Aruba 203R Series Wireless Access Points

Installation Guide

Aruba 203R Series remote access points (203R and 203RP) are high-performance flex-radio wireless devices for hospitality and branch deployments.
This access point uses Multiple-Input, Multiple-Output (MIMO) technology to provide secure wireless connectivity for both 2.4GHz 802.11 b/g/n and 5GHz 802.11 a/n/ac WiFi. The wired Ethernet ports located on the back of this access point allow users to connect directly to the device when linked by an Ethernet cable.

- IEEE 802.11a/b/g/n/ac operation as a wireless access point
- IEEE 802.11a/b/g/n/ac operation as a wireless air monitor
- Compatibility with IEEE 802.3 af PoE-out (E2 port) (Aruba 203RP only)
- Central management configuration
- Support for selected USB peripherals
- Integrated Bluetooth Low Energy (BLE) radio

Package Contents

The following materials are included with this product:

- Aruba 203R Series access point
- Snap-on back cover

NOTE

Inform your supplier if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use these materials to repack and return the unit to the supplier if needed.

Hardware Overview

The following sections outline the hardware components of the 203R Series access point.

Figure 1 *Aruba 203R Series (front view)*

LED

The LED displays located on the front panel of the access point indicate the following functions:

System Status

The System Status LED indicates the operating condition of the access point, See Table 1.

Table 1 System Status LED

Color/State	Meaning
Off	Device is powered off
Green/solid	Device is ready; fully functional
Green/blinking [1]	Device is booting; not ready
Green/flashing [2]	Device is ready; uplink negotiated at suboptimal speed (<1Gbps)
Red/solid	Error condition

1 Blinking: one second on/one second off.
2 Flashing: on/off repeated in less than 1s

Radio Status

The Radio Status LED indicates the operating mode of the access point's radios. See Table 2.

Table 2 Radio Status LED

Color/State	Meaning
Off	Meets one of the following conditions: • Device is powered off • both radios are disabled • device is powered off
Green/solid	Both radios enabled in access mode
Green/blinking	One radio enabled in access mode; one radio disabled
Amber/solid	Both radios enabled in monitor mode
Amber/blinking	One radio enabled in monitor mode; one radio disabled
Alternating[3]	One radio enabled in access mode; one radio in monitor mode

3 Alternating: light cycles alternate between green/amber; one second on/one second off.

Network Status (E1)

The Network Status (E1) LED indicates activity transmitted to/from the wired E1 port. See Table 3.

Table 3 Network Status LED

Color/State	Meaning
Off	Meets one of the following conditions: • device is powered off • port is disabled • no link established
Green/solid	Link established
Green/flicker [4]	Activity detected across link

4 Flickering: the LED's on/off cycle is active for irregular intervals.

Network/PSE Status (E2)

The Network/PSE Status (E2) LED indicates activity transmitted to/from the wired E2 port. For Aruba 203RP access points, this LED also indicates when the access point is providing Power over Ethernet (PoE) to an external device that is physically linked to the E2 port. See Table 4.

Table 4 Network/PSE Status LED

Color/State	Meaning
Off	Meets one of the following conditions: • device is powered off • port is disabled • no link established
Green/solid	Link established
Green/flickering	Activity detected across link
Blue/solid	Link established; supplying PoE-out (Aruba 203RP only)
Blue/flickering	Activity detected across link; supplying PoE-out (Aruba 203RP only)

LED Display Settings

The LEDs have three operating modes that can be selected in the system management software:

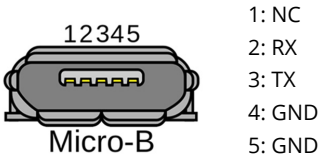
- Default mode: Refer to Table 1-4
- Off mode: LEDs are off
- Blink mode: LEDs blink green

Figure 2 *Aruba 203R Series access point (rear view)*

Console Port

The 5-pin Micro-B connector located on the bottom of this device. Use an AP-CBL-SERU cable for direct management of this device when connected to a laptop or serial console. For pin-out details, refer to Figure 3.

