



## ARUBA AP-120 AND AP-121 ACCESS POINTS

The multifunction AP-120 and AP-121 are indoor 802.11n access points (APs) designed for maximum deployment flexibility in low-density environments that require above-ceiling or enclosure-based installations. These high-speed APs deliver wire-like performance at data rates up to 300 Mbps.

The AP-120 features a single 3x3 MIMO dual-band 2.4-GHz/5GHz radio with detachable antenna interfaces while the AP-121 features the same radio with integrated antenna elements. Both APs are built to provide years of trouble-free operation and are backed by a limited lifetime warranty.

Working with Aruba's line of centralized Mobility Controllers, the AP-120 and AP-121 deliver secure, high-speed network services that move users to a "wireless where possible, wired where necessary" network access model. The network can then be *rightsized* by eliminating unused Ethernet switch ports and thereby reducing operating costs.

802.11n enables 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 and spectrum analysis\* capabilities, which manage the 2.4-GHz and 5-GHz radio bands to deliver maximum client performance while mitigating any RF interference.

The multifunction AP-120 and AP-121 can be configured through the Mobility Controller to provide WLAN 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-120 and AP-121 feature dual 100/1000BASE-T Ethernet interfaces and operate from standard 802.3af power-over-Ethernet (PoE) sources.



### APPLICATION

- 802.11n indoor AP designed for maximum deployment flexibility in low-density environments that require above-ceiling or enclosure-based installations.

### OPERATING MODE

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

### RADIOS

- Software-configurable single radio capable of supporting 2.4 GHz or 5 GHz

### 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 provide increased visibility into non-802.11n RF interference sources and their effect on 802.11n channel quality.

### ADVANCED FEATURES

- Integrated RAP, secure enterprise mesh point or portal, and wireless intrusion detection and prevention
- Integrated Trusted Platform Module (TPM) for secure storage of credentials and keys
- SecureJack-capable for secure tunneling of wired Ethernet traffic

### WIRELESS RADIO SPECIFICATIONS

- AP type: Single-radio, dual-band 802.11n indoor
- 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: 3x3 MIMO with 2 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: 23 dBm (limited by local regulatory requirements)
  - 5 GHz: 22 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

\*Available Q3 2010

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## ANTENNA

- AP-120: Three RP-SMA interfaces for external antenna support (supports up to 3x3 MIMO with spatial diversity)
- AP-121: AP-121: Integral, tri, omni-directional multiband dipole antenna elements (supports up to 3x3 MIMO with spatial diversity)
- AP-121 antenna max gain:
  - 2.4 to 2.5 GHz/3.2 dBi
  - 5.150 to 5.875 GHz/5.2 dBi

## POWER

- 48 V DC 802.3af or 802.3at or PoE+
- 5 V DC for external AC supplied power (adapter sold separately)
- Maximum power consumption: 12 watts

## INTERFACES

- Network:
  - 2 x 100/1000BASE-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX
  - 48 V DC 802.3af or 802.3at or PoE+ interoperable power-over-Ethernet (PoE) on both ports
- Antenna (model AP-120 only):
  - 3 x RP-SMA antenna interfaces (supports up to 3x3 MIMO with spatial diversity)
- Other:
  - 1 x RJ-45 console interface

## MOUNTING

- Standard:
  - Wall
  - Tool-less ceiling tile rail (15/16")
- Optional mounting kit:
  - Desk-stand and wall-outlet mount plate
  - Solid wall stand-off
  - Ceiling tile rail (15/16" & 9/16" recessed or non-recessed)
- Security:
  - Kensington security lock point (AP-121 only)

## MECHANICAL

- Dimensions/weight:
  - 124 mm x 130 mm x 51 mm (4.9" x 5.13" x 2.0")
  - 0.42 kg (15 oz)

## ENVIRONMENTAL

- Operating:
  - Temp: 0° C to 50° C +(32° F to +122° F)
  - Humidity: 5 to 95% non-condensing
- Storage and Transportation Temperature Range:
  - Temp: -40° C to +70° C (-40° F to +158° F)

## REGULATORY

- FCC Part 15
- Industry of Canada
- MIC
- Anatel
- NOM/COFETEL
- SRRC / CCC
- GS Mark
- CE Mark
- R&TTE Directive - 1995/5/EC
- Low Voltage Directive - 72/23/EEC
- EN 300 328
- EN 301 893
- EN 301 489

