



## WLA Series

# WLA532E Access Point Hardware Documentation



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*WLA Series WLA532E Access Point Hardware Documentation*

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Revision History

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# Table of Contents

	About This Topic Collection . . . . .	ix
	How to Use This Guide . . . . .	ix
	List of Wireless LAN Software Guides for Release 7.6 . . . . .	ix
	Documentation Symbols Key . . . . .	x
	Documentation Feedback . . . . .	x
	Requesting Technical Support . . . . .	x
	Self-Help Online Tools and Resources . . . . .	xi
	Opening a Case with JTAC . . . . .	xi
<b>Part 1</b>	<b>Access Point Overview and Components</b>	
<b>Chapter 1</b>	<b>WLA532E Access Point Overview . . . . .</b>	<b>3</b>
	WLA532E Access Point Hardware Overview . . . . .	3
	Features Supported by the WLA532E Access Point . . . . .	4
	Physical Specifications of the Access Point . . . . .	4
	Hardware Mounting Options for the Access Point . . . . .	5
	Software and Hardware Used with the Access Point . . . . .	6
	WLA532E Antenna Models . . . . .	7
	External Antenna Configurations for the WLA532E Access Point . . . . .	8
	Status LEDs on a WLA532E Access Point . . . . .	8
	MAC Address Information for WLA Series Access Points . . . . .	9
<b>Chapter 2</b>	<b>Ethernet Ports and Connectors . . . . .</b>	<b>11</b>
	Ethernet Connections for Wireless LAN Access Points . . . . .	11
	PoE Information for the WLA532E Access Point . . . . .	11
<b>Part 2</b>	<b>Planning for Access Point Installation</b>	
<b>Chapter 3</b>	<b>Site Preparation . . . . .</b>	<b>15</b>
	Site Preparation Checklist for the WLA532E Access Point . . . . .	15
	General Site Guidelines . . . . .	17
	Environmental Requirements and Specifications for the WLA532E Access Point . . . . .	18
	Planning Guidelines for Using RingMaster to Plan a Mobility System . . . . .	18
<b>Part 3</b>	<b>Safety Guidelines and Standards for Access Point Installation</b>	
<b>Chapter 4</b>	<b>Safety Standards and Guidelines . . . . .</b>	<b>23</b>
	General Safety Guidelines and Warnings . . . . .	23
	Qualified Personnel Warning . . . . .	24
	General Electromagnetic Safety and Compliance . . . . .	24
	Medical Safety Compliance for WLA Series Access Points . . . . .	25

	No User Serviceable Parts Warning . . . . .	26
	Product Disposal Warning . . . . .	27
<b>Part 4</b>	<b>Requirements and Certifications</b>	
<b>Chapter 5</b>	<b>Requirements and Specifications . . . . .</b>	<b>31</b>
	Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point . . . . .	31
	Requirements and Specifications for 5-GHz Radios on a WLA532E Access Point . . . . .	32
<b>Chapter 6</b>	<b>Certifications for the Access Point . . . . .</b>	<b>35</b>
	Agency Approvals for WLA Series Access Points . . . . .	35
	IEEE 802.11 WLAN Standards and Compliance for the WLA532E Access Point . . . . .	36
	802.11 a/b/g/n Features . . . . .	36
	RoHs . . . . .	36
	IEEE Standard Compliance . . . . .	36
	WLA Series Access Point Radio Frequency Exposure Guidelines . . . . .	37
<b>Part 5</b>	<b>Installing, Connecting, and Verifying the Access Point</b>	
<b>Chapter 7</b>	<b>Installing and Connecting the Access Point . . . . .</b>	<b>43</b>
	Installation Instructions Warning . . . . .	43
	Unpacking a WLA532E Access Point . . . . .	44
	Parts Inventory (Packing List) for a WLA532E Access Point . . . . .	44
	Installing the WLA532E Access Point on a Ceiling Rail . . . . .	46
	Installing the WLA532E Access Point Using the Plenum Bracket Kit . . . . .	51
	Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit . . . . .	57
	Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit . . . . .	64
	Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit . . . . .	70
	Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit . . . . .	72
	Connecting the Access Point to Wireless LAN Controllers . . . . .	76
<b>Chapter 8</b>	<b>Verifying the Health of the Access Point . . . . .</b>	<b>77</b>
	Verifying the Health of WLA Series Access Points Using LEDs . . . . .	77
<b>Chapter 9</b>	<b>Customer Support . . . . .</b>	<b>79</b>
	Contacting JTAC Regarding Access Point Parts . . . . .	79

# List of Figures

<b>Part 1</b>	<b>Access Point Overview and Components</b>	
<b>Chapter 1</b>	<b>WLA532E Access Point Overview</b> . . . . .	<b>3</b>
	Figure 1: WLA532E External Hardware Features . . . . .	3
	Figure 2: WLA532E Hardware Dimensions . . . . .	4
	Figure 3: A WLA532E with Installed Antennas . . . . .	7
<b>Part 5</b>	<b>Installing, Connecting, and Verifying the Access Point</b>	
<b>Chapter 7</b>	<b>Installing and Connecting the Access Point</b> . . . . .	<b>43</b>
	Figure 4: Antenna Orientation for Best Reception . . . . .	47
	Figure 5: Opening the Ceiling Bracket Clips . . . . .	48
	Figure 6: Opening the Ceiling Bracket Snaps . . . . .	49
	Figure 7: Locking the Bracket Clips over the Rail . . . . .	49
	Figure 8: Aligning the Access Point with the Ceiling Bracket . . . . .	50
	Figure 9: Locking the Access Point onto the Ceiling Tile . . . . .	51
	Figure 10: Removing the M4 Flat Head Screws . . . . .	52
	Figure 11: Removing the Diamond Bracket . . . . .	53
	Figure 12: Orienting the Installed WLA532E Antennas . . . . .	53
	Figure 13: Mounting the WLA532E to the Plenum Bracket . . . . .	54
	Figure 14: Aligning the Plenum Bracket Flanges with the Ceiling Cross Rails . . . . .	54
	Figure 15: Aligning the Plenum Bracket Tabs to Bracket Openings . . . . .	55
	Figure 16: Securing the Locked Plenum Bracket Using the Provided M4 Screws . . . . .	56
	Figure 17: Securing the Plenum Bracket to the Ceiling Rail Using Sheet Metal Self-Threading Screws . . . . .	56
	Figure 18: Unlocking the Universal Mounting Bracket . . . . .	58
	Figure 19: The Exposed WLA522 Universal Mounting Bracket on the Ceiling T-bar . . . . .	58
	Figure 20: Earthquake Safety Stability Screws . . . . .	59
	Figure 21: Rotating the Locking Bracket into an Open Position . . . . .	59
	Figure 22: Aligning the Legacy Mounting Bracket Adapter Alignment Pins to the Universal Bracket Holes . . . . .	59
	Figure 23: Rotating the Locking Bracket into a Locked Position . . . . .	60
	Figure 24: Locked Bracket Tabs on the WLA522 Mounting Bracket . . . . .	60
	Figure 25: Opening the Ceiling Bracket Snaps . . . . .	61
	Figure 26: Aligning the Ceiling Mount Bracket with the Legacy Mounting Bracket Adapter . . . . .	61
	Figure 27: Orienting the Installed WLA532E Antennas . . . . .	62
	Figure 28: Aligning the Access Point with the Ceiling-Mount Bracket . . . . .	62
	Figure 29: A WLA532 Installed on the Legacy Mounting Bracket Adapter . . . . .	63

Figure 30: Locking a WLA532E onto the Ceiling-Mount Bracket . . . . .	63
Figure 31: Wall-Mount Bracket Dimensions--WLA-BRKT-WALL . . . . .	65
Figure 32: Use the Provided Template to Install Wall Anchors . . . . .	66
Figure 33: Pull the Category 5 Cable Through the Wall Bracket . . . . .	67
Figure 34: Use M3 or 6-32 Wall Anchors to Secure the Bracket to Anchors . . . . .	67
Figure 35: Faceplate Secured to the Wall-Mount Bracket . . . . .	68
Figure 36: Align the Access Point with the Bracket and Push Down . . . . .	68
Figure 37: Release the Access Point . . . . .	69
Figure 38: Secure the Access Point with the Security Screw and Tool . . . . .	69
Figure 39: EU Faceplate Dimensions . . . . .	71
Figure 40: Dimensions of the Installed WLA532 Access Point on an EU-Standard Faceplate . . . . .	71
Figure 41: NA Wall-Mount Bracket Dimensions . . . . .	73
Figure 42: NA Standard Outlet Box . . . . .	74
Figure 43: NA Faceplate Secured to the Outlet Box . . . . .	75

# List of Tables

<b>Part 1</b>	<b>Access Point Overview and Components</b>	
<b>Chapter 1</b>	<b>WLA532E Access Point Overview</b> .....	<b>3</b>
	Table 1: Physical Specifications of the WLA532E .....	5
	Table 2: WLA532E Antenna Models .....	7
	Table 3: Single Band Antenna Configurations for 2.4GHz and 5GHz Radios .....	8
	Table 4: Dual Band Antenna Configurations for 2.4GHz and 5GHz Radios .....	8
	Table 5: LED Status and Description of WLA532E .....	9
	Table 6: MAC Address Information for WLA Series Access Points .....	10
<b>Part 2</b>	<b>Planning for Access Point Installation</b>	
<b>Chapter 3</b>	<b>Site Preparation</b> .....	<b>15</b>
	Table 7: Site Preparation Checklist .....	15
	Table 8: WLA532E Environmental Tolerances .....	18
<b>Part 4</b>	<b>Requirements and Certifications</b>	
<b>Chapter 5</b>	<b>Requirements and Specifications</b> .....	<b>31</b>
	Table 9: WLA532E Antenna Models .....	31
	Table 10: 2.4-GHz Radio Receive Sensitivities .....	32
	Table 11: WLA532E Antenna Models .....	32
	Table 12: 5-GHz Radio Receive Sensitivities .....	33
<b>Part 5</b>	<b>Installing, Connecting, and Verifying the Access Point</b>	
<b>Chapter 7</b>	<b>Installing and Connecting the Access Point</b> .....	<b>43</b>
	Table 13: Parts List for the WLA532E .....	45





# About This Topic Collection

- [How to Use This Guide on page ix](#)
- [List of Wireless LAN Software Guides for Release 7.6 on page ix](#)
- [Documentation Symbols Key on page x](#)
- [Documentation Feedback on page x](#)
- [Requesting Technical Support on page x](#)

## How to Use This Guide

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Complete documentation for the wireless LAN product family is provided on webpages at [Wireless LAN Services \(WLS\) Product Documentation](#).

This guide, *WLA532 Access Point Hardware Documentation*, helps you install the WLA532 wireless LAN access point in a Juniper Networks wireless LAN (WLAN).





## List of Wireless LAN Software Guides for Release 7.6

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Title	Description
<i>Mobility System Software Command Reference Guide</i>	Functional and alphabetic reference to all MSS commands supported on the controllers and access points
<i>Mobility System Software Configuration Guide</i>	Basic instructions for configuring and managing the system through the MSS CLI
<i>Mobility System Software Quick Start Guide</i>	Instructions for performing basic setup of secure (802.1X) and guest (Web AAA) access, for configuring a Mobility Domain for roaming, and for accessing a sample network plan in RingMaster for advanced configuration and management
<i>Mobility System Software Release Notes</i>	What's new, version compatibility, licensing, supported platforms, upgrade and downgrade information, and caveat information for Mobility System Software (MSS).
<i>RingMaster Configuration Guide</i>	Instructions for configuring wireless services as well as wireless LAN controller appliances and access points on a WLAN. Read this guide to learn how to deploy a WLAN network.
<i>RingMaster Monitoring and Management Guide</i>	You can manage the entire WLAN with the RingMaster tool suite. Read this guide to learn how to optimize and manage your WLAN.

Title	Description
<i>RingMaster Planning Guide</i>	Instructions for planning wireless services. Read this guide to learn how to configure a WLAN network.
<i>RingMaster Quick Start Guide</i>	Quick start guide to get started with RingMaster.
<i>RingMaster Release Notes</i>	Version compatibility, licensing, supported platforms, upgrade and downgrade information, and caveat information for RingMaster.

## Documentation Symbols Key

Notice Icons		
Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.

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- Software version
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- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://www.juniper.net/alerts/>
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## PART 1

# Access Point Overview and Components

- [WLA532E Access Point Overview on page 3](#)
- [Ethernet Ports and Connectors on page 11](#)



## CHAPTER 1

# WLA532E Access Point Overview

- [WLA532E Access Point Hardware Overview on page 3](#)
- [WLA532E Antenna Models on page 7](#)
- [External Antenna Configurations for the WLA532E Access Point on page 8](#)
- [Status LEDs on a WLA532E Access Point on page 8](#)
- [MAC Address Information for WLA Series Access Points on page 9](#)

## WLA532E Access Point Hardware Overview

The Juniper Networks Wireless LAN Access Point WLA532E is a indoor access point that provides enterprise customers, such as those in business, healthcare and education, with 802.11n based wireless LAN access in high density deployments. The device is a plenum-rated compact, hexagon-shaped access point (see [Figure 1 on page 3](#) and [Figure 2 on page 4](#)) with three external antenna ports and three dual radios with multiple input multiple output (MIMO) supporting up to three spatial streams on each radio.

Figure 1: WLA532E External Hardware Features

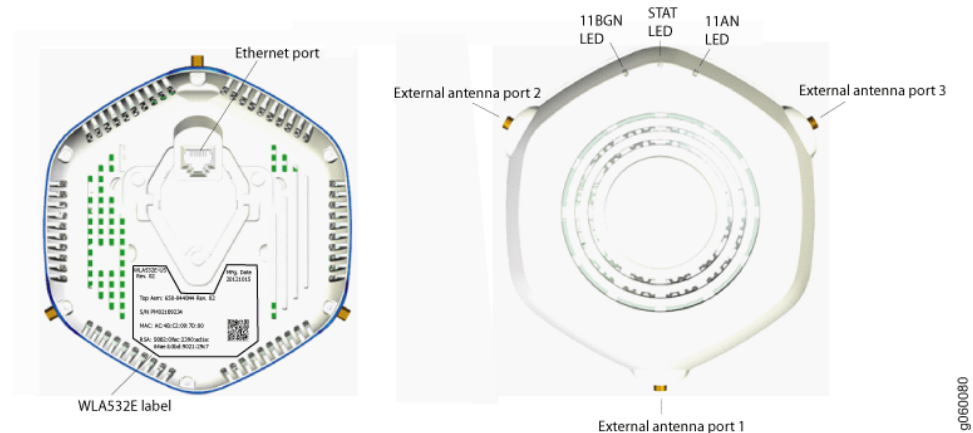
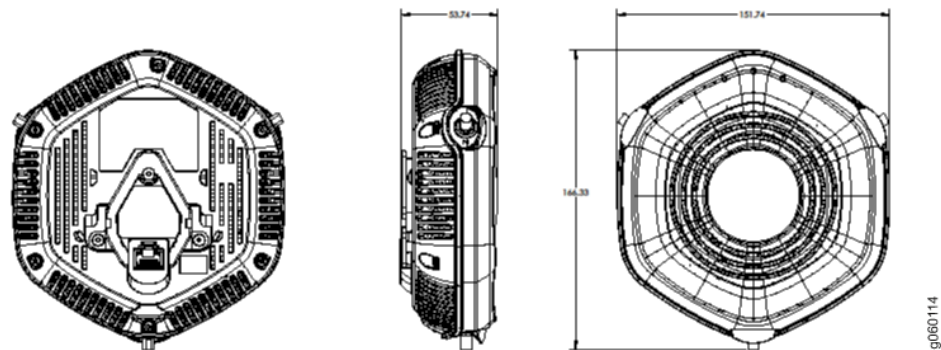


Figure 2: WLA532E Hardware Dimensions



**NOTE:** The WLA532E access point requires only hardware installation. All configurations for the access point are done on the wireless LAN controllers (WLCs).

You configure the access point with the Juniper Networks WLC Series Wireless LAN Controllers, through the Juniper Networks RingMaster graphical user interface or the Juniper Networks Mobility System Software (MSS) CLI.

