

Overview

Aruba RAP-3 Series Remote Access Points

High-performance wireless and wired networking for branch offices and teleworkers



Product overview

The multifunctional Aruba RAP-3 delivers secure 802.11n wireless and wired network access to corporate resources from branch and home offices.

Centrally managed by Aruba Mobility Controllers, the RAP-3 extends corporate resources to remote locations by establishing site-to-site VPN tunnels to the data center.

To eliminate client stickiness, the RAP-3 includes integrated ClientMatch technology, which continuously gathers session performance metrics and uses this data to every device to the best AP and radio on the WLAN, even while users roam and RF conditions change.

The RAP-3 also offers a variety of enterprise-class features, including role-based network access, policy-based forwarding, and Adaptive Radio Management (ARM), which gives remote workers the same high-quality Wi-Fi experience they get at corporate headquarters.

Delivering a wireless data rate of up to 300 Mbps, the RAP-3 has three 10/100BASE-T Ethernet ports and one USB port for connecting to 3G and 4G networks. It is also available with an 802.3af power-over-Ethernet (PoE) port (RAP-3WNP model) for IP phones or other devices.

At locations that require greater coverage, the RAP-3 can join an Aruba Instant WLAN cluster. Simply install additional RAP-3s or any Instant AP and the entire cluster is managed as one. If one Instant AP fails, another AP automatically takes over with no disruption.

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.

Features and Benefits

Advanced Features

- Zero-touch provisioning as well as automated firmware upgrades and inventory management with the cloud-based Aruba Activate service.
- ClientMatch technology eliminates sticky clients by continuously gathering session performance

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metrics and using this information to steer them to the best AP and radio.

- ARM technology delivers best-in-class RF management, including automatic transmit power and channel control with auto coverage-hole correction.
- Security:
 - With a WebCC subscription, Aruba Instant RAPs deliver integrated web filtering 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

- Wireless
 - 802.11b/g/n Mobility Controller-managed RAP
 - 802.11b/g/n Aruba Instant AP
 - 802.11b/g/n air monitor
 - Hybrid WLAN and air monitor
 - Configurable to support 802.11n HT 20/40 channels or mixed-mode deployment IEEE 802.11b/g/n
- Wired
 - 10/100BASE-T Ethernet, PoE capable
 - User authentication: 802.1X, captive portal, MAC authentication or open access
 - Policy-based forwarding for local resource access

Wireless Radio Specifications

- AP type: 2.4 GHz 802.11n indoor
- Software-configurable 2.4-GHz radio
- 2x2 MIMO with two spatial streams and up to 300 Mbps wireless data rate
- Supported frequency band (country-specific restrictions apply): 2.4000 GHz to 2.4835 GHz
- Available channels: Managed by Aruba Instant or Mobility Controller, dependent upon configured regulatory domain
- Supported radio technologies:
 - 802.11b: Direct-sequence spread-spectrum (DSSS)
 - 802.11g/n: Orthogonal frequency-division multiplexing (OFDM)
 - 802.11n: 2x2 MIMO with two spatial streams
- Supported modulation types:
 - 802.11b: BPSK, QPSK, CCK
 - 802.11g/n: BPSK, QPSK, 16-QAM, 64-QAM
- Transmit power: Configurable in increments of 0.5 dBm
- Maximum (aggregate) transmit power: +19 dBm (limited by local regulatory requirements)
- Maximum ratio combining (MRC) for improved receiver performance
- Cyclic delay diversity for improved downlink RF performance
- Short guard interval for 20-MHz and 40-MHz channels
- Space-Time Block Coding (STBC) for increased range and improved reception
- Supported data rates (Mbps):
 - 802.11b: 1, 2, 5.5, 11
 - 802.11g: 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

AC-to-DC power adapter (included)

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- RAP-3WN:
 - AC input: 100-240 volts AC/0.5 A
 - DC output: 12 volts DC/1.5 A
- RAP-3WNP:
 - AC input: 100-240 volts AC/0.75 A
 - DC output: 48 volts DC/0.75 A

Maximum Power Consumption:

- RAP-3WN:
 - Maximum (excluding USB): 4.0 watts
 - Maximum (using USB): 6.5 watts
- RAP-3WNP:
 - Maximum (excluding USB and PoE): 5.5 watts
 - Maximum (using USB, no PoE): 8.0 watts
 - Maximum (using USB, full PoE): 26 watts

Encrypted Throughput

- Max IPsec encrypted wired throughput = 20 Mbps

Antennas

- Two integrated, omni-directional antenna elements for 2x2 MIMO
- Antenna gain: 2.0 dBi

Interfaces

- Network:
 - E0 (WAN): One 10/100BASE-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX
 - E1-E2 (LAN): Two 10/100BASE-T Ethernet (RJ-45), auto-sensing link speed and MDI/MDX
 - Optional 802.3af PoE (15.4 watts) on the E2 port for IP phones and other equipment
- One port for DC power connector
- One USB 2.0 port (Type A connector)
- One four-pin console interface (custom)

