



**Ruckus Wireless®
ZoneFlex® 2741 802.11g
Outdoor Access Point**

Getting Started Guide

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1 About This Getting Started Guide

This *Getting Started Guide* provides information on how to set up the Ruckus Wireless ZoneFlex 2741 802.11g Outdoor Access Point on your network. Topics covered in this guide include installation, basic configuration, and device mounting.

This guide is intended for use by those responsible for installing and setting up network equipment. Consequently, it assumes a basic working knowledge of local area networking, wireless networking, and wireless devices.

Related Documentation

In addition to this guide, each Ruckus Wireless ZoneFlex 2741 802.11g Outdoor Access Point documentation set includes the following:

- **User Guide:** Provides detailed information on how to configure the Access Point. The User Guide is available for download on the Ruckus Wireless Support Web site at: <http://support.ruckuswireless.com/documents>
- **Release Notes:** Provides late-breaking information about the current software release, including new features, enhancements, and known issues. If the information in the Release Notes differs from the information in this guide, follow the instructions in the Release Notes.
- **Online Help:** Accessible from the ZoneFlex Web interface, the Online Help provides information that helps you configure the Access Point using the Web interface.

Using ZoneDirector or FlexMaster to Manage the Access Point

If you are planning to use either Ruckus Wireless FlexMaster or Ruckus Wireless ZoneDirector to manage the Access Point, this guide describes the required steps that will enable the Access Point to report to and communicate with FlexMaster or ZoneDirector successfully.

- To set up the Access Point for management by FlexMaster, refer to [“\(Optional\) Set the FlexMaster Server Address”](#) on [page 22](#).
- To set up the Access Point for management by ZoneDirector, refer to [“Configuring for Management by ZoneDirector”](#) on [page 12](#)

2 Unpacking the ZoneFlex Access Point

1. Open the Access Point package, and then carefully remove the contents.
2. Return all packing materials to the shipping box, and put the box away in a dry location.
3. Verify that all items listed in [Package Contents](#) below are included in the package. Check each item for damage. If any item is damaged or missing, notify your authorized Ruckus Wireless sales representative.

Package Contents

A complete Access Point package contains all of the items listed below:

- ZoneFlex 2741 Outdoor Access Point
- Box containing the PoE injector (not included in some SKUs)
- Box containing the power adapter (not included in some SKUs)
- Two-prong plug adapter (for three-prong wall outlet)
- Mounting kit (see ["Mounting Kit Contents"](#) for details)
- Bag containing bottom Access Point cover and related accessories (see ["Bottom Cover and Accessories"](#) for details)
- Service Level Agreement / Limited Warranty Statement
- Regulatory Statement
- This *Getting Started Guide*



WARNING: The Ruckus Wireless PoE injector and power adapter (if supplied with your Access Point) is for indoor use only. Never mount the PoE injector and power adapter outdoor with the Access Point.

Mounting Kit Contents

- Dynamic bracket
- Static bracket
- Metal plates (2 pieces)
- Steel clamp
- Wall anchors (2 pieces)
- Hex bolts (4 pieces)
- Machine screws (8 pieces)
- Split lock washers (4 pieces)
- Fender washers (4 pieces)

Bottom Cover and Accessories

- Bottom cover of the Access Point
- DC terminal block
- Black solid rubber stoppers (2 pieces)
- Black rubber O-ring
- Green rubber O-ring
- White P-clip cable clamp (2 pieces)
- Machine screws (2 pieces)
- Machine screws with washers (3 pieces)

3 Before You Begin

Before installing and setting up the Access Point, Ruckus Wireless recommends that you first complete the following pre-installation tasks.

Prepare the Required Hardware and Tools

You must supply the following tools and equipment:

- A notebook computer running on Windows XP/2000 and installed with one wireless 802.11b/g network card and one Ethernet card
- 6mm flathead screwdriver
- 6mm Phillips screwdriver
- 10mm ratchet wrench
- 3mm Phillips screwdriver (if you will be using DC power)
- Electric drill with 8mm drill bit (if mounting on a flat surface)



NOTE: At the beginning of each procedure, this guide lists the specific tools, accessories, and equipment that you will need to complete the procedure.

Before You Begin

Get to Know the Access Point Features

Get to Know the Access Point Features

[Figure 1](#) and [Figure 2](#) identify the Access Point features that are relevant to the installation and mounting instructions that this guide provides. Before you begin the installation process, Ruckus Wireless recommends that you become familiar with these features.

Figure 1. Access Point LEDs and bottom connectors



Table 1. LEDs and bottom panel connectors

No	Label	Description
1	LEDs	See “LED Colors and What They Mean” below for more information.
2	RJ45	LAN port that supports Power over Ethernet (PoE) and 10/100Mbps network connections

Table 1. LEDs and bottom panel connectors

No	Label	Description
3	Reset	<p>Using a pointed object (for example, a pen), press this button to restart the Access Point or to restore it to factory default settings:</p> <ul style="list-style-type: none">• To restart the Access Point, press the Reset button once.• To restore the Access Point to factory default, press the Reset button for six (6) seconds. <p><i>WARNING: Restoring the Access Point to factory default settings removes all configuration changes that you have made. These include the IP address, password, access control list, and wireless settings. Returning the configuration of these features to their factory default settings may result in network connectivity issues.</i></p>
4	12V DC	<p>In addition to PoE, you can also use direct current or DC (from a battery, for example) to supply power to the Access Point.</p>

LED Colors and What They Mean

Refer to [Table 2](#) below for all possible LED states and what they indicate.

Table 2. LED states and behaviors

LED	Meaning
OPT	Not used in this model
DIR	<ul style="list-style-type: none">• <i>Off</i>: The Access Point is not being managed by ZoneDirector (standalone mode).• <i>Green</i>: The Access Point is being managed by ZoneDirector.• <i>Flashing green</i>: The Access Point is being managed by ZoneDirector, but is currently unable to communicate with ZoneDirector.