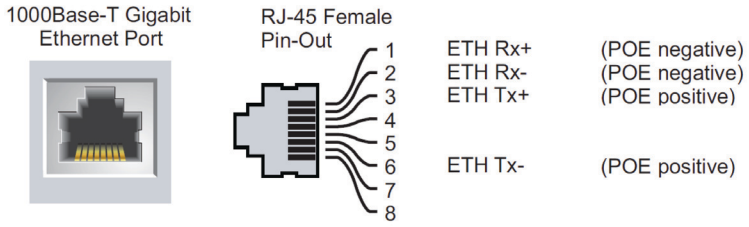
Figure 3 *Micro-B Port Pin-out*



Ethernet Ports

The Aruba 203R Series access point is equipped with three active Ethernet ports (E0-E2), shown in Figure 2.
The E0 port is a 100/1000 Base-T, auto-sensing MDI/MDX, which supports uplink connectivity when linked by an Ethernet cable.
The E1-E2 ports are 100/1000 Base-T auto-sensing MDI/MDX, which support downlink connectivity. These ports may be used to provide secure network connectivity and also allows for manual configuration the device when linked by an Ethernet cable. Refer to Figure 4 for a detailed port pin-out.
The Aruba 203RP access point supports 802.3af PoE-out from the E2 port. This device is capable of supplying up to 15.4W to a powered device.

Figure 4 *Gigabit Ethernet Port Pin-Out*



USB Interface

The top of this access point is equipped with a USB-A port that is compatible with cellular modems. When active, this port can supply up to 5W/1A to a connected device.

Push Button

The push button located on the bottom of the device can be used to reset the access point to factory default settings or turn off/on the LED display.

- To reset the access point to factory default settings:
  1. Power off the access point.
  2. Press and hold the push button using a small, narrow object, such as a paperclip.
  3. Power-on the access point without releasing the push button. The System Status LED will flash within 5 seconds.
  4. Release the push button.

  The system status LED will flash again within 15 seconds indicating that the reset is completed. The access point will now continue to boot with the factory default settings.
- To turn off/on the LED display:

  During the normal operation of the access point, press and release the push button using a small, narrow object, such as a paperclip.

Power

Aruba 203R Series access points supports AC power when using the C7 cord (ordered separately).
Acceptable power sources for this device should meet the following specifications:

- Input AC voltage range: 90V — 264V
- Input AC frequency range: 47Hz — 63Hz

The maximum power consumption for an Aruba 203R access point with a full USB load is 14W, while the maximum power consumption for an Aruba 203RP with a full PoE-PSE (15.4W) and USB load, is 31W.
The USB and PoE-PSE (Aruba 203RP only) settings can be enabled/disabled through the software's WebUI or CLI.

Before You Begin

Refer to the sections below before beginning the installation process.

Pre-Installation Checklist

Before installing your 203R Series access point, be sure that you have the following:

- Cat5E UTP cable with network access installed in the wall box
- Aruba AP AC power cable

One of the following network services:

- Aruba Discovery Protocol (ADP)
- DNS server with an "A" record
- DHCP Server with vendor-specific options

This device in compliance with governmental requirements, and is designed the so that only authorized network administrators can change the settings. For more information about access point configuration, refer to the *ArubaOS Quick Start Guide and ArubaOS User Guide*.

Identifying Specific Installation Locations

This access point should be oriented vertically, with rubber pads facing downward to facilitate maximum antenna gain. Use the access point placement map generated by Aruba RF Plan software application to determine the proper installation location(s). Each location should be as close as possible to the center of the intended coverage area and should be free from obstructions or obvious sources of interference. These RF absorbers/reflectors/interference sources will impact RF propagation and should be accounted for during the planning phase and adjusted for in RF plan.

Identifying Known RF Absorbers/Reflectors/Interference Sources

Identifying known RF absorbers, reflectors, and interference sources while in the field during the installation phase is critical. Make sure that these sources are taken into consideration when you attach an access point to its fixed location.

RF absorbers include:

- Cement/concrete—Old concrete has high levels of water dissipation, which dries out the concrete, allowing for potential RF propagation. New concrete has high levels of water concentration in the concrete, blocking RF signals.
- Natural Items—Fish tanks, water fountains, ponds, and trees
- Brick

RF reflectors include:

- Metal Objects—Metal pans between floors, rebar, fire doors, air conditioning/heating ducts, mesh windows, blinds, chain link fences (depending on aperture size), refrigerators, racks, shelves, and filing cabinets.
- Do not place an access point between two air conditioning/heating ducts. Make sure that access points are placed below ducts to avoid RF disturbances.

