Aruba 7005 Controller

The Aruba 7005 Controller is a wireless LAN controller that connects, controls, and intelligently integrates wireless Access Points (APs) and Air Monitors (AMs) into a wired LAN system. The 7005 controller includes four ethernet ports, one Console port, one Mini-USB console port, and one USB port. This device supports up to 16 APs and 1024 users.

> **NOTE** The 7005 controller requires ArubaOS 6.4.1.0 or later.

Package Contents

- Aruba 7005 Controller
- Mini-USB Console Cable
- Installation Guide (this document, printed)
- Quick Start Guide (Printed)
- End User License Agreement (Printed)

> **NOTE** Optional accessories are available for use with the Aruba 7005 controller and are sold separately. Contact your Aruba sales representative for details and assistance.

7005 Components

This section introduces the different components and their location in the Aruba 7005 controller. Figure 1 shows the front panel of the Aruba 7005 controller and Figure 2 shows the back panel of the Aruba 7005 controller.

Figure 1 *Front Panel of the 7005 Controller*
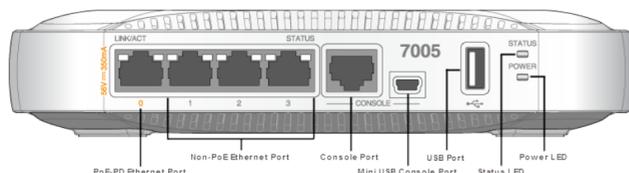
Figure 2 *Back Panel of the 7005 Controller*
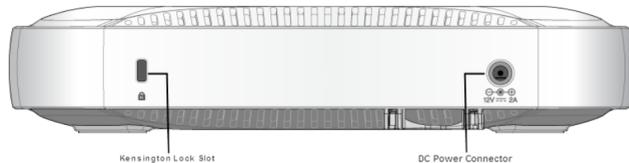
Ethernet Ports

The Aruba 7005 controller is equipped with four 10/100/ 1000BASE-T Gigabit Ethernet ports (0 to 3). Gigabit Ethernet uses all eight wires and each pair is bi-directional, which means, the same pair is used for both data transmission and data reception. Figure 3 illustrates the Gigabit Ethernet port pin-out for an RJ-45 connector. The pins paired on a 10/100/1000BASE-T Gigabit Ethernet port are: 1/2, 3/6, 4/5, and 7/8.

Figure 3 *Gigabit Ethernet Port Pin-Out*

> **NOTE** In the Aruba 7005 controller, the orange numbering on port 0 indicates that it is a PoE powered device (PoE-PD) port and the gray numbering on ports 1, 2, and 3 indicate that they are non-PoE ports.

Ethernet Port LEDs

Each 10/100/1000BASE-T Ethernet port is equipped with two LEDs that allow basic monitoring of link/port status and activity.

- **LINK/ACT**: Placed on the left side of the port, this LED displays the link status and activity of the port.
- **STATUS**: Placed on the right side of the port, this LED displays the status of the port based on the CLI.

The following table describes the LED behavior for each mode:

Table 1 *10/100/1000BASE-T Ethernet Port LEDs*

LED	Function	Mode	Indicator	Status
LINK/ACT	Link status	N/A	Green (Solid)	Link has been established
			Green (Blinking)	Port is transmitting or receiving data
			Off	No link on port
STATUS	Port status	Speed	Green (Solid)	1000 Mbps
			Off	10/100 Mbps

Console Port

The serial console port allows connecting the controller to a serial terminal or a laptop for direct local management. This port is an RJ-45 female connector with the pinouts described in Figure 4. Connect it directly to a terminal or terminal server using an Ethernet cable.

Figure 4 *Serial Console Port Pin-Out*
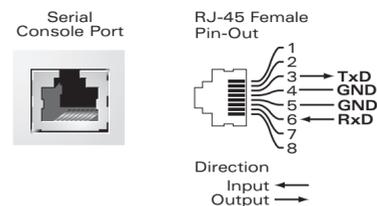
The communication settings for the Console port is shown in the following table:

Table 2 *Console Terminal Settings*

Baud Rate	Data Bits	Parity	Stop Bits	Flow Control
9600	8	None	1	None

> **CAUTION** The CONSOLE port is compatible only with RS-232 devices. Non-RS-232 devices, such as APs, are not supported.