Before You Begin

Get to Know the Access Point Features

Table 2. LED states and behaviors

LED	Meaning
AIR	<ul style="list-style-type: none">• <i>Green</i>: The Access Point is functioning as a mesh AP (MAP) and the wireless signal to its uplink MAP is <i>good</i> (> 24dbm).• <i>Fast flashing green (two flashes every second)</i>: The Access Point is functioning as a mesh AP (MAP) and the wireless signal to its uplink MAP is <i>poor</i> (< 24dbm).• <i>Slow flashing green (one flash every two seconds)</i>: Mesh networking is enabled, but the Access Point cannot find a mesh uplink.• <i>Off</i>: The Access Point is operating in standalone mode or, if mesh networking is enabled, the Access Point is functioning as a root AP (RAP).
WLAN	<ul style="list-style-type: none">• <i>Green</i>: The wireless LAN (WLAN) service is up and at least one wireless client is associated with it. If mesh networking is enabled, there are no downlink MAPs connected to this Access Point.• <i>Fast flashing green (two flashes every second)</i>: The WLAN service is up and at least one wireless client is associated with it. Mesh networking is enabled and at least one downlink MAP is connected to this Access Point.• <i>Slow flashing green (one flash every two seconds)</i>: The WLAN service is up, but no wireless clients are currently associated with it. Mesh networking is enabled and at least one downlink MAP is connected to this Access Point.• <i>Off</i>: Either the WLAN is down, or it is up but no wireless clients are currently associated with it. If mesh networking is enabled, there are no downlink MAPs connected to this Access Point.
LAN	<ul style="list-style-type: none">• <i>Green</i>: The LAN port is connected to a 10/100Mbps device.• <i>Flashing green</i>: Traffic is passing through the LAN port.• <i>Off</i>: The LAN port is not connected to any network device.

Table 2. LED states and behaviors

LED	Meaning
PWR	<ul style="list-style-type: none">• Green: The Access Point is connected to a power source.• Off: No power is available, or the Access Point is not connected to a power source.

If you want to extend the range of your wireless network, you can connect an external high gain antenna to the standard N-type radio frequency (RF) antenna connector on the top panel of the Access Point. The antenna must have a gain of less than 9dBi to comply with FCC and CE regulations. If you are connecting an external antenna to the Access Point, refer to [“\(Optional\) Mounting and Connecting the External Antenna”](#) on [page 46](#) for more information.

Figure 2. The antenna connector is protected by a black waterproof antenna connector cover



Perform a Site Survey

Before installing the Access Point, perform a site survey to determine the optimal Access Point placement or maximum range, coverage, and network performance. When performing a site survey, consider the following factors:

- *Data rates:* Range is generally inversely proportional to data rates. The maximum radio range is achieved at the lowest workable data rate. Higher data rates will generally be achieved at closer distances.
- *Antenna type and placement:* Proper antenna configuration is a critical factor in maximizing radio range. As a general rule, radio range is increased by mounting the radio higher off of the ground with the Access Point oriented so that the dome is facing down (for recommended orientation examples, refer to [Figure 3](#) on page 9). If you are connecting an external antenna to the Access Point, mount the Access Point so that the external antenna is pointing down.
- *Physical environment:* Clear or open areas provide better radio range than closed or filled areas. The less cluttered the operating environment, the greater the wireless range.
- *Obstructions, building materials, and sources of interference:* Physical obstructions, such as concrete pillars, steel beams, filing cabinets, buildings, or trees, can block or hinder wireless communication. Avoid installing the Access Point in a location where there is an obstruction between sending and receiving devices. A number of machines and electronic devices that emit radio waves – cranes, wireless phones, microwave ovens, satellite dishes – interfere with and block wireless signals. Building materials used in construction also influence radio signal penetration. For example, drywall construction permits greater range than concrete blocks.

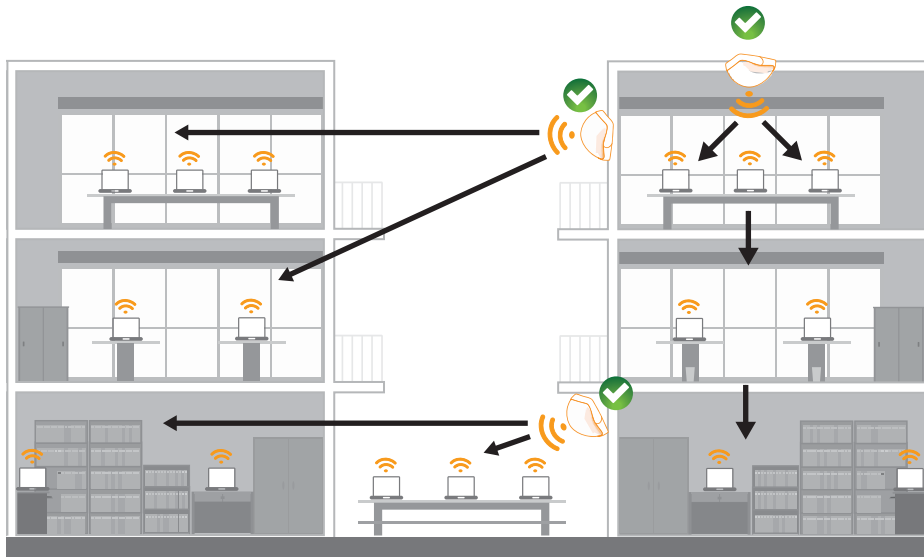
For more Access Point placement guidelines, refer to [“Determine the Optimal Mounting Location and Orientation”](#).

Determine the Optimal Mounting Location and Orientation

The location and orientation that you choose for the Access Point play a critical role in the performance of your wireless network. In general, Ruckus Wireless recommends installing the Access Point away from obstructions and sources of interference and ensuring that the Access Point's dome is pointing to the general direction of its wireless clients.

[Figure 3](#) illustrates mounting locations and access point orientations Ruckus Wireless recommends.