This topic covers:

- [Features Supported by the WLA532E Access Point on page 4](#)
- [Physical Specifications of the Access Point on page 4](#)
- [Hardware Mounting Options for the Access Point on page 5](#)
- [Software and Hardware Used with the Access Point on page 6](#)

## Features Supported by the WLA532E Access Point

Features supported by the access point include:

- Up to 450 Mbps transmission—WLA532E spatial stream access point can support data rates of up to 450-Mbps in a 5-GHz band with 40-MHz channel bonding and a short-guard interval. On a 3x3bgn 2.4-GHz band with 20-MHz channel width, the access point supports up to 195-Mbps by default with standard guard-interval and supports up to 216.7-Mbps with short guard-interval.
- In-band spectrum monitoring and network spectrum mitigation—The access point supplies in-band RF-detect functionality to include spectrum analysis to detect and classify the non-IEEE 802.11 sources of interference.
- Rate adaptation feature with 3 spatial stream (SS) rates, 2 spatial stream rates and 1 spatial stream rates—The access point supports 3 SS, 2 SS and 1 SS rates and provides and full support for rate adaptation with 3 SS clients.

## Physical Specifications of the Access Point

Physical characteristics of the access point include:



- Plenum-rated metal casing (see [Table 1 on page 5](#)) with optimized performance for dual-band concurrent 2.4-GHz and 5-GHz operation on all external RP-SMA antenna ports.

**Table 1: Physical Specifications of the WLA532E**

Description	Value
Access point height	6.398in. (16.25 cm)
Access point width	5.975in. (15.176 cm )
Access point depth	2.131in. (5.414 cm)
Access point weight	25.186oz (714 g)

- Three external RP-SMA antenna ports—Ports support external omnidirectional and paddle antennas. See [“WLA532E Antenna Models” on page 7](#).
- WLA532E supports wireless mesh functionality on both 2.4-GHz and 5-GHz radios when used with omni-directional and wide beam width sector antennas. WLA532E allows configurations in which one antenna port can be used to operate in single-stream mode for client access and the two other antenna ports can be used to operate in two-stream mode for traffic backhaul. See [“External Antenna Configurations for the WLA532E Access Point” on page 8](#).
- One 2.4 GHz radio—One 2.4-GHz IEEE 802.11ng radio that supports 3x3 spatial streams and is backward compatible with 2 SS and 1 SS radios.
- One 5 GHz radio—One 5-GHz IEEE 802.11na radio that supports 3x3 spatial streams and is backward compatible with 2 SS and 1 SS radios.
- One 10/100/1000Base-T Gigabit Ethernet port—One 10/100/1000BASE T auto-sensing Gigabit Ethernet port with an RJ 45 connector to connect the access point to a wireless LAN controller or switch.
- Power over Ethernet (PoE) on the Gigabit Ethernet port—12.95W power consumption within IEEE standard 802.3af power on the Gigabit Ethernet port. This feature reduces power consumption.

## Hardware Mounting Options for the Access Point

Hardware mounting option for the access point include:

- 9/16-inch or 15/16-inch T recessed ceiling-tile rail adapter and indoor ceiling rail adapter—see [“Installing the WLA532E Access Point on a Ceiling Rail” on page 46](#).
- Wall mount adapter —see [“Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit” on page 64](#).
- Trapeze Legacy Mounting Bracket Adapter—see [“Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit” on page 57](#).

- Metal plenum mounting bracket—see [“Installing the WLA532E Access Point Using the Plenum Bracket Kit”](#) on page 51.
- North America single gang wall box adapter—see [“Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit”](#) on page 72.
- EU single gang wall box adapter—see [“Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit”](#) on page 70.

## Software and Hardware Used with the Access Point

Use the following software (from Juniper Networks) to configure and operate the access point:

- RingMaster GUI—RingMaster to configure and monitor the access point
- Mobility System Software (MSS) CLI—MSS to configure the access point.

For more information, see the RingMaster and MSS guides at: [RingMaster and MSS Guides](#).

Use the following hardware from Juniper Networks to connect the access point and make it operational:

- WLC2 Wireless LAN Controller
- WLC200 Wireless LAN Controller
- WLC216 Wireless LAN Controller
- WLC8 Wireless LAN Controller
- WLC800R Wireless LAN Controller
- WLC880R Wireless LAN Controller
- WLC2800 Wireless LAN Controller

The WLA532E access point can be powered up and operational within 3 minutes and supports all features of RingMaster and Mobility System Software (MSS).

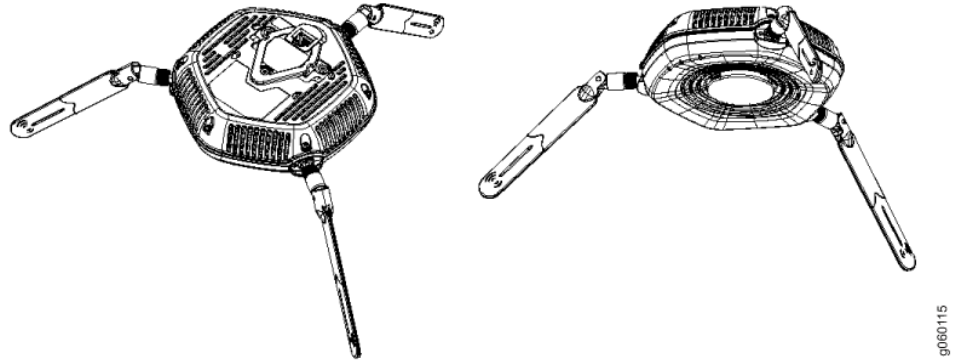
### Related Documentation

- [WLA532E Antenna Models on page 7](#)
- [External Antenna Configurations for the WLA532E Access Point on page 8](#)

## WLA532E Antenna Models

The Juniper Networks Wireless LAN Access Point WLA532E supports wireless mesh AP functionality on both 2.4-GHz and 5-GHz radios when used in conjunction with up to three supported external omni-directional and paddle antennas (see [Figure 3 on page 7](#)).

**Figure 3: A WLA532E with Installed Antennas**



[Table 2 on page 7](#) lists the supported antenna models.

**Table 2: WLA532E Antenna Models**

Juniper Model Number	Type	Gain		Horizontal BW		Vertical BW	
		2.4GHZ	5GHz	2.4GHZ	5GHz	2.4GHZ	5GHz
WLA-ANT-7360P-IN	Omni (Paddle) Non-Plenum	3dBi	4dBi	360°	360°	60°	60°
ANT-7360A-OUT	Omni	6dBi	8dBi	360°	360°	22°	15°
ANT-77555-OUT	Panel	8dBi	10.7dBi	75°	55°	70°	60°

The antennas are separately orderable:

- WLA-ANT-7360P-IN— This antenna kit includes 3 omni paddles. These 3 omni-directional paddle antennas with the mating RPSMA plug to direct connect to WLA532E antenna ports for dual-concurrent 3SS radion operations.
- ANT-7360A-OUT— This antenna kit includes 1 omni antenna. Three ANT-7360A-OUT kits are required to connect to WLA532E ports for dual-concurrent 3SS radio operations.
- ANT-77555-OUT— This antenna kit includes a three-element dual-band sector panel antenna that has three mating reverse polarity SMA connector plug cables.

### Related Documentation

- [External Antenna Configurations for the WLA532E Access Point on page 8](#)

- [Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point on page 31](#)
- [Requirements and Specifications for 5-GHz Radios on a WLA532E Access Point on page 32](#)

## External Antenna Configurations for the WLA532E Access Point

The Juniper Networks Wireless LAN Access Point WLA532E supports 3 external antennas with a maximum gain of 11dBi at 2.4GHz and 25.5dBi at 5GHz.

The labeled ports enable single band connection operations such as distributed antenna system (DAP) and AP plus mesh applications with combinations. See [Table 3 on page 8](#) and [Table 4 on page 8](#) for antenna configurations.

**Table 3: Single Band Antenna Configurations for 2.4GHz and 5GHz Radios**

1x1 only	1x1 and 2x2 combo	2x2 only	3x3 only
Port 2 for 5GHz and/or Port 3 for 2.4GHz	Port 2 for 5GHz + Ports 1 and 3 for 2.4GHz OR Port 3 for 2.4GHz + Ports 1 and 2 for 5GHz	Ports 1 and 2 for 5GHz OR Ports 2 and 3 for 2.4GHz	Port 1+2+3 for either 2.4GHz or 5GHz but not both

**Table 4: Dual Band Antenna Configurations for 2.4GHz and 5GHz Radios**

1x1	2x2	3x3
Port 2 for 5GHz and/or Port 3 for 2.4GHz	Ports 1 and 2 for 5GHz and/or Ports 2 and 3 for 2.4GHz	Port 1+2+3 for both 2.4GHz or 5GHz

### Related Documentation

- [WLA532E Antenna Models on page 7](#)
- [Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point on page 31](#)
- [Requirements and Specifications for 5-GHz Radios on a WLA532E Access Point on page 32](#)

## Status LEDs on a WLA532E Access Point

The Juniper Networks Wireless LAN Access Point WLA532E has three status LEDs that glow in green, red and amber colors to indicate the status of the access point, see [Table 5 on page 9](#).

Table 5: LED Status and Description of WLA532E

Label	Color	Status and Description
STAT	Off	No power
Indicates access point status and power	Flash amber	On. The AP is on power on self-test mode.
	Flash green	On. The AP is waiting to receive boot instructions and a configuration file from a WLC.
	Flash Green or Amber	On. The AP is booting and receiving a configuration file from the WLC. After the AP boots and receives a configuration, this alternating LED appearance persists until a radio is enabled.
	Green	On. Powered on and the AP is operational.
	Red	On. The AP has failed to configure and is not operational.
LED 11BGN	Amber	On.. The 2.4GHz Radio is disabled.
Indicates radio status and activity on the 2.4GHz radio.	Green	On. The 2.4GHz Radio is enabled.
	Amber	On. Dedicated sensor
	Flashing Green	On. The Unit is transmitting/receiving on 2.4GHz radio
	Red	On. Radio failed.
	LED 11AN	Amber
Indicates radio status and activity on the 5GHz radio.	Green	On. The 5GHz Radio is enabled.
	Amber	On. Dedicated sensor
	Flashing Green	On. The Unit is transmitting/receiving on 5GHz radio
	Red	On. Radio failed.

**Related Documentation** • [Verifying the Health of WLA Series Access Points Using LEDs on page 77](#)

## MAC Address Information for WLA Series Access Points

Each WLA Series access point is assigned a unique block of 64 MAC addresses. Each radio has 32 MAC addresses and supports up to 32 service set identifiers (SSIDs), with one MAC address assigned to each SSID as a basic service set identification (BSSID). The access point MAC address block is listed on a label on the back of the access point.

If the access point is already deployed and running on the network, you can display MAC address assignments by using the **show ap status** command in the Mobility System Software (MSS) CLI.

All MAC addresses for an access point are assigned based on the base MAC address of the access point as described in [Table 6 on page 10](#).

**Table 6: MAC Address Information for WLA Series Access Points**

MAC Address Type	Description
Access point base MAC address	The access point has a base MAC address. All other addresses are assigned based on this address.
Ethernet port MAC addresses	<ul style="list-style-type: none"> <li>The MAC address of Ethernet port 1 is the same as the access point base MAC address.</li> <li>The MAC address of Ethernet port 2, if there is an Ethernet port 2 on the access point, is the same as the access point base MAC address + 1. The WLA322 access points have only one Ethernet port.</li> </ul>
5-GHz radio and SSID MAC addresses	<ul style="list-style-type: none"> <li>The MAC address of the 5-GHz radio is the same as the access point base MAC address + 1.</li> <li>The BSSIDs for the SSIDs configured on the 5-GHz radio end in odd numbers. The first BSSID is equal to the access point base MAC address + 1. The next BSSID is equal to the access point base MAC address + 3, and so on.</li> </ul>
2.4-GHz radio and SSID MAC addresses	<ul style="list-style-type: none"> <li>The MAC address of the 2.4-GHz radio is the same as the access point base MAC address.</li> <li>The BSSIDs for the SSIDs configured on the 2.4-GHz radio end in even numbers. The first BSSID is equal to the access point base MAC address. The next BSSID is equal to the access point base MAC address + 2, and so on.</li> </ul>

- Related Documentation**
- [Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point on page 31](#)
  - [Requirements and Specifications for 5-GHz Radios on a WLA532E Access Point on page 32](#)

## CHAPTER 2

# Ethernet Ports and Connectors

- [Ethernet Connections for Wireless LAN Access Points on page 11](#)
- [PoE Information for the WLA532E Access Point on page 11](#)

## Ethernet Connections for Wireless LAN Access Points

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The RJ-45 network port on wireless LAN access points connects the access point to a wireless LAN controller (WLC) or to a switch in the network. The access point receives power and data through the RJ-45 port.

The port provides a 10/100/1000BASE-T autosensing (MDI/MDIX) Gigabit Ethernet connection. The access point can be configured as a direct or indirect connection through an intermediate Layer 2 or Layer 3 network. Use a Category 5 (or higher) cable and standard RJ-45 connectors to connect the access point to a controller or to a Juniper Networks switch in the network.

The access point draws power from a standard IEEE 802.3af Power Over Ethernet (PoE) supply. The access points can also receive PoE power from PoE-capable switches or other Juniper Networks switches that support PoE.



**NOTE:** The access points do not support daisy-chain configurations. Do not connect one access point to another access point.

### Related Documentation

- [Connecting the Access Point to Wireless LAN Controllers on page 76](#)
- [PoE Information for WLA Series Access Points](#)

## PoE Information for the WLA532E Access Point

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The WLA Series Wireless LAN access point operates as a powered device within standard IEEE 802.3af Power over Ethernet (PoE) from either mid-span or end-span power source equipment. It also operates on IEEE 802.3at (54 V from power source equipment and 12.95W power consumption) or IEEE 802.3at (PoE+). It responds to IEEE 802.3at discovery as an IEEE 802.3af class 3 device. The access point operates below IEEE 802.3af standard PoE power.

- Related Documentation**
- [Ethernet Connections for Wireless LAN Access Points on page 11](#)



## PART 2

# Planning for Access Point Installation

- [Site Preparation on page 15](#)



## CHAPTER 3

# Site Preparation

- Site Preparation Checklist for the WLA532E Access Point on page 15
- General Site Guidelines on page 17
- Environmental Requirements and Specifications for the WLA532E Access Point on page 18
- Planning Guidelines for Using RingMaster to Plan a Mobility System on page 18

### Site Preparation Checklist for the WLA532E Access Point

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The checklist in [Table 7 on page 15](#) summarizes the tasks you need to perform when preparing a site for WLA532E access point installation.

**Table 7: Site Preparation Checklist**

Item or Task	For More Information	Performed By	Date
<b>Environment</b>			
Verify that environmental factors such as temperature and humidity do not exceed access point tolerances.	"Environmental Requirements and Specifications for the WLA532E Access Point" on page 18		
<b>Power</b>			
Measure distance between power source (PoE) and access point installation site.	Access points require an installed Category 5 cable.		
Locate optimal sites for desired type of installation.	"General Site Guidelines" on page 17		
Calculate the power consumption and requirements.	"Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point" on page 31  "Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point" on page 31		
<b>Hardware Configuration</b>			

Table 7: Site Preparation Checklist (*continued*)

Item or Task	For More Information	Performed By	Date
Choose the number of access points and WLCs needed for your planned Mobility System.	<p>“Planning Guidelines for Using RingMaster to Plan a Mobility System” on page 18</p> <p>“WLA532E Access Point Hardware Overview” on page 3</p>		
<b>Type of Hardware Installation</b>			
Plan installation location. Access points can be installed on recessed ceiling rails, on a gang wall junction box (NA and EU), and a plenum-rated WLA532E can be installed in a concealed space inside the ceiling.	<p>“Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit” on page 64</p> <p>“Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit” on page 70</p> <p>“Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit” on page 72</p> <p>“Installing the WLA532E Access Point Using the Plenum Bracket Kit” on page 51</p> <p>“Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit” on page 57</p> <p>“Installing the WLA532E Access Point on a Ceiling Rail” on page 46</p>		
Order or purchase additional hardware kits, bracket kits, security kits, tools, or external antennas needed to planned hardware installation.	<p><a href="http://www.juniper.com/docs/wireless/wla532e/pathway-pages/wireless-lan/index.html">http://www.juniper.com/docs/wireless/wla532e/pathway-pages/wireless-lan/index.html</a></p> <p><a href="http://www.juniper.com/docs/wireless/wla532e/wla532e-antennas-information.html">http://www.juniper.com/docs/wireless/wla532e/wla532e-antennas-information.html</a></p> <p>WLA532E antennas information: “WLA532E Antenna Models” on page 7</p>		
Qualified personnel must install the access point.			
<b>Configure the Access Point</b>			

Table 7: Site Preparation Checklist (*continued*)

Item or Task	For More Information	Performed By	Date
Configure the Access Point Connection	<p>If you are installing the access point in a wireless LAN mesh or wireless bridge configuration, you must configure the access point before deploying the access point in the final location. To configure the access point connection, use the RingMaster GUI or the Mobility System Software CLI.</p> <p>See <a href="#">Mobility System Software Configuration Guide</a> at <a href="http://www.juniper.net/usenet/products/information/whitepapers/wireless/01.html">http://www.juniper.net/usenet/products/information/whitepapers/wireless/01.html</a></p>		

**Related Documentation**

- [General Safety Guidelines and Warnings on page 23](#)
- [General Site Guidelines on page 17](#)

## General Site Guidelines

This topic applies to hardware devices in the WLA Series.

