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Airespace Access Point (AP) Installation Guide

Airespace System 1.1: Last Updated April 21, 2003

Airespace, Inc. 110 Nortech Parkway San Jose, CA 95134 1-866-546-2100 1-408-635-2000 www.airespace.com



Trademarks and Service Marks

Airespace[™] and Airespace AP[™] are trademarks of Airespace, Inc. All other trademarks, service marks, and product names used in this document are the property of their respective owners.

FCC Statements for Airespace AP

Class A Statement

This equipment has been tested and found to comply with the limits for a Class A 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 a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

RF Radiation Hazard Warning

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 20cm (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 system must adhere to the installation instructions provided in this manual.

Non-Modification Statement

Use only the supplied internal antenna, or external antennas supplied by the manufacturer. Unauthorized antennas, modifications, or attachments could damage the badge and could violate FCC regulations and void the user's authority to operate the equipment.

Note: No 802.11a external antennas are currently certified or available in this release. Contact Airespace, Inc. for a list of FCC-approved 802.11b external antennas.

Deployment Statement

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

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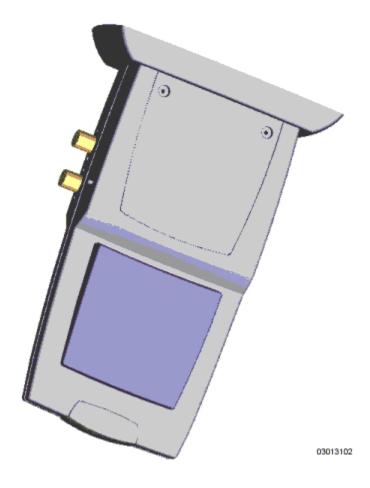
About this Guide

The Airespace Access Point (AP) Installation Guide allows installation planners, network administrators, and installers to work together to install Airespace APs in a target environment. Refer to the following sections for more information about the Airespace AP.

About the Airespace Access Point

The Airespace AP is a part of the innovative Airespace Wireless Enterprise Platform (Airespace System). When associated with an Airespace Wireless Switch as described below, the Airespace AP provides advanced 802.11a and/or 802.11b AP functions in a single aesthetically pleasing enclosure. The following figure shows the Airespace Switch with its ceiling-mount base.

Figure - Airespace AP with Ceiling Mount Base

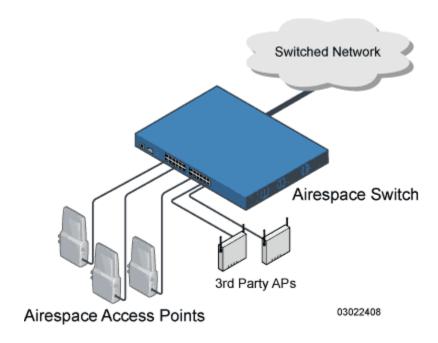




Note that the Airespace AP is manufactured in a neutral color so it blends into most environments (but can be painted), contains pairs of high-gain internal antennas for unidirectional (180-degree) or omnidirectional (360-degree) coverage (<u>Airespace AP External and Internal Antennas</u>), and is plenum-rated for installations in hanging ceiling spaces.

In the Airespace System, most of the processing responsibility is removed from traditional SOHO (small office, home office) APs and resides in the Airespace Switch. The following figure shows Airespace APs and Third Party Access Points connected directly to the Airespace Wireless Switch front panel.





Refer to the following for more information on Airespace APs:

- <u>Airespace AP Models</u>
- Airespace AP 802.11a Radio Cards
- Airespace AP External and Internal Antennas
- Airespace AP LEDs
- Airespace AP Connectors
- <u>Airespace AP Power Requirements</u>
 - Airespace AP External Power Converter
 - Power Over Ethernet



- Airespace AP Mounting Options
- Airespace AP Physical Security
- Airespace Access Point Quick Installation Guide

About Airespace AP Models

The Airespace AP includes one 802.11a radio (AS-1200-A), one 802.11b radio (AS-1200-B), or one 802.11a and one 802.11b radio (AS-1200-AB). As an added feature, the AS-1200-B Airespace AP can be updated by the customer with an 802.11a radio, allowing for current 802.11b coverage and future 802.11a coverage by the same Airespace AP.

