ARUBA 175 SERIES OUTDOOR ACCESS POINTS

For high-density Wi-Fi client environments

Multifunctional 175 series outdoor wireless access points (APs) deliver enterprise-grade Wi-Fi to high-density client environments in campuses, storage yards, warehouses, container and transportation facilities, extreme industrial production areas and other harsh environments.

These high-performance 802.11n outdoor APs deliver wireless data rates up to 300 Mbps per radio and ensure peak performance by utilizing channel bonding, block acknowledgement and MIMO radios. Advanced antenna technology also increases RF signal range and reliability.

Able to survive in harsh outdoor environments, 175 series APs 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 175 series outdoor APs feature two dual-band 2.4-GHz and 5-GHz radios with 2x2 MIMO and four external antenna connectors.

WI-FI CLIENT OPTIMIZATION

To eliminate sticky client behavior, every Aruba AP comes with ClientMatch™ technology, which continuously gathers session performance metrics and utilizes this data to steer mobile devices to the best AP and radio on the WLAN, even while users roam.

BEST-IN-CLASS RF MANAGEMENT

All Aruba APs include Adaptive Radio Management™ technology, which is essential to creating the most reliable, high-performance WLANs. ARM™ manages the 2.4-GHz and 5-GHz radio bands to optimize Wi-Fi client performance and ensures that APs stay clear of RF interference.

The 175 series can be configured to provide part-time or dedicated air monitoring for spectrum analysis and wireless intrusion protection, VPN tunnels to extend remote locations to corporate resources, and wireless mesh connections where Ethernet drops are not available.

CHOOSE YOUR OPERATING MODE

The 175 series of outdoor APs offers a choice of operating modes to meet your unique management and deployment requirements.

- **Controller-managed mode**. When managed by Aruba Mobility Controllers, 175 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 Instant™ mode**. In Aruba Instant mode, a single AP automatically distributes the network configuration to other Instant APs in the WLAN. Simply power-up one Instant AP, configure it over the air, and plug in the other APs – the entire process takes about five minutes.

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, Instant APs are factory-shipped to any site and configure themselves when powered up.

If WLAN and network requirements change, a built-in migration path allows 175 series Instant APs to become part of a WLAN that is centrally managed by a Mobility Controller.

ADVANCED FEATURES

- Spectrum Analysis:
  - Spectrum analyzer remotely scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference.
- Security:
  - With an OpenDNS service subscription, Aruba Instant delivers integrated web filtering, malware and botnet protection to every device connected to the WLAN
  - Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys
  - SecureJack-capable for secure tunneling of wired Ethernet traffic

OPERATING MODES

- 802.11a/b/g/n Aruba Instant AP
- 802.11a/b/g/n Mobility Controller-managed AP
- Air monitor (AM)
- Secure enterprise mesh
- Remote AP (RAP) when used with a Mobility Controller

ARUBA networks

WIRELESS RADIO SPECIFICATIONS

- AP type: Dual-radio, dual-band 802.11n outdoor
- Software-configurable dual radio supports 2.4 GHz and 5 GHz
- 2x2 MIMO 802.11n with two spatial streams and up to 300 Mbps 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 upon 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: Orthogonal frequency division multiplexing (OFDM)
  - 802.11n: 2x2 MIMO with two spatial streams
- Supported modulation types:
  - 802.11b: BPSK, QPSK, CCK
  - 802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum transmit power:
  - 2.4 GHz: 25 dBm aggregate (limited by local regulatory requirements)
  - 5 GHz: 25 dBm aggregate (limited by local regulatory requirements)
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay diversity for improved downlink RF performance
- Space-Time Block Coding (STBC) for increased range and improved reception
- Association rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: MCS0 to MCS15 (6.5 Mbps to 300 Mbps)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11n packet aggregation: A-MPDU, A-MSDU

POWER IN

- IAP-175P and AP-175P: 48-volt DC 802.3at power over Ethernet (PoE+)
- IAP-175AC and AP-175AC: 100-240-volt AC from external AC power source
- AP-175DC: 12-48 volt DC from external DC power source
- Maximum power consumption: 18 watts; excludes power consumed by any PoE device connected to and powered by the IAP-175AC and AP-175AC

POWER OUT

- The AC and DC powered models provide an 802.3af PoE power source (PSE) on the Ethernet interface

ANTENNA

- Four N-type female interfaces (two 2.4 GHz and two 5 GHz) for external MIMO antennas
- Feeder cable may be used for external antenna deployments

INTERFACES

- Network: One 10/100/1000BASE-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX
- Power: One AC power connector (IAP-175AC and AP-175AC) and one DC power connector (IAP-175DC and AP-175DC)
- Other: One USB console interface

MOUNTING

- Wall or mast mounted using the mounting bracket supplied with the unit; solar shield included

MECHANICAL

- Dimensions/weight (unit):
  - 225 mm x 225 mm x 105 mm (8.9” x 8.9” x 4.1“), excluding connectors
  - 3.5 kg (7.7 lb): IAP-175P and AP-175P
  - 4.25 kg (9.4 lb): IAP-175AC, AP-175AC and AP-175DC
- Dimensions/weight (shipping):
  - 395 mm x 348 mm x 375 mm (15.6” x 13.7” x 14.8“)
  - 8.25 kg (18.2 lb): IAP-175P and AP-175P
  - 9 kg (19.8 lb): IAP-175AC, AP-175AC and AP-175DC