Figure 3. Recommended mounting locations and orientations

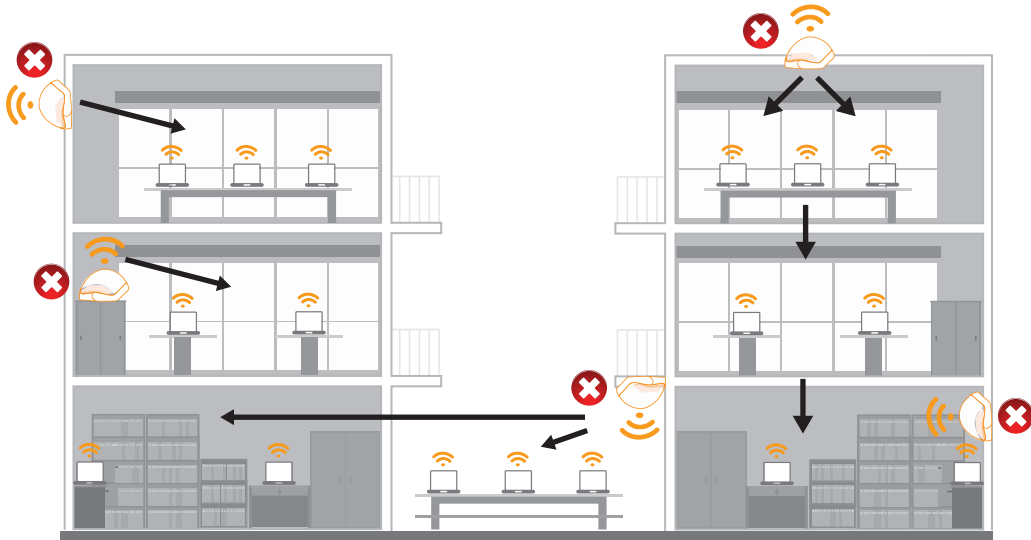


Before You Begin

Determine the Optimal Mounting Location and Orientation

[Figure 4](#) illustrates mounting locations and access point orientations that should be avoided.

Figure 4. *Not recommended mounting locations and orientations*

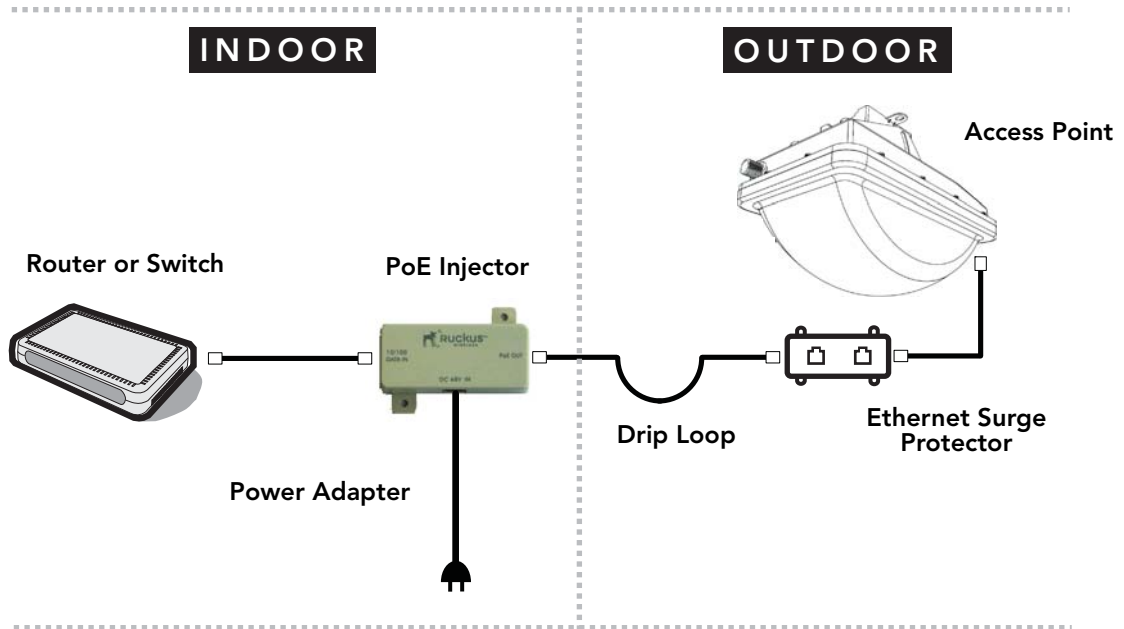


Become Familiar with the Installation Components

The Access Point can be installed in an indoor or outdoor environment, such as an interior wall or ceiling or the exterior roof overhang of a building or a streetlight pole. Refer to [Figure 5](#) for the installation components involved in a typical installation.

Take note of the components that must be installed indoor and outdoor. The PoE injector and power adapter that are shipped with the Access Point are for indoor use only. Ruckus Wireless also strongly recommends that you form a drip loop on any cable that is connected to devices that are installed outdoor (for example, the Access Point and the Ethernet surge protector).

Figure 5. Typical installation components using PoE as the only power source



WARNING: Only trained and qualified personnel should be allowed to install, replace, or service this equipment.

Configuring the Access Point

Configuring for Management by ZoneDirector



WARNING: Installation of the equipment must comply with local and national electrical codes.



CAUTION: Make sure that you form a 3"-5" drip loop in any cable that is attached to the Access Point and Ethernet surge protector. This will prevent water from running along the cables and entering the Access Point, Ethernet surge protector, or the building where the cables terminate.



CAUTION: Be sure that grounding is available and that it meets local and national electrical codes. For additional lightning protection, use lightning rods, lightning arrestors, or surge suppressors.



WARNING: The Ruckus Wireless PoE injector (if supplied with your Access Point) is for indoor use only. Never mount the PoE injector outdoor with the Access Point.



NOTE: If the power outlet in your installation environment is three-pronged, use the two-prong plug adapter that is shipped with the Access Point.

4 Configuring the Access Point

The procedure for completing the Access Point's essential configuration depends on whether you want it to be managed by either ZoneDirector or FlexMaster or to operate as a standalone access point. Refer to the section that is relevant to your deployment:

- [Configuring for Management by ZoneDirector](#)
- [Configuring for Standalone Operation or for Management by FlexMaster](#)

Configuring for Management by ZoneDirector

If ZoneDirector is installed on the network, you can configure the Access Point for management by ZoneDirector. Simply connect the Access Point to same Layer 2 subnet as ZoneDirector. When the Access Point starts up, it will discover and register with ZoneDirector automatically.



