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May 2005

4655 Great America Parkway  
Santa Clara, CA 95054

# **Nortel WLAN—Access Point 2330 Quick Installation Guide**



**NORTEL**

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## Regulatory Compliance Statements for WLAN Access Point 2330

### Federal Communications Commission (FCC) Compliance Notices

This section includes the following FCC statements for the WLAN Access Point 2330:

- [Class B Interference Statement](#)
- [RF Radiation Exposure & Hazard Warning](#)
- [Non-Modification Statement](#)
- [Deployment Statement](#)

### Class B Interference Statement

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

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

### FCC Caution:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### RF Radiation Exposure & Hazard Statement

To ensure compliance with FCC RF exposure requirements, this device must be installed in a location such that the antenna of the device will be greater than 20 cm (8 in.) from all persons. Using higher gain antennas and types of antennas not covered under the FCC certification of this product is not allowed. Installers of the radio and end users of the product must adhere to the installation instructions provided in this manual.

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

### Non-Modification Statement

Use only the supplied internal antenna, or external antennas supplied by the manufacturer. Unauthorized antennas, modifications, or attachments could damage the WLAN Access Point 2330 and violate FCC regulations. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

## Deployment Statement

This product is certified for indoor deployment only. Do not install or use this product outdoors.

## Canadian IC Statement

Operation is subject to the following two conditions in Canada:

- 1) this device may not cause interference, and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device

To prevent radio interference to the licensed service (i.e. co-channel Mobile Satellite systems) this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Because high power radars are allocated as primary users (meaning they have priority) in the 5250-5350 MHz band, these radars could cause interference and/or damage to license exempt WLAN devices.

## European Community Compliance

### Declaration of Conformity

Marking by this symbol



indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment meets the following conformance standards:

EN300 328 V1.4.1 (2003-04), EN301 893 V1.2.3 (2003-08), EN301 489-17 V1.2.1 (2002-08), EN60950

### European Community Declaration of Conformity

<b>English</b>	Hereby, Nortel Networks, declares that this Radio LAN device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
<b>Finnish</b>	<i>Valmistaja</i> Nortel Networks vakuuttaa täten että Radio LAN device tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
<b>Dutch</b>	Hierbij verklaart Nortel Networks dat het toestel Radio LAN device in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG Bij deze verklaart Nortel Networks dat deze Radio LAN device voldoet aan de essentiële eisen en aan de overige relevante bepalingen van Richtlijn 1999/5/EC.
<b>French</b>	Par la présente Nortel Networks déclare que l'appareil Radio LAN device est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE Par la présente, Nortel Networks déclare que ce Radio LAN device est conforme aux exigences essentielles et aux autres dispositions de la directive 1999/5/CE qui lui sont applicables
<b>Swedish</b>	Härmed intygar Nortel Networks att denna Radio LAN device står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
<b>Danish</b>	Undertegnede Nortel Networks erklærer herved, at følgende udstyr Radio LAN device overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF

<b>German</b>	Hiermit erklärt Nortel Networks, dass sich <i>dieser/diese/dieses</i> Radio LAN device in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet". (BMWi)  Hiermit erklärt Nortel Networks die Übereinstimmung des Gerätes Radio LAN device mit den grundlegenden Anforderungen und den anderen relevanten Festlegungen der Richtlinie 1999/5/EG. (Wien)
<b>Greek</b>	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Nortel Networks ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN device ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ
<b>Italian</b>	Con la presente Nortel Networks dichiara che questo Radio LAN device è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
<b>Spanish</b>	Por medio de la presente Nortel Networks declara que el Radio LAN device cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/ 5/CE
<b>Portuguese</b>	Nortel Networks declara que este Radio LAN device está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

## Countries of Operation & Conditions of Use in the European Community

The professional installer should use the configuration utility provided with this product to check the current channel of operation and confirm that the device is operating in conformance with the spectrum usage rules for European Community countries. **If operation is occurring outside of the allowable channels as indicated in the Regulatory Conformance Guide, then operation of the product must cease immediately** and the installer must consult with the local technical support staff responsible for the wireless network.

