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aruba AP-503R Series Remote Access Points Installation Guide

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aruba AP-503R Series Remote Access Points

The Aruba 503R Series access points are dual-radio 802.11ax Wi-Fi 6 remote access points that provide connectivity for both wired and wireless client devices.
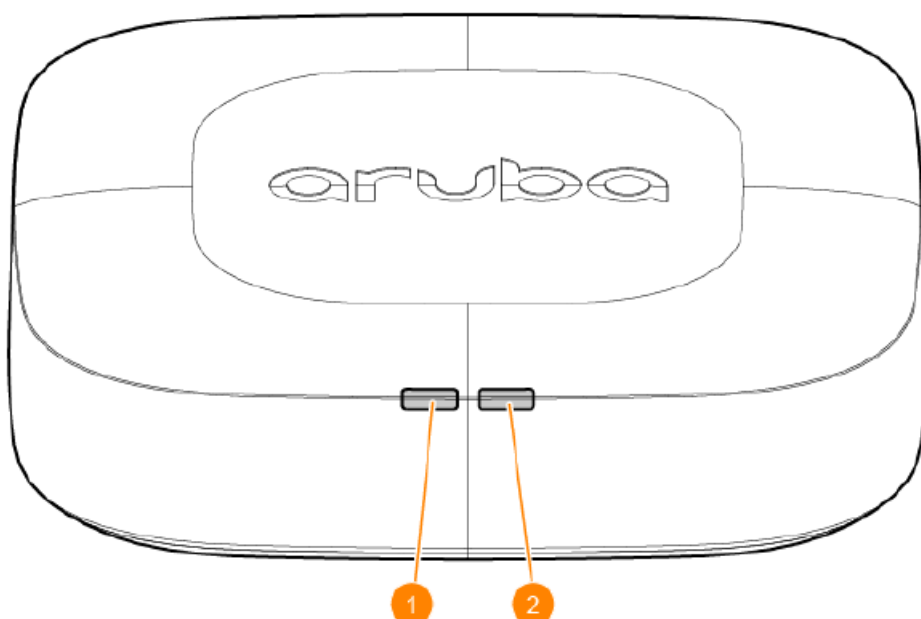
Package Contents

The following materials are included with this product:

- AP-503R Access Point
- AC-to-DC Power Adapter with country-specific AC power plug

Hardware Overview

Figure 1 AP-503R Front View

1	System Status LED
2	Radio Status LED

Figure 2 AP-503R Rear and Side View
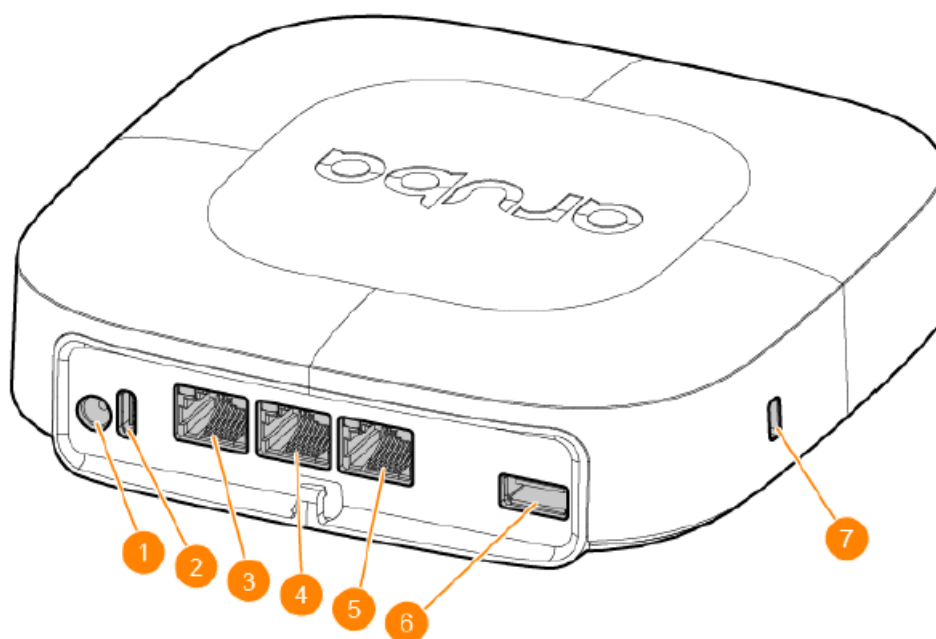
1	Primary DC Power Port (Circular)
2	Alternate DC Power Port (USB-C)
3	E0 Ethernet Port (Uplink)
4	E1 Ethernet Port (Downlink)
5	E2 Ethernet Port (Downlink)
6	USB Type-A Host Port
7	Kensington Lock Slot