NOTE: In addition to using Layer 2 auto discovery to enable the Access Point to register with ZoneDirector, you can also use DHCP Option 43 or DNS. For more information, refer to the *ZoneDirector User Guide*.



CAUTION: If you use this method, make sure that you do not change the IP address of ZoneDirector after the AP discovers and registers with it. If you change the ZoneDirector IP address, the AP will no longer be able to communicate with it and will be unable to rediscover it.

Before starting this procedure, check the back panel of the Access Point (above the recess where the bottom connectors are located), and then write down the MAC address of the Access Point. You will need the MAC address to identify the Access Point on the ZoneDirector Web interface.

1. Connect the Access Point to the same Layer 2 subnet as ZoneDirector. The same Layer 2 subnet means that there should not be any router between the Access Point and ZoneDirector.
2. Power on the Access Point.
3. Log into ZoneDirector, and then go to the **Monitor > Access Points** page.
4. Look for the MAC address of the Access Point, and then check its **Status** column.
 - If automatic approval is enabled, the Status column should show **Connected**.
 - If automatic approval is disabled, click the **Allow** link that is on the same row as the Access Point's MAC address. This allows the Access Point to register with ZoneDirector.

When the Status column shows **Connected**, this indicates that the Access Point has successfully registered with ZoneDirector and that it can now be moved to its destination Layer 2 or Layer 3 network.

5. Continue to ["Attaching the Mounting Brackets"](#) on [page 25](#).

Configuring for Standalone Operation or for Management by FlexMaster

What You Will Need

Before starting with the configuration task, make sure that you have the following requirements ready:

- An administrative computer (notebook computer) running on Microsoft Windows Vista/XP/2000
- Mozilla Firefox 2.0 (or later) or Microsoft Internet Explorer 6.0 (or later) installed on the administrative computer
- One Cat5e UTP (outdoor-rated) solid cable
- One Ethernet cable
- PoE injector (if not supplied with the Access Point, you can purchase a third party 802.3af-compliant PoE injector or switch)
- 6mm Phillips screwdriver

If you are planning to power the Access Point using a 12v DC connection, you will also need the following:

- UL1185 (80°, 300V) single shielded DC cable
- 12v DC, 1A DC power source (for example, a battery)
- 3mm Phillips screwdriver

Step 1: Prepare the Administrative Computer



NOTE: The following procedure is applicable if the administrative computer is running on Windows XP or Windows 2000. If you are using a different operating system, refer to the documentation that was shipped with your operating system for information on how to modify the computer's IP address settings.

1. On your Windows XP or Windows 2000 computer, open the **Network Connections** (or **Network and Dial-up Connections**) control panel according to how the Start menu is set up:
 - On Windows XP, click **Start > Control Panel > Network Connections**.
 - On Windows 2000, click **Start > Settings > Network Connections**.
2. When the Network Connections window appears, right-click the icon for Local Area Connection, and then click **Properties**.



NOTE: Make sure that you configure the Local Area Connection properties, not the Wireless Network Connection properties.

3. When the **Local Area Connection Properties** dialog box appears, select **Internet Protocol (TCP/IP)** from the scrolling list, and then click **Properties**. The **Internet Protocol (TCP/IP) Properties** dialog box appears.
4. Write down all of the currently active network settings. You will need this information later when you restore your computer to its current network configuration.
5. Click **Use the following IP address**, and then configure the IP address settings with the values listed in [Table 3](#). For a sample configuration, refer to [Figure 6](#).

Table 3. Configure your computer's IP address settings

IP address	192 . 168 . 0 . 22 (or any address in the 192.168.0.x network—with the exception of 192 . 168 . 0 . 1, which is already used by the Access Point)
Subnet mask	255 . 255 . 255 . 0
Default gateway	192 . 168 . 0 . 1
Preferred DNS server	192 . 168 . 0 . 1

You can leave the **Alternate DNS server** box blank.

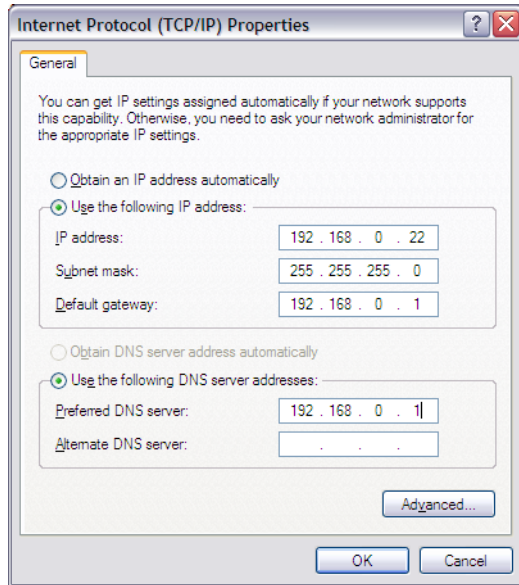
6. Click **OK** to save your changes and close the TCP/IP Properties dialog box.
7. Click **OK** again to close the Local Area Connection Properties dialog box.

Windows saves the IP address settings that you have configured.

Configuring the Access Point

Configuring for Standalone Operation or for Management by FlexMaster

Figure 6. Sample configuration in the Internet Protocol (TCP/IP) Properties dialog box



Step 2: Connect the Access Point to the Administrative Computer

The procedure for connecting the Access Point to the administrative computer depends on the power source that you will be using. You can do one of the following:

- [Use Power Over Ethernet](#)
- [Use DC Power](#)



NOTE: You only need to connect one type of power source at this point, even if you are planning to use both PoE and DC power in your final deployment.

