OAW-RAP3WN Instant Access Point

Installation Guide

The Alcatel-Lucent OAW-RAP3WN and OAW-RAP3WNP are single-radio, single-band wireless access points (AP) that support the IEEE 802.11n standard for high-performance WLAN. These access points use MIMO (Multiple-in, Multiple-out) technology and other high-throughput mode techniques to deliver high-performance, 802.11n 2.4 GHz functionality while simultaneously supporting existing 802.11 b/g wireless services.

The OAW-RAP3 ships with Alcatel-Lucent Instant software. Therefore, out of the box, the OAW-RAP3 will operate as a Virtual Switch (VC) or an Instant AP. However, the OAW-RAP3 can be converted to operate as a Remote AP (RAP). For information about the IAP to RAP conversion, see RAP Conversion.

> **NOTE** The OAW-RAP3 requires Alcatel-Lucent Instant 3.0 to operate as a Instant AP and Alcatel-Lucent Instant 6.1.4.0 to operate as a Remote AP.

- Wireless transceiver
- Protocol-independent networking functionality
- IEEE 802.11b/g/n operation as a wireless access point
- IEEE 802.11b/g/n operation as a wireless air monitor
- Compatibility with IEEE 802.3af PoE

Package Contents

- 1x OAW-RAP3WN or OAW-RAP3WNP Access Point
- 1x Installation Guide (this document)
- 1x Alcatel-Lucent Instant Quick Start Guide
- 1x RJ-45 Ethernet Cable
- 1x 12V Power Adapter (OAW-RAP3WN only)
- 1x 48V Power Adapter (OAW-RAP3WNP only)

> **NOTE** The 48V power adapter that ships with the OAW-RAP3WNP does not come with a country specific power cord. This cord must be ordered separately.

> **NOTE** Inform your supplier if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use them to repack the product in case there is a need to return it.
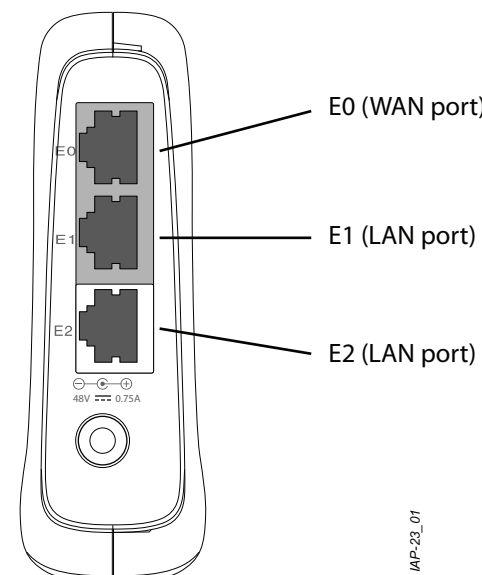
Before You Begin

Before installing your OAW-RAP3 Remote Access Point, please ensure you have the following:

- OAW-RAP3 (included)
- 1 x RJ-45 Ethernet Cable (included)
- 1 x Power Adapter (included)

OAW-RAP3 Overview

Figure 1 *Rear View (OAW-RAP3WN Shown)*

E0 (WAN port)
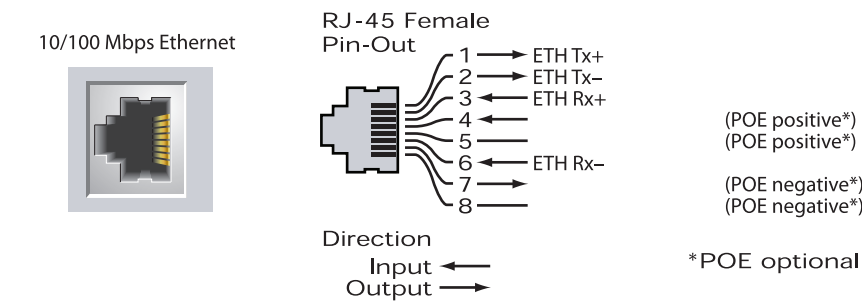E1 (LAN port)
E2 (LAN port)

10/100Base-T Ethernet Ports

The OAW-RAP3 has three 10/100Base-T (RJ-45) Ethernet ports for wired network connectivity.