Figure 3 AP-503R Bottom View
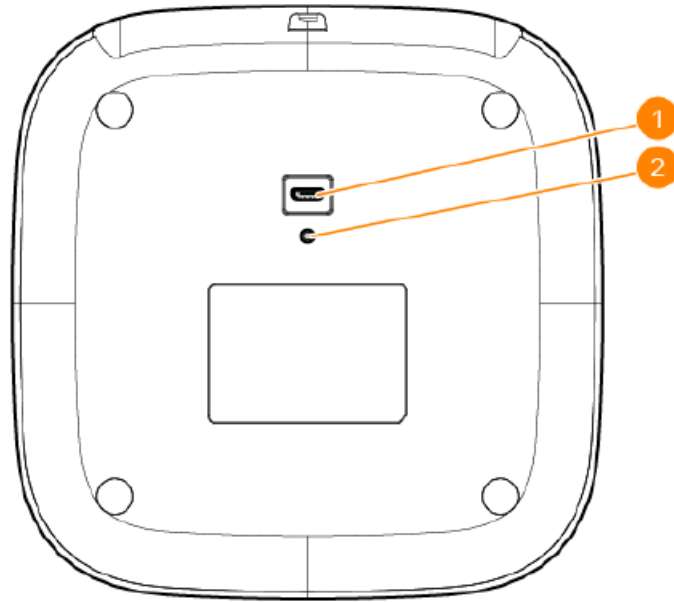
| 1 | USB Micro-B Console Port (proprietary) |
| 2 | Reset Button |

LEDs

The LEDs located on the front panel of the access point indicate the system and radio status of the access point. You can turn on/off the LEDs by tapping the top cover of the AP-503R access point.

System Status LED
The system status LED indicates the system status of the access point.

Table 1: System Status LED

Color/State	Meaning
Off	Access point powered off
Green – blinking 1	Access point booting, not ready
Green – solid	Access point ready, fully functional
Red	System error condition – Immediate attention required

Radio Status LED
The radio status LED indicates the radio status of the access point.

Table 2: Radio Status LED

Color/State	Meaning
Off	The device powered off, or both radios disabled
Green- solid	Both radios enabled in access mode
Green- blinking	One radio was enabled in access mode, the other was disabled
Amber- solid	Both radios enabled in monitor mode
Amber- blinking	One radio was enabled in monitor mode, and the other was disabled
Alternating green/amber 2	One radio enabled in access mode, the other in monitor mode

1. **Blinking:** one second on, one second off, 2 seconds cycle.
2. **Alternating:** one second for each color, 2 seconds cycle.

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

- **Normal mode:** default after power on.
- **Off mode:** the LEDs are all off
- **Blink mode:** both LEDs blink green (synchronized)

Pressing the reset button for less than 10 seconds during normal operation will toggle the LED mode between "normal" (default after power on) and "off" mode.

Caution:
Pressing the reset button for longer than 10 seconds may cause the access point to reset and return to the factory default state.

Primary DC Power Port (Circular)

- This DC power port is designed for use with the power adapter (part number R9D91A) included in the package.
- After inserting the L-shape DC connector of the power adapter into the DC power port, rotate the
- DC connector by 90 degrees and route the power cord through the cable hook on the access point. See Figure 4 and Figure 5.

