-Fi 6 (802.11ax)
- Wi-Fi CERTIFIEDTM ac (with wave 2 features)
- Passpoint® (Release 2) with ArubaOS and Instant 8.3+

Technical Specifications

Warranty

• Aruba Limited lifetime warranty

Minimum Software Versions

• ArubaOS and Aruba InstantOS 8.7.1.0

Band, rate	Maximum transmit power (dBm) per	Receiver sensitivity (dBm) per receive		
	transmit chain	chain		
2.4 GHz, 802.11b				
1 Mbps	22	-97		
11 Mbps	22	-89		
2.4 GHz, 802.11g				
6 Mbps	22	-93		
54 Mbps	20	-76		
2.4 GHz, 802.11n/ac	HT20			
MCS0	22	-93		
MCS8	19	-75		
2.4GHz, 802.11ax HE	20			
MCS0	22	-93		
MCS11	17	-62		
5GHz, 802.11a				
6 Mbps	22	-92		
54 Mbps	20	-75		
5GHz, 802.11n/ac HT	20/VHT20			
MCS0	22	-92		
MCS8	19	-72		
5GHz, 802.11n/ac HT	40/VHT40			
MCS0	22	-90		
MCS9	19	-65		
5GHz, 802.11ac VHT	80			
MCS0	22	-88		
MCS9	19	-63		
5GHz, 802.11ax HE2				
MCS0	22	-94		
MCS11	17	-62		
5GHz, 802.11ax HE4		1		
MCS0	22	-91		
MCS11 17		-60		
5GHz, 802.11ax HE8	·	1		
MCS0	22	-87		
MCS11 17		-57		
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Summary of Changes

Date	Version History	Action	Description of Change
21-Nov-2022	Version 4	Changed	Configuration Information was updated.
06-Dec-2021	Version 3	Changed	SKUs added in Configuration Information section.
28-Jun-2021	Version 2	Changed	SKUs added in Configuration Information section.
04-Jan-2021	Version 1	New	New QuickSpecs

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