This device is intended to be operated in all countries of the European Community. Requirements for indoor versus outdoor operation, license requirements and allowed channels of operation apply as described below.

- This device is restricted to **indoor** use when operated in the European Community using the 5.15-5.35 GHz band, including Channels 36, 40, 44, 48, 52, 56, 60 & 64. Consult the Regulatory Conformance Guide for allowed 5 GHz channels by country.
- This device may be operated **indoors or outdoors** in all countries of the European Community using the 2.4 GHz band, including Channels 1 - 13, except where noted below.
- **In Italy** the end-user must apply for a license from the national spectrum authority to operate this device outdoors.
- **In Belgium** outdoor operation is only permitted using the 2.46 - 2.4835 GHz band: Channel 13 and a license is required for outdoor operation over 300 meters.
- **In France** outdoor operation is only permitted using the 2.4 - 2.454 GHz band: Channels 1 - 7.
- The **5GHz Turbo Mode** feature is not allowed for operation in any European Community country.

## Operation Using 5 GHz Channels in the European Community

To remain in conformance with European National spectrum usage laws, please consult the Regulatory Conformance Guide for the channel limitations associated with the 5 GHz bands. The professional installer should verify the current channel of operation of the WLAN Access Point 2330 and compare it to the allowable channels of operation in the geographic region where the unit is being installed. If operation is occurring outside of the allowable frequencies as listed in the guide, then operation of the product must cease immediately and the installer must consult with the local technical support staff responsible for the wireless network.

## Dynamic Frequency Selection (DFS)

This device implements a DFS feature in accordance with the limits in EN 301 893 Version 1.2.3, Section 4.6 and Annex D, Tables D.1, D.2 & D.4 for a device operating in the mode defined as “Master”. Section 4.6, Tables 6 and 7 of this document define the requirements prior to using a channel and during normal operation for a Master device (i.e., Interference Detection Threshold, Channel Availability Check Time, Uniform Spreading, Channel Closing Transmission Time and Channel Move Time). This product qualifies for this category since the maximum achievable transmit power is greater than 23 dBm per the requirements of Table D.2 in Annex D of the standard.

## External Antenna Statement

Intentional radiators, such as the Nortel Networks WLAN Access Point 2330 are not intended to be operated with any antenna(s) other than those furnished by Nortel Networks. An intentional radiator may only be operated with the antenna(s) with which it is authorized. For a complete listing of the authorized antennas for use with this product, visit <http://www.nortel.com/support>.

In order to ensure continued compliance, use of an antenna not on the Nortel approved antenna list is not allowed without specific authorization from Nortel Networks. For additional questions or inquiries regarding specific antennas, contact Nortel at 1-800-4NORTEL, and use express routing code (ERC) 1572.

Use of an antenna not specifically authorized by Nortel Networks may not comply with local regulatory requirements with respect to radiated emission limits and may result in illegal operation of the product. The installer of the wireless system and associated antenna is required to ensure that only those antennas on the Nortel approved antenna list or those antennas specifically approved by Nortel on a case by case basis are deployed with the intentional radiator.

Be sure to associate the appropriate antenna model number and localized regulatory region when selecting the Nortel Networks authorized antenna(s).



# Contacting Nortel Technical Support

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller for assistance.

Additional information about the Nortel Technical Solutions Centers is available from the [www.nortel.com/contactus](http://www.nortel.com/contactus) URL.

An Express Routing Code (ERC) is available for many Nortel products and services. When you use an ERC, your call is routed to a technical support person who specializes in supporting that product or service. To locate an ERC for your product or service, go to the [www.nortel.com/erc](http://www.nortel.com/erc) URL.