RF interference sources include:

- Microwave ovens and other 2.4 or 5 GHz objects (such as cordless phones)
- Cordless headset such as those used in call centers or lunch rooms

Access Point Installation

The Aruba 203R Series access point is designed for easy desktop deployments and includes a snap-on cover to cover the back panel of this device. The two holes in the snap-on cover may be used to mount the access point to a wall.

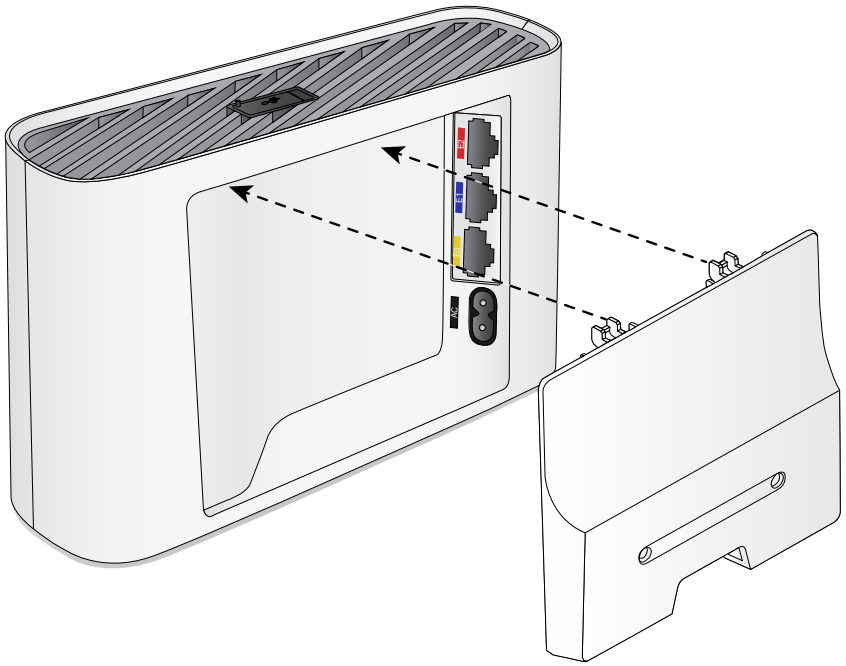
All Aruba access points should be professionally installed by an Aruba-Certified Mobility Professional (ACMP). The installer is responsible for ensuring that grounding is available and meets applicable national and electrical codes. Failure to properly install this product may result in physical injury and/or damage to property.

Tous les points d'accès Aruba doivent impérativement être installés par un professionnel agréé. Ce dernier doit s'assurer que l'appareil est mis à la terre et que le circuit de mise à la terre est conforme aux codes électriques nationaux en vigueur. Le fait de ne pas installer correctement ce produit peut entraîner des blessures corporelles et / ou des dommages matériels.

Use the steps in this section to install the Aruba 203R Series access point.

1. (Optional) refer to this step if you are mounting this device to a wall.
   a. Press the snap-on cover flat against the wall and use the two screw holes to mark the location anchor points on the wall.
   b. Once the wall has been marked, remove the snap-on cover and pre-drill the anchor holes.
   c. Position the snap-on cover so that it lay flat against the wall in the upright position. Align the screw holes on the snap-on cover with the corresponding anchor holes on the wall.
2. Ensure that the power and Ethernet cable(s) are plugged into the back of the access point.
3. Align the tabs on the snap-on cover with the corresponding slot on the back of the access point, then press the cover until it snaps into place. See Figure 5.

Figure 5 *Snap on Cover*



Software

For instructions on choosing operating modes and initial software configuration, refer to the Access Point Software Quick Start Guide.

Verifying Post-Installation Connectivity

The integrated LED on the access point can be used to verify that the access point access point is receiving power and initializing successfully (see Table 1-4). Refer to the Access Point Software Quick Start Guide for further details on verifying post-installation network connectivity.

Electrical and Environmental Specifications

For additional specifications on this product, please refer to the product data sheet at www.arubanetworks.com/safety_addendum.

