Cisco Aironet Power Injector AIR-PWRINJ6= Guide

This document describes the Cisco Aironet series access point power injector AIR-PWRINJ6= (referred to as the *power injector* in this document) and provides instructions for mounting them.

Product Overview

The Cisco Aironet Power Injector AIR-PWRINJ6= increases wireless LAN deployment flexibility of supported Cisco Aironet Access Points by providing an alternative powering option to local power, inline power-capable multiport switches, and multiport power patch panels.

The single-port PoE injector provides up to 30 Watts and is compliant with IEEE 802.3af (15.4 W) and IEEE 802.3at (30 W) systems. This power injector is for use with the Cisco Aironet 2800 series and 3800 series access points.

Note The Cisco Aironet Power Injector AIR-PWRINJ6= is not weatherproof and hence is not meant to be used outdoors.
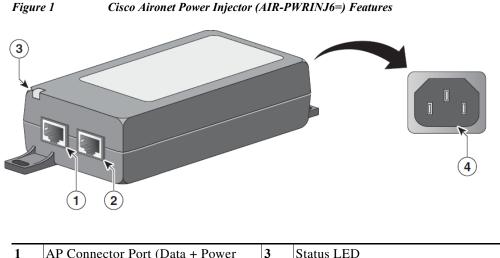
A Category 5 or better Ethernet cable connects the injector to a 10/100/1000 Ethernet switch, hub, or network, and another cable carries power and data to the access point's WAN Ethernet port. The power injector's built-in power supply has a C13 connector that connects to a wall outlet or power strip. The power injector connects to a wall outlet or power strip.

Caution To avoid overheating and possible failure, do not stack or tie together (bundle) the power injector and its AC power cable.

Figure 1 shows the key features of the power injector.

Figure 1   *Cisco Aironet Power Injector (AIR-PWRINJ6=) Features*

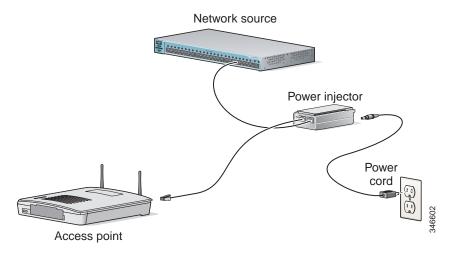| 1	AP Connector Port (Data + Power Out)	3	Status LED
2	Switch Connector Port (Data In)	4	C13 Power Connector

The Status LED indicates the following system status events:

- AC Power - The LED is amber to indicate that the Power Injector is powered ON and ready for connection.
- AP Power - The LED lights solid green to indicate that a valid IEEE 802.3af or 802.3at load (AP) is detected and powered ON. The LED remains green when powering the Access Point even if the uplink is not connected. The LED is green for showing that the power injector is providing power to the Access Point

Figure 2 shows a typical installation scenario.

Figure 2   *Power Injector AIR-PWRINJ6= Installation Scenario*

Unpacking the Power Injector

The typical power injector package contains the following items:

- Power injector
- Power cord
- URL Pointer Card and China RoHS Statement

If any item is missing or damaged, contact your Cisco representative or reseller.

Additional Requirements

Use the power cord that shipped with your power injector to supply power for the injector. If you install the access point in an environmental air space such as above a suspended ceiling, check national and local safety codes to make sure that the Ethernet cable you connect to the unit meets applicable standards.

Note
- The AIR-PWRINJ6= should not be installed in the plenum airspace.
- The maximum distance that is supported for in-line power is 328 ft. (100 m), including the length of the 6.5-ft. (2-m) Ethernet cable provided with the power injector.

Disable PoE on the Connected Switchport

Sometimes, when the AP is connected to the AIR-PWRINJ6 that is cabled to a 802.3af PoE-enabled switchport, it might not function properly. To resolve this, disable PoE on the switchport connected to the AIR-PWRINJ6= injector.

Failure to do so will result in the injector not supplying full power to the AP and might cause issues such as disabled radios since the AP will intermittently receive only 15.4W of power.

To disable PoE on the connected switchport, execute the **power inline never** command at the CLI prompt of the Cisco switch when it is in the *interface config* mode.