If you purchased a Nortel service program, contact one of the following Nortel Technical Solutions Centers:

Technical Solutions Center	Telephone
Europe, Middle East, and Africa	00800 8008 9009 or +44 (0) 870 907 9009
North America	(800) 4NORTEL or (800) 466-7835
Asia Pacific	(61) (2) 9927-8800
China	(800) 810-5000

## RMA Procedures

Please have the following available when making a call:

- Company and Contact information
- Equipment model number(s)
- WLAN Security Switch software revision level (4.0.x.x)
- WLAN Management Software revision level (4.0.x.x)
- Symptom(s)
- Network configuration

You can find Nortel Technical Support information at [www.nortel.com/support](http://www.nortel.com/support).

# WLAN—Access Point 2330

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This document provides basic indoor hardware installation instructions for AP access point model 2330. For more information about AP installation as well as safety and installation requirements, see the following:

- *Nortel WLAN—Access Point 2330 Installation Guide. Part # 320661-A*
- *Nortel WLAN Access Point 2330—Regulatory Conformance Guide Part # 320660-A*

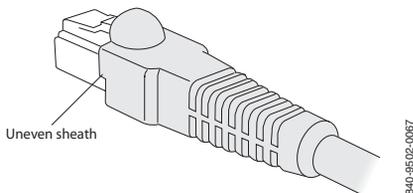


**Caution!** When mounting the WLAN Access Point 2330, this device must be installed in a location such that the device will be greater than 20 cm (8 in.) from all persons to ensure compliance with regulatory RF exposure requirements. Using higher gain antennas and types of antennas not covered under the FCC certification of this product is not allowed.

## Cable Requirement

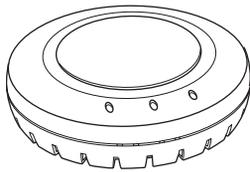
The Ethernet ports on the 2330 access point cannot accept a Cat 5 cable that has an uneven sheath such as the one shown in Figure 1. The RJ-45 connector on the cable will not seat properly in the receptacle on the 2330 access point. Use a Cat 5 cable with an even sheath instead.

**Figure 1. Do Not Use a Cat 5 Cable with an Uneven Sheath**

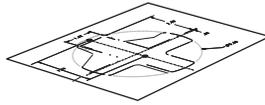


# Suspended Ceiling Installation—Flush Ceiling Tiles

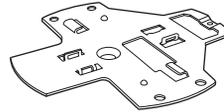
This procedure applies to T-bars that are 23.9 mm (15/16 inches) wide. For a 14.2-mm (9/16-inch) or 15.9-mm (5/8-inch) T-bar, go to “Suspended Ceiling Installation—Drop Ceiling Tiles” on page 11.



Access point



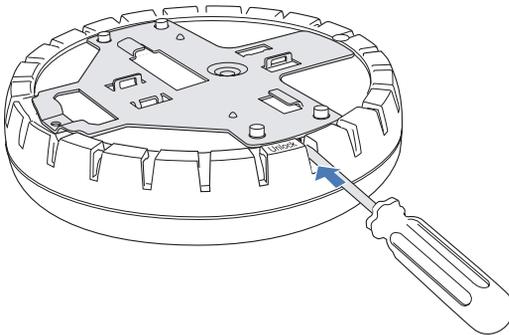
Mounting template



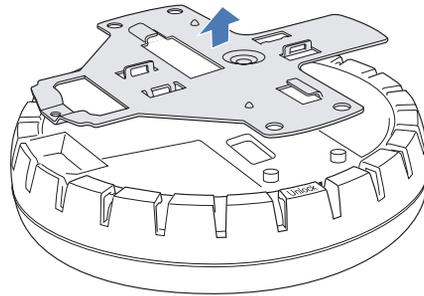
Mounting bracket

840-9502-0089

- 1 Use the mounting template to cut a hole for the Cat 5 cable.
- 2 Remove the mounting bracket from the 2330 access point.