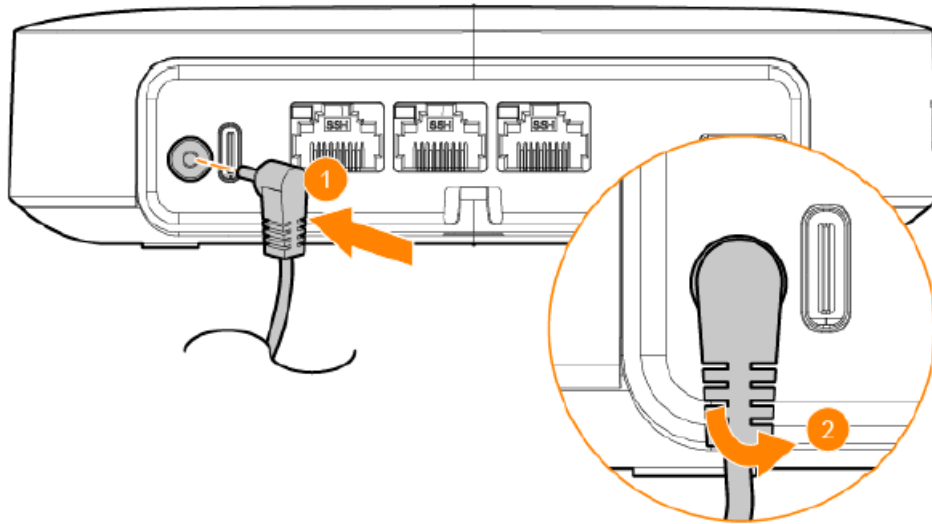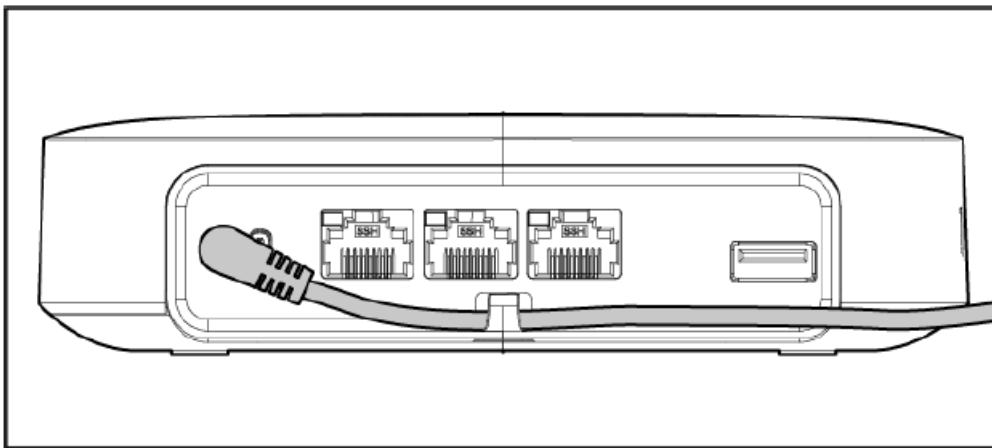**Figure 4 Connecting Power Adapter to DC Power Port**

Figure 5 Routing Power Cord through Cable Hook

Alternate DC Power Port (USB-C)

The USB-C port is designed to offer an alternate way to provide DC power to the AP-503R access point by using a compatible 5V/3A USB-C power adapter.

Ethernet Ports

The AP-503R access point has three Ethernet ports (E0 – E2), shown in Figure 2.

- The E0 port is a 100/1000Base-T auto-sensing MDI/MDIX uplink port .
- The E1 and E2 ports are 100/1000Base-T auto-sensing MDI/MDIX downlink ports.

Ethernet Port LEDs

Each of the E0-E2 ports has one LED located on the top left corner of the port, indicating the network status or activity on the port. See Figure 2 and Table 2

Table 3: Ethernet Port LEDs

LED	Color/State	Meaning
Left	Off	Meet one of the following conditions: ■ The access point is powered off ■ port is disabled ■ no link established
	Green – blinking	Activity detected on the port
	Green – solid	Link established at optimum speed (1Gbps)
	Amber – solid	Link established at reduced speed (100Mbps)

USB Type-A Host Port
The USB Type-A host port supports the Aruba MDM-USB-LTE modem, Aruba AP-USB-ZB IOT radio module and other compatible peripherals. When active, this USB port can supply up to 5W/1A to a connected device.

Reset Button
The reset button can be used to reset the access point to factory default settings or turn off/on the LED display.