Mounting

- Desktop (using stand supplied with product)
- Wall (using optional wall-mount accessory)

Mechanical

- Dimensions/weight (unit, with desk stand):
 - 129 mm x 109 mm x 64 mm (5.1" x 4.3" x 2.5")
 - 180 g (6.6 oz)
- Dimensions/weight (shipping):
 - 218 mm x 150 mm x 64 mm (8.6" x 5.9" x 2.5")
 - RAP-3WN: 510 g (1.1 lb)
 - RAP-3WNP: 620 g (1.4 lb)

Environmental

- Operating:
 - Temperature: 0° C to +40° C (+32° F to +104° F)
 - Humidity: 5% to 95% non-condensing
- Storage and transportation:
 - Temperature: -40° C to +70° C (-40° F to +158° F)

Overview

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
- UL/IEC/EN 60950

Regulatory Model Numbers

- RAP-3WN: RAP-3WN
- RAP-3WNP: RAP-3WNP

Certifications

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

Warranty

- **Limited lifetime warranty**

Minimum software Versions

- ArubaOS 6.1.4.0
 - Aruba Instant 3.0
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Configuration

Ordering Guide

Step 1: Select RAP-3 Model

Description	Part Number
Instant Access Points	
Aruba RAP-3WN (RW) Wireless 3x10/100Base-T USB Remote AP	JW288A
Aruba RAP-3WN (US) Wireless 3x10/100Base-T USB Remote AP	JW291A
Aruba RAP-3WN (JP) Wireless 3x10/100Base-T USB Remote AP	JW290A
Aruba RAP-3WN (IL) Wireless 3x10/100Base-T USB Remote AP	JW289A
Aruba RAP-3WN (RW) FIPS/TAA-compliant Wireless 3x10/100Base-T USB Remote AP	JW292A
Aruba RAP-3WN (US) FIPS/TAA-compliant Wireless 3x10/100Base-T USB Remote AP	JW293A
Aruba RAP-3WNP (RW) Wireless 3x10/100Base-T USB PoE Out Remote AP	JW294A
Aruba RAP-3WNP (US) Wireless 3x10/100Base-T USB PoE Out Remote AP	JW297A
Aruba RAP-3WNP (JP) Wireless 3x10/100Base-T USB PoE Out Remote AP	JW296A
Aruba RAP-3WN (JP) FIPS/TAA-compliant Wireless 3x10/100Base-T USB Remote AP	JY757A
Aruba RAP-3WNP (JP) FIPS/TAA-compliant Wireless 3x10/100Base-T USB PoE Out Remote AP	JY758A
Aruba RAP-3WNP (IL) Wireless 3x10/100Base-T USB PoE Out Remote AP	JW295A
Aruba RAP-3WNP (RW) FIPS/TAA-compliant Wireless 3x10/100Base-T USB PoE Out Remote AP	JW298A
Aruba RAP-3WNP (US) FIPS/TAA-compliant Wireless 3x10/100Base-T USB PoE Out Remote AP	JW299A

NOTE: All units ship with compatible AC-to-DC power adapter.

NOTE: The RAP-3WNP models ship without AC power cord (add separately below)

Step 2: Add AC Power Cord (RAP-3WNP Models Only)

Description	Part Number
Select one of the following:	
PC-AC-ARG Argentina 220V AC 10A 2-meter AC Power Cord	JW113A
PC-AC-AUS Australian AC Power Cord	JW114A
PC-AC-BR Brazil AC Power Cord	JW115A
PC-AC-CHN China AC Power Cord	JW116A
PC-AC-DEN Denmark 220V AC 10A 2-meter AC Power Cord	JW117A
PC-AC-EC Continental European/Schuko AC Power Cord	JW118A
PC-AC-IN India AC Power Cord	JW119A
PC-AC-IL Israel 250V AC 10A 2-meter AC Power Cord	JW120A
PC-AC-IT Italian AC Power Cord	JW121A
PC-AC-JP Japanese AC Power Cord	JW122A
PC-AC-KOR Korea AC Power Cord	JW123A
PC-AC-NA North America AC Power Cord	JW124A
PC-AC-SWI Switzerland 220V AC 10A 2-meter AC Power Cord	JW125A
PC-AC-TW Taiwan AC Power Cord	JW126A
PC-AC-UK UK AC Power Cord	JW127A
PC-AC-ZA South Africa 250V AC 10A 2-meter AC Power Cord	JW128A

Step 3: Add Accessories (Optional)



Configuration

Description

Part Number

Mount Kit

RAP-3WN-MNT RAP-3 Series Wall Mount Kit

JW058A

Power Adapters

Description

Part Number

Configuration Impact

AP-AC-12V30A 12V/30W AC/DC Desktop Style 1.7/4.0/9.5mm Circular 90 Deg Plug DoE Level VI Adapter

JX989A

Alternate adapter for RAP-3WN(-xx), desktop style. Add AC power cord (PC-AC-xx).