- UL/IEC/EN 60950-1:2001
- CB, cULus
- AS/NZS 4268, 4771
- UL2043 Compliant

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

## CERTIFICATIONS

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

## WARRANTY

- Limited lifetime warranty



## ORDERING INFORMATION

Part number	Description
AP-120	Aruba 120 AP (802.11a/n or 802.11b/g/n only)
AP-121	Aruba 121 AP (802.11a/n or 802.11b/g/n only)
AP-AC-NA-2	AC Power Adapter Kit - North America
AP-AC-JPN-2	AC Power Adapter Kit - Japan
AP-AC-UK-2	AC Power Adapter Kit - United Kingdom
AP-AC-IT-2	AC Power Adapter Kit - Italy
AP-AC-EC-2	AC Power Adapter Kit - Schuko
AP-AC-AUS-2	AC Power Adapter Kit - Australia
AP-AC-LA-2	AC Power Adapter Kit - North America 2 Prong Version
AP-AC-CHN-2	AC Power Adapter Kit - China
AP-AC-IN-2	AC Power Adapter Kit - India
AP-AC-KOR-2	AC Power Adapter Kit - Korea
AP-120-MNT	Aruba 120 Family Wireless Access Point desktop/wall / ceiling mounting kit
AP-120-MNT-WJ	Mounting hardware kit and product enclosure to facilitate secure wall or ceiling mounting of an Aruba AP-121 or AP-125 access point to a standard North American or BS telecom/data port wall gang box, or to a 15/16" or 9/16" ceiling tile rail.
AP-120-MNT-CV	Cabling cover mounting kit to to facilitate tamper - proof mounting of an Aruba AP-121 or AP-125 access point.
AP-ANT-xx	Detachable antennas (for use with AP-120 only)



# ARUBA AP-120 AND AP-121 ACCESS POINTS

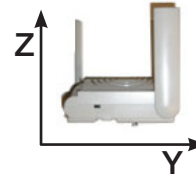
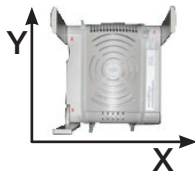
## RF PERFORMANCE TABLE

	2.4 GHz		5 GHz	
	Max TX power per active TX chain (dBm)	RX Sensitivity (dBm)	Max TX power per active TX chain (dBm)	RX Sensitivity (dBm)
<b>802.11b</b>				
1 Mbps	+18	-93		
2 Mbps	+18	-91		
5.5 Mbps	+18	-90		
11 Mbps	+18	-88		
<b>802.11a/g</b>				
6 Mbps	+17	-92	+17	-91
9 Mbps	+17	-92	+17	-91
12 Mbps	+17	-92	+17	-91
18 Mbps	+17	-91	+17	-90
24 Mbps	+17	-88	+17	-87
36 Mbps	+17	-85	+16	-83
48 Mbps	+16	-81	+15	-79
54 Mbps	+13	-79	+13	-77
<b>802.11n HT20</b>				
MCS0	+18	-92	+17	-91
MCS1	+18	-91	+17	-89
MCS2	+18	-89	+17	-87
MCS3	+18	-85	+17	-84
MCS4	+18	-82	+17	-80
MCS5	+17	-78	+17	-76
MCS6	+13	-76	+13	-74
MCS7	+11	-75	+12	-72
MCS8	+18	-90	+17	-89
MCS9	+18	-89	+17	-87
MCS10	+18	-87	+17	-85
MCS11	+18	-83	+17	-82
MCS12	+18	-80	+17	-78
MCS13	+17	-76	+17	-74
MCS14	+13	-74	+13	-72
MCS15	+11	-73	+12	-70
<b>802.11n HT40</b>				
MCS0	+18	-89	+17	-88
MCS1	+18	-87	+17	-85
MCS2	+18	-84	+17	-83
MCS3	+18	-84	+17	-80
MCS4	+18	-78	+17	-77
MCS5	+17	-74	+17	-72
MCS6	+13	-72	+13	-70
MCS7	+11	-71	+12	-67
MCS8	+18	-87	+17	-86
MCS9	+18	-85	+17	-83
MCS10	+18	-82	+17	-81
MCS11	+18	-82	+17	-78
MCS12	+18	-76	+17	-75
MCS13	+17	-72	+17	-70
MCS14	+13	-70	+13	-68
MCS15	+11	-69	+12	-65

