ARUBA AP-175 ACCESS POINT

The multifunction AP-175 is an affordable, fully hardened outdoor 802.11n access point (AP) that provides maximum deployment flexibility in high-density campuses, storage yards, warehouses, container/transportation facilities, extreme industrial production areas and other harsh environments. The high-performance AP-175 delivers wire-like performance at data rates up to 300 Mbps per radio.

The AP-175 features two 2x2 MIMO dual-band 2.4-GHz/5-GHz radios with quad antenna interfaces. Each radio is capable of providing a maximum aggregate transmit power of up to 25dBm.

With wall and mast mounting options, the AP-175 is built to provide years of trouble-free operation.

Engineered to survive in harsh outdoor environments, the AP-175 withstands exposure to high and low temperatures, persistent moisture and precipitation, and is fully sealed for protection from airborne contaminants. All electrical interfaces include industrial-strength surge protection.

As an 802.11n AP, the AP-175 works with Aruba's centralized Mobility Controllers to enable the use of wireless as a primary connection with speed and reliability comparable to a wired LAN. It also increases performance by utilizing techniques such as channel bonding, block acknowledgement and MIMO radios. Advanced antenna technology also increases range and reliability.

The key to ensuring wire-like performance and reliability is Aruba's unique Adaptive Radio Management (ARM) and spectrum analysis* capabilities, which manage the 2.4-GHz and 5-GHz radio bands to mitigate RF interference and maximize Wi-Fi client performance.

The multifunction AP-175 can be configured through the Aruba Mobility Controller to provide wireless LAN access with part-time air monitoring, dedicated air monitoring for wireless IPS and spectrum analysis, Remote AP (RAP) functionality or secure enterprise mesh.

The AP-175 can operate either from standard 802.3at power-over-Ethernet (PoE+) sources (AP-175P model), a 100-240 volt AC power source (AP-175AC model), or a 12-48 volt DC power supply or solar and plant bus power sources. The AC and DC powered models provide an 802.3af POE power source (PSE) on the Ethernet interface.
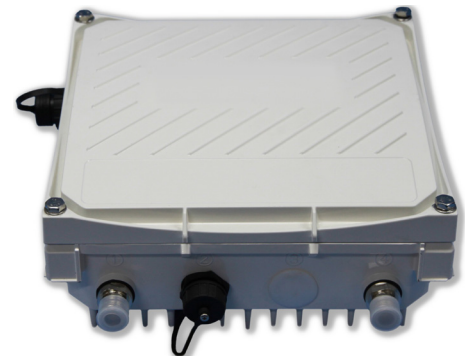
APPLICATION
- 802.11n outdoor AP provides maximum deployment flexibility in high-density campuses, storage yards, warehouses, container/transportation facilities, extreme industrial production areas and other harsh environments

OPERATING MODE
- 802.11a/b/g/n AP, air monitor (AM) and Remote AP (RAP)
- Spectrum monitor, AM and RAP
- AM and RAP
- RAP
- Secure enterprise mesh

RADIOS
- Software-configurable dual radio capable of supporting 2.4 GHz and 5 GHz
- 802.11n capable, implementing 2x2 MIMO with two spatial streams, providing up to 300 Mbps data rate per radio
- Maximum (aggregate) transmit power per radio: 25dBm

RF MANAGEMENT
- Automatic transmit-power and channel-management control with auto coverage-hole correction via Adaptive Radio Management (ARM)
- Spectrum analysis* remotely scans the 2.4-GHz and 5-GHz radio bands to identify sources of RF interference. This provides visibility into non-802.11 RF interference sources and their effect on 802.11 channel quality.