AP-AC-12V18 12V/18W Indoor AP AC Power Adapter without Power Cord

JW622A

Alternative power adapter for RAP-3WN models (desktop style) **NOTE:** requires AC power cord as described in step 2

AP-AC-12V18HT 12Vdc/18W High Temp AC Power Adapter

JW623A

Alternative power adapter for RAP-3WN models (desktop style) **NOTE:** requires AC power cord as described in step 2

JW631A

For US and Japan only

AP-DC-CAR 12V/18W Indoor AP Car Power US Only Adapter Kit

Optional accessory for RAP-3WN models Only compatible with the RAP-3WN variants, not RAP-3WNP

Serial Cable

Description

Part Number

AP-CBL-SER AP Proprietary DB9 Female Serial Adapter Cable

JW071A

Technical Specifications

Rf Performance Table

	Maximum transmit power (dBm) per transmit chain	Receiver sensitivity (dBm) per receive chain
802.11b		
1 Mbps	16.0	-97.0
2 Mbps	16.0	-
5.5 Mbps	16.0	-
11 Mbps	16.0	-90.0
802.11g		
6 Mbps	16.0	-90.0
9 Mbps	16.0	-
12 Mbps	16.0	-
18 Mbps	16.0	-
24 Mbps	16.0	-
36 Mbps	16.0	-
48 Mbps	13.0	-
54 Mbps	11.0	-75.0
802.11n HT20		
MCS0/8	16.0	-90.0
MCS1/9	16.0	-
MCS2/10	16.0	-
MCS3/11	16.0	-
MCS4/12	16.0	-
MCS5/13	13.0	-
MCS6/14	11.0	-
MCS7/15	10.0	-72.0

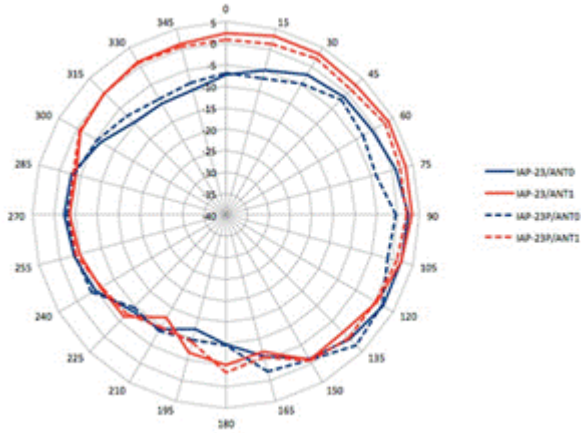
Maximum capability of the hardware provided. Maximum transmit power will be limited by local regulatory

Technical Specifications

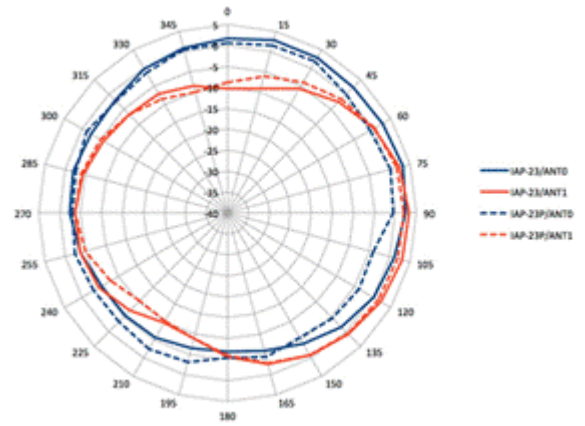
settings

Antenna Gain Plots

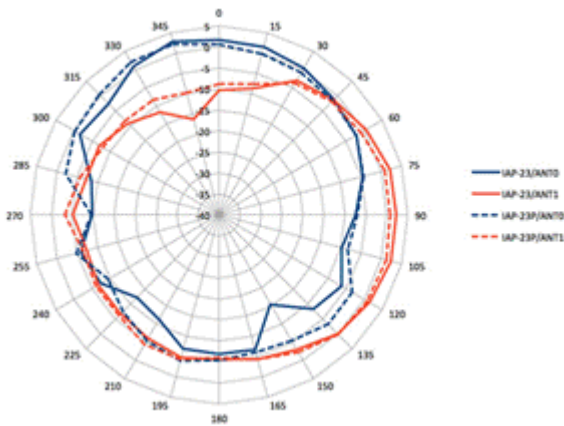
All plots are for Channel 6 (2,462 MHz)



Azimuth (top) view



Elevation (front) view



Elevation (side) view

Summary of Changes

Date	Version History	Action	Description of Change
07-Nov-2016	From Version 1 to 2	Added	Models added: JY757A, JY758A
01-Nov-2016	Version 1	Created	Document creation.

   
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