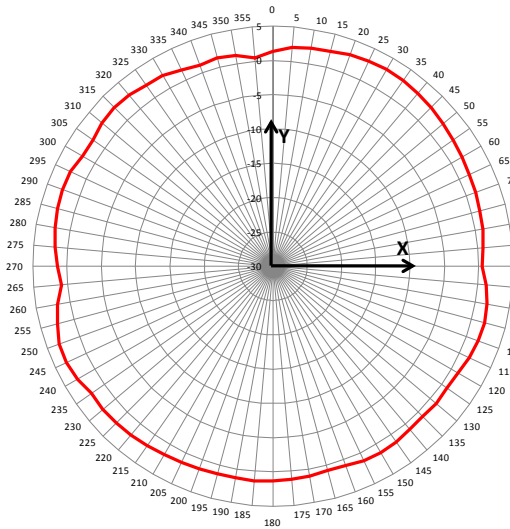
Maximum capability of the hardware provided. Maximum transmit power will be limited by local regulatory settings.

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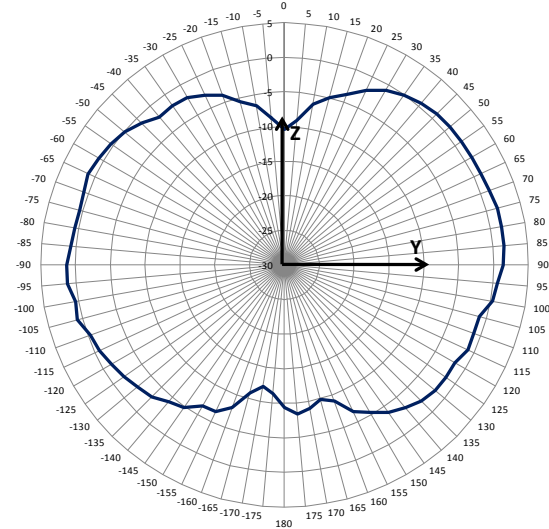
## ANTENNA PLOTS



2.45 GHz

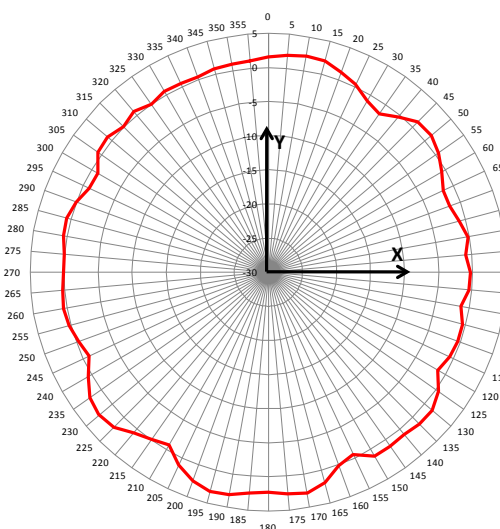


H-Plane

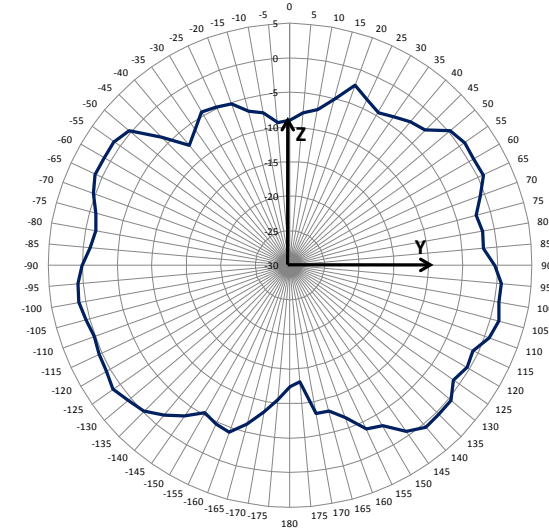


E-Plane

5.5 GHz



H-Plane



E-Plane



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