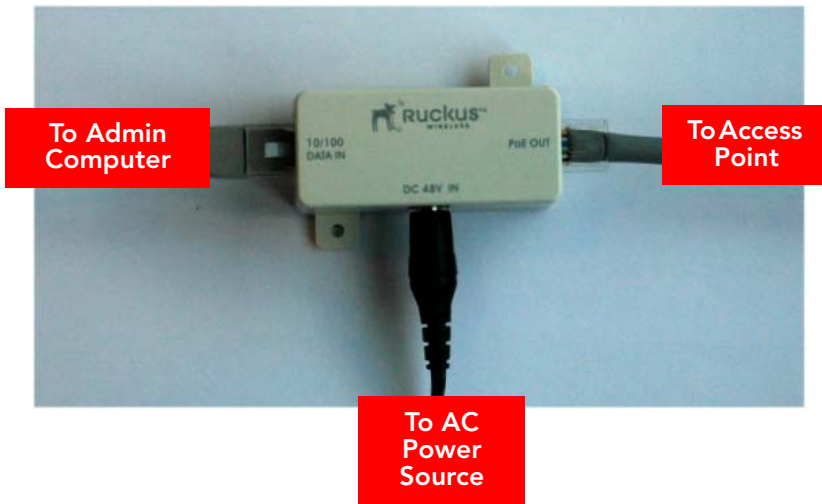
Use Power Over Ethernet

1. Take out the PoE injector and the power adapter from the Access Point package.
2. Connect one end of an Ethernet cable to the **10/100 DATA IN** port on the PoE injector, and then connect the other end to the administrative computer's Ethernet port.
3. Connect one end of the other Ethernet cable to the **PoE Out** port on the PoE injector, and then connect the other end to the **RJ45** port on the Access Point.

4. Connect the power jack to the **DC 48V IN** connector on the PoE injector, and then plug the power adapter to a power source. Verify that the **PWR** LED on the back of the Access Point is steady green.

NOTE: If the power outlet in your installation environment is three-pronged, use the two-prong plug adapter that is shipped with the Access Point.

Figure 7. Connect the Ethernet cables and power adapter to the PoE injector



You have completed connecting the Access Point to the administrative computer and to a PoE power source.

Use DC Power

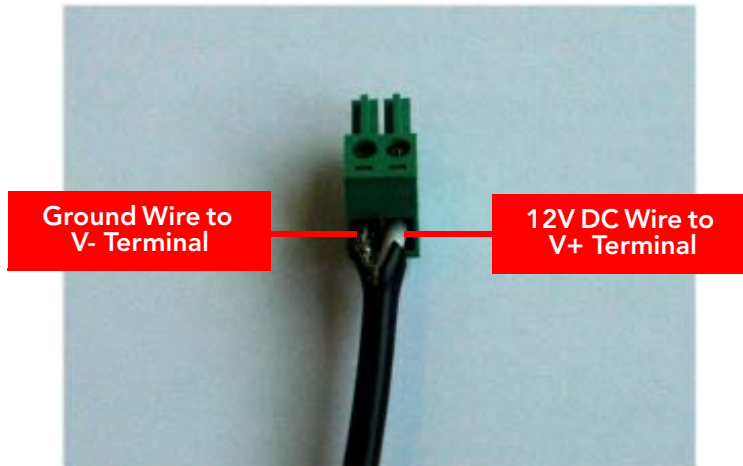
To use DC to power the Access Point, you need to connect a DC cable (not supplied with the Access Point) to the DC terminal block.

1. Connect one end of an Ethernet cable to the **RJ45** port on the Access Point, and then connect the other end to the administrative computer's Ethernet port.
2. Take out the DC terminal block from the small plastic bag that contains the bottom cover of the Access Point.
3. Connect the DC cable's ground wire to V- terminal. If you are looking at the terminal block with the wiring terminal screws on top, the V- terminal is on the *left side*.
4. Connect the DC cable's +12v DC wire to the V+ terminal. If you are looking at the terminal block with the wiring terminal screws on top, the V+ terminal is on the *right side*.

Configuring the Access Point

Configuring for Standalone Operation or for Management by FlexMaster

Figure 8. Connect the ground wire to the V- terminal and the +12v DC wire to the V+ terminal



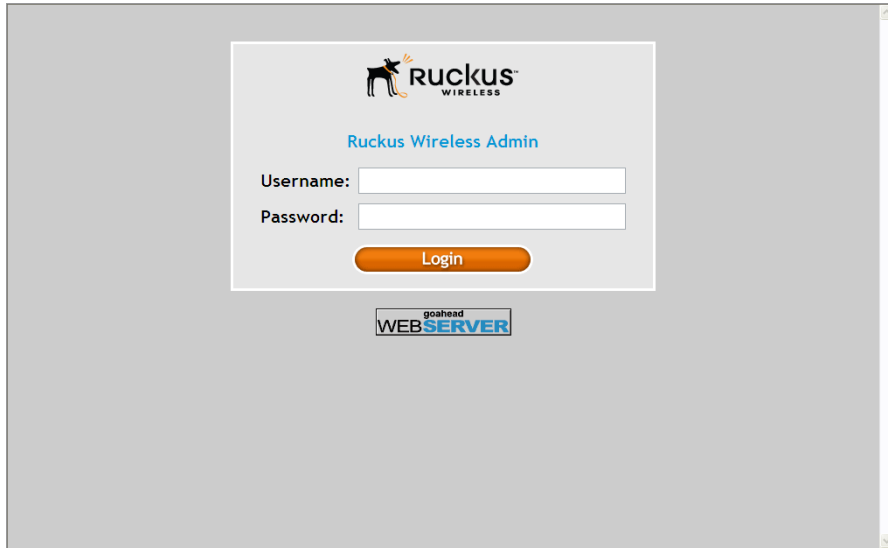
5. Using a 3mm Phillips screw, tighten the wiring terminal screws.
6. Connect the DC terminal block to the **12V DC** port on the Access Point.
7. Connect the DC cable to a DC power source (for example, a battery).

You have completed connecting the Access Point to the administrative computer and to a DC power source.

Step 3: Log Into the Access Point's Web Interface

1. On the administrative computer, open a Web browser window.
2. In the address or location bar, type the following address:
`https://192.168.0.1`
3. Press <Enter> on the keyboard to connect to the Access Point's Web interface. A security alert message appears.
4. Click **Yes** or **OK** (depending on the browser) to continue. The Access Point's login page appears.