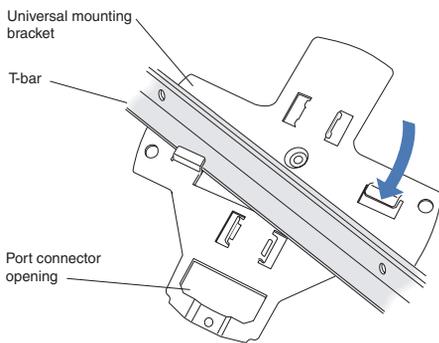


840-9502-0011



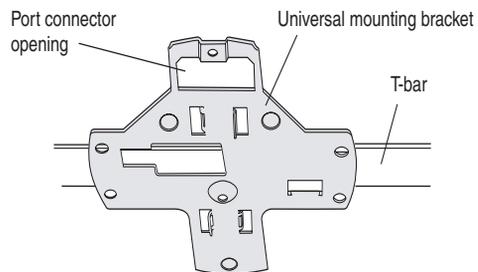
840-9502-0008

- 3 Attach the mounting bracket to the T-bar clamp.



(Viewed from above ceiling tiles, looking down.)

840-9502-0005

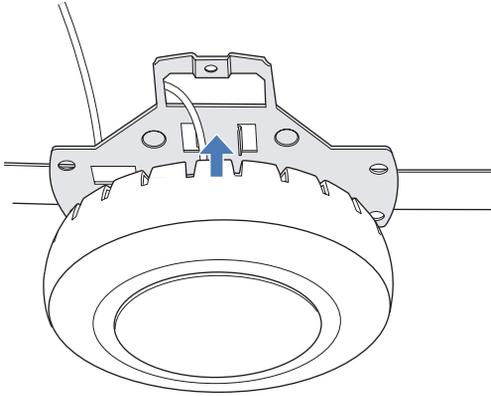


840-9502-0004

## 10 Suspended Ceiling Installation—Flush Ceiling Tiles

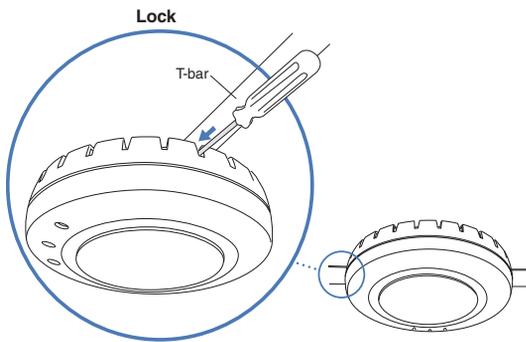
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- 4** Insert the Cat 5 cable through the point connector opening in the mounting bracket, then plug the cable into the 2330.



840-9502-0002

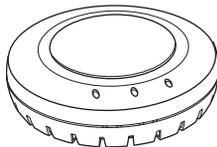
- 5** Attach the 2330 to the mounting bracket.



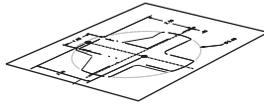
840-9502-0006

# Suspended Ceiling Installation—Drop Ceiling Tiles

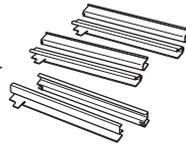
This procedure applies to T-bars that are 23.9 mm (15/16 inches), 14.2-mm (9/16-inches), or 15.9-mm (5/8-inches) wide. You also can use this procedure for flush ceilings with 14.2-mm (9/16-inch) or 15.9-mm (5/8-inch) T-bars.



Access  
point



Mounting  
template



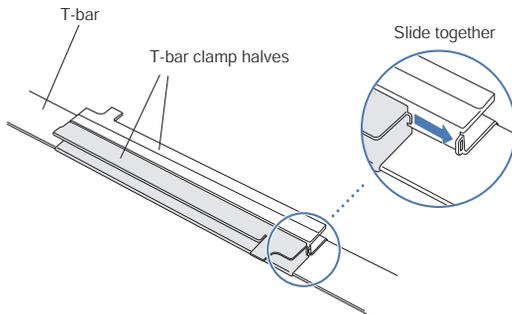
T-bar clamps  
(use set that fits T-bar)