- E0: WAN port (top)
- E1: LAN port (middle)
- E2: LAN port (bottom)

On the OAW-RAP3WNP, port E2 has PoE power sourcing capability (PSE) to supply power to any compliant 802.3af powered device (class 0-4).

Figure 2 *Fast Ethernet Port Pin Out*

10/100 Mbps Ethernet

RJ-45 Female Pin-Out
1 — ETH Tx+
2 — ETH Tx−
3 — ETH Rx+
4 — (POE positive*)
5 — (POE positive*)
6 — ETH Rx−
7 — (POE negative*)
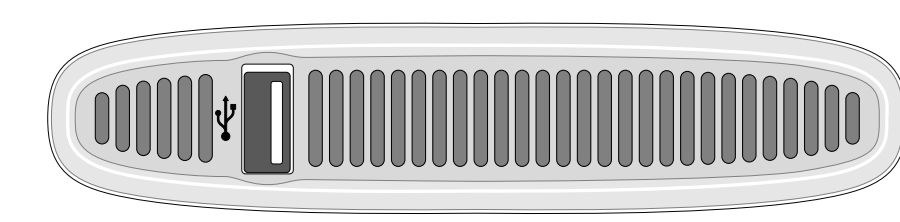8 — (POE negative*)

Direction
Input
Output

*POE optional

DC IN (Power Socket)

The OAW-RAP3 power adapter (included) connects to the DC IN port. The OAW-RAP3 does not have an On/Off switch. The device turns on when the power adapter is attached and plugged into a power outlet. The device turns off when you disconnect the power adapter from the power source (outlet).

> **NOTE** The OAW-RAP3WN ships with a 12V power supply and the OAW-RAP3WNP ships with a 48V power supply. These power supplies are not interchangeable.
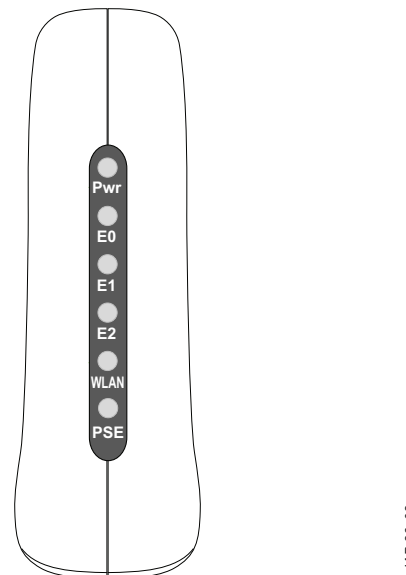
Top View

Figure 3 *Top View*

USB Port

The OAW-RAP3 is equipped with a USB port to support cellular modems.

Figure 4 *Bottom View (OAW-RAP3WNP Shown)*

Pwr
E0
E1
E2
WLAN
PSE

LEDs

The OAW-RAP3WN has five LED indicators that display the status of the device. The OAW-RAP3WNP has an additional LED called PSE.

- PWR: When lit, the OAW-RAP3 is powered on
- E0: Indicates activity and/or status on this port.
- E1: Indicates activity and/or status on this port
- E2: Indicates activity and/or status on this port
- WLAN: Indicates wireless status and activity
- PSE (OAW-RAP3WNP only): Indicated the PSE status on the OAW-RAP3WNP

LED	Color(s)	Activity	Action
PWR	Green	On	Power on
		Off	No power
WLAN	Green	Off	Wireless is inactive
		On	Wireless is active
		Flashing	Radio mode
Ports (E0, E1, E2)	Green	Off	No link
		On	Link established
		Flashing	Ethernet activity

LED	Color(s)	Activity	Action
PSE	Green	Off	Not sourcing PoE power
		On	Sourcing PoE power to an 802.3af Powered Device
		Flashing	PoE power sourcing error

Reset Button

The OAW-RAP3 is equipped with reset button, that when pushed, resets the device to factory default settings. The reset button is located on the bottom of the device and is recessed in a small, round hole.