> **CAUTION** Do not connect the Console port to an Ethernet switch or a PoE power source. This may damage the controller.

Serial Console Port Adaptor

A modular adaptor can be used to convert the female RJ-45 connector to a male DB9 connector. See Figure 5 for complete details.

Figure 5 *RJ-45 (Female) to DB9 (Male) Modular Adapter Conversion*
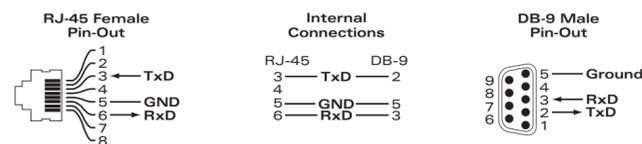
Mini-USB Console Connector

The Aruba 7005 controller is equipped with one Mini-USB (type B) connector that provides console access for direct local access. If both Mini-USB and RJ-45 Console ports are connected, the Mini-USB connection takes precedence over the RJ-45 Console connection.

Mini-USB Driver

To use the Mini-USB console port, install the Aruba Mini-USB driver on the computer that will manage your controller. To download the driver, perform the following steps:

1. Go to https://support.arubanetworks.com.
2. Click on the **Tools & Resources** tab.
3. Open the **USB Console Driver** folder.
4. Open the **Mobility Controller and Mobility Access Switch** folder.
5. Select the appropriate file for your application. The corresponding operating system is in the file name.

USB Interface

The Aruba 7005 controller is equipped with one USB 2.0 interface. A USB storage device can be used to save and upload configurations to the controller.

> **NOTE** If the 7005 controller is powered from IEEE 802.3at PSE then the USB port remains enabled. If the 7005 controller is powered from IEEE 802.3af PSE, then the USB port is automatically disabled.

Power and Status LEDs

The front panel also includes power and status LEDs that provide basic monitoring of the overall status of the Aruba 7005 controller

Table 3 *Power and Status LEDs*

LED	Function	Indicator	Status
Power	System powers	Green (Solid)	Powered from DC adapter
		Amber (Solid)	Powered from PoE source
		Off	Power Off
Status	System status	Green (Solid)	Operational
		Green (Blinking)	Device is loading software
		Amber (Blinking)	Major Alarm
		Amber (Solid)	Critical Alarm
		Off	No power

Kensington Security Slot

The Aruba 7005 controller is equipped with a Kensington security slot for additional security.

DC Power Socket

The AC-DC adapter kit with the following specification is used to power the Aruba 7005 controller:

- 12V/ 2A power interface
- Center-positive 1.7/4.0 mm circular plug, 9.5 mm length

Make sure to securely route the DC cable through the slot provided. See Figure 6.

Figure 6 *DC Cable Routing Slot*
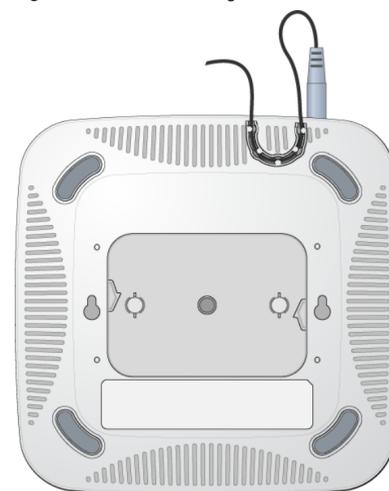
Installing the 7005 Controller

> **NOTE** Service to all Aruba Networks, Inc. products should be performed by trained service personnel only.

Installation Recommendations

- For proper air circulation, leave at least 10 cm (4 inches) clearance for the vents on the left, right, front, and rear side of the controller.
- Leave additional space in front and rear side of the controller to access power cords, network cables, and indicator LEDs.