Efficient device operation requires proper site planning and maintenance and proper installation of the equipment using brackets, adapters and other hardware from installation kits.

To plan and create an acceptable operating environment for your device and prevent environmentally caused equipment failures:

- Keep the area around the access point free from dust and conductive material.
- Follow prescribed installation and safety guidelines to ensure that the access point is properly installed and not at risk for causing damage to the hardware or falling to potentially cause bodily harm.
- Follow the prescribed environmental requirements and specifications to avoid damaging the equipment.
- Install the device in a secure area, so that only authorized personnel can access the device.

**Related Documentation**

- [Environmental Requirements and Specifications for the WLA532E Access Point on page 18](#)
- [Medical Safety Compliance for WLA Series Access Points on page 25](#)

## Environmental Requirements and Specifications for the WLA532E Access Point

The Wireless LAN Access Point WLA532E can be installed in a clean, dry, temperature-controlled environment on a recessed, 9/16-inch or 15/16-inch T ceiling-tile rail or on a wall using a country-specific mounting kit, and also inside the ceiling using a metal plenum mounting bracket.

**Table 8: WLA532E Environmental Tolerances**

Access Point	Environmental Tolerance					
	Altitude	Relative humidity	Temperature	Seismic	Transportation	Storage
WLA532E	No performance degradation up to 5,000 feet (1524 meters)  IEC 60068-2-41 Combined heat/low air pressure	Normal operation ensured in relative humidity range of 5% through 95% (noncondensing)	Normal operation ensured in the temperature range 32° F through 122° F (0° C through 50° C).	Complies with IEC 60068-2-6 requirements.	Complies with Environmental Conditions and Environmental Tests for Telecommunications Equipment ETSI EN 300 019-1-2 Class 2.3  Non-operating transportation ensured in the temperature range -40° F through 158° F, (-40° C through 70° C)	Complies with Environmental Conditions and Environmental Tests for Telecommunications Equipment ETSI EN 300 019-1-2 Class 2.3  Non-operating storage ensured in the temperature range -40° F through 158° F, (-40° C through 70° C)

- Related Documentation**
- [Site Preparation Checklist for the WLA532E Access Point on page 15](#)
  - [General Safety Guidelines and Warnings on page 23](#)
  - [Medical Safety Compliance for WLA Series Access Points on page 25](#)

## Planning Guidelines for Using RingMaster to Plan a Mobility System

The Juniper Networks Mobility System is an enterprise wireless LAN (WLAN) solution that seamlessly integrates with an existing wired enterprise network. The Mobility System provides secure connectivity to both wireless and wired users in large environments such as office buildings, hospitals, and university campuses.

If you are using RingMaster software to plan your Mobility System installation, we recommend that you create and verify a network plan for the entire installation and generate a wireless LAN access point (WLA) work order using RingMaster before installing the access points. A network plan and the WLA work order generated from RingMaster provide the following information about access point installation and configuration:

- Number of access points required for adequate WLAN capacity in each coverage area
- Details of installation location for each access point
- Settings for all access points in the WLAN

After you have created the plan and reviewed it, you can arrange for the WLAN installation. System administrators and anyone involved in the installation of the WLAN system are responsible for its proper setup and operation in accordance with all rules and regulations of the country in which the network equipment operates.

**Related  
Documentation**

- [Site Preparation Checklist for the WLA532E Access Point on page 15](#)
- [General Site Guidelines on page 17](#)





## PART 3

# Safety Guidelines and Standards for Access Point Installation

- [Safety Standards and Guidelines on page 23](#)



## CHAPTER 4

# Safety Standards and Guidelines

- [General Safety Guidelines and Warnings on page 23](#)
- [Qualified Personnel Warning on page 24](#)
- [General Electromagnetic Safety and Compliance on page 24](#)
- [Medical Safety Compliance for WLA Series Access Points on page 25](#)
- [No User Serviceable Parts Warning on page 26](#)
- [Product Disposal Warning on page 27](#)

## General Safety Guidelines and Warnings

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This topic applies to hardware devices in the WLA Series Wireless LAN Access Point product family. For a complete list of safety guidelines and warnings and detailed compliance information, see the *Regulatory Guide for Wireless Topics* documentation at [Wireless LAN Services \(WLS\) Product Documentation](#).

To comply with safety and environmental standards specified by various agencies:

- Perform only the procedures explicitly described in the hardware documentation for this device.
- Keep the area around the device clear and free from dust before, during, and after installation.
- Keep tools away from areas where people could trip over them.
- Do not wear loose clothing or jewelry, such as rings, bracelets, or chains, which could become caught in the device during installation.
- Wear safety glasses if you are working under any conditions that could be hazardous to your eyes.
- Do not perform any actions that create a potential hazard to people or make the equipment unsafe.
- Never attempt to lift on your own, any object that is too heavy for one person to handle.
- Never perform installation tasks or manipulate wiring during electrical storms.

### Related Documentation

- [Installation Instructions Warning on page 43](#)
- [Medical Safety Compliance for WLA Series Access Points on page 25](#)

- [General Electromagnetic Safety and Compliance on page 24](#)

## Qualified Personnel Warning

This topic applies to hardware devices in the Wireless LAN Access Point WLA Series product family.



**WARNING:** Only trained and qualified personnel should install or replace the router.

**Waarschuwing** Installatie en reparaties mogen uitsluitend door getraind en bevoegd personeel uitgevoerd worden.

**Varoitus** Ainoastaan koulutettu ja pätevä henkilökunta saa asentaa tai vaihtaa tämän laitteen.

**Attention** Tout installation ou remplacement de l'appareil doit être réalisé par du personnel qualifié et compétent.

**Warnung** Gerät nur von geschultem, qualifiziertem Personal installieren oder auswechseln lassen.

**Avvertenza** Solo personale addestrato e qualificato deve essere autorizzato ad installare o sostituire questo apparecchio.

**Advarsel** Kun kvalifisert personell med riktig opplæring bør montere eller bytte ut dette utstyret.

**Aviso** Este equipamento deverá ser instalado ou substituído apenas por pessoal devidamente treinado e qualificado.

**¡Atención!** Estos equipos deben ser instalados y reemplazados exclusivamente por personal técnico adecuadamente preparado y capacitado.

**Warning!** Denna utrustning ska endast installeras och bytas ut av utbildad och kvalificerad personal.

Προσοχή! Μόνο οι κατάλληλα εκπαιδευμένοι και εξειδικευμένοι τεχνικοί μπορούν να εγκαταστήσουν ή να αντικαταστήσουν αυτό το προϊόν.

- Related Documentation**
- [General Safety Guidelines and Warnings on page 23](#)
  - [No User Serviceable Parts Warning on page 26](#)

## General Electromagnetic Safety and Compliance

This topic applies to hardware devices in the WLA Series Wireless LAN Access Point WLA. For a complete list of safety guidelines and warnings and detailed compliance information, see the *Regulatory Guide for Wireless Topics* documentation at [Wireless LAN Services \(WLS\) Product Documentation](#).

- CAN/CSA-C22.2 No. 60950-1 Information Technology Equipment
- UL 60950-1 (2nd Ed.) Information Technology Equipment
- EN 60950-1 Information Technology Equipment
- IEC 60950-1 Information Technology Equipment - Safety (All country deviations)
- EN 60601-1-1 General Safety for medical electrical systems
- ETSI EN 300 019-1-2 Class 2.3 Environmental Conditions and Environmental Tests for Telecommunications Equipment
- IEC 60601-1 3rd edition
- IEC 60068-2-41
- IEC 60068-2-6
- Low Voltage Directive 2006/95/EEC

**Related Documentation**

- [General Safety Guidelines and Warnings on page 23](#)
- [WLA Series Access Point Radio Frequency Exposure Guidelines on page 37](#)

## Medical Safety Compliance for WLA Series Access Points

This topic applies to all hardware devices in the Juniper Networks WLA Series Wireless LAN Access Point family.



**NOTE:** No maintenance is required for the WLA Series Wireless LAN Access Point hardware products. However, if external cleaning is needed, use a dry cloth only to lightly wipe device.



**NOTE:** No hardware modification is allowed.



**NOTE:** The expected service life of the *WLA321*, *WLA322*, *WLA532*, and *WLA532E* access points is 10 years. For the expected service life of your unit and whether an extended end of life warranty option was purchased, see your service contract.



**NOTE:** The system must be in compliance with IEC60601-1 clause 16 when you are connecting external accessories.

**Related Documentation**

- [General Safety Guidelines and Warnings on page 23](#)
- [No User Serviceable Parts Warning on page 26](#)

- [Qualified Personnel Warning on page 24](#)
- [Installation Instructions Warning on page 43](#)

## No User Serviceable Parts Warning

This topic applies to hardware devices in the WLA Series Wireless LAN Access Point product family.



**WARNING:** There are no user serviceable parts inside the WLA Access Point.

**Waarschuwing** Innerhalb des Geräts befinden sich keine Teile, die einer Wartung bedürfen.

**Warnung!** De binnenzijde van het apparaat bevat geen onderdelen die geschikt zijn voor onderhoud door de gebruiker.

**Avertissement!** Il n'y a pas de pièces réparables par l'utilisateur à l'intérieur.

**Attenzione!** Non vi sono parti utilizzabili dall'operatore all'interno dello strumento.

**iAdvertencia!** En el interior no existen piezas que requieran mantenimiento.

**Advertência!** No interior não existem peças que requeiram manutenção.

**Varning!** Det finns inga användartjänliga delar inne i enheten.

**Advarsel!** Este equipamento deverá ser instalado ou substituído apenas por pessoal devidamente treinado e qualificado.

**Advarsel!** Inneholder ingen deler brukeren selv kan reparere.

**Varoitus!** Tämän laitteen sisällä ei ole käyttäjän huollettavia osia.

**Viðvörðun!** Í tækinu eru engir íhlutir sem notendur geta þjónustað.

Προσοχή! Δεν υπάρχουν στο εσωτερικό εξαρτήματα λειτουργικά για το χρήστη.



**WARNING:** Obtain a Return Materials Authorization (RMA) from the Juniper Networks Technical Assistance Center (JTAC) and return the defective hardware to Juniper Networks, Inc.

### Related Documentation

- [Qualified Personnel Warning on page 24](#)
- [General Safety Guidelines and Warnings on page 23](#)

## Product Disposal Warning

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This topic applies to hardware devices in the Wireless LAN (WLA) Series product family, which includes all Access Points.



**WARNING:** Disposal of this device must be handled according to all national laws and regulations.

**Waarschuwing** Dit produkt dient volgens alle landelijke wetten en voorschriften te worden afgedankt.

**Varoitus** Tämän tuotteen lopullisesta hävittämisestä tulee huolehtia kaikkia valtakunnallisia lakeja ja säännöksiä noudattaen.

**Attention** La mise au rebut définitive de ce produit doit être effectuée conformément à toutes les lois et réglementations en vigueur.

**Warnung** Dieses Produkt muß den geltenden Gesetzen und Vorschriften entsprechend entsorgt werden.

**Avvertenza** L'eliminazione finale di questo prodotto deve essere eseguita osservando le normative italiane vigenti in materia

**Advarsel** Endelig disponering av dette produktet må skje i henhold til nasjonale lover og forskrifter.

**Aviso** A descartagem final deste produto deverá ser efectuada de acordo com os regulamentos e a legislação nacional.

**¡Atención!** El desecho final de este producto debe realizarse según todas las leyes y regulaciones nacionales

**Varning!** Slutlig kassering av denna produkt bör skötas i enlighet med landets alla lagar och föreskrifter.

- Related Documentation**
- [General Safety Guidelines and Warnings on page 23](#)
  - [Installation Instructions Warning on page 43](#)





## PART 4

# Requirements and Certifications

- Requirements and Specifications on page 31
- Certifications for the Access Point on page 35



## CHAPTER 5

# Requirements and Specifications

- [Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point on page 31](#)
- [Requirements and Specifications for 5-GHz Radios on a WLA532E Access Point on page 32](#)

### Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point

The 2.4-GHz band radio is operational from channels 1 through 14 in legacy IEEE standard 802.11bg or in IEEE 802.11n 3x3 from single to three spatial streams of 20 MHz channel modes. At an MCS0 data rate, it provides 17 dBm transmit power per chain and has a receive sensitivity of -89 dBm. At an MCS23 data rate, it provides 11 dBm transmit power per chain and has a receive sensitivity of -69 dBm. The 2.4-GHz radio consumes a maximum power rate of 2.75W.

Each antenna connector on the WLA532E can support any external single or dual band elements. The access point has been designed to maximize isolation between all antennas. For 5-GHz and 2.4-GHz concurrent operation, the antenna can support a co-band isolation of -15dB at 2.4-GHz and -30dB at 5-GHz.

[Table 2 on page 7](#) lists the supported antenna models.

**Table 9: WLA532E Antenna Models**

Juniper Model Number	Type	Gain		Horizontal BW		Vertical BW	
		2.4GHZ	5GHz	2.4GHZ	5GHz	2.4GHZ	5GHz
WLA-ANT-7360P-IN	Omni (Paddle) Non-Plenum	3dBi	4dBi	360°	360°	60°	60°
ANT-7360A-OUT	Omni	6dBi	8dBi	360°	360°	22°	15°
ANT-77555-OUT	Panel	8dBi	10.7dBi	75°	55°	70°	60°

Table 10: 2.4-GHz Radio Receive Sensitivities

2.4-GHz Radio Receive Sensitivities (in dBm)											
Legacy "a"		Legacy "b"		Legacy "g"		HT-20					
6 Mbps	54 Mbps	1 Mbps	11 Mbps	6 Mbps	54 Mbps	MCS0	MCS7	MCS8	MCS15	MCS16	MCS23
-91	-75	-95	-88	-93	-77	-93	-71	-93	-71	-93	-71

**Related Documentation**

- [Requirements and Specifications for 5-GHz Radios on a WLA532E Access Point on page 32](#)
- [WLA Series Access Point Radio Frequency Exposure Guidelines on page 37](#)
- [WLA532E Antenna Models on page 7](#)

## Requirements and Specifications for 5-GHz Radios on a WLA532E Access Point

The 5-GHz band radio is operational from channels 36 through 165 in legacy IEEE standard 802.11n 3x3 or IEEE 802.11n 3x3 from single to three spatial streams of 20 MHz and 40 MHz channel modes. At an MCS0 data rate, it provides 16 dBm transmit power per chain and has a receive sensitivity of -88 dBm. At an MCS23 data rate, it provides 10 dBm transmit power per chain and has a receive sensitivity of -65 dBm. The 5-GHz radio consumes maximum power rate of 4.25W.

Each antenna connector on the WLA532E can support any external single or dual band elements. The access point has been designed to maximize isolation between all antennas. For 5-GHz and 2.4-GHz concurrent operation, the antenna can support a co-band isolation of -15dB at 2.4GHz and -30dB at 5GHz.

[Table 2 on page 7](#) lists the supported antenna models.