Use one of the following methods to reset the access point to factory default settings:

- **To reset during normal operation:**
  - Hold the reset button for more than 10 seconds while the access point is running.
  - Release the reset button.
- To reset during power-up, hold the reset button while the access point is powering up.

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 toggle the system status LED between "normal" (default after power on) and "off" mode, during the normal operation of the access point, briefly press the reset button for less than 10 seconds.

USB Micro-B Console Port (Proprietary)
To create a console connection to the access point, follow these steps:

1. Connect the console port on the access point to the serial port on the computer using the proprietary Aruba AP-CBL-SERU cable or AP-MOD-SERU module, which needs to be purchased separately.
2. Start the terminal emulation software on the computer and configure a new serial session with the following settings:
   - **Speed:** 9600 bps
   - **Data bits:** 8
   - **Stop bits:** 1
   - **Parity:** None
   - **Flow control:** None
3. Start the terminal emulation session.
4. Press Enter once. If the connection is successful, you are prompted to log in. For this console port pin-out details, refer to Figure 6.

Figure 6 Micro-B Console Port Pin-out
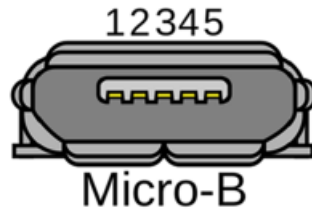
1. NC
2. RXD
3. TXD
4. GND
5. GND

If needed, the AP console driver can be found at the Aruba support portal.

Kensington Lock Slot
The AP-503R access point is equipped with a Kensington lock slot for additional physical security.

Access Point Installation

Caution

- All Aruba access points should be professionally installed by a professional installer. The installer is responsible for meeting 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.
- For indoor use only. The access point, power adapter, and all connected cables are not to be installed outdoors. This stationary device is intended for stationary use in partly temperature-controlled weather-protected environments (class 3.2 per ETSI 300 019).

You can put the AP-503R access point on any flat surface such as a desktop.

Software

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

Aruba access points are classified as radio transmission devices and are subject to government regulations of the host country. The network administrator(s) is/are responsible for ensuring that the configuration and operation of this equipment are in compliance with their country's regulations. For a complete list of approved channels in your country, refer to the Aruba Downloadable Regulatory Table at **https://www.arubanetworks.com/techdocs/DRT/content/home.htm**.

Verifying Post-Installation Connectivity

The integrated LEDs on the access point can be used to verify that the access point is receiving power and initializing successfully. See Table 1, Table 2 and Table 2.

- **Ethernet:**
    - E0/E1/E3 port: 100/1000Base-T auto-sensing MDI/MDX wired RJ45 network connectivity port
- **Power**
    - 12V DC power interface, support powering through AC-to-DC power adapter
    - Maximum power consumption: Refer to datasheet

Environmental

- **Operating**
    - **Temperature:** 0°C to +40°C (+32°F to +104°F)
    - **Humidity:** 5% to 95% non-condensing
- **Storage**
    - **Temperature:** -25ºC to 55ºC (-13ºF to 131ºF)
    - **Humidity:** 10% to 100% non-condensing

Regulatory Information

For the purpose of regulatory compliance certifications and identification, this product has been assigned a unique regulatory model number (RMN). The regulatory model number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to this regulatory model number. The regulatory model number RMN is not the marketing name or model number of the product.

The following regulatory model numbers apply to the 503R Series

- AP-503R RMN: APINR503

Caution:

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- Toute modification effectuée sur cet équipement sans l'autorisation expresse de la partie responsable de la con-formité est susceptible d'annuler son droit d'utilisation.

Safety and Regulatory Compliance

FCC Statement

Improper termination of access points installed in the United States configured to non-US model controllers will be in 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).

RF Radiation Exposure Statement:
This equipment complies with RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 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.

The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit the transmission of control or signaling information or the use of repetitive codes where required by the technology.

Industry Canada
This Class B digital apparatus meets all of the requirements of the Canadian Interference-Causing Equipment Regulations.

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). 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.

When operated in the 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.

- Operation shall be limited to indoor use only;
- Operation on oil platforms, cars, trains, boats, and aircraft shall be prohibited except for on large aircraft flying above 10,000 ft.