To reset the OAW-RAP3, insert a small, narrow object, such as a pin or paperclip, into the hole and press and hold the button while powering on the OAW-RAP3. This will return the device to factory default settings.

OAW-RAP3 Installation

Tabletop Mounting

The OAW-RAP3 is shipped with a stand to use on flat (i.e. table top) surfaces. Place the OAW-RAP3 in the stand (see Figure 5) and place the stand on a flat, level surface.

Figure 5 *Stand Installation*

Connecting the Required Cables

The OAW-RAP3 must be connected to a network device that has access to the Internet, such as a router or modem. To complete the installation of the OAW-RAP3:

1. Connect one end of the provided RJ-45 cable to port E0 on the OAW-RAP3.
2. Connect the other end of the RJ-45 cable to a free RJ-45 port on your modem or router.
3. Attach the provided power adapter to the DC IN port on the OAW-RAP3.
4. Connect the other end of the power adapter to a power outlet.

The OAW-RAP3 is now powered on. To verify this, ensure that the PWR LED is solid green.
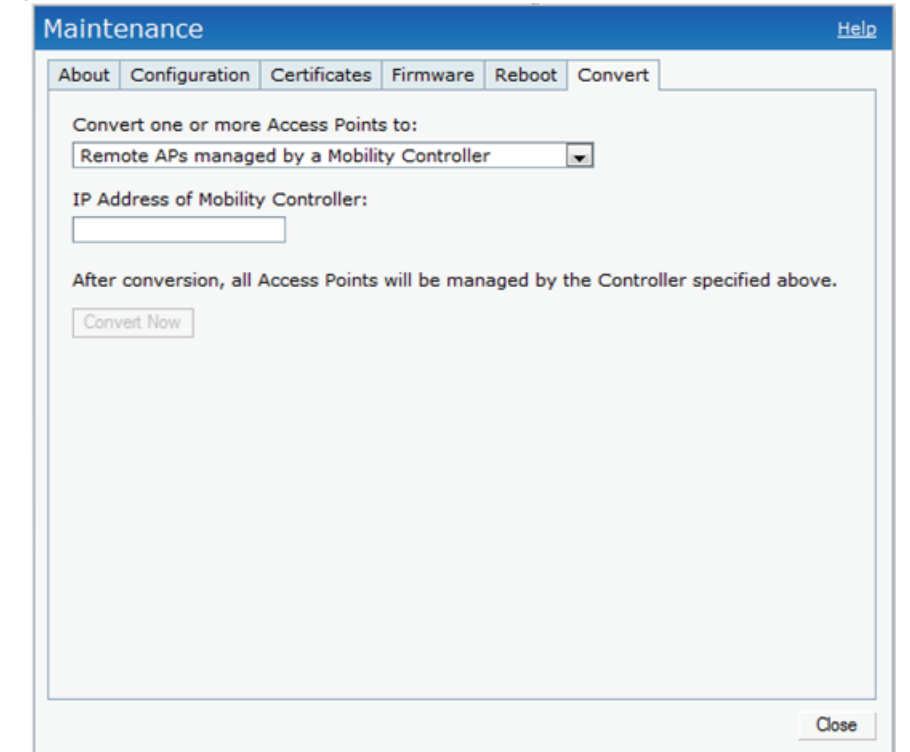
Verifying Successful Installation

Once the OAW-RAP3's PWR LED has come up, the device will take 2 to 3 minutes to complete the boot cycle. Once the boot cycle is complete, you can connect to your company or corporate network.