Table 11: WLA532E Antenna Models

Juniper Model Number	Type	Gain		Horizontal BW		Vertical BW	
		2.4GHZ	5GHz	2.4GHZ	5GHz	2.4GHZ	5GHz
WLA-ANT-7360P-IN	Omni (Paddle) Non-Plenum	3dBi	4dBi	360°	360°	60°	60°
ANT-7360A-OUT	Omni	6dBi	8dBi	360°	360°	22°	15°
ANT-77555-OUT	Panel	8dBi	10.7dBi	75°	55°	70°	60°

Table 12: 5-GHz Radio Receive Sensitivities

5-GHz Radio Receive Sensitivities (in dBm)													
Legacy "a"		HT-20						HT-40					
6 Mbps	54 Mbps	MCS0	MCS7	MCS8	MCS15	MCS16	MCS23	MCS0	MCS7	MCS8	MCS15	MCS16	MCS23
-91	-75	-91	-70	-91	-70	-91	-70	-88	-67	-88	-67	-88	-67

**Related Documentation**

- [Requirements and Specifications for 2.4-GHz Radios on a WLA532E Access Point on page 31](#)
- [WLA Series Access Point Radio Frequency Exposure Guidelines on page 37](#)
- [WLA532E Antenna Models on page 7](#)



## CHAPTER 6

# Certifications for the Access Point

- [Agency Approvals for WLA Series Access Points on page 35](#)
- [IEEE 802.11 WLAN Standards and Compliance for the WLA532E Access Point on page 36](#)
- [WLA Series Access Point Radio Frequency Exposure Guidelines on page 37](#)

### Agency Approvals for WLA Series Access Points

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This topic applies to hardware devices in the WLA Series Wireless LAN Access Point product family.

- Safety
  - CCAN/CSA-C22.2 No. 60950-1 Information Technology Equipment
  - UL 60950-1 (2nd Ed.) Information Technology Equipment
  - EN 60950-1 Information Technology Equipment
  - IEC 60950-1 Information Technology Equipment Safety (All country deviations)
  - IEC 60601-1 3rd edition
  - EN 60601-1-1 General Safety for medical electrical systems
  - Low Voltage Directive 2006/95/EEC
  - IEEE 802.3at PoE requirements
  - UL 2043 plenum rated (*applies to WLA532E only*)
- EMC
  - FCC CFR 47, Part 2 Frequency allocations and general treaty matters, General rules
  - FCC CFR 47, Part 15 Radio Frequency Devices
  - EN 300 328 EMC and Radio Spectrum Matters 2.4-GHz ISM band
  - EN 301 489-1 EMC and Radio Spectrum Matters: Common Technical requirements
  - EN 301 489-17 EMC and Radio Spectrum Matters: 2.4-GHz wideband and 5-GHz RLAN

- EN 301 893 Broadband Radio Access Networks 5-GHz RLAN
- R&TTE Directive 1995/5/EC
- Various Country Specific Radio Regulations

**Related  
Documentation**

- [IEEE 802.11 WLAN Standards and Compliance for the WLA532E Access Point on page 36](#)

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## IEEE 802.11 WLAN Standards and Compliance for the WLA532E Access Point

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This topic applies to the Wireless LAN Access Point WLA532E.

### 802.11 a/b/g/n Features

The WLA532E access point supports:

- High-performance 11-Mbps (802.11b), 54-Mbps (802.11a/g), or 450-Mbps (802.11n) data rates
- WMM-PS Base and Power Save
- Wi-Fi, WPA-certificated interoperability
- WFA WMM and WMM power-save UAPSD
- WPA and WPA2 personal or enterprise with TKIP/AES
- EAP methods such as TLS and PEAP
- Either 40-bit/104-bit WEP or 64-bit/128-bit WEP
- Seamless roaming within the IEEE 802.11 a/b/g/n Juniper Networks WLAN infrastructure
- Adjustable output power support
- Single autosensing 10/100/1000BASE-T Gigabit Ethernet port, configured as MDI
- Compliance with IEEE 802.3, 802.3u, and 802.3ab standards
- Gigabit Ethernet Power over Ethernet (PoE) injector support
- IEEE 802.3af PoE compatibility

### RoHs

- Directive 2002/95/EC
- 2006/122/EC China RoHS

### IEEE Standard Compliance

- IEEE 802.11
- IEEE 802.11a
- IEEE 802.11b



- IEEE 802.11g
- IEEE 802.11af
- IEEE 802.11i
- IEEE 802.11n
- IEEE 802.11abgn
- IEEE 802.3i—10BASE-T Ethernet
- IEEE 802.3u—100BASE-TX Ethernet
- IEEE 802.3ab—1000BASE-TX Gigabit Ethernet
- IEEE 802.3af—Power over Ethernet
- IEEE 802.3at—Power over Ethernet
- IEEE 802.3az—Energy Efficient Ethernet

**Related  
Documentation**

- [Agency Approvals for WLA Series Access Points on page 35](#)

## WLA Series Access Point Radio Frequency Exposure Guidelines

The following are radio frequency exposure guidelines for the WLA Series access points:

### Wireless LAN Access Point (WLA) Radio Safety Advisories:

Federal Communications Commission (FCC) Docket 96-8 for Spread Spectrum Transmitters specifies a safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC-certified equipment. When used with the proper antennas (shipped in the product), Juniper Networks WLA Series Access Point products meet the uncontrolled environmental limits found in OET-65 and ANSI C95.1-1991. Proper installation of the access point according to the instructions in this manual will result in user exposure that is below the FCC recommended limits.

#### 802.11b/802.11g/BT警語：

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，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、科學及醫療用電波射性電機設備之干擾。

Article 12—Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristics as well as performance of an approved low power radio-frequency device.

Article 14—The low power radio-frequency device shall not influence aircraft security and interfere legal communication; if such influence or interference is found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications are operated in compliance with the

Telecommunications Act. The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

**802.11a** 警語：Unlicensed National Information Infrastructure, U-NII

4.7→無線傳輸設備(U-NII)

4.7.5→在5.25-5.35GHz頻帶內操作之無線資訊傳輸設備，限於室內使用。

4.7.6→無線資訊傳輸設備忍受合法通信之干擾且不得干擾合法通信；如造成干擾，應立即停用，俟無干擾之處，始得繼續使用。

4.7.7→無線資訊傳輸設備的製造廠商應確保頻帶穩定性，如依製造廠商使用手冊上所述正常操作，發射的信號應維持於操作頻帶中。

加印警語→「避免電波干擾，本器材禁止於室外使用5.25-

5.35GHz頻帶」於器材使用說明書內，並將警語印製貼紙可黏貼於裝設器材機身外明處。

4.7.5—Within the 5.25–5.35-GHz band, U-NII devices will be restricted to indoor operations to reduce any potential for harmful interference to co-channel MSS operations.

4.7.6—The operation of the U-NII devices is subject to the condition that no harmful interference be caused. The user must stop operating the device immediately should harmful interference be caused by the operation of authorized communications, or ISM equipment, and shall not resume until the condition causing the harmful interference has been corrected.

4.7.7—Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user manual.

**B급 기기**

(가정용 방송통신기자재)

이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

Translation: Class B (Broadcasting Communication Equipment for Home Use) As electromagnetic-wave equipment for home use (Class B), this equipment is intended mainly for home use and may be used in all areas of the home.

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

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

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.

*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 20 cm 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 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.

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 appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

#### Radio Safety Standards

- FCC CFR 47, Part 2 Frequency allocations and general treaty matters, General rules
- FCC CFR 47, Part 15 Radio Frequency Devices
- EN 300 328 EMC and Radio Spectrum Matters 2.4-GHz ISM band
- EN 301 489-1 EMC and Radio Spectrum Matters: Common Technical requirements
- EN 301 489-17 EMC and Radio Spectrum Matters: 2.4-GHz wideband and 5-GHz RLAN
- EN 301 893 Broadband Radio Access Networks 5-GHz RLAN
- RTTE Directive 1995/5/EC
- Various Country Specific Radio Regulations (see Country List in *Regulatory Guide*)



**WARNING:** In the USA, install the access point and any externally attached antennae a minimum of 7.9 in. (20 cm) away from people. This safety warning conforms with FCC radio frequency exposure limits for dipole antennae such as those used in the access point.

- Related Documentation**
- [General Electromagnetic Safety and Compliance on page 24](#)
  - [General Safety Guidelines and Warnings on page 23](#)

## PART 5

# Installing, Connecting, and Verifying the Access Point

- [Installing and Connecting the Access Point on page 43](#)
- [Verifying the Health of the Access Point on page 77](#)
- [Customer Support on page 79](#)



## CHAPTER 7

# Installing and Connecting the Access Point

- Installation Instructions Warning on page 43
- Unpacking a WLA532E Access Point on page 44
- Parts Inventory (Packing List) for a WLA532E Access Point on page 44
- Installing the WLA532E Access Point on a Ceiling Rail on page 46
- Installing the WLA532E Access Point Using the Plenum Bracket Kit on page 51
- Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit on page 57
- Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit on page 64
- Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit on page 70
- Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit on page 72
- Connecting the Access Point to Wireless LAN Controllers on page 76

## Installation Instructions Warning

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This topic applies to hardware devices in the Wireless LAN Access Point WLA Series product family. For a complete list of safety guidelines and warnings and detailed compliance information, see the Juniper Networks Regulatory Guide in the Wireless LAN Services (WLS) documentation at [Wireless LAN Services \(WLS\) Product Documentation](#).



**WARNING:** Read the installation instructions before you connect the device to a power source.

**Waarschuwing** Raadpleeg de installatie-aanwijzingen voordat u het systeem met de voeding verbindt.

**Varoitus** Lue asennusohjeet ennen järjestelmän yhdistämistä virtalähteeseen.

**Attention** Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.

**Warnung** Lesen Sie die Installationsanweisungen, bevor Sie das System an die Stromquelle anschließen.

**Avvertenza** Consultare le istruzioni di installazione prima di collegare il sistema all'alimentatore.

**Advarsel** Les installasjonsinstruksjonene før systemet kobles til strømkilden.

**Aviso** Leia as instruções de instalação antes de ligar o sistema à sua fonte de energia.

**¡Atención!** Ver las instrucciones de instalación antes de conectar el sistema a la red de alimentación.

**Varning!** Läs installationsanvisningarna innan du kopplar systemet till dess strömförsörjningsenhet.

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**Related  
Documentation**

- [General Safety Guidelines and Warnings on page 23](#)
- [Medical Safety Compliance for WLA Series Access Points on page 25](#)

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## Unpacking a WLA532E Access Point

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The WLA532E Access Points are shipped in a cardboard carton, secured with foam packing material. The carton has an accessory compartment and contains the quick start instructions.

To unpack the access point:

1. Open the carton.
2. Pull out the packing material holding the access point in place.
3. Verify the parts received against the inventory on the label attached to the carton. See [“Parts Inventory \(Packing List\) for a WLA532E Access Point” on page 44](#).
4. Save the shipping carton and packing materials in case you need to move or ship the access point later.

**Related  
Documentation**

- [Parts Inventory \(Packing List\) for a WLA532E Access Point on page 44](#)
- [Installing the WLA532E Access Point on a Ceiling Rail on page 46](#)
- [Connecting the Access Point to Wireless LAN Controllers on page 76](#)

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## Parts Inventory (Packing List) for a WLA532E Access Point

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Wireless LAN Access Point (WLAs) are shipped in a cardboard carton, secured with foam packing material. The carton also contains an accessory box.



The WLA shipment includes a packing list. Check the parts you receive in the WLA shipping carton against the items on the packing list. The parts shipped depend on the configuration you order.

If any part on the packing list is missing, contact your customer service representative or contact Juniper customer care from within the U.S. or Canada by telephone at 1-800-638-8296. For international-dial or direct-dial options in countries without toll-free numbers, see <http://www.juniper.net/support/requesting-support.html>.

Table 13 on page 45 lists the parts and their quantities in the packing list.

**Table 13: Parts List for the WLA532E**

Component	Quantity
WLA532E Access Point	1
One ceiling-mount bracket (WLA-BRKT-CLNG)	1
Ceiling rail adapter	1
Mounting template	1
WLA532E Quick Start installation instructions	1

- Related Documentation**
- [Unpacking a WLA532E Access Point on page 44](#)
  - [Connecting the Access Point to Wireless LAN Controllers on page 76](#)
  - [Installing the WLA532E Access Point on a Ceiling Rail on page 46](#)

## Installing the WLA532E Access Point on a Ceiling Rail

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You can install the WLA532E access point on the ceiling using the provided mounting bracket in the or on a junction box on a wall. Mounting the device on the ceiling is the primary installation method and ceiling-mount installation steps are provided in this topic. You can purchase a junction box wall-mount kit separately and follow the wall-mounting instructions in the Wireless LAN Services (WLS) documentation at <http://www.juniper.net/techpubs/>.

The ceiling mount kit includes a bracket for mounting the access point to a recessed, 9/16-inch or 15/16-inch T ceiling-tile rail and an indoor ceiling rail adapter that allows you to mount the access point to a 1/4-inch and 1/8-inch open ceiling rail.

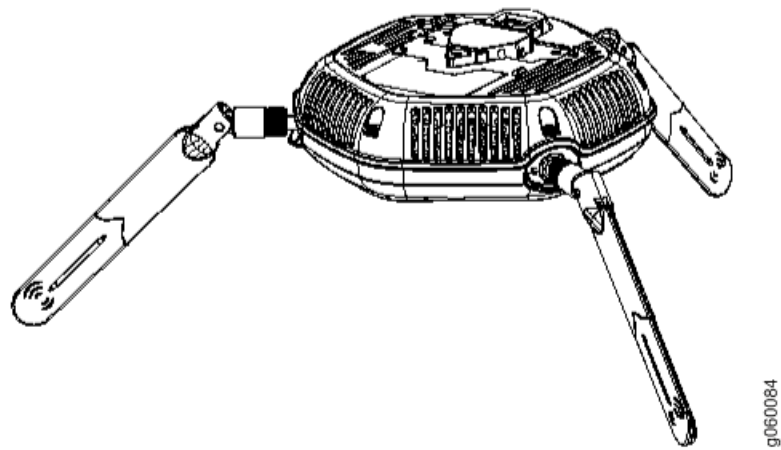
Ensure that you have the following parts and tools available to install the access point:

- One ceiling-mount bracket (WLA-BRKT-CLNG) (provided)
- Mounting template (provided)
- Category 5e straight-through signaling cable with RJ-45 connectors, installed (not provided)
- Three supported external omnidirectional and paddle antennas (not provided)
- Box cutter or similar tool to cut ceiling tiles (not provided)
- (Optional) An indoor ceiling-rail adapter and a legacy adapter (both provided), which are needed only for unique ceiling-rail installations using the adapters—see the WLA532E Access Point Hardware Documentation at [http://www.juniper.net/techpubs/en\\_US/release-dependent/wireless/informationproducts/pathway-pages/wireless-lan/index.html](http://www.juniper.net/techpubs/en_US/release-dependent/wireless/informationproducts/pathway-pages/wireless-lan/index.html).
- (Optional) Security kit, which includes a security tool and a security screw. (The kit is not provided and can be ordered separately.)

To install the access point on a suspended ceiling rail:

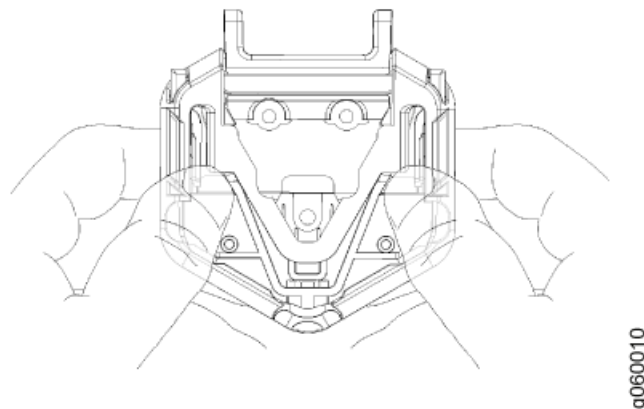
1. Attach three supported external omnidirectional and paddle antennas to the external antenna ports of the access point. For antenna specifications and ordering information see the WLA Series Wireless LAN Access Points product information at <http://www.juniper.net/us/en/products-services/wireless/wla-series>.
2. Orient the antennas for the best antenna reception. See [Figure 4 on page 47](#).