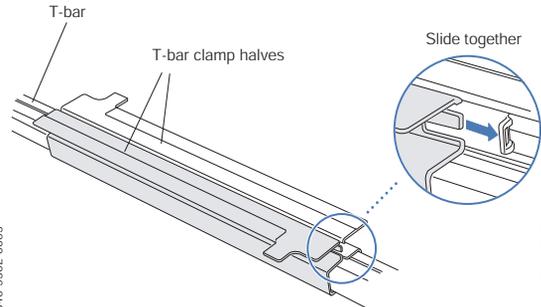
Mounting  
bracket

840-9502-0088

- 1** Use the mounting template to cut a hole for the Cat 5 cable.
- 2** Install the T-bar clamp that fits the T-bar.



840-9502-0003

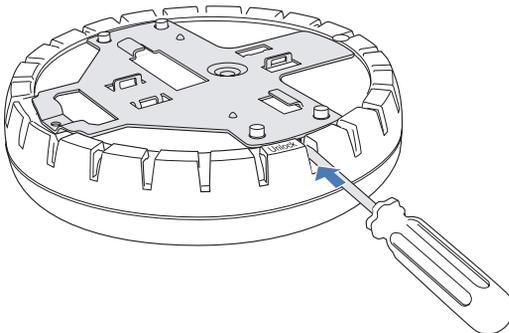


840-9502-0066

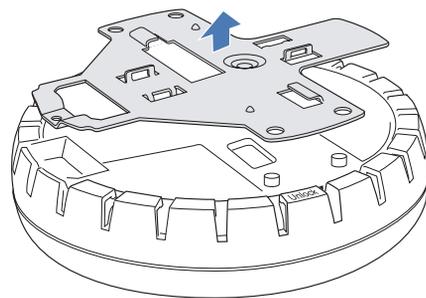
23.9-mm (15/16-inch) or 14.2-mm (9/16-inch) T-bar  
(The clamps are different widths but the assembly is the same.)

15.9-mm (5/8-inch) T-bar

- 3** Remove the mounting bracket from the 2330 access point.



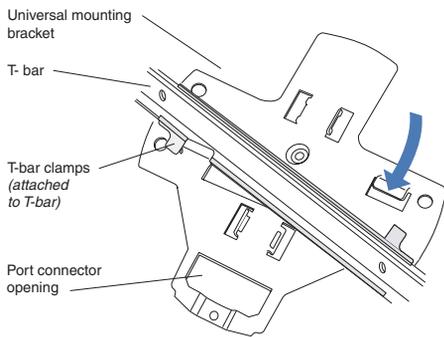
840-9502-0011



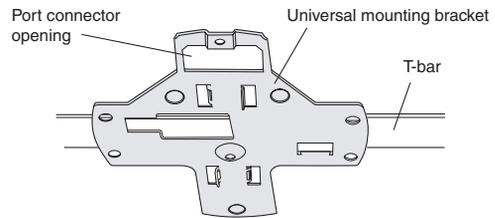
840-9502-0008

## 12 Suspended Ceiling Installation—Drop Ceiling Tiles

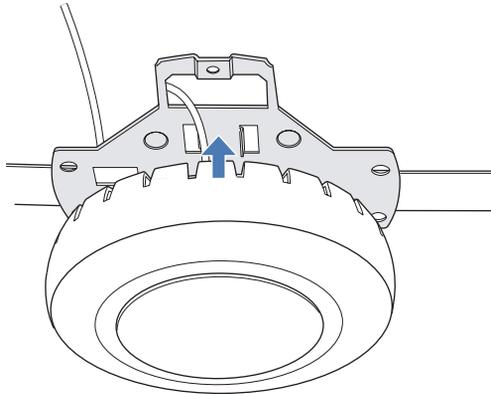
- 4** Attach the mounting bracket to the T-bar clamp.