The Airespace AP is available in the following configurations:

- AS-1200-A Airespace AP with one 802.11a radio and two high-gain internal antennas
- <u>AS-1200-B</u> Airespace AP with one 802.11b radio and four high-gain internal antennas; can be upgraded to an AS-1200-AB by adding an 802.11a Radio Card
- AS-1200-AB Airespace AP with one 802.11a and one 802.11b radio and four high-gain internal antennas

The following upgrade card is available:

• <u>AS-AP-RC-A</u> - 802.11a Radio Card: Certified professionals can add this card to an AS-1200-B to create an AS-1200-AB Airespace AP

Refer to <u>Airespace AP 802.11a Radio Cards</u> for information on the field-installable radio that adds 802.11a capability to an existing 802.11b Airespace AP.

The Airespace AP is shipped with a color-coordinated ceiling mount base, and projection and flush wall mount brackets. These brackets and base allow quick mounting to ceiling or wall.

The Airespace can be powered by Power Over Ethernet or by an <u>Airespace AP</u> <u>External Power Converter</u>. The two power converter models are:

- <u>AS-AP-PWR110</u> External 110 VAC-to-48 VDC Power Converter for any Airespace AP.
- AS-AP-PWR220 External 220 VAC-to-48 VDC Power Converter for any Airespace AP.



About Airespace AP 802.11a Radio Cards

The AS-1200-B (802.11b) Airespace AP can be upgraded to an AS-1200-AB (802.11a and 802.11b) Airespace AP by adding a professionally-installed 802.11a radio card.

The 802.11a radio supports diversity between the internal antennas and an optional factory-supplied external antenna.

Refer to the Airespace AP 802.11a Radio Card Quick Installation Guide for professional installer instructions.

Note: No 802.11a external antennas are currently certified or available in this release. Contact Airespace, Inc. for a list of FCC-approved 802.11b external antennas.



About Airespace AP External and Internal Antennas

The AS-1200-A Airespace AP enclosure contains one 802.11a radio which drives two fully-enclosed high-gain antennas which provide a large 360-degree coverage area. When equipped with an optional factory-supplied external antenna, the 802.11a radio supports receive and transmit diversity between the internal antenna and the external antenna.

The diversity function provided by Airespace radios can result in lower multipath fading, fewer packet retransmissions, and higher client throughput.

Note: The Airespace APs must use the factory-supplied internal or external antennas to avoid violating FCC requirements and voiding the user's authority to operate the equipment. Refer to <u>FCC Statements</u> for Airespace AP for detailed FCC information.

The AS-1200-AB Airespace AP enclosure contains one 802.11a and one 802.11b radio and four fully-enclosed high-gain antennas which provide large 360-degree 802.11a and 802.11b coverage areas. Note that the 802.11b radio supports receive and transmit diversity between the internal antennas, while the 802.11a radio supports diversity between the internal antennas and an optional factory-supplied external antenna.

The AS-1200-B Airespace AP enclosure contains one 802.11b radio and a slot for an 802.11a radio card, and four high-gain antennas, which provide large 360-degree 802.11b (and future 802.11a) coverage areas. The 802.11b radio supports receive and transmit diversity between the internal antennas. Note that the 802.11a radio supports diversity between the internal antennas and an optional factory-supplied external antenna.

The Airespace APs have reverse-polarity TNC jacks for installations requiring factory-supplied external directional or high-gain antennas. The external antenna option can create more flexibility in Airespace AP and antenna placement.

Note that the Airespace System supports Antenna Sectorization, which can be used to increase the number of clients and/or client throughput in a given air space. Installers can mount two Airespace APs back-to-back and the Airespace Switch operator can disable the second antenna in both Airespace APs to create a 360-degree coverage area with two sectors.



About Airespace AP LEDs

Each Airespace AP is equipped with four LEDs across the top of the case. They can be viewed from nearly any angle. The LEDs indicate power and fault status, 2.4 GHz (802.11b) radio activity, and 5 GHz (802.11a) radio activity.

This LED display allows the wireless LAN manager to quickly monitor the Airespace AP status. For more detailed troubleshooting instructions, refer to the Troubleshooting the Airespace AP section (to be determined).

About Airespace AP Connectors

The Airespace AP has the following external connectors:

- One RJ-45 Ethernet jack, used for connecting the Airespace AP to the Airespace Switch or to the switched network.
- One 48 VDC power input jack, used to plug in an optional factory-supplied external power adapter.
- Three reverse-polarity TNC antenna jacks, used to plug optional external antennas into the Airespace AP: two for an 802.11b radio, and one for an 802.11a radio.