EU and UK Regulatory Conformity
The Declaration of Conformity made under Radio Equipment Directive 2014/53/EU as well as the United Kingdom's Radio Equipment Regulations 2017/UK is available for viewing below. Select the document that corresponds to your device's model number as it is indicated on the product label.

EU & UK Declaration of Conformity
Compliance is only assured if the Aruba-approved accessories as listed in the ordering guide are used.
https://www.arubanetworks.com/assets/og/OG_503RSeries.pdf.

Wireless Channel Restrictions
5150-5350MHz band is limited to indoor only in the following countries; Austria (AT), Belgium (BE), Bulgaria (BG), Croatia (HR), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (GR), Hungary (HU), Iceland (IS), Ireland (IE), Italy (IT), Latvia (LV), Liechtenstein (LI), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SL), Spain (ES), Sweden (SE), Switzerland (CH), Turkey (TR), United Kingdom (UK (NI)).

Radio	Frequency Range MHz	Max EIRP
Wi-Fi	2412-2472	20 dBm
	5150-5250	23 dBm
	5250-5350	23 dBm
	5470-5725	30 dBm
	5725-5850	14 dBm

Caution:
Lower power radio LAN product operating in 2.4 GHz and 5 GHz bands. Please refer to the ArubaOS User Guide/Instant User Guide for details on restrictions.

European Union and United Kingdom

This device is limited for indoor use. Use in trains with metal-coated windows (or similar structures made of materials with comparable attenuation characteristics) and aircraft is permitted. Operations in the 6GHz band are blocked by firmware for some countries pending the adoption of the spectrum. Refer to Aruba DRT release notes for details.

United States

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

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.

Caution:

- FCC regulations restrict the operation of this device to indoor use only.
- The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.
- Operation in the 5.9725-7.125GHz band is prohibited for control of or communication with unnamed aircraft systems.

Medical

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

Contacting Support

Table 4: Contact Information

Main Site	**https://www.arubanetworks.com**
Support Site	**https://asp.arubanetworks.com**
Airheads Social Forums and Knowledge Base	**https://community.arubanetworks.com**
North American Telephone	1-800-943-4526 (Toll Free) 1-408-754-1200
International Telephone	**https://arubanetworks.com/support-services/contact- support/**
Software Licensing Site	**https://hpe.com/networking/support**
End-of-life Information	**https://www.arubanetworks.com/support-services/end-of- life/**
Security Incident Response Team	**https://www.arubanetworks.com/support-services/security- bulletins/** Email: **aruba-sirt@hpe.com**

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Open Source Code
This product includes code licensed under the GNU General Public License, the GNU Lesser General Public License, and/or certain other open-source licenses. A complete machine-readable copy of the source code corresponding to such code is available upon request. This offer is valid to anyone in receipt of this information and shall expire three years following the date of the final distribution of this product version by Hewlett Packard Enterprise Company.

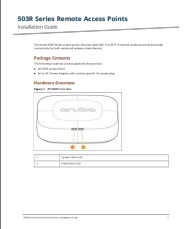To obtain such source code, send a check or money order in the amount of US $10.00 to:

Hewlett Packard Enterprise Company
Attn: General Counsel 6280 America Center Drive San Jose, CA 95002 USA

Warranty

This hardware product is protected by an Aruba warranty. For more details, visit
www.hpe.com/us/en/support.html.

Documents / Resources

aruba AP-503R Series Remote Access Points [pdf] Installation Guide
AP-503R Series Remote Access Points, AP-503R, Series Remote Access Points, Remote Access Points, Access Points

References

- ⊙ **Contact Support | HPE Aruba Networking**
- ⊙ **Aruba Support Portal**
- ▭ **Regulations certificates | Hewlett Packard Enterprise**
- ▭ **hpe.com/us/en/support.html**
- ⊙ **Aruba Support Portal**
- ⊙ **Aruba Support Portal**
- ✦ **Home - Airheads Community**
- ✦ **Home - Airheads Community**
- ▭ **My Networking | HPEÂ® Official Site**
- ⊙ **Enterprise Networking and Security | HPE Aruba Networking**
- ⊙ **Enterprise Networking and Security | HPE Aruba Networking**
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