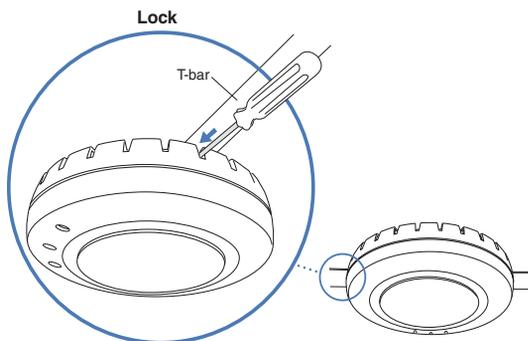
(Viewed from above ceiling tiles, looking down.)



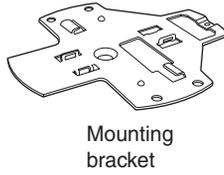
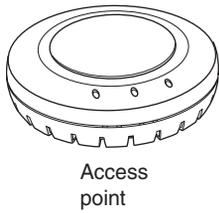
- 5** Insert the Cat 5 cable through the port connector opening in the mounting bracket, then plug the cable into the 2330.



- 6** Attach the 2330 to the mounting bracket.

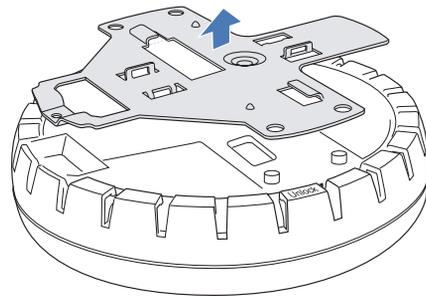
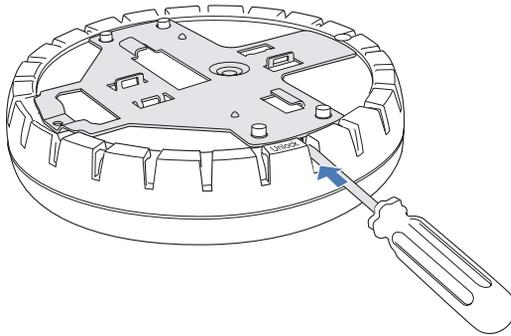


# Junction Box Installation

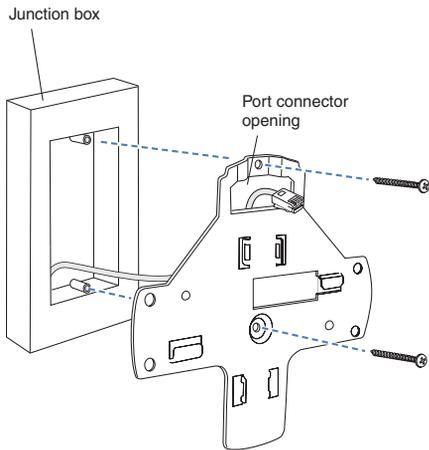


840-9502-0090

- 1 Remove the mounting bracket from the 2330 .



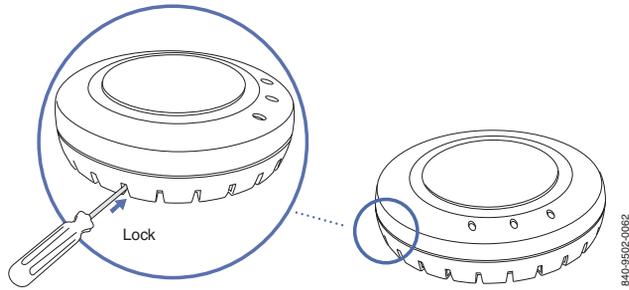
- 2 Attach the bracket to the junction box.