Figure - Airespace AP External Connectors



A. 2.4 GHz/802.11b Left External Antenna, Power, and Ethernet



B. 5 GHz/802.11a and 2.4 GHz/802.11b Right External Antennas



The Airespace AP communicates with an Airespace Switch using standard CAT-5 (Category 5) or higher 10/100 Mbps twisted pair cable with RJ-45 connectors. Plug the CAT-5 cable into the RJ-45 jack on the side of the Airespace AP.

Note that the Airespace AP can receive power over the CAT-5 cable from the Airespace Switch or switched network equipment. Refer to <u>Power Over</u> <u>Ethernet</u> for more information about this option.

The Airespace AP can be powered from an optional factory-supplied external AC-to-48 VDC power adapter. If you are powering the Airespace AP using an external adapter, plug the adapter into the 48 VDC power jack on the side of the Airespace AP.

The Airespace AP includes two 802.11a and two 802.11b high-gain internal antennas, which provide omnidirectional coverage. However, the Airespace AP can also use optional factory-supplied external high-gain and/or directional antennas, as described in <u>Airespace AP External and Internal Antennas</u>. When you are using external antennas, plug them into the reverse-polarity TNC jacks on the side of the Airespace AP as described in the <u>Airespace Access Point Quick Installation Guide</u>.

Note: The Airespace APs must use the factory-supplied internal or external antennas to avoid violating FCC regulations and voiding the user's authority to operate the equipment, as described in FCC State-ments for Airespace AP.

About Airespace AP Power Requirements

The Airespace AP requires a 48 VDC nominal (between 38 and 57 VDC) power source capable of providing 7 Watts. The polarity of the DC source does not matter because the Airespace AP can use either a +48 VDC or a -48 VDC nominal source.

Airespace APs can receive power from an external power converter (see figure below) plugged into the side of the Airespace AP case, or from <u>Power Over Ethernet</u>.





For more information about the Airespace AP specifications and capacities, refer to <u>Specifications</u>, to be determined.



About Airespace AP External Power Converter

The Airespace AP can receive power from an external 115 VAC-to-48 VDC power converter or from <u>Power Over Ethernet</u> equipment.

The external power converter plugs into a secure 115 VAC convenience outlet (to avoid having cleaning personnel unplug the converter when they use power cleaning equipment). The converter produces the required 48 VDC output (*Airespace AP Power Requirements*) for the Airespace AP. The converter output feeds into the side of the Airespace AP through a 48 VDC jack (*Airespace AP Connectors*).

About Power Over Ethernet

Airespace equipment supports 802.3af-compliant Power over Ethernet (PoE), which can reduce the cost of discrete power supplies, additional wiring, conduits, outlets, and installer time. PoE also frees installers from having to mount an <u>Airespace Access Point</u> or other powered equipment near AC outlets, providing greater flexibility in positioning APs for maximum coverage.

When you are using PoE, the installer runs a single CAT-5 cable from each Airespace AP to the PoE-equipped Airespace Wireless Switch or other network element, or to a PoE power hub. When the PoE equipment determines that the Airespace AP is PoE-enabled, it sends 48 VDC over the unused pairs in the Ethernet cable to power the Airespace AP.

- Note: Airespace APs can receive power from the Airespace Switch, or any other network device conforming to the IEEE 802.3af standard.
- Note: Each Airespace AP can also receive power from an <u>Airespace AP</u>

 External Power Converter.

The Airespace Switch can be ordered with or without PoE, as required. It can be ordered with internal PoE or an external PoE hub. Contact Airespace for recommended external PoE hubs.



About Airespace AP Mounting Options

Refer to the <u>Airespace Access Point Quick Installation Guide</u> for the Airespace AP mounting options.



About Airespace AP Physical Security

The side of the Airespace AP housing includes a slot for a Kensington Micro-Saver Security Cable. You can use any MicroSaver Security Cable to ensure that your Airespace AP stays where you mounted it!

Refer to the <u>Kensington</u> website for more information about their security products, or to the <u>Airespace Access Point Quick Installation Guide</u> for installation instructions.

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Airespace Access Point Quick Installation Guide

System Release 1.1

Overview

This guide is designed to provide you with the information needed to mount Airespace Access Points (APs). Airespace APs are part of the innovative Airespace Wireless Enterprise Platform (Airespace System), and require no configuration after they are mounted; the end user configures Airespace APs through the Airespace Wireless Switch.