RAP Conversion

If your network administrator has instructed you to convert the OAW-RAP3 to work in RAP mode, follow the process below to complete the RAP conversion.

1. Power up the RAP-3.
2. Connect to **Instant** SSID.
3. Login to the OAW-RAP3 by navigating to http://instant.alcatel-lucentnetworks.com and login to the Instant WebUI. The default username is **admin** and the default password is **admin**. See the included *Alcatel-Lucent Instant Quick Start Guide* for more information.
4. Navigate to the **Maintenance** tab in the top right.
5. Click on the **Convert** tab.
6. Select **Remote APs managed by a Mobility Switch** from the drop down menu.
7. Enter the IP address of the switch. This is provided by your network administrator.
8. Click **Convert Now** to complete the conversion (see Figure 6).
9. The RAP-3 will reboot and begin operating in RAP mode.

Figure 6 *IAP-RAP Conversion over the Internet*

Product Specifications

Electrical

- Ethernet:
  - 3 x 10/100Base-T auto-sensing Ethernet RJ-45 Interfaces
  - MDI/MDX
  - IEEE 802.3 (10Base-T), IEEE 802.3u (100Base-T).
- Power - OAW-RAP3WNP:
  - 48VDC power interface, supports powering through an AC-to-DC power adapter
- Power -OAW-RAP3WN:
  - 12 VDC power interface, supports powering through an AC-to-DC power adapter

> **NOTE**
> If a power adapter other than the one provided by Alcatel-Lucent is used in the US or Canada, it should be NRTL Listed, with appropriate voltage and current rating, marked "LPS" or "Class 2," and suitable for plugging into a standard power receptacle in the US and Canada.

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

Proper Disposal of Alcatel-Lucent Equipment

For the most current information about Global Environmental Compliance and Alcatel-Lucent products, see our website at www.alcatel-lucent.com.

Waste of Electrical and Electronic Equipment

Alcatel-Lucent 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

Alcatel-Lucent products also comply with the EU Restriction of Hazardous Substances Directive 2002/95/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 Alcatel-Lucent 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.

China RoHS

Alcatel-Lucent 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 (Cr⁺⁺)	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 homogeneous 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 homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard.

对销售之日的所售产品, 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.

Safety and Regulatory Compliance

Alcatel-Lucent Networks provides a multi-language document that contains country-specific restrictions and additional safety and regulatory information for all Alcatel-Lucent access points. This document can be viewed or downloaded from the following location: https://service.esd.alcatel-lucent.com

> **CAUTION**
> Alcatel-Lucent access points must be installed by a professional installer. The professional installer is responsible for ensuring that grounding is available and it meets applicable local and national electrical codes.

> **CAUTION**
> **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 operations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

EMC Compliance and Warning Statement

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.

The device has been found to be compliant to the requirements set forth in CFR 47 Sections 2.1091 for an uncontrolled environment. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

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.

L ' utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne doit pas produire de brouillage et (2) l' utilisateur du dispositif doit étre prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Le présent appareil est conforme aux normes CNR d'industrie Canada applicables aux appareils radio exempts licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit produire de brouillage, et
2. L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

EU Regulatory Conformance

This product is CE marked according to the provisions of the R & TTE Directive (99/5/EC) - CE(!). Alcatel-Lucent, Inc., hereby declares that this OAW-RAP3 device models are in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. CE(!)

The Declaration of Conformity made under Directive 1999/5/EC is available for viewing at the following location in the EU community.

OAW-RAP3WN Instant Access Point
Installation Guide

Contacting Alcatel-Lucent

Table 1

Web Site Support	
Main Site	http://www.alcatel-lucent.com/enterprise
Support Site	https://service.esd.alcatel-lucent.com/

Table 2

Telephone Support	
North America	1-800-995-2696
Latin America	1-877-919-9526
Europe	+33 (0) 38 855 6929
Asia Pacific	+65 6240 8484
Worldwide	1-818-878-4507