#### Figure 4: Antenna Orientation for Best Reception



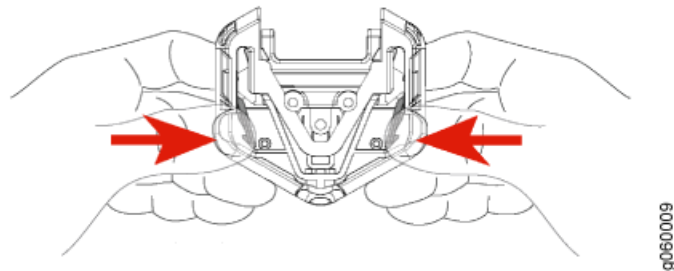
3. Select an installation location under a recessed 9/16-inch or 15/16-inch T ceiling-tile rail in the ceiling.
4. Cut a hole as follows in the ceiling tile for running the Category 5e cable:
  - a. Place the mounting template over the area where you will install the access point.
  - b. Use a box cutter or a similar tool to cut along the line marking the opening for the port connectors.
  - c. Remove the mounting template and the material you cut from the ceiling tile.
5. Run the Category 5e cable from the ceiling through the hole in the ceiling tile.
6. Ensure that the snaps on the top of the ceiling-mount bracket are open so that the clips can fully extend to fit around the ceiling rail. The bracket is shipped with the snaps open so that it is ready to be clipped over a ceiling rail (see [Figure 5 on page 48](#)).

**Figure 5: Opening the Ceiling Bracket Clips**



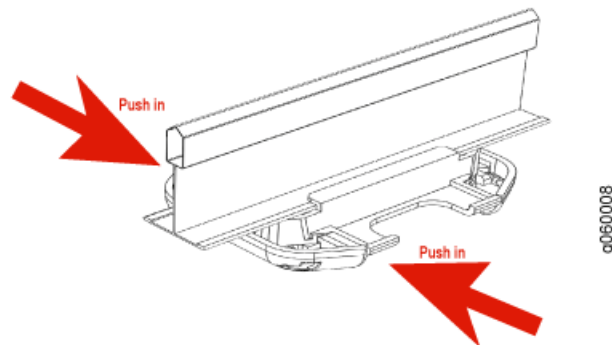
7. If the snaps are closed, open the snaps by pressing in and up with your thumbs on both sides of the snaps on the bottom of the bracket until the snaps are fully open (see [Figure 6 on page 49](#)) until it is fully open.

**Figure 6: Opening the Ceiling Bracket Snaps**



8. With the bracket clips fully extended, align the clips with the rail and hook the clips around the top sides of the rail. Push in on the sides of the bracket until the clips lock over the rail (see [Figure 7 on page 49](#)). Listen for a click that indicates that the clips have locked. Ensure that the bracket has locked over the rail by gently pulling down on the bracket before installing the access point.

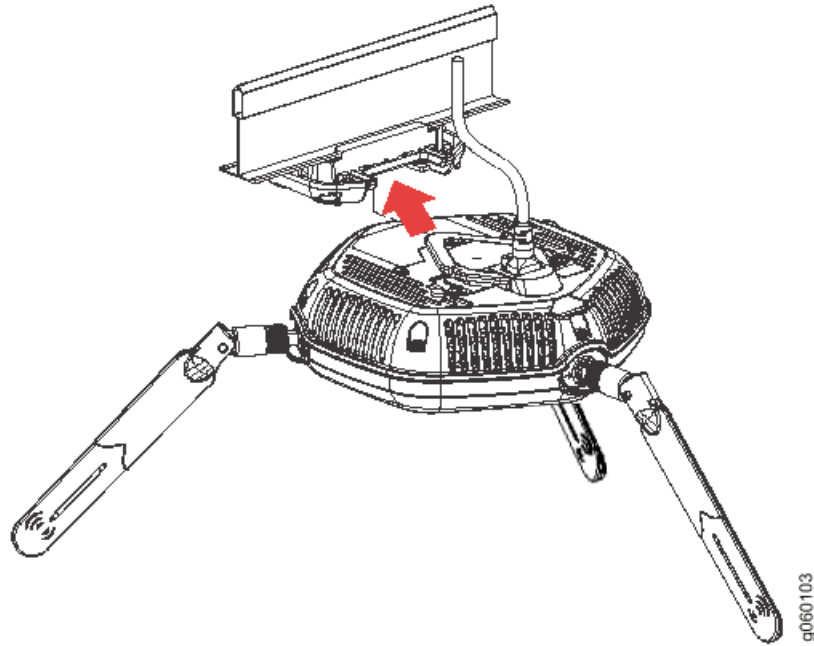
**Figure 7: Locking the Bracket Clips over the Rail**



9. Grasp the Category 5e cable that extends from the ceiling and plug it into the access point.
10. Align the access point with the bracket.

11. Press the access point forward (see [Figure 8 on page 50](#)) until it clicks into place. Ensure that the access point is seated correctly in the bracket by gently pulling down on the access point.

**Figure 8: Aligning the Access Point with the Ceiling Bracket**



12. If the access point is not properly secured, press the release button on top of the bracket to unlock the access point. Making sure that the cable is still connected, repeat Steps 10 and 11.

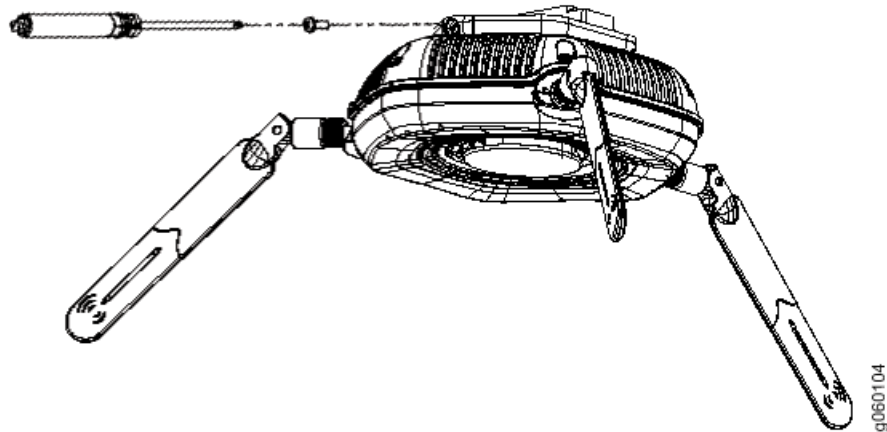
13. If the access point is not properly secured (the access point sits flat against the ceiling bracket and does not move when properly installed), press on the release button on the top of the bracket to unlock the access point. Realign the access point, making sure the cable is still connected, and push in until the access point clicks securely into place.



**NOTE:** We recommend that you use the optional security kit to secure the access point (Step 14). The kit includes a security tool and a security screw. Be sure to retain the tool so you can unlock and move the access point. Never use a power tool to insert or remove the security screw.

14. To lock the access point into place using the security kit, secure the security screw in the release button by using the tool provided with the security kit (see [Figure 9](#) on [page 51](#)). Do not overtighten the screw.

**Figure 9: Locking the Access Point onto the Ceiling Tile**



#### Related Documentation

- [Installing the WLA532E Access Point Using the Plenum Bracket Kit on page 51](#)
- [Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit on page 64](#)
- [Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit on page 70](#)
- [Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit on page 72](#)
- [Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit on page 57](#)

## Installing the WLA532E Access Point Using the Plenum Bracket Kit

The Juniper Networks WLA532E Wireless LAN Access Point is plenum rated and can be installed (with attached antennas) using a plenum bracket in concealed plenum spaces inside the ceiling in locations that require the access point to not be visible.

Mounting the device on the exposed ceiling-tile rail is the primary installation method for the WLA532E. The steps for a concealed plenum bracket ceiling-mount are provided in this topic. Details about installation and installation kits and other WLA hardware information can be viewed on the [WLA Series Wireless LAN Access Points](#) data sheet from the [WLA Series Wireless LAN Access Points](#) product page and the hardware can be purchased by contacting a Juniper Partner or a Juniper Salesperson at 1-866-298-6428.

Before installing the access point inside the ceiling :

- Find a permanent installation location for the WLA532E inside the ceiling. The plenum bracket requires a ceiling cross-rail for installation.
- Read [“General Safety Guidelines and Warnings”](#) on page 23.
- Remove the access point from the shipping carton (see [“Unpacking a WLA532E Access Point”](#) on page 44).

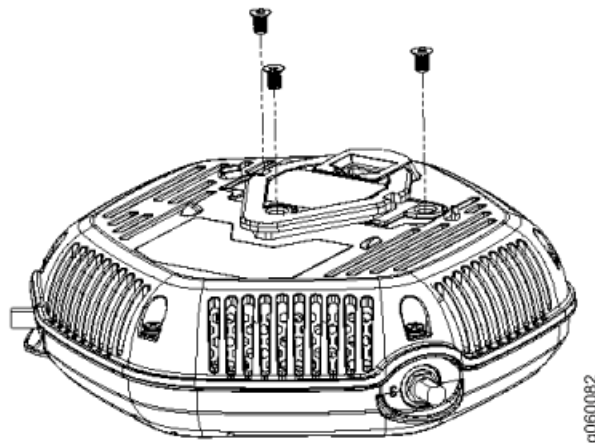
Ensure that you have the following parts and tools available:

- Plenum ceiling-mount bracket (provided)
- Category 5e cable, installed (not provided)
- Two M4 screws (provided)
- Two sheet metal self threading screws ( not provided)
- Phillips number 2 screwdriver (not provided)

To install the access point on a ceiling cross-rail inside the ceiling:

1. The WLA532E is shipped with an installed diamond mount on the bottom of the access point for exposed ceiling tile rail installation. For plenum installation inside the ceiling, you must first remove the diamond by unscrewing the three M4 flat head screws (see [Figure 10](#) on page 52) using a Phillips number 2 screwdriver. Keep the screws for later use.

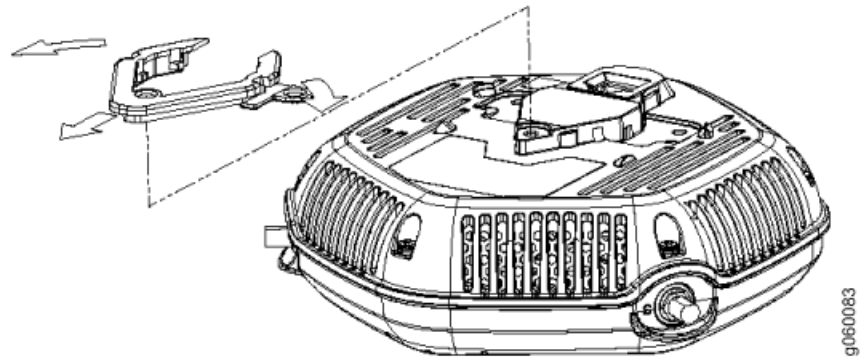
**Figure 10: Removing the M4 Flat Head Screws**



2. After the screws are removed, separate the open ends of the diamond bracket and slide it forward to release the bracket snaps. See [Figure 11](#) on page 53.

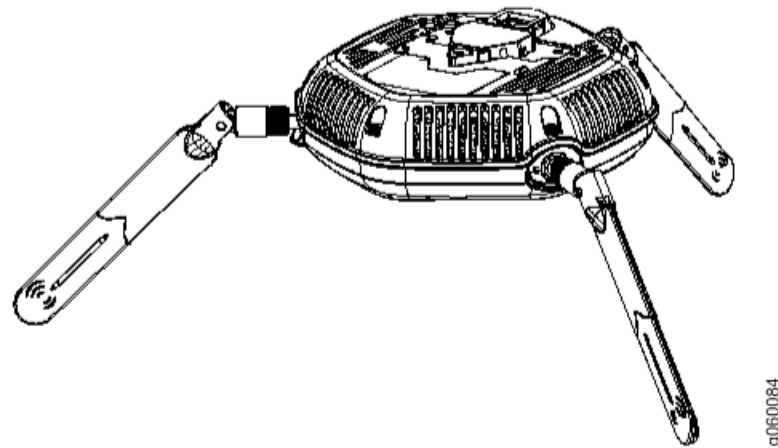


Figure 11: Removing the Diamond Bracket



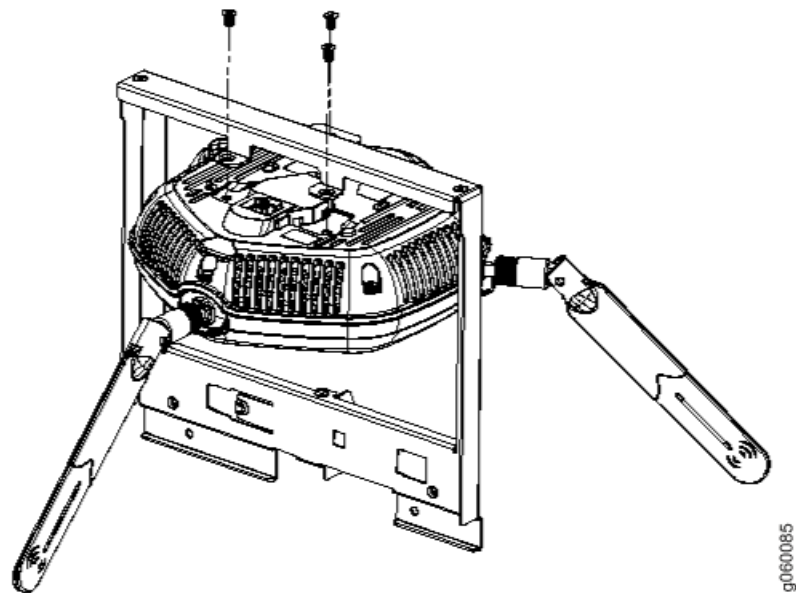
3. Attach three supported external omnidirectional and paddle antennas to the external antenna ports of the access point. For antenna specifications and ordering information see the WLA Series Wireless LAN Access Points product information at <http://www.juniper.net/us/en/products-services/wireless/wla-series>.
4. Orient the antennas for the best antenna reception. See [Figure 12 on page 53](#).

Figure 12: Orienting the Installed WLA532E Antennas



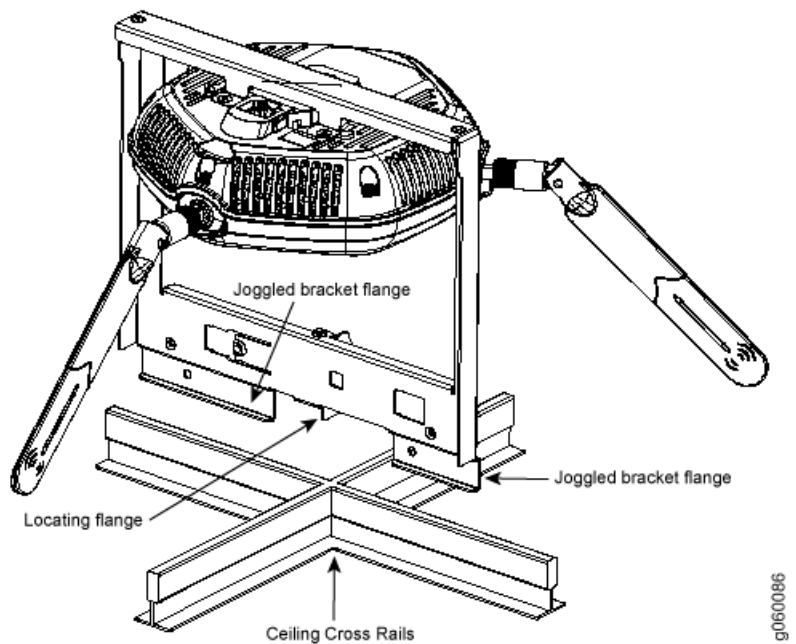
5. Mount the WLA532E to the top bar of the plenum bracket with the three screws that were removed from the diamond bracket. See [Figure 13 on page 54](#).