Environmental

- Operating:
  - Temperature: 0˚C to +40˚C (+32˚F to +104˚F)
  - Humidity: 5% to 93% non-condensing
- Storage and transport:
  - Temperature: -40˚C to +70˚C (-40˚F to +158˚F)
  - Humidity: 5% to 93% non-condensing

Proper Disposal of Aruba Equipment

Dispose of Aruba products per local regulation. For the most current information about Global Environmental Compliance and Aruba products, see our website at www.arubanetworks.com.

Regulatory Information

The regulatory model names for the 203R Series access points are:

- 203R: APINR203
- 203RP: APINP203

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

CAUTION

Toute modification effectuée sur cet équipement sans l'autorisation expresse de la partie responsable de la conformité est susceptible d'annuler son droit d'utilisation.

FCC

Improper termination of access points installed in the United States configured to a non-US model controller is a violation of the FCC grant of equipment authorization. Any such willful or intentional violation may result in a requirement by the FCC for immediate termination of operation and may be subject to forfeiture (47 CFR 1.80).

The network administrator(s) is/are responsible for ensuring that this device operates in accordance with local/regional laws of the host domain.

RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 7.87 inches (20cm) between the radiator and your body for 2.4 GHz and 5 GHz operations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. When operated in 5.15 to 5.25 GHz frequency range, this device is restricted to indoor use to reduce the potential for harmful interference with co-channel Mobile Satellite Systems.

CAUTION

Déclaration sur les limites d'exposition aux radiofréquences : cet équipement est conforme aux limites d'exposition aux rayonnements radioélectriques spécifiées par la FCC. Il doit être installé et utilisé à une distance minimale de 20 cm par rapport à votre corps pour les fréquences de 2,4 et 5 GHz. Cet émetteur-récepteur ne doit pas être utilisé ou situé à proximité d'autres antennes ou émetteurs-récepteurs. En cas d'utilisation dans la plage de fréquences de 5,15 à 5,25 GHz, cet appareil doit uniquement être utilisé en intérieur afin de réduire les risques d'interférence avec les systèmes satellites mobiles partageant le même canal.

CAUTION

Canada

User manuals for licence-exempt radio apparatus shall contain the following text, or an equivalent notice that shall be displayed in a conspicuous location, either in the user manual or on the device, or both:
This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and(2) This device must accept any interference, including interference that may cause undesired operation of the device.
Cet appareil numerique de la classe B respecte toutes les exigencies du Reglement sur le materiel brouilleur du Canada.

Déclaration d'Industrie Canada

Conformément aux réglementations d'Industrie Canada, cet émetteur-récepteur radio doit être utilisé uniquement avec une antenne dont le type et le gain maximal doivent être approuvés par Industrie Canada. Pour réduire les interférences radio potentielles, le type d'antenne et son gain doivent être choisis de façon à ce que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas les valeurs nécessaires à une communication efficace.
Ce périphérique est conforme aux règlements RSS exempts de licence d'Industrie Canada. L'utilisation de ce périphérique est soumise aux deux conditions suivantes : (1) ce périphérique ne doit pas provoquer d'interférences, et (2) ce périphérique doit accepter toute interférence, y compris les interférences susceptibles de provoquer un dysfonctionnement.

Medical

1. Equipment not suitable for use in the presence of flammable mixtures.
2. Connect to only IEC 60950-1 or IEC 60601-1 3rd edition certified products and power sources. The end user is responsible for the resulting medical system complies with the requirements of IEC 60601-1 3rd edition.
3. Wipe with a dry cloth, no additional maintenance required.
4. No serviceable parts, the unit must be sent back to the manufacturer for repair.
5. No modifications are allowed without Aruba approval.

EMC Class A Warning

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다 .
=> 사용자 안내문은 " 업무용방송통신기자재 ' 에만 해당된다

Taiwan

第十二條 → 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條 → 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Contact Aruba

Main Site	http://www.arubanetworks.com
Support Site	http://support.arubanetworks.com
Airheads Social Forums and Knowledge Base	http://community.arubanetworks.com/
North America Telephone	1-800-943-4526 (toll free) 1-408-754-1200
International Telephone	http://arubanetworks.com/support-services/contact-support/
Software Licensing Site	http://hpe.com/networking/support
End-of-Life Information	http://arubanetworks.com/support-services/end-of-life/
Security Incident Response Team (SIRT)	Site: http://www.arubanetworks.com/support-service/security-bulletins/ Email: sirt@arubanetworks.com