This document assumes that a site survey has been performed as described in the Airespace Access Point Site Survey Guide section in the Airespace Product Guide, that AP locations and mounting options have been selected, and that you have one Airespace AP per indicated location.

After the site survey is done, you should have a map indicating the following:

- AP locations.
- AP mounting options: in the middle of a ceiling/hallway, in the ceiling plenum, projecting away from the wall, or flat against the wall.
- AP power options: power supplied by the AC-to-DC power converter orderable from the factory, or Power over Ethernet (PoE) from the Airespace Wireless Switch, another switched network device, or a PoE injector/hub (usually located in a wiring closet).

If you do not have a map, make one so you can return the MAC addresses from each location to the person who is planning or managing this wireless network.

Refer to the following sections to install the Airespace APs.

Note: When mounting Airespace APs, make sure to maintain a 20 cm (8 in.) separation between the Airespace APs and bystanders to comply with FCC RF exposure regulations. Refer to the FCC Statements section in the Airespace Product Guide for more FCC information.



For more details about the Airespace AP installations, refer to the <u>Planning</u> <u>Notes</u> section at the end of this document.



Step 1: Collecting Required Tools and Supplies

- One Airespace AP per location.
- AP Mounting Kits, factory-supplied with each Airespace AP.
- Optional external AC-to-DC power converter, factory-orderable.
- Optional external 802.11b antennas.
- Note: No 802.11a external antennas are currently certified or available in this release. Contact Airespace, Inc. for a list of FCC-approved 802.11b external antennas.
 - Map showing AP locations, and mounting and power options.
 - Screwdrivers, drills, and ladder.
 - An assortment of sheet metal and drywall screws and toggle bolts.
- CAT-5 (or higher) cables to connect the Airespace AP locations and the Airespace Wireless Switch or switched network device.
- Optional Kensington MicroSaver Security Cable to secure each Airespace AP.

Continue with Step 2: Preparing Mounting Locations.

Step 2: Preparing Mounting Locations

On your map, you should have the AP locations, mounting options, and power options.

- Find the required mounting locations.
- Use the appropriate mounting bases and/or brackets to mark the wall or ceiling locations for sheet metal, drywall, or other screws. Make sure you leave enough space around the APs and brackets to plug the CAT-5 cable, optional external antenna cable(s), optional power converter cable, and optional Kensington MicroSaver Security Cable into the sides of the APs.

Figure - Factory-Supplied Mounting Brackets



A. Ceiling-Mount Base



B. Projection-Mount Bracket



C. Flush-Mount Bracket

- If necessary, drill holes for the various cables where they can be mostly hidden from casual view. When you are mounting the AP using a projection-mount L-bracket (the one with two long legs) the cables can be routed through the 5/8-inch (15.9 mm) holes in the bracket.
- Route the CAT-5, optional power converter, optional external antenna cable(s), and optional Kensington MicroSaver Security cables to where they can plug into the AP. Make sure to leave about 6 inches (15 cm) of slack in the cables for future modifications.
- Attach the brackets to the wall or ceiling, or install screws for ceiling-mount base:
 - Where you are going to use the projection-mount or flush-mount bracket, use customer-supplied sheet metal, drywall, or other screws to attach the bracket to the ceiling or wall.



- Where you are going to use the ceiling-mount base, install customer-supplied sheet metal, drywall, or other screws with 1/4 inch (6.35 mm) or smaller heads protruding from the ceiling about 0.1 inch (2.5 mm).

You are now ready to install the Airespace APs. Continue with <u>Step 3:</u> <u>Mounting the Airespace APs</u>.



Step 3: Mounting the Airespace APs

Using the mounting kits supplied with each Airespace AP, mount each Airespace AP in its indicated location, oriented as shown on the map. Note that you can mount the Airespace APs in the ceiling plenum or below the ceiling, but the APs perform best when mounted below the ceiling.

Note that the Airespace System supports Antenna Sectorization, which can be used to increase the number of clients and/or client throughput in a given air space. Installers can mount two Airespace APs back-to-back and the Airespace Switch operator can disable the second antenna in both Airespace APs to create a 360-degree coverage area with two sectors.