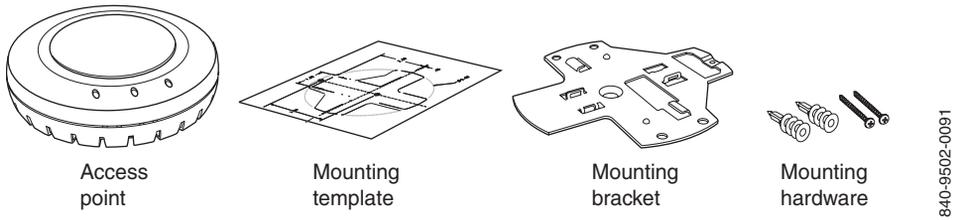
## 14 Junction Box Installation

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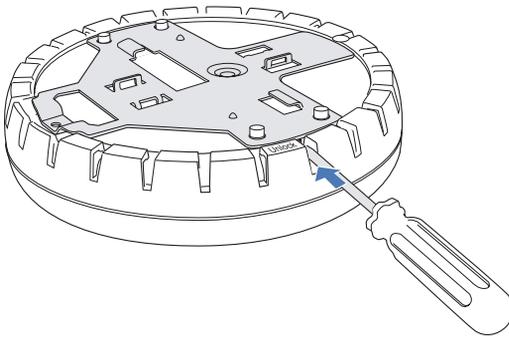
- 3** Plug the Cat 5 cable into the 2330 access point and attach the 2330 to the mounting bracket.



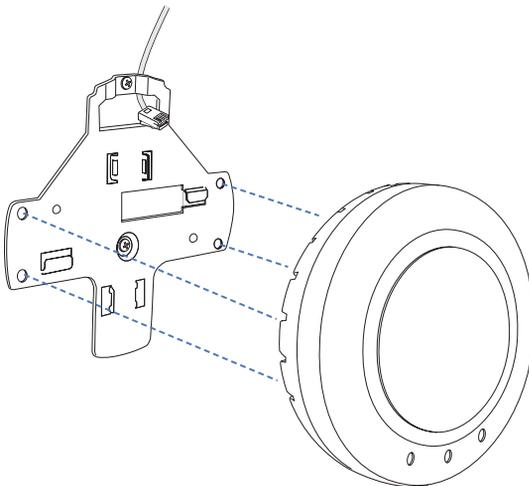
# Solid Wall or Ceiling Installation



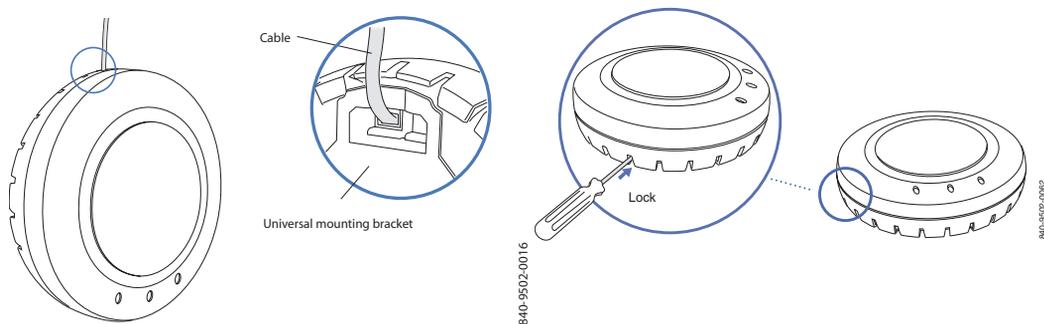
- 1 Use the mounting template to cut a hole for the Cat 5 cable.
- 2 Remove the mounting bracket from the 2330 .



- 3 Attach the bracket to the wall or ceiling.



- 4 Plug the Cat 5 cable into the 2330 access point and attach the 2330 to the mounting bracket.



## Configuring the AP

To configure the channels, power settings, and other 2330 parameters, see the following:

- *Nortel WLAN—Security Switch 2300 Series Quick Installation Guide*
- “Configuring a WSS for Basic Service” chapter in the *Nortel WLAN—Security Switch 2300 Series Installation and Basic Configuration Guide*
- “Configuring the AP Access Points” chapter in the *Nortel WLAN—Security Switch 2300 Series Configuration Guide*
- *Nortel WLAN Access Point 2330—Regulatory Conformance Guide*