ADVANCED FEATURES
- Integrated RAP, secure enterprise mesh point or portal, wireless intrusion detection and prevention

POWER IN
- AP-175P: 48-volt DC 802.3at power over Ethernet (PoE+)
- 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 AP-175AC or AP-175DC)

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

WIRELESS RADIO SPECIFICATIONS
- AP type: Dual-radio, dual-band 802.11n outdoor
- 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: Controller-managed, dependent upon configured regulatory domain

- 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 (limited by local regulatory requirements)
  - 5 GHz: 25 dBm (limited by local regulatory requirements)
- Maximum ratio combining (MRC) for improved receiver performance
- Association rates (Mbps):
  - 802.11b: 1, 2, 5.5, 11
  - 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: MCS0 - MCS15 (6.5 Mbps to 300 Mbps)
- 802.11n high-throughput (HT) support: HT 20/40
- 802.11n packet aggregation: A-MPDU, A-MSDU

ANTENNA
- Quad, N-type female interfaces (2 x 2.4 GHz, 2 x 5 GHz) for external antenna support (supports MIMO)
- Feeder cable may be used for external antenna deployments

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

INTERFACES
- Network:
  - 1 x 10/100/1000BASE-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX
- Power:
  - 1 x DC power connector (in AP-175DC model only)
  - 1 x AC power connector (in AP-175AC model only)
- Antenna:
  - 4 x N-Type female antenna interfaces
- Other:
  - 1 x USB console interface

MECHANICAL
- Dimensions/weight (unit)
  - 260 mm x 240 mm x 105 mm (10.2" x 9.4" x4.1")
  - 3.25 kg (7 lb)
- Dimensions/weight (shipping)
  - 330 mm x 320 mm x 300 mm (12.9" x 12.6"x 11.8")
  - 7.5 kg (16.6 lb)

ENVIRONMENTAL
- Operating:
  - Temperature: -30º C to 55º C (-22º F to 131º F)
  - Relative humidity: 5% to 95% non-condensing
  - Altitude: Up to 3,000 meters (9,850 feet)
- Storage and transportation temperature range
  -40º C to 70º C (-40º F to 158º F)
- Weather rating: IP66
- Wind survivability: Up to 165 mph
- Shock and vibration: ETSI 300-19-2-4 spec T41.E class 4M3
- Transportation: ISTA 2A

REGULATORY
- FCC/Industry of Canada
- R&TTE Directive 1995/5/EC
- EN 300 328
- EN 301 893
- CB Scheme Safety, cTUVus
- Korea KCC
- Mexico NOM/COFETEL
- IEC 60529 IP66, NEMA 4X
- ATEX Zone 2
- CE Marked
- Low Voltage Directive 72/23/EEC
- EN 301 489
- UL/IEC/EN 60950
- Japan MIC/VCCI
- Brazil ANATEL
- China SRRC/CCC
- AS/NZS 4260, 4771, 3548

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

CERTIFICATIONS
- Wi-Fi certified: 802.11a/b/g/n

WARRANTY
- 1 year parts/labor

ORDERING INFORMATION

Part number	Description
AP-175P	Aruba 175 Outdoor Wireless Access Point, 802.11abgn, dual radio, external antennas, PoE+ powered (802.3at). Includes mounting kit and sun shield.
AP-175AC	Aruba 175 Outdoor Wireless Access Point, 802.11abgn, dual radio, external antennas, AC powered (100-240Vac). Includes mounting kit, sun shield and power cord.
AP-175DC	Aruba 175 Outdoor Wireless Access Point, 802.11abgn, dual radio, external antennas, DC powered (12-48Vdc). Includes mounting kit, sun shield and power cord.
PD-9001G-AC	Single Port 802 3at PoE Midspan Injector
AP-LAR-1	Aruba Outdoor Antenna Lightning Arrestor - N Type Connector
AINS2KKIT-00	Outdoor Installation Kit
ACONGESTD-00	USB console cable, 1.5m
AETHGEL05-00	5m shielded Ethernet cable with RJ-45 connectors

RF PERFORMANCE TABLE

	Max TX power per active TX chain (dBm)	RX Sensitivity (dBm)	Max TX power per active TX chain (dBm)	RX 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 will be limited by local regulatory settings.