Figure 13: Mounting the WLA532E to the Plenum Bracket



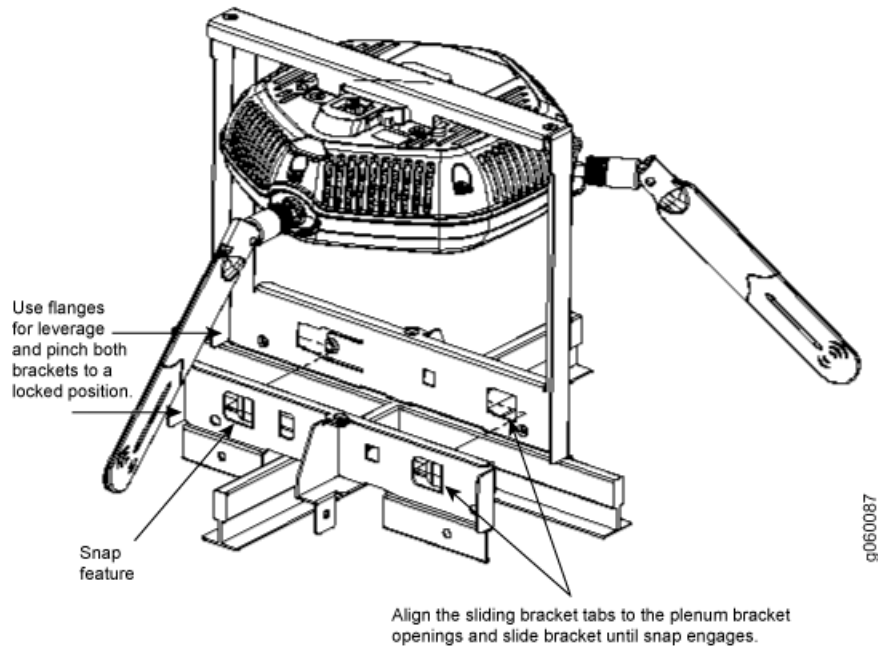
6. Align the locating notch on the plenum bracket to the where the ceiling rails cross and move the plenum bracket until the joggled bracket flanges are in-line with the ceiling cross rails. See [Figure 14 on page 54](#).

Figure 14: Aligning the Plenum Bracket Flanges with the Ceiling Cross Rails



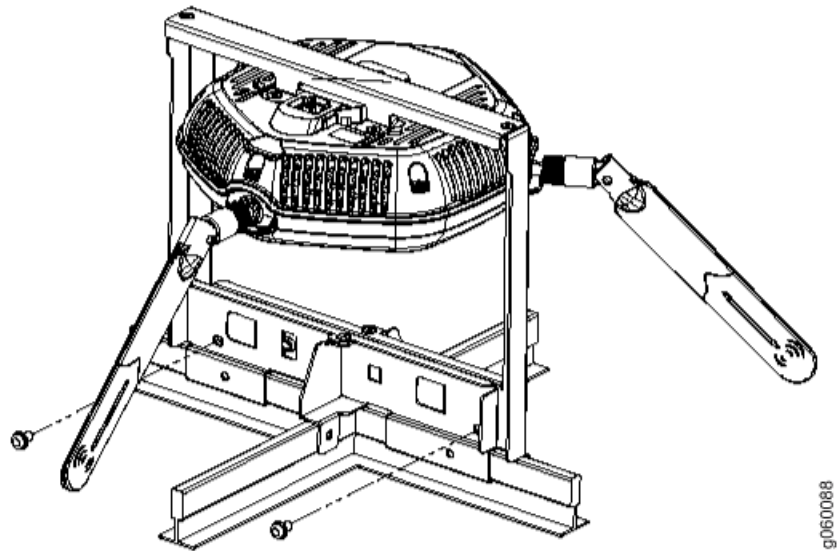
7. Align the sliding bracket tabs to the plenum bracket openings (see [Figure 15 on page 55](#)) and push the tab into the openings.

Figure 15: Aligning the Plenum Bracket Tabs to Bracket Openings



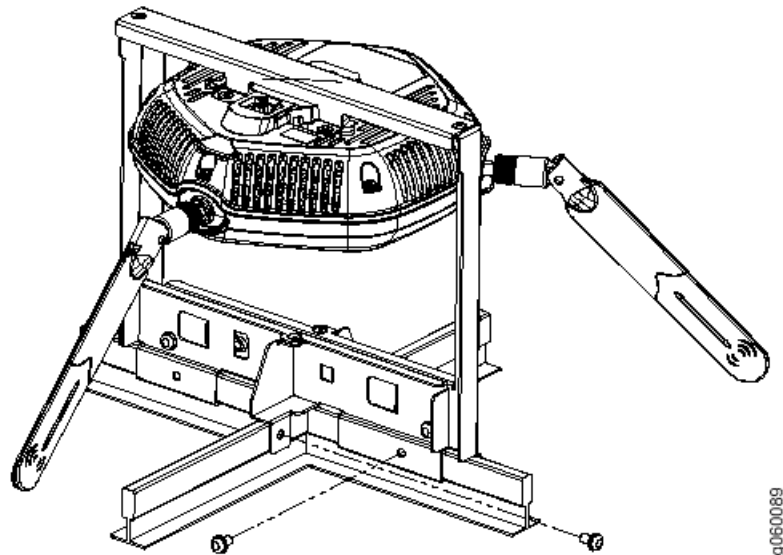
8. Slide the plenum bracket forward using flanges for leverage until both snaps engage. Listen for simultaneous clicks that indicate that the snaps have closed and the plenum bracket is locked.
9. Secure the locked plenum bracket by inserting two M4 screws (not provided) into the openings on the plenum bracket (see [Figure 16 on page 56](#)) using a Phillips number 2 screwdriver.

Figure 16: Securing the Locked Plenum Bracket Using the Provided M4 Screws



10. In order for the WLA532E plenum bracket to meet seismic safety standards you must mount the plenum bracket directly to ceiling rails by securing the two provided sheet metal self-threading screws into the openings on the plenum bracket (see [Figure 17 on page 56](#)).

Figure 17: Securing the Plenum Bracket to the Ceiling Rail Using Sheet Metal Self-Threading Screws



**Related Documentation**

- [Installing the WLA532E Access Point on a Ceiling Rail on page 46](#)
- [Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit on page 57](#)

- [Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit on page 64](#)
- [Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit on page 70](#)
- [Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit on page 72](#)

## Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit

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If you have a ceiling-mounted Juniper Networks WLA522 Wireless LAN Access Point installed on a suspended ceiling rail you can use the installed WLA522 universal mounting bracket and a legacy mounting bracket adapter to install a WLA532E.

Mounting the device on the ceiling is the primary installation method and ceiling-mount installation steps are provided in this topic. You can also install the WLA532E on a junction box using a junction box wall-mount kit that can be ordered separately and installed using the wall-mounting instructions in the Wireless LAN Services (WLS) documentation at <http://www.juniper.net/techpubs/>. Details about installation kits and other WLA hardware information can be viewed on the WLA Series Wireless LAN Access Points data sheet from the [WLA Series Wireless LAN Access Points](#) product page and the hardware can be purchased by contacting a Juniper Partner or a Juniper Salesperson at 1-866-298-6428.

This WLA532E ceiling mount kit includes a legacy mounting bracket adapter for mounting the access point to a recessed, 9/16-inch or 15/16-inch T ceiling-tile rail in a location where a WLA522 is already installed.

Before installing the WLA532E on the ceiling using a legacy mounting adapter bracket adapter:

- Locate an installed WLA522 on a suspended ceiling rail.
- Read [“General Safety Guidelines and Warnings” on page 23](#).
- Remove the access point and the legacy mounting bracket adapter from the shipping carton (see [“Unpacking a WLA532E Access Point” on page 44](#)).

Ensure that you have the following parts and tools available to install the access point:

- One legacy mounting bracket adapter (provided)
- One ceiling-mount bracket (WLA-BRKT-CLNG) (provided)
- Category 5e straight-through signaling cable with RJ-45 connectors, installed (not provided)

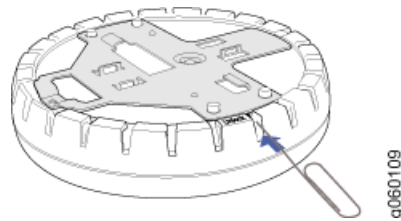
To install the WLA532E on a suspended ceiling rail using the legacy mounting bracket adapter:

1. Remove the WLA522 from the installed mounted position by unlocking the universal mounting bracket from the access point by inserting the lock/unlock tool into the Unlock hole (see [Figure 18 on page 58](#)).

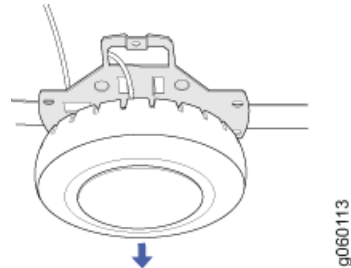


**NOTE:** Use a small-pointed instrument or a paperclip to unlock the access point. Do not use a screwdriver as it can cause damage to the access point lock mechanism or electronic components. Do not use excessive force when using the tool to lock or unlock the universal mounting bracket.

**Figure 18: Unlocking the Universal Mounting Bracket**

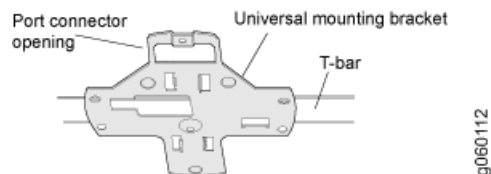


2. Remove the WLA522 from the universal mounting bracket by pulling the access point forward. See



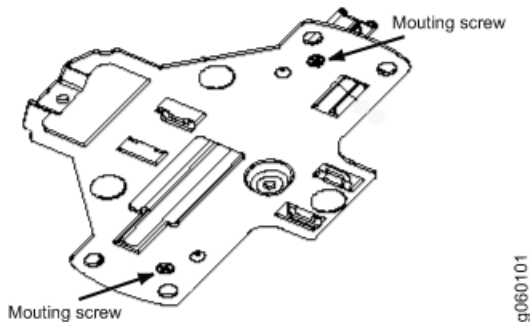
3. Remove the Category 5e cable from the WLA522. The universal mounting bracket is now exposed in a locked position on the ceiling T-bar. See [Figure 19 on page 58](#)

**Figure 19: The Exposed WLA522 Universal Mounting Bracket on the Ceiling T-bar**



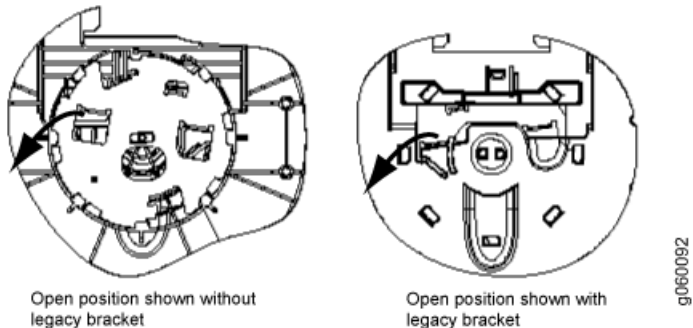
4. Ensure that two M3 pan head threaded mounting screws are installed on the bracket to provide earthquake safety standards qualification. See [Figure 20 on page 59](#) for the mounting screws location on the universal mounting bracket.

Figure 20: Earthquake Safety Stability Screws



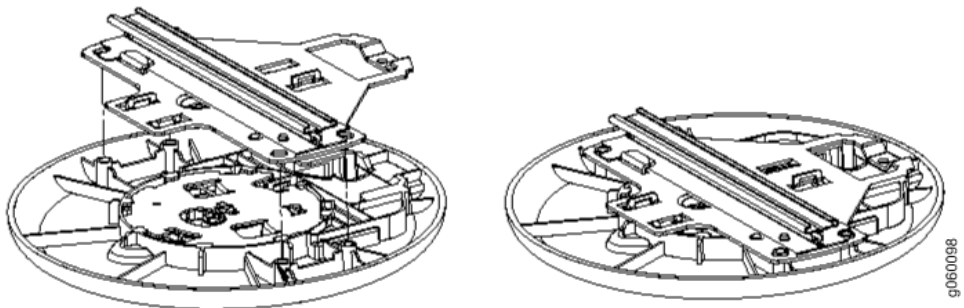
5. Rotate the locking bracket on the legacy mounting bracket adapter into an open position by pushing the left metal tab down. See [Figure 21 on page 59](#).

Figure 21: Rotating the Locking Bracket into an Open Position



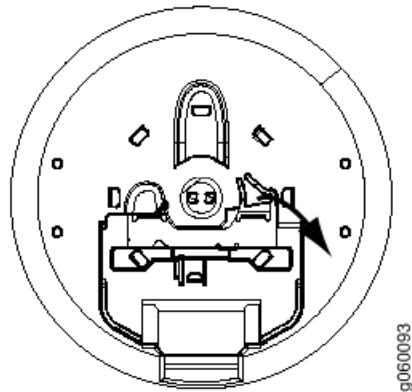
6. Align the four legacy mounting bracket adapter alignment pins to the matching holes on the universal mounting bracket and push up so the brackets meet. See [Figure 22 on page 59](#).

Figure 22: Aligning the Legacy Mounting Bracket Adapter Alignment Pins to the Universal Bracket Holes



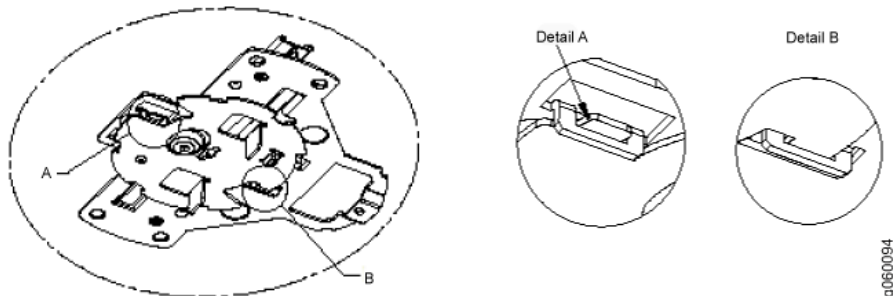
7. Rotate the locking bracket into a locked position by pushing the right metal tab down. See [Figure 23 on page 60](#).

Figure 23: Rotating the Locking Bracket into a Locked Position



8. Check that the locking bracket tabs are locked into the WLA522 mounting bracket (see [Figure 24 on page 60](#)). The legacy mounting bracket adapter should now be locked onto the ceiling.

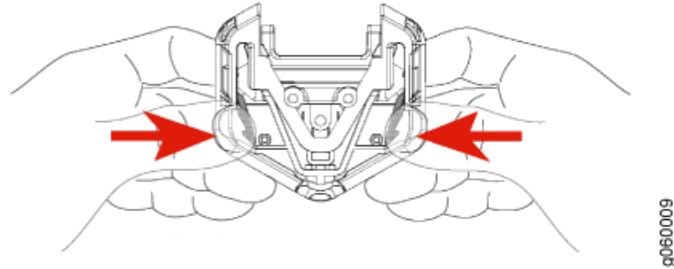
Figure 24: Locked Bracket Tabs on the WLA522 Mounting Bracket



9. Ensure that the snaps on the top of the ceiling-mount bracket are open so that the clips can fully extend to fit onto the legacy mounting bracket adapter. The ceiling-mount bracket is shipped in an open position so that it is ready to be clipped over a ceiling rail. If the bracket is closed, open the snaps by pressing in and up with your thumbs on both sides of the snaps on the bottom of the bracket (see [Figure 25 on page 61](#)) until it is fully open.



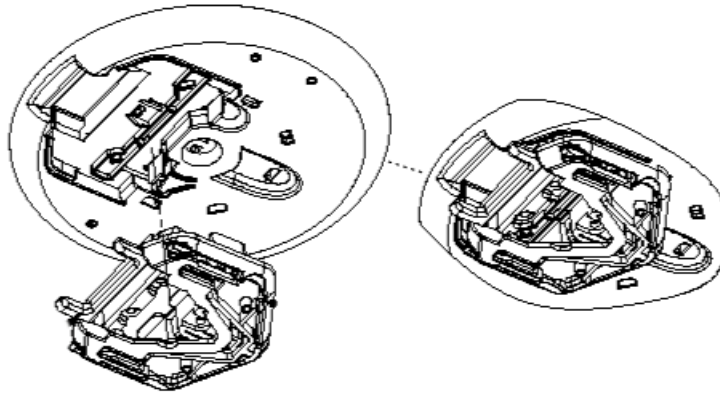
Figure 25: Opening the Ceiling Bracket Snaps



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10. Align the ceiling-mount bracket with the opening of the legacy mounting bracket adapter and push in on the top and bottom of the bracket until the clips lock into the legacy mounting bracket adapter (see Figure 26 on page 61). Listen for a click that indicates that the clips have locked.