The Airespace APs can be mounted in one of three configurations:

- <u>Ceiling Mount</u>
- Projection Wall Mount
- Flush Wall Mount

Ceiling Mount

When you are mounting the AP in the middle of a ceiling (flat sides toward the room or hallway), use the ceiling-mount base to mount the AP as shown in the following figure and as described below:

Figure - Assembling the Airespace AP and Ceiling-Mount Base



- 03032002
- Copy the MAC address(es) from the label(s) on the AP onto the corresponding location on the map. MAC addresses have the format 000B85xxxxxx.
- Attach the ceiling-mount base to the bottom of the AP using the factory-supplied machine screws and washers.



- Position the ceiling-mount base so its keyhole slots are partly on the drywall, sheet metal, or other screw heads installed in <u>Step 2:</u> <u>Preparing Mounting Locations</u>.
- Note: If the screws do not securely hold the ceiling-mount base, remove the AP and adjust the screws until they hold the ceiling-mount base securely.
 - Attach the cables to the sides of the AP.
- Note: When the AP is powered up and is associated with an Airespace Wireless Switch (Green/Power and Yellow/802.11b and/or Yellow/802.11a LEDs lit), the AP is broadcasting its beacon signal(s). When this happens, complete the installation as quickly as possible to remove yourself from within 8 inches (20 cm) of the AP to comply with FCC RF radiation exposure guidelines.
 - Slide the ceiling-mount base onto the drywall, sheet metal, or other screw heads until it snugs into place.

You have installed the Airespace AP. Repeat <u>Step 3: Mounting the Airespace</u> <u>APs</u> for each AP location, and then continue with <u>Step 4: Returning MAC</u> <u>Information</u>.

Projection Wall Mount

When you are mounting the AP out from a wall (flat sides along the wall or hallway), use the projection-mount L-bracket.

- Before proceeding, gently screw the two factory-supplied screws and spring washers into the bottom of the Airespace AP. Make sure the spring washers have their convex (high center sections) pointing toward the screw heads.
- Note: The Airspace AP threaded holes have precision-depth threads. Do not overtighten the screws, or the bracket will not fit under the screw heads.

Figure - Assembling the Mounting Screws and Spring Washers to the Airespace AP



A. Screws and Spring Washers



B. Completed Assembly

- Copy the MAC address(es) from the label(s) on the AP onto the corresponding location on the map. MAC addresses have the format 000B85xxxxxxx.
- You have already attached the projection-mount L-bracket to the wall in <u>Step 2: Preparing Mounting Locations</u>.
 - Slide the screws into the keyhole slots on the mounting bracket as shown in the following figure.
- Note: If the screws do not securely hold the bracket, remove the AP and adjust the screws until they securely hold the bracket.





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- Attach the cables to the sides of the AP.
- Note: When the AP is powered up and is associated with an Airespace Wireless Switch (Green/Power and Yellow/802.11b and/or Yellow/802.11a LEDs lit), the AP begins broadcasting its beacon signal(s). When this happens, complete the installation as quickly as possible to remove yourself from within 8 inches (20 cm) of the AP to comply with FCC RF radiation exposure guidelines.

You have installed the Airespace AP. Repeat <u>Step 3: Mounting the Airespace</u> <u>APs</u> for each AP location, and then continue with <u>Step 4: Returning MAC</u> <u>Information</u>.

Flush Wall Mount

When you are mounting the AP against a wall (flat side toward the inside of the building), use the flush-mount bracket.

- Before proceeding, gently screw the two factory-supplied screws and spring washers into the bottom of the Airespace AP. Make sure the spring washers have their convex (high center sections) pointing toward the screw heads.
- Note: The Airspace AP threaded holes have precision-depth threads. Do not overtighten the screws, or the bracket will not fit under the screw heads.

Figure - Assembling the Mounting Screws and Spring Washers to the Airespace AP



A. Screws and Spring Washers



B. Completed Assembly

- Copy the MAC address(es) from the label(s) on the AP onto the corresponding location on the map. MAC addresses have the format 000B85xxxxxxx.
- You have already attached the flush-mount bracket to the wall in <u>Step 2: Preparing Mounting Locations</u>.
 - Slide the screws into the keyhole slots on the mounting bracket as shown in the following figure.
- Note: Make sure the side of the AP with the door is facing away from the wall. This ensures that the correct antenna is facing the building, and makes future upgrades easier.
- Note: If the screws do not securely hold the bracket, remove the AP and adjust the screws until they securely hold the bracket.