- Avoid placing anything that covers the vents on top of the controller. Covering the vents can lead to overheating of the controller.
- Avoid placing this controller on any other device because the heat dissipated from the other device may overheat the controller.

Installation Using the Integrated Wall-Mounting Slots

The keyhole-shaped slots on the bottom of the controller can be used to attach the device upright (front port facing downwards) to an indoor wall or shelf.

Since the ports are on the front of the device, make sure to mount the controller in such a way that there is a clear path to the Ethernet port, such as a predrilled hole in the mounting surface.

1. At the mounting location, install two screws on the wall or shelf, 120 mm apart. If you are attaching the device to drywall, it is recommended that you use appropriate wall anchors (not included). See Figure 7.

Figure 7 *Mounting Using the Integrated Wall-Mounting Slots*
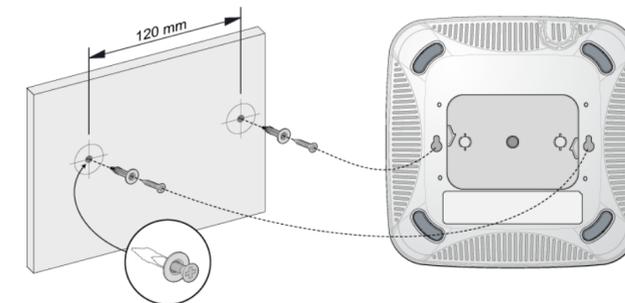
2. Align the mounting slots on the bottom of the controller over the screws and slide the unit into place. See Figure 8

Figure 8 *Wall Mounting Aruba 7005*
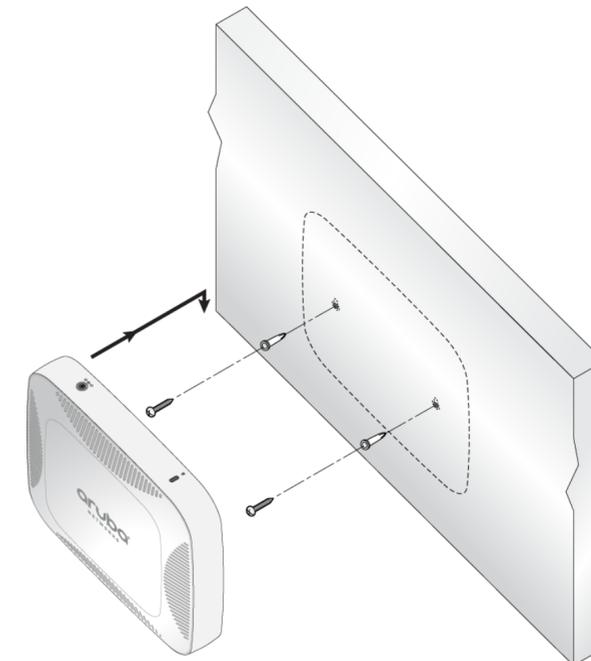
Product Specifications

Physical

- Device Dimensions (HxWxD): 4.09 cm x 20 cm x 20 cm
- Device Weight: 2.03 lbs (0.92 kg)

Electrical

- Ethernet:
  - 4 x 10/100/1000BASE-T auto-sensing Ethernet RJ-45 Interfaces
  - MDI/MDX
  - Power over Ethernet (IEEE 802.3af or IEEE 802.3at compliant), 48V DC (nominal) and 56V DC (maximum)/ 350 mA (see Figure 3 for pin configuration)

- Power:
  - 12V DC power interface, supports powering through an 12V DC, 2A AC-to-DC power adapter
  - PoE support on port 0: supports PoE-PD IEEE 802.3af/at

Environmental

- Operating:
  - Temperature: 0° C to +40° C (+32° F to +122° F)
  - Humidity: 10% to 90% non-condensing
- Storage and transportation:
  - Temperature: -40° C to +70° C (-40° F to +158°)

For additional specifications on this product, please refer to the data sheet. The data sheet can be found at www.arubanetworks.com.