Figure 9. The ZoneFlex Access Point login page



5. In **User name**, type `super`.
6. In **Password**, type `sp-admin`.
7. Click **Log In**. The Web interface appears, displaying the Device page.
8. Continue to ["Step 4: Configure the Wireless Settings"](#) below.

Step 4: Configure the Wireless Settings

To complete this step, you will need to configure the settings on the **Common** tab and at least one **Wireless #** tab. These are the essential wireless settings that will enable wireless devices on the network to associate with the Access Point.

For your reference, the default wireless settings on the Access Point are listed in [Table 4](#).

Table 4. Default wireless settings

Setting	Default Value
SSID (network name)	Wireless 1 to Wireless 8 (8 WLANs)
Encryption (security)	Disabled on all WLANs
Default management IP address	192.168.0.1

Configuring the Access Point

Configuring for Standalone Operation or for Management by FlexMaster

Configure Common Wireless Settings

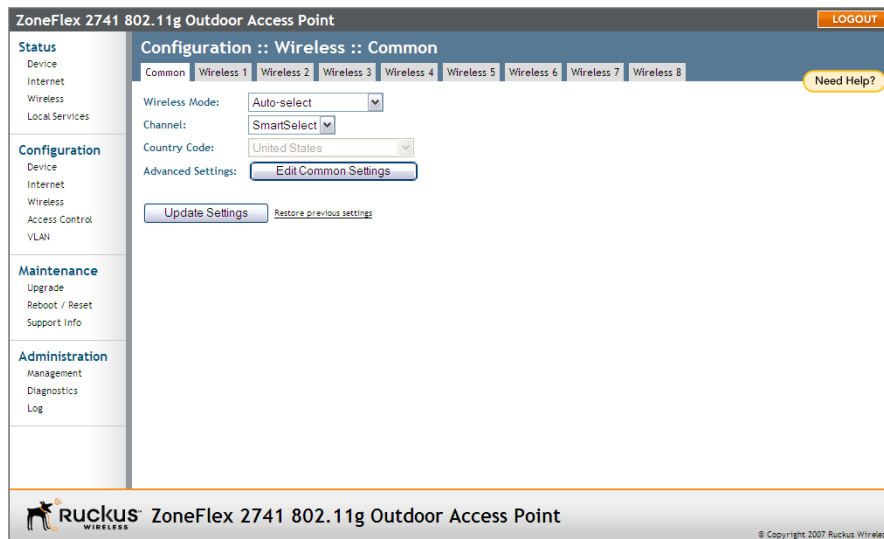
1. On the left menu of the Web interface, click **Configuration** > **Wireless**. The Common page appears.
2. Verify that the common wireless settings are configured as listed in [Table 5](#).

Table 5. Common wireless configuration

Setting	Recommended Value
Wireless Mode	Auto-select
Channel	SmartSelect
Country Code	<ul style="list-style-type: none">• If you purchased the Access Point in the United States, this value is fixed to United States at the factory and is not user configurable.• If you purchased the Access Point outside the United States, verify that the value is set to your country or region. Selecting the correct country code ensures that the Access Point uses only the radio channels allowed in your country or region.

3. If you made any changes to the **Common** tab, click **Update Settings**.
4. Continue to ["Configure Wireless # Settings"](#) below.

Figure 10. The Configuration > Wireless > Common tab



Configure Wireless # Settings

1. Click one of the **Wireless #** tabs.
2. In **Wireless Availability**, click **Enabled**.
3. In **Broadcast SSID**, click **Enabled**.
4. Clear the **SSID** box, and then type a unique and descriptive name that you want to call this wireless network.

For example, you can type `Ruckus Wireless AP`. This SSID is the name that will help users identify this wireless network in their wireless network connection application.



NOTE: You may also configure other wireless settings on this and other **Wireless #** tabs (in addition to the settings described above), although it is not necessary for completing the Access Point installation.

5. Click **Update Settings**.

You have completed configuring the basic wireless settings of the Access Point.

Figure 11. The Configuration > Wireless > Wireless 1 tab

The screenshot displays the configuration interface for a Ruckus ZoneFlex 2741 802.11g Outdoor Access Point. The main title is "Configuration :: Wireless :: Wireless 1". The interface is divided into several sections:

- Wireless Network:** A text input field containing "Wireless 1".
- Wireless Availability?** Radio buttons for "Enabled" and "Disabled", with "Disabled" selected.
- Broadcast SSID?** Radio buttons for "Enabled" and "Disabled", with "Enabled" selected.
- SSID:** A text input field containing "Wireless1".
- Threshold Settings:** A button labeled "Edit Settings".
- Rate Limiting:** A button labeled "Edit Settings".
- Encryption Method:** A dropdown menu currently set to "Disabled".
- Buttons:** "Update Settings" and "Restore previous settings".

The left sidebar contains navigation menus for Status, Configuration, Maintenance, and Administration. The bottom of the page features the Ruckus logo and the text "RUCKUS ZoneFlex 2741 802.11g Outdoor Access Point" and "© Copyright 2007 Ruckus Wireless".

Configuring the Access Point

Configuring for Standalone Operation or for Management by FlexMaster

(Optional) Set the FlexMaster Server Address

If you have a FlexMaster server installed on the network and you intend to use FlexMaster to manage the Access Point, you can set the FlexMaster server address at this point. Before starting this procedure, make sure you obtain the correct FlexMaster server URL.



NOTE: In addition to setting the FlexMaster server URL manually on the Access Point, you can also use DHCP Option 43 or DNS to point the Access Point to the FlexMaster server. For more information, refer to the *FlexMaster User Guide*.

1. On the menu, click **Administration > Management**.
2. Scroll down the page to the **TR069 / SNMP Management Choice** section.
3. Verify that the **Auto** option is selected.
4. In **FlexMaster Server URL**, type the URL of the FlexMaster server on the network. You can use either `http` or `https` to connect to the URL and include either the host name or IP address of the FlexMaster server in the URL. The following are examples of valid FlexMaster server URLs:

```
http://flexmaster/intune/server
```

```
https://flexmaster/intune/server
```

```
http://192.168.20.1/intune/server
```

```
https://192.168.20.1/intune/server
```

5. Click **Update Settings** to save your changes.

You have completed setting the FlexMaster server address on the Access Point.