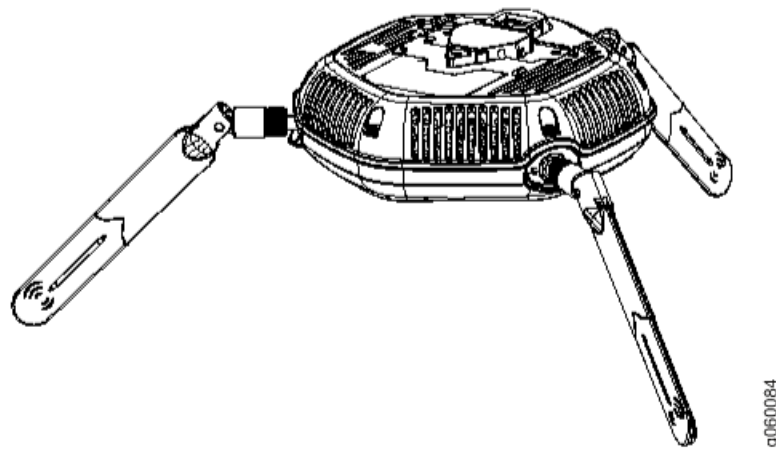
Figure 26: Aligning the Ceiling Mount Bracket with the Legacy Mounting Bracket Adapter



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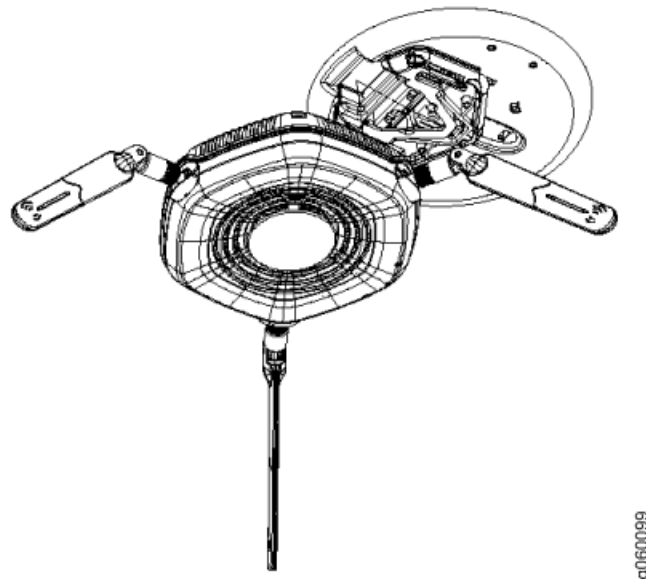
11. Grasp the Category 5e cable that extends from the ceiling and plug it into the access point.
12. Attach three supported external omnidirectional and paddle antennas to the external antenna ports of the access point. For antenna specifications and ordering information see the WLA Series Wireless LAN Access Points product information at <http://www.juniper.net/us/en/products-services/wireless/wla-series>.
13. Orient the antennas for the best antenna reception. See Figure 12 on page 53.

Figure 27: Orienting the Installed WLA532E Antennas



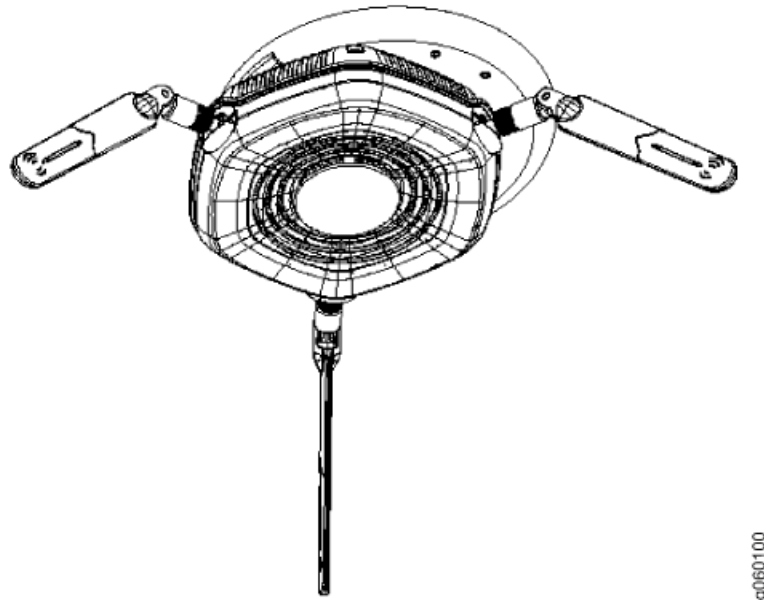
14. Align the access point with the ceiling-mount bracket. See [Figure 28 on page 62](#).

Figure 28: Aligning the Access Point with the Ceiling-Mount Bracket



15. Push up and forward until the access point locks into place. See [Figure 29 on page 63](#)

Figure 29: A WLA532 Installed on the Legacy Mounting Bracket Adapter



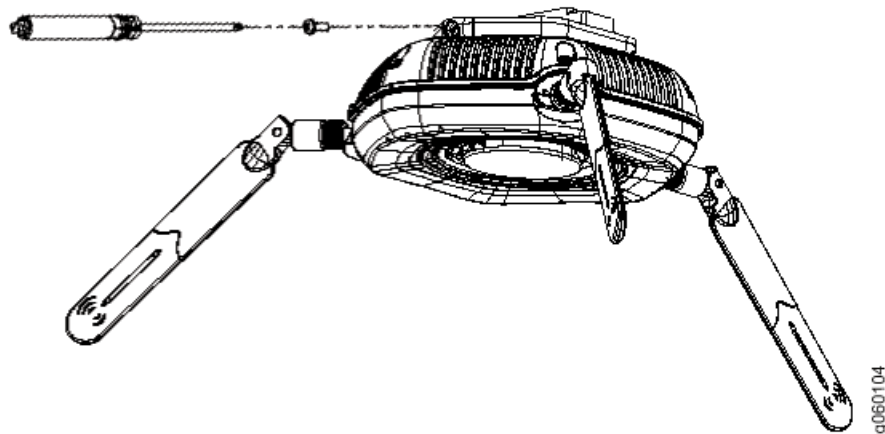
9060100



**NOTE:** We recommend that you use the optional security kit to secure the access point. The kit includes a security tool and a security screw. Be sure to retain the tool so you can unlock and move the access point. Never use a power tool to insert or remove the security screw.

16. (Optional) To lock the access point into place using the security kit, secure the security screw in the release button by using the tool provided with the security kit (see [Figure 30 on page 63](#)). Do not overtighten the screw.

Figure 30: Locking a WLA532E onto the Ceiling-Mount Bracket



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**Related Documentation**

- [Installing the WLA532E Access Point on a Ceiling Rail on page 46](#)
- [Installing the WLA532E Access Point Using the Plenum Bracket Kit on page 51](#)

- Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit on page 64
- Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit on page 70
- Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit on page 72

## Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit

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The primary method of installing the WLA Series Wireless LAN WLA532E access point is mounting it on the ceiling; however, you can also install the access point on the wall by using one of three separately orderable wall-mount kits that can be purchased at <https://www.juniper.net/customers/support/>.

This topic covers installation of the WLA532E access point on the WLA-BRKT-WALL kit:

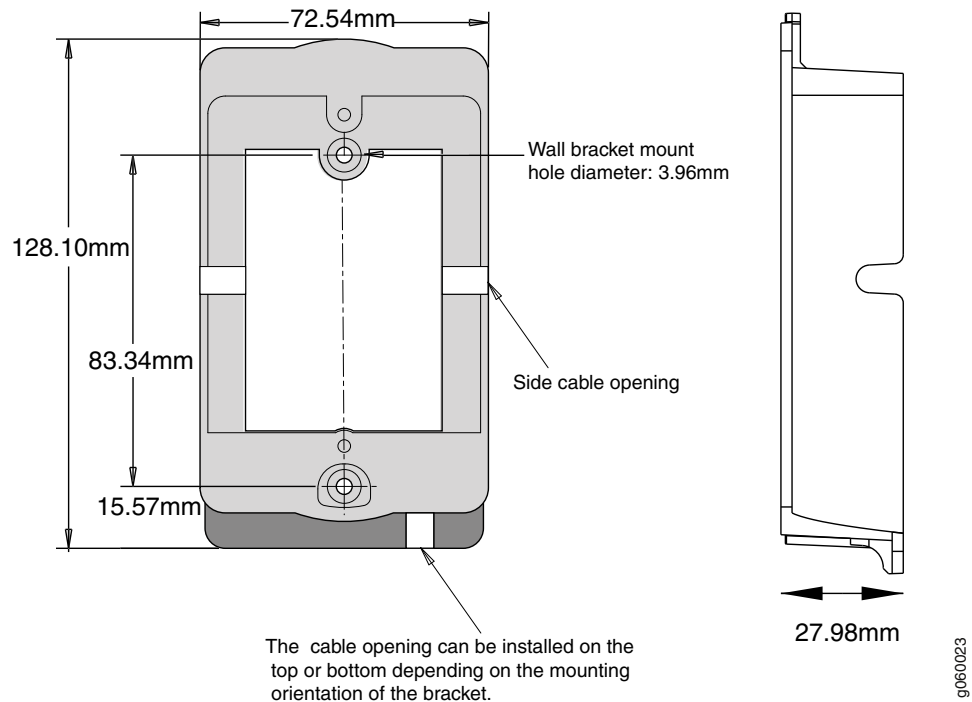
Ensure that you have the following parts and tools available to install the access point:

- Wall-mount bracket—provided in the WLA-BRKT-WALL kit)



**NOTE:** The wall-mount bracket extends the access point 1.5 inches from the wall to accommodate the Ethernet cable bend radius.

**Figure 31: Wall-Mount Bracket Dimensions—WLA-BRKT-WALL**

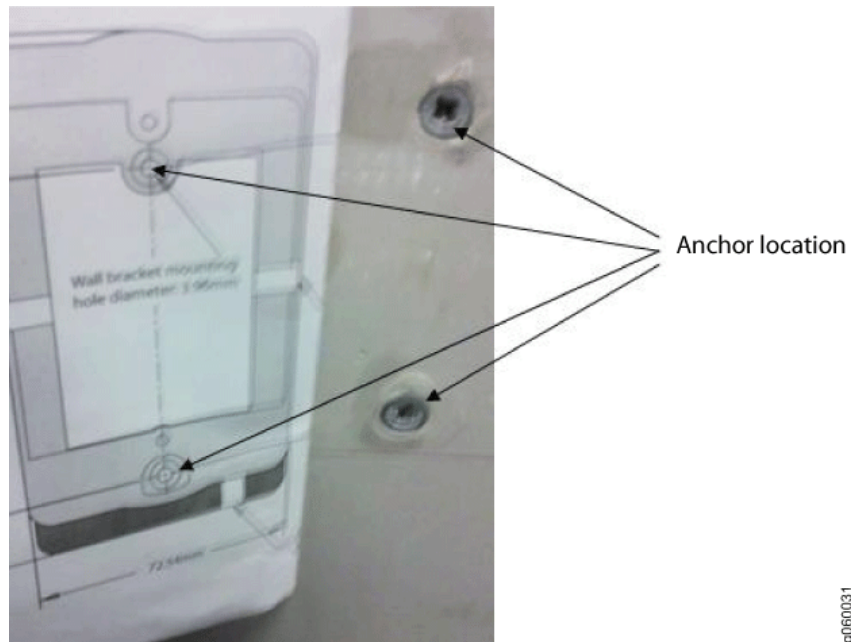


- Two flat-tip, flat-head screws—provided in the WLA-BRKT-WALL kit)
- Faceplate—provided in the WLA-BRKT-WALL kit)
- Flat-head screwdriver (not provided)
- Category 5 cable, installed (not provided)
- Two M3 or 6-32 wall anchors (not provided)
- Wall-mount template (part number 530-043682, provided in the WLA-BRKT-WALL kit)
- (Optional) Security kit, which includes a security tool and a security screw (The kit is not provided; you can order it separately at [https://www.juniper.net/customers/support/.](https://www.juniper.net/customers/support/))

To install the access point on the wall:

1. Use the provided WLA532E wall-mount template to determine your anchor mounting location (see [Figure 32 on page 66](#)) and install the wall anchors (not included in the WLA-BRKT-WALL kit).

**Figure 32: Use the Provided Template to Install Wall Anchors**



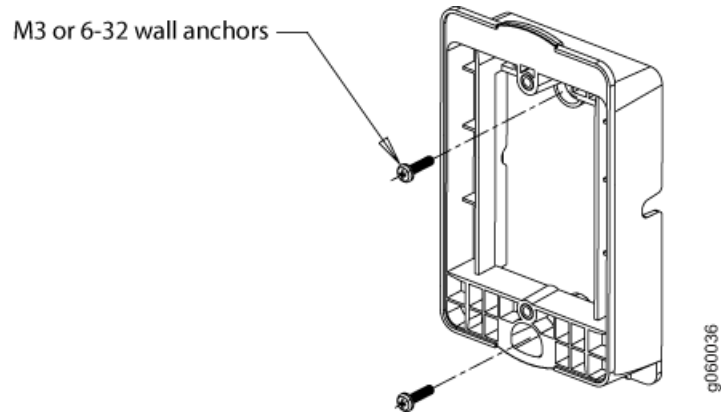
2. Hold the wall-mount bracket centered over the wall anchors and pull the installed Category 5 cable through the wall-mount bracket (see [Figure 33 on page 67](#)).

Figure 33: Pull the Category 5 Cable Through the Wall Bracket



3. Install the bracket to the anchors using M3 or 6-32 wall anchors (see [Figure 34 on page 67](#)).

Figure 34: Use M3 or 6-32 Wall Anchors to Secure the Bracket to Anchors



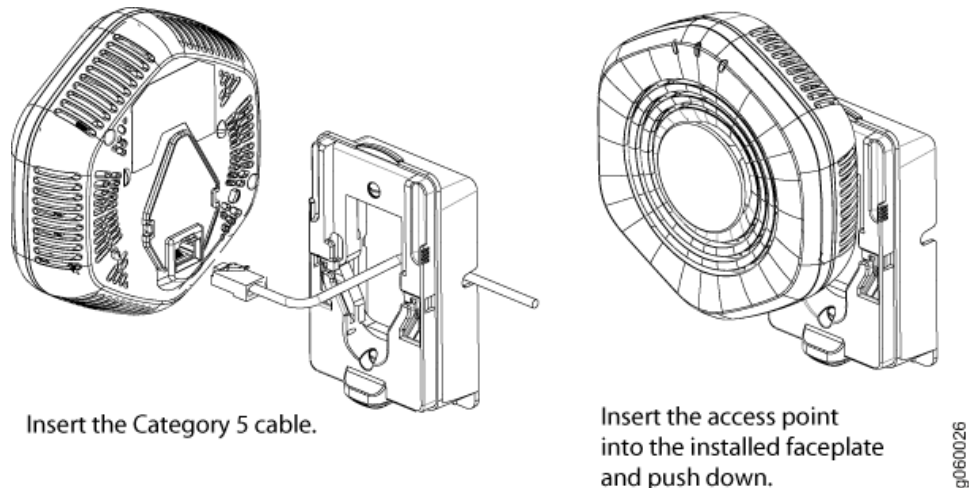
4. Align the faceplate with the installed wall-mount bracket and secure the faceplate using the two provided flat-tip screws and the screwdriver (see [Figure 35 on page 68](#)).

Figure 35: Faceplate Secured to the Wall-Mount Bracket



5. Plug the Category 5 cable from the wall socket into the access point.
6. Align the access point with the bracket and push down on the access point until you hear it click into place (see [Figure 36 on page 68](#)). Be sure the device is seated correctly in the bracket by gently pulling up the access point and then pushing it down.