Safety and Regulatory Compliance

Aruba Networks provides a multi-language document that contains country-specific restrictions and additional safety and regulatory information for all Aruba controllers. This document can be viewed or downloaded from the following location: www.arubanetworks.com/safety_addendum

FCC Class B Part 15

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

⚠ CAUTION	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.

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. 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 interference harmful to radio communications.

If this equipment does cause interference, 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 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.

Industry Canada

This product complies with the Class B limits for radio noise emissions as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet apareil numerique de la classe B respecte toutes les exigencies du Reglement sur le materiel brouilleur du Canada.

EU Regulatory Conformance

This product is CE marked according to the provisions of the EMC Directive (2004/108/EC) - CE. Aruba Networks Inc., hereby declares that 7005 controller device models are in compliance with the essential requirements and other relevant provisions of Directive (2004/108/EC). CE The Declaration of Conformity made under Directive 1999/5/EC is available for viewing at the following location in the EU community.

⚠ CAUTION	Use of controls or adjustments of performance or procedures other than those specified in this manual may result in hazardous radiation exposure

⚠ CAUTION	Although this controller has been tested up to 1kV per CE immunity requirements, it requires surge protection to be provided as part of the building installation to protect against unidirectional surges resulting from electrical switching and lightning strikes. For protection against these surges in an outdoor installation, any exposed wiring must be shielded, and the shield for the wiring must be grounded at both ends.

Battery Statements

⚠ CAUTION	Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie due même type ou d'un équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux unstruction du fabricant.

⚠ CAUTION	The battery supplied with this product may contain perchlorate material. Special handling may apply in California and other certain states. See www.dtsc.ca.gov/hazardouswaste/perchlorate for more information.

⚡ WARNING	Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Japan VCCI

This product is a Class B product based on the standard of the VCCI Council. If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

Proper Disposal of Aruba Equipment

Waste of Electrical and Electronic Equipment

Aruba products at end of life are subject to separate collection and treatment in the EU Member States, Norway, and Switzerland and therefore are marked with the symbol shown at the left (crossed-out wheelie bin). The treatment applied at end of life of these products in these countries shall comply with the applicable national laws of countries implementing Directive 2002/96EC on Waste of Electrical and Electronic Equipment (WEEE).

European Union RoHS

Aruba products also comply with the EU Restriction of Hazardous Substances Directive 2011/65/EC (RoHS). EU RoHS restricts the use of specific hazardous materials in the manufacture of electrical and electronic equipment. Specifically, restricted materials under the RoHS Directive are Lead (including Solder used in printed circuit assemblies), Cadmium, Mercury, Hexavalent Chromium, and Bromine. Some Aruba products are subject to the exemptions listed in RoHS Directive Annex 7 (Lead in solder used in printed circuit assemblies). Products and packaging will be marked with the "RoHS" label shown at the left indicating conformance to this Directive.

India RoHS

This product complies with RoHS requirements as prescribed by E-Waste (Management & Handling) Rules, governed by the Ministry of Environment & Forests, Government of India.

China RoHS

Aruba products also comply with China environmental declaration requirements and are labeled with the "EFUP 10" label shown at the left.

有毒有害物质声明
Hazardous Materials Declaration

部件名称 (Parts)	有毒有害物质或元素 (Hazardous Substance)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr⁶⁺)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板 (PCA Boards)	×	○	○	○	○	○
机械组件 (Mechanical Sub-Assemblies)	×	○	○	○	○	○

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
Indicates that the concentration of the hazardous substance in all homogenous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。
Indicates that the concentration of the hazardous substance of at least one of all homogenous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard.

对销售之日的所有产品, 本表显示, 供应链的电子信息产品可能包含这些物质。
This table shows where these substances may be found in the supply chain of electronic information products, as of the date of sale of the enclosed product.

此标志为针对所涉及产品的环保使用期标志。某些零部件会有一个不同的环保使用期 (例如, 电池单元模块)贴在其产品上。
此环保使用期限只适用于产品是在产品手册中所规定的条件下工作。
The Environment- Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here. The Environment- Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.

Aruba 7005 Controller
Installation Guide

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