Figure - Assembling the Airespace AP to the Flush-Mount Bracket

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- Attach the cables to the sides of the AP.
- Note: When the AP is powered up and is associated with an Airespace Wireless Switch (Green/Power and Yellow/802.11b and/or Yellow/ 802.11a LEDs lit), the AP begins broadcasting its beacon signal(s). When this happens, complete the installation as quickly as possible to remove yourself from within 8 inches (20 cm) of the AP to comply with FCC RF radiation exposure guidelines.

You have installed the Airespace AP. Repeat <u>Step 3: Mounting the Airespace</u> APs for each AP location, and then continue with Step 4: Returning MAC Information.



Step 4: Returning MAC Information

When you have completed the installations as outlined in <u>Step 3: Mounting</u> <u>the Airespace APs</u>, return the MAC addresses and their locations on the maps or floorplans to the network planner or manager. The Airespace Control System (ACS) software operators will use the MAC address and location information to create maps for precise wireless LAN management.

Also return any unused mounting kit hardware and external power converters to the network planner or manager for use in future deployments.

Note: Network Planner or Manager, now is a good time to register your Airespace APs at www.airespace.com.

Planning Notes

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

About Cables

- You will run one CAT-5 Ethernet cable from the AP to the Airespace Switch, another switched network device, or a PoE injector/hub.
 - When the AP will be mounted below the ceiling using the ceiling mount or wall mount brackets, you may have to drill a hole into the ceiling plenum to run the CAT-5 cable to the wiring closet. When the CAT-5 cable cannot be run through the ceiling plenum, find another path to route the cable from the AP to the wiring closet.
 - When the AP will be mounted above the ceiling using the ceiling mount or wall mount brackets, run the CAT-5 cable to the wiring closet through the ceiling plenum. When the CAT-5 cable cannot be run through the ceiling plenum, find another path to route the cable from the AP to the wiring closet.
- When you are powering the AP from AC power, route the power converter cable from the AC convenience outlet to the AP. Make sure you secure the AC power plug so it will be difficult for people to pull on the power cord or unplug the power converter from the AC power outlet.
- When you are powering the AP from a PoE source (Airespace Switch, another switched network device, or a PoE injector/hub), you do not need to route a separate power cable to the AP, because the AP will receive its power across the CAT-5 Ethernet cable. Return the power converter to the wireless network planner/manager.

About External Antennas

- Refer to the <u>Airespace AP External and Internal Antennas</u> section for an overview of the external 802.11a and 802.11b external antennas available for use with the Airespace APs.
- Note: No 802.11a external antennas are currently certified or available in this release. Contact Airespace, Inc. for a list of FCC-approved 802.11b external antennas.

 When you are attaching external antennas to the Airespace AP, use cables with reverse-TNC connectors to connect antennas to the ports on the side of the Airespace AP. See the following figure for antenna port markings.

Figure - Airespace AP External Antenna Port Markings



A. 2.4 GHz/802.11b Left External Antenna Port



B. 5 GHz/802.11a and 2.4 GHz/802.11b Right External Antenna Ports

About Mounting Options

- Note: Because the Airespace AP internal antennas have been designed to reduce inter-floor interference, it is strongly recommended that you mount the AP standing or hanging straight up or down.
- Note: You can mount the Airespace APs in the ceiling plenum or below the ceiling using the ceiling mount base or wall mount brackets, but the APs perform best when mounted below the ceiling.
- When you are mounting the AP in the middle of a ceiling, hallway, or ceiling plenum, you will typically use the color-coordinated ceiling-mount base to stabilize the AP after it is mounted. Use the mounting base to mark the sheet metal, drywall, or other screw locations.
 - The mounting base attaches to the bottom of the AP with two supplied screws, and then the assembly slides and locks onto two sheet metal, drywall, or other screws.
- When you are mounting the AP out from a wall (flat sides along the room or hallway), use the projection-mount L-bracket supplied with the AP. Use the L-bracket to mark the sheet metal, drywall, or other screw locations.
- When you are mounting the AP against a wall (flat side toward the inside of the building), use the flush-mount bracket supplied with the AP. The flush-mount L-bracket is the one with one long and one short leg. Use the L-bracket to mark the sheet metal, drywall, or other screw locations.

About Physical Security

Regardless of mounting, the Airespace AP can be secured with a Kensington MicroSaver Security Cable. If required, use any MicroSaver Security Cable to attach either side of your Airespace AP to a solid beam, pipe, or support.