Installing the Power Injector

Follow these steps to install the power injector:

1. Plug a Category-5 Ethernet cable into the port on the power injector labeled *AP*.

2. Plug the other end of the Ethernet cable into the WAN uplink Ethernet port of the access point.

3. Plug a Category-5 Ethernet cable into the port on the power injector labeled *Switch*.

Note Ensure that PoE is disabled on this switchport before it is connected to the AIR-PWRINJ6= injector. For more information, go to

4. Plug the other end of the Ethernet cable into your 10/100/1000 Ethernet switch, hub, or network.

5. When power is applied, the Status LED is amber. When the AP is detected, the Status LED glows solid green.

6. Secure the power injector by mounting it to a vertical or horizontal surface using the mounting keyholes on the bottom of the unit.

Mounting Instructions

You can mount the power injector to most vertical or horizontal surfaces using the mounting tabs on the top right and bottom left of the unit.

Using the Mounting Tabs

To mount the power injector to a vertical or horizontal surface using the mounting tabs, you will need the following parts and tools:

- Two #6 plastic wall anchors if mounting to a drywall surface
- Two #6 x 1-in. (2.5 cm) sheet-metal screws
- A drill and a 3/16-in (0.48-cm) drill bit
- A Phillips head screw driver
- A small hammer

Follow these steps to mount the power injector:

1. Using the holes in the power injector mounting tabs as a template, mark the locations on the surface where you will drill the holes for the wall anchors or screws.
2. Drill a 3/16-in. (4.7-mm) hole at each marked location.
3. If you are using #6 wall anchors, use a hammer to install them in the holes.
4. Hold the power injector to the wall and align the mounting tabs on the power injector with the screw holes.
5. Insert the #6 screws through the mounting tabs and into the holes in the wall or surface.
6. Use a Phillips head screwdriver to drive the screws into the surface.

Note If the power injector is not securely fastened, continue making small adjustments until you are satisfied.

Specifications

This table lists specifications for the power injectors:

Specification	AIR-PWRINJ6=
Dimensions (W, H, L)	53 mm x 32.5 mm x 140 mm 2.09 in x 1.28 in x 5.5 in
Data Rates	10/100/100 Mbps
PoE Output	Pin Assignment and Polarity: 4/5 (+), 7/8 (-) Output Power Voltage 55 V DC
User Port Power	30 Watts
Input Power Requirements	AC Input Voltage: 100 to 240 V AC AC Input Current: 0.67 A @ 100 - 240 V AC AC Frequency: 50 to 60 Hz
Weight	0.44 lbs (200 g)
Connectors	Shielded RJ-45, EIA 568A and 568B
Environmental Conditions	Operating Ambient Temperature: -4ºF to 104ºF (-20ºC to 40ºC) at 30 W -4ºF to 122ºF (-20ºC to 50ºC) at 25 W Operating Humidity: Maximum 90%, Non-condensing Storage Temperature: -4ºF to 158ºF (-20ºC to 70ºC)
Reliability	MTBF: 100,000 hrs @ 25ºC
Thermal Rating	20 BTU/Hr @ 240 V AC
Regulatory Compliance	IEEE 802.3 at (PoE), China RoHS Compliant, WEEE Compliant, CE Compliant
Electromagnetic Emission and Immunity	FCC Part 15, Class B EN 55022 Class B (Emissions) EN 55024 (Immunity) VCCI
Safety	UL 60950-1 IEC/EN 60950-1
Stacking restrictions	**Do not stack. Do not bundle the power injector and AC power cable.**

Regulatory Information

The following information is for FCC compliance of Class B devices:

The equipment described in this manual generates and may radiate radio-frequency energy. If it is not installed in accordance with Cisco's installation instructions, it may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in part 15 of the FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

Modifying the equipment without Cisco's written authorization may result in the equipment no longer complying with FCC requirements for Class A or Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

You can determine whether your equipment is causing interference by turning it off. If the interference stops, it was probably caused by the Cisco equipment or one of its peripheral devices. If the equipment causes interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the equipment to one side or the other of the television or radio.
- Move the equipment farther away from the television or radio.
- Plug the equipment into an outlet that is on a different circuit from the television or radio. (That is, make certain the equipment and the television or radio are on circuits controlled by different circuit breakers or fuses.)

Modifications to this product not authorized by Cisco Systems, Inc. could void the FCC approval and negate your authority to operate the product.