Figure 12. Type the FlexMaster server URL

The screenshot shows the configuration page for a Ruckus ZoneFlex 2741 802.11g Outdoor Access Point. The interface is divided into several sections: Status, Configuration, Maintenance, and Administration. In the Configuration section, under 'TR069 / SNMP Management Choice', the 'Auto' option is selected. Below this, the 'DHCP Discovery' section contains a 'FlexMaster Server URL' field, which is highlighted with a red box and contains the text 'http://flexmaster/intune/server'. Other fields include 'Digest-authentication Username' (001392-zf10003104), 'Digest-authentication password' (zf10003104-001392), 'Contact FlexMaster every' (15 min), and 'Associated-Clients Monitoring Mode' (Disabled). The 'TR069 Status' section shows 'Currently using: (not contacted yet)', 'Last attempted contact: (not contacted yet)', 'Last successful contact: (not contacted yet)', and 'Current time: Wed Nov 5 08:22:00 2008 (UTC)'. At the bottom, there are buttons for 'Update settings' and 'Restore previous settings'.



NOTE: Instructions on how to verify that the Access Point and FlexMaster can communicate with each other are provided in [“Check the TR069 Status \(FlexMaster Management Only\)”](#) on [page 41](#).

Step 5: Disconnect the Access Point from the Administrative Computer

You are now ready to attach the mounting brackets to the mounting surface and to the Access Point. Before continuing, make sure that you disconnect the Access Point from the power source and from the administrative computer.

1. Disconnect the power adapter of the PoE injector from the power source.
2. Verify that the **PWR** LED on the back of the Access Point is off.
3. Disconnect the Ethernet cable from the administrative computer's Ethernet port.

Step 6: Restore the Administrative Computer's Network Settings

1. On your Windows XP or Windows 2000 computer, open the **Network Connections** (or **Network and Dial-up Connections**) control panel according to how the Start menu is set up:
 - On Windows XP, click **Start > Control Panel > Network Connections**.

Configuring the Access Point

Configuring for Standalone Operation or for Management by FlexMaster

- On Windows 2000, click **Start > Settings > Network Connections**.
- 2. When the Network Connections window appears, right-click the icon for **Local Area Connection**, and then click **Properties**.
- 3. When the **Local Area Connection Properties** dialog box appears, select **Internet Protocol (TCP/IP)** from the scrolling list, and then click **Properties**. The **TCP/IP Properties** dialog box appears.
- 4. Restore the computer's network settings by typing the original IP address settings in the **TCP/IP Properties** dialog box.
- 5. On the **TCP/IP Properties** dialog box, click **OK** to close it.
- 6. Click **OK** again to close the **Local Area Connection Properties** dialog box.

5 Attaching the Mounting Brackets

What You Will Need

To complete this procedure, you will need the following items:

- Static bracket
- Dynamic bracket
- Wall anchors
- Fender washers
- Hex nuts
- 10mm ratchet wrench

If you are mounting the Access Point on a flat surface, you will also need an electric drill with an 8mm drill bit.

If you are mounting the Access Point on a pipe or pole, you will also need the following:

- A 30mm to 60 mm (1.18 in. to 2.36 in.) pipe or pole
- Steel clamp
- 10mm flathead screwdriver

For mounting on a horizontal pole, you will need the two metal bars that are supplied with the Access Point.



NOTE: Do not mount the Access Point after you finish attaching the mounting brackets. Ruckus Wireless strongly recommends that you first connect the Access Point to the network, and then test it first before finally mounting it to your desired location.

Attaching the Mounting Brackets

Step 1: Attach the Static Bracket to the Mounting Surface

Step 1: Attach the Static Bracket to the Mounting Surface

The procedure for attaching the bracket to the mounting surface depends on whether you are mounting the Access Point to a flat surface or a pole.

- [Attaching the Bracket to a Flat Surface](#)
- [Attaching the Bracket to a Pole](#)

Attaching the Bracket to a Flat Surface



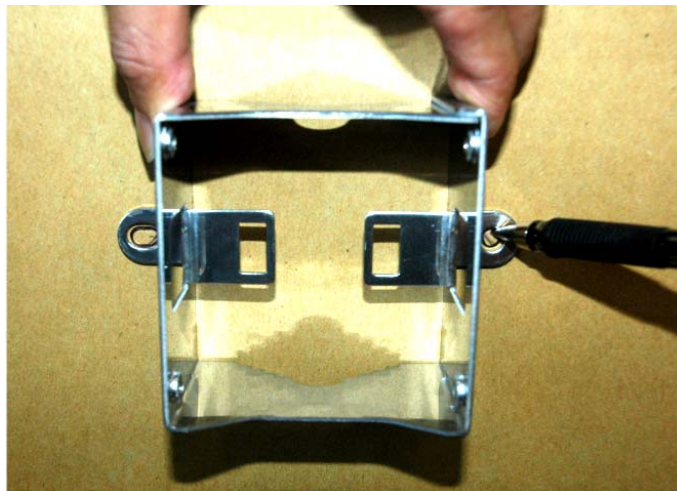
WARNING: Ruckus Wireless strongly recommends that you wear eye protection before drilling holes on the mounting surface.



NOTE: The wall anchors that are supplied with the Access Point are for mounting on *solid masonry walls* only. If you are mounting the Access Point on other materials (for example, drywall, wood, or hollow cinder block), you will need the appropriate types of wall anchors. Check your local hardware store for options.

1. Place the static bracket at the exact location on the mounting surface where you want to mount it.
2. Use the static bracket as a template to mark the locations of the mounting holes on the two mounting tabs.