ENVIRONMENTAL

- Operating temperature:
  - -30° C to 60° C (-22° F to 140° F): IAP-175P and AP-175P
  - -40° C to 55° C (-40° F to 131° F): IAP-175AC, AP-175AC and AP-175DC
- Operating humidity: 5% to 95% non-condensing
- Operating altitude: Up to 3,000 meters (9,850 feet)
- Storage and transportation temperature: -40° C to +70° C (-40° F to +158° F)
- Weather rating: IP66 and IP67
- Wind survivability: Up to 165 mph
- Shock and vibration: ETSI 300-19-2-4 spec T41.E class 4M3

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

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

CERTIFICATIONS

- CB Scheme Safety, cTUVus
- Wi-Fi certified 802.11a/b/g/n

WARRANTY

- One year parts and labor

MINIMUM ARUBAOS VERSION

- 5.0.2.1 on an Aruba Mobility Controller
- Aruba Instant 2.0.0.3 software

175 SERIES AP RF PERFORMANCE TABLE

	Max transmit power per active transmit chain (dBm)	Receive sensitivity (dBm)	Max transmit power per active transmit chain (dBm)	Receive sensitivity (dBm)
	2.4 GHz		**5 GHz**	
802.11b				
1 Mbps	20	-96	–	–
2 Mbps	20	-96	–	–
5.5 Mbps	20	-94	–	–
11 Mbps	20	-93	–	–
802.11a/g				
6 Mbps	20	-96	22	-97
9 Mbps	20	-96	22	-96
12 Mbps	20	-96	22	-96
18 Mbps	20	-95	22	-94
24 Mbps	19	-92	22	-88
36 Mbps	18	-89	20	-86
48 Mbps	17	-85	19	-82
54 Mbps	17	-83	18	-80
802.11n HT20				
MCS0	22	-94	21	-97
MCS1	22	-93	20	-94
MCS2	22	-92	19	-91
MCS3	22	-89	18	-87
MCS4	21	-85	17	-86
MCS5	20	-81	16	-81
MCS6	19	-80	15	-79
MCS7	18	-78	15	-77
MCS8	22	-94	21	-97
MCS9	22	-93	20	-94
MCS10	22	-92	19	-91
MCS11	22	-89	18	-87
MCS12	21	-85	17	-86
MCS13	20	-81	16	-81
MCS14	19	-80	15	-79
MCS15	18	-78	15	-77
802.11n HT40				
MCS0	21	-92	19	-92
MCS1	21	-91	19	-90
MCS2	21	-89	18	-88
MCS3	20	-86	17	-85
MCS4	19	-83	16	-83
MCS5	18	-79	15	-79
MCS6	18	-77	14	-77
MCS7	17	-75	14	-73
MCS8	21	-92	19	-92
MCS9	21	-91	19	-90
MCS10	21	-89	18	-88
MCS11	20	-86	17	-85
MCS12	19	-83	16	-83
MCS13	18	-79	15	-79
MCS14	18	-77	14	-77
MCS15	17	-75	14	-73

Maximum capability of the hardware provided. Maximum transmit power is limited by local regulatory settings.

ORDERING INFORMATION	
Part Number	**Description**
IAP-175P	Aruba Instant 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 802.3at PoE+. Includes mounting kit and sun shield. These products should be considered rest-of-world products and must not be deployed in the United States, Japan or Israel.
IAP-175P-US	Aruba Instant 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 802.3at PoE+. Includes mounting kit and sun shield. Restricted regulatory domain: United States
IAP-175P-IL	Aruba Instant 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 802.3at PoE+. Includes mounting kit and sun shield. Restricted regulatory domain: Israel
IAP-175P-JP	Aruba Instant 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 802.3at PoE+. Includes mounting kit and sun shield. Restricted regulatory domain: Japan
IAP-175AC	Aruba Instant 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 100-240 VAC power. Includes mounting kit and sun shield. These products should be considered rest-of-world products and must not be deployed in the United States, Japan or Israel.
IAP-175AC-US	Aruba Instant 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 100-240 VAC power. Includes mounting kit and sun shield. Restricted regulatory domain: United States
IAP-175AC-IL	Aruba Instant 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 100-240 VAC power. Includes mounting kit and sun shield. Restricted regulatory domain: Israel
IAP-175AC-JP	Aruba Instant 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 100-240 VAC power. Includes mounting kit and sun shield. Restricted regulatory domain: Japan
AP-175-P	Aruba 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 802.3at PoE+. Includes mounting kit and sun shield.
AP-175AC	Aruba 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 100-240 VAC power. Includes mounting kit and sun shield.
AP-175DC	Aruba 175 outdoor wireless AP, 802.11a/b/g/n, 2x2:2, dual radio, external antenna connectors, 12-48 VDC power. Includes mounting kit and sun shield.

For a complete list of accessories, please see the AP-175 Configuration Guide.

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