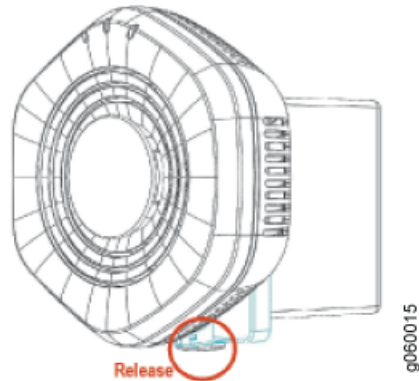
Figure 36: Align the Access Point with the Bracket and Push Down



7. If the access point is not properly secured, press the release button on the bottom of the bracket to release the device (see [Figure 37 on page 69](#)). Realign the unit, making sure the cable is still connected, and push down until the access point clicks securely into place.



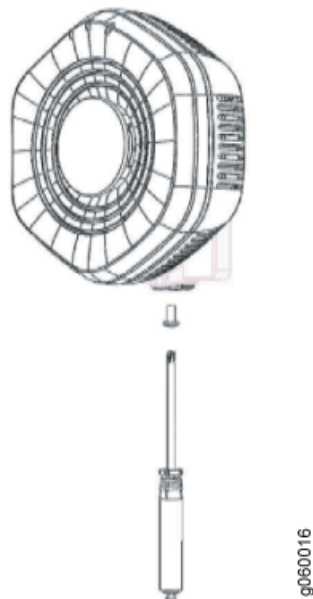
Figure 37: Release the Access Point



**NOTE:** We recommend that you use the optional security kit (separately orderable) to secure the access point. The kit includes a special tool and a security screw. Be sure that you retain the tool so that you can unlock and move the access point. Never use a power tool to insert or remove the security screw.

8. To lock the access point into place, secure the security screw in through the release button by using the tool provided with the security kit (see [Figure 38 on page 69](#)). Do not overtighten the screw.

Figure 38: Secure the Access Point with the Security Screw and Tool



**Related Documentation**

- [Installing the WLA532E Access Point on a Ceiling Rail on page 46](#)
- [Installing the WLA532E Access Point Using the Plenum Bracket Kit on page 51](#)

- Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit on page 70
- Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit on page 72
- Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit on page 57

## Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit

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The primary method of installing the WLA Series Wireless LAN WLA532E access point is mounting it on the ceiling; however, you can also install the access point on the wall by using one of three separately orderable wall-mount kits that can be purchased at <https://www.juniper.net/customers/support/>.

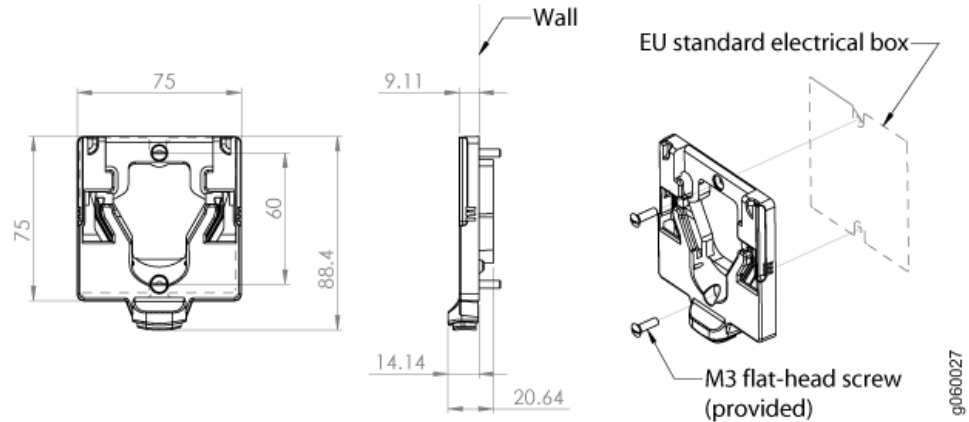
This topic covers installation of the WLA532E access point on the European Faceplate Standard Hardware WLA-GNGWLBX-ADP-EU Kit. The EU faceplate is meant to be installed directly onto an existing wall outlet box.

Ensure that you have the following parts and tools available to install the access point:

- European-standard faceplate – (provided in the WLA-BRKT-WALL kit)

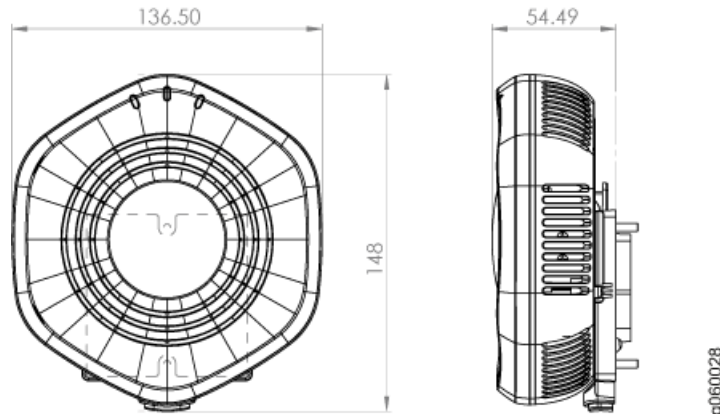
The EU faceplate included in the kit covers the wall box and cables and has a minimum extension plastic body that conforms to the EU faceplate standard (see [Figure 39 on page 71](#)).

**Figure 39: EU Faceplate Dimensions**



[Figure 39 on page 71](#) and [Figure 40 on page 71](#) show the dimensions of the installed WLA532 on the EU-standard faceplate in millimeters.

**Figure 40: Dimensions of the Installed WLA532 Access Point on an EU-Standard Faceplate**



- Two M3 flat-head, flat-tip, screws (provided in the WLA-GNGWLBX-ADP-EU kit)
- Flat-head screwdriver (not provided)
- Category 5 cable, installed (not provided)
- Two M3 or 6-32 wall anchors (not provided)
- Wall-mount template (part number 530-043682, provided in the WLA-BRKT-WALL kit)
- (Optional) Security kit, which includes a security tool and a security screw (The kit is not provided; you can order it separately at <https://www.juniper.net/customers/support/>.)

To install the access point on the wall:

1. Hold the faceplate centered over the existing European standard outlet box that has an installed Category 5 cable.
2. Secure the faceplate to the outlet box using the two provided M3 flat-head, flat-tip screws and a screwdriver.
3. Plug the Category 5 cable from the outlet box into the access point.
4. Align the access point with the installed faceplate and push down on the access point until you hear it click into place. Be sure the device is seated correctly in the bracket by gently pulling up the access point and then pushing it down.
5. If the access point is not properly secured, press the release button on the bottom of the bracket to release the device. Realign the unit, making sure the cable is still connected, and push down until the access point clicks securely into place.



**NOTE:** We recommend that you use the optional security kit (separately orderable) to secure the access point. The kit includes a special tool and a security screw. Be sure that you retain the tool so that you can unlock and move the access point. Never use a power tool to insert or remove the security screw.

6. To lock the access point into place, secure the security screw in through the release button by using the tool provided with the security kit (see [Figure 38 on page 69](#)). Do not overtighten the screw.

**Related  
Documentation**

- [Installing the WLA532E Access Point on a Ceiling Rail on page 46](#)
- [Installing the WLA532E Access Point Using the Plenum Bracket Kit on page 51](#)
- [Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit on page 64](#)
- [Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit on page 72](#)
- [Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit on page 57](#)

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## Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-NA Wall-Mount Kit

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The primary method of installing the WLA Series Wireless LAN WLA532E access point is mounting it on the ceiling; however, you can also install the access point on the wall by using one of three separately orderable wall-mount kits that can be purchased at <https://www.juniper.net/customers/support/>.

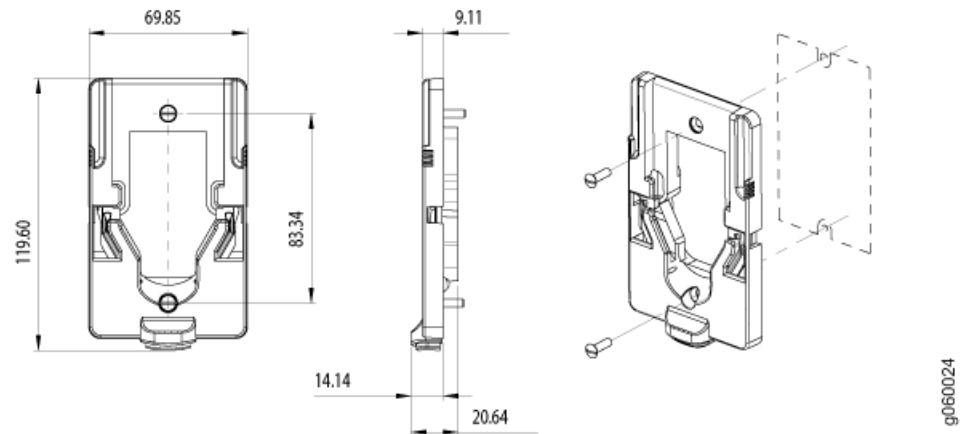
This topic covers installation of the WLA532E access point on the European Faceplate Standard Hardware WLA-GNGWLBX-ADP-NA kit. The faceplate is meant to be installed onto an existing wall outlet box.

Ensure that you have the following parts and tools available to install the access point:

- NA -standard faceplate – (provided in the WLA-GNGWLBX-ADP-NA kit)

The NA faceplate included in the kit covers the wall box and cables and has a minimum extension plastic body that is meant to conform to the NA faceplate standard (see [Figure 41 on page 73](#)).

**Figure 41: NA Wall-Mount Bracket Dimensions**

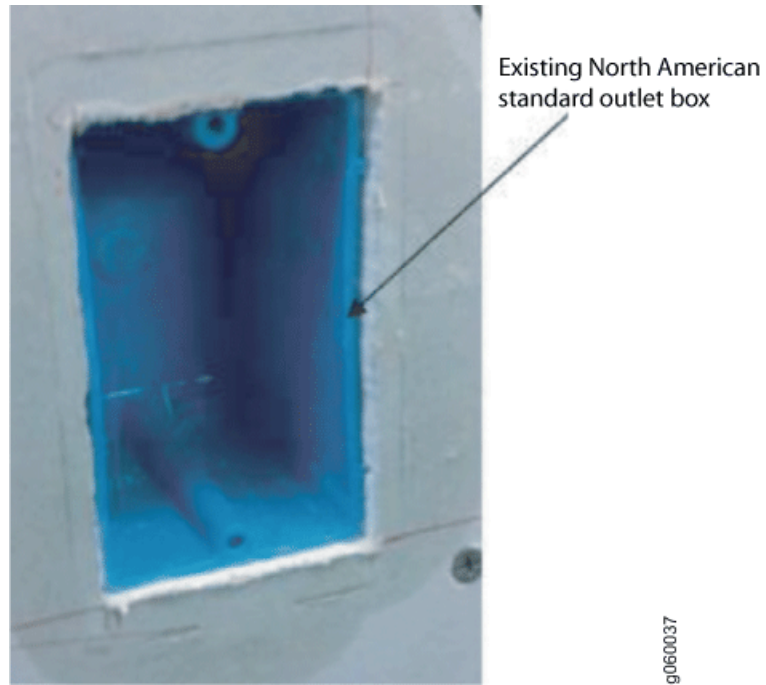


- Two 6-32 flat-head, flat-tip screws (provided in the WLA-GNGWLBX-ADP-NA kit)
- Flat-head screwdriver (not provided)
- Category 5 cable, installed (not provided)
- Two M3 or 6-32 wall anchors (not provided)
- Wall-mount template (part number 530-043682, provided in the WLA-BRKT-WALL kit)
- (Optional) Security kit, which includes a security tool and a security screw (The kit is not provided; you can order it separately at [https://www.juniper.net/customers/support/.](https://www.juniper.net/customers/support/))

To install the access point on the wall:

1. Hold the faceplate centered over an existing NA standard outlet box (see [Figure 42 on page 74](#)) that has an installed Category 5 cable.

**Figure 42: NA Standard Outlet Box**



2. Secure the faceplate to the outlet box using the two provided 6-32 flat-head, flat-tip screws and a screwdriver (see [Figure 43 on page 75](#)).

Figure 43: NA Faceplate Secured to the Outlet Box



3. Plug the Category 5 cable from the NA outlet box into the access point.
4. Align the access point with the installed faceplate and push down on the access point until you hear it click into place. Be sure the device is seated correctly in the bracket by gently pulling up the access point and then pushing it down.
5. If the access point is not properly secured, press the release button on the bottom of the bracket to release the device. Realign the unit, making sure the cable is still connected, and push down until the access point clicks securely into place.



**NOTE:** We recommend that you use the optional security kit (separately orderable) to secure the access point. The kit includes a special tool and a security screw. Be sure that you retain the tool so that you can unlock and move the access point. Never use a power tool to insert or remove the security screw.

6. To lock the access point into place, secure the security screw in through the release button by using the tool provided with the security kit (see [Figure 38 on page 69](#)). Do not overtighten the screw.

**Related Documentation**

- [Installing the WLA532E Access Point on a Ceiling Rail on page 46](#)
- [Installing the WLA532E Access Point Using the Plenum Bracket Kit on page 51](#)

- [Installing the WLA532E Access Point on the Wall Using the WLA-BRKT-WALL Wall-Mount Kit on page 64](#)
- [Installing the WLA532E Access Point on the Wall Using the WLA-GNGWLBX-ADP-EU Wall-Mount Kit on page 70](#)
- [Installing the WLA532E Access Point on a Ceiling Rail Using the Trapeze Legacy Mounting Bracket Adapter Kit on page 57](#)

## Connecting the Access Point to Wireless LAN Controllers

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After you install the wireless LAN access point, you can connect it to a wireless LAN controller (WLC) directly or indirectly through an intermediate Layer 2 or Layer 3 network.

To connect the access point directly to a controller or switch:

1. Insert one end of the installed Category 5 cable with a standard RJ-45 connector in the Ethernet port of the access point and the other end in Ethernet port of the controller.
2. Look at the access point STAT LED for the port on the controller and verify that the link is activated.

The link is activated if the STAT LED is green and glowing steadily.

To configure the access point connection, use the RingMaster GUI or the Mobility System Software CLI.

If you are installing the access point in a wireless LAN mesh or wireless bridge configuration, you must configure the access point before deploying the access point in the final location. For more information, see the *Mobility System Software Configuration Guide* from the Software Documentation section at [Wireless LAN Services \(WLS\) documentation](#).

### Related Documentation

- [Status LEDs on a WLA532E Access Point on page 8](#)



## CHAPTER 8

# Verifying the Health of the Access Point

- [Verifying the Health of WLA Series Access Points Using LEDs on page 77](#)

## Verifying the Health of WLA Series Access Points Using LEDs

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After you install the WLA Series access point and enable the Power over Ethernet (PoE) on the Ethernet cable connected to the access point, you can verify the access point status by observing the health LED. The health or STAT LED indicates whether the access point is operational.

- If the LED is green and glowing steadily, the access point has been successfully booted by the wireless LAN controller (WLC) and is operational.
- If the LED is not steadily glowing green and is either yellow or alternating between yellow and green, contact the system administrator for the WLC.

### **Related Documentation**

- [Status LEDs on a WLA532E Access Point on page 8](#)



## CHAPTER 9

# Customer Support

- [Contacting JTAC Regarding Access Point Parts on page 79](#)

### Contacting JTAC Regarding Access Point Parts

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If you receive your access point installation kit with any incorrect or damaged parts or if parts are missing from the kit, contact Juniper Networks JTAC. You can contact JTAC 24 hours a day, seven days a week on the Web or by telephone:

- Case Manager at CSC: <http://www.juniper.net/cm/>
- Telephone: +1-888-314-JTAC1-888-314-5822, toll free in U.S., Canada, and Mexico

If possible, retain the carton, including the original packing materials. Use them to repack the product if you need to return it. Refer to the following checklist to ensure you have received a complete installation kit.

The general access point installation kit includes:

- One access point
- One ceiling-mount bracket (WLA-BRKT-CLNG)
- Mounting template
- Ceiling rail adapter
- *Access Point Quick Start Guide*



**NOTE:** You can order other mounting kit separately. See <http://www.juniper.net/us/en/products-services/wireless/wla-series/>.

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#### Related Documentation

- [Installing the WLA532 Access Point on a Suspended Ceiling Rail](#)
- [Installing the WLA532 Access Point on the Wall Using Hardware Kits](#)