Figure 13. Mark the locations of the mounting holes

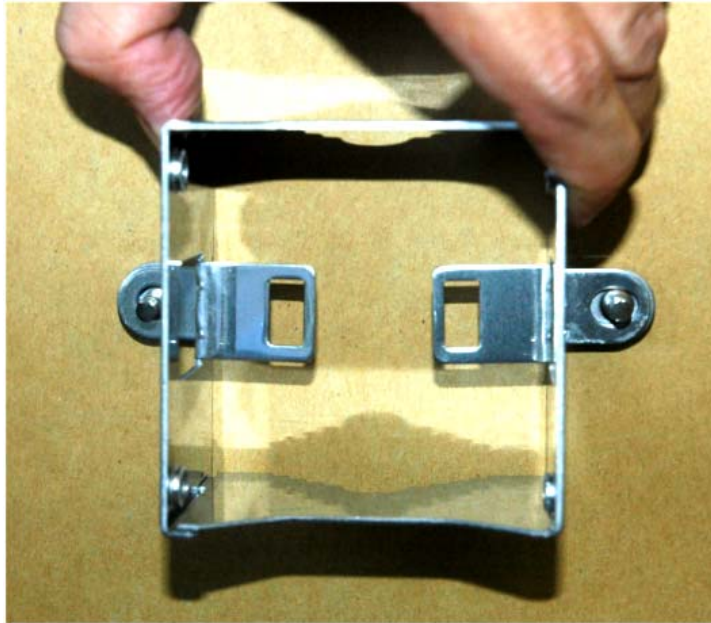


Attaching the Mounting Brackets

Step 1: Attach the Static Bracket to the Mounting Surface

3. Remove the static bracket from the mounting surface.
4. Drill an 8mm-diameter hole with a depth of 36mm-38mm into each of the markings that you made on the mounting surface.
5. Insert a wall anchor (with the unthreaded part first) into each of the holes that you drilled.
6. Place a fender washer on each screw.
7. Align the two screw holes on the bracket with the wall anchors that you inserted earlier.

Figure 14. Align the screw holes on the bracket with the wall anchors

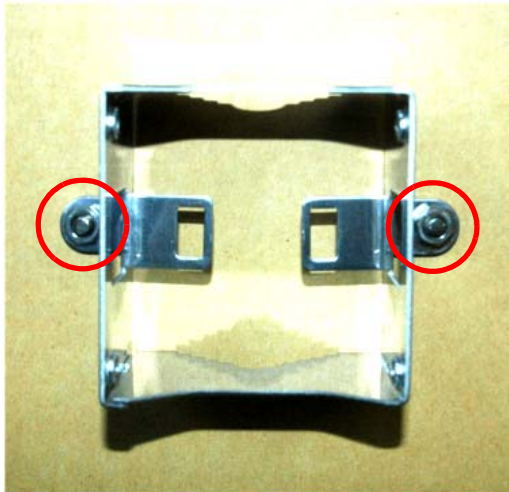


8. Use two hex nuts to attach the bracket to the mounting surface.

Attaching the Mounting Brackets

Step 1: Attach the Static Bracket to the Mounting Surface

Figure 15. Use hex nuts to attach the bracket to the surface



9. Using a 10mm open-end wrench, tighten the nuts to secure the bracket to the mounting surface. As you tighten the nuts, the metal cones that are built into the wall anchors will expand and lock the wall anchors into place.
10. Continue to ["Step 2: Attach the Dynamic Bracket to the Access Point"](#).

Attaching the Bracket to a Pole

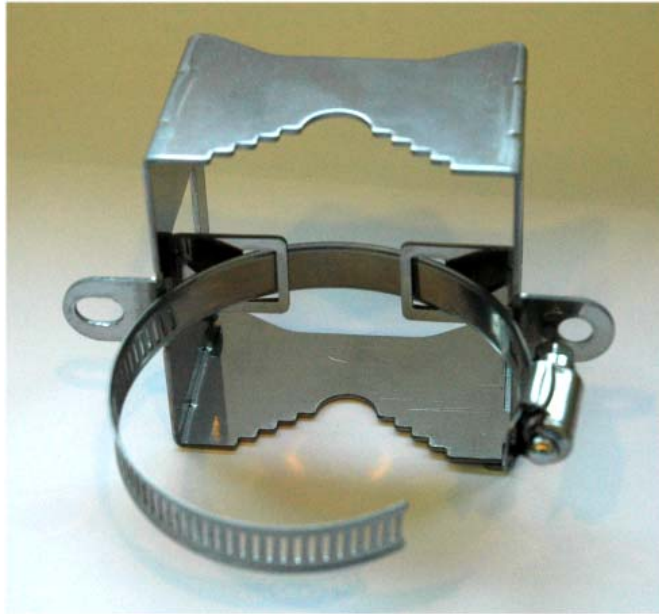
The Access Point can be mounted vertically or horizontally on a 30mm to 60mm (1.18 in. to 2.36 in.) pole.

1. Insert the open end of the steel clamp into the two tabs on the bracket.

Attaching the Mounting Brackets

Step 1: Attach the Static Bracket to the Mounting Surface

Figure 16. Insert the steel clamp into the tabs on the bracket



2. Use the clamp to attach the bracket to the pole.

Attaching the Mounting Brackets

Step 1: Attach the Static Bracket to the Mounting Surface

Figure 17. Use the clamp to attach the bracket to the pole



3. Using a 10mm flathead screwdriver, tighten the clamp lock to secure the bracket to the pole.

Figure 18. Tighten the clamp lock to secure the bracket



4. Continue to ["Step 2: Attach the Dynamic Bracket to the Access Point"](#).

Step 2: Attach the Dynamic Bracket to the Access Point

The procedure for attaching the dynamic bracket to the Access Point depends on whether you are mounting the Access Point on a flat surface/vertical pole or on a horizontal pole. If you are mounting the Access Point on a horizontal pole, you will need to install the two metal bars that are supplied with the Access Point.

Mounting on a Flat Surface or Vertical Pole

1. Place the dynamic bracket onto the flat side of the Access Point so that the four screw holes on the bracket align with the four screw holes on the Access Point. Make sure that the shorter end of the mounting bracket is on the same side as the antenna connector.
2. Insert four machine screws (supplied with the Access Point) into the screw holes.
3. Tighten the four machine screws using a 6mm Phillips screwdriver.

Attaching the Mounting Brackets

Step 2: Attach the Dynamic Bracket to the Access Point

Figure 19. Tighten the four machine screws to fasten the bracket to the Access Point



4. Continue to ["Connecting to the Network"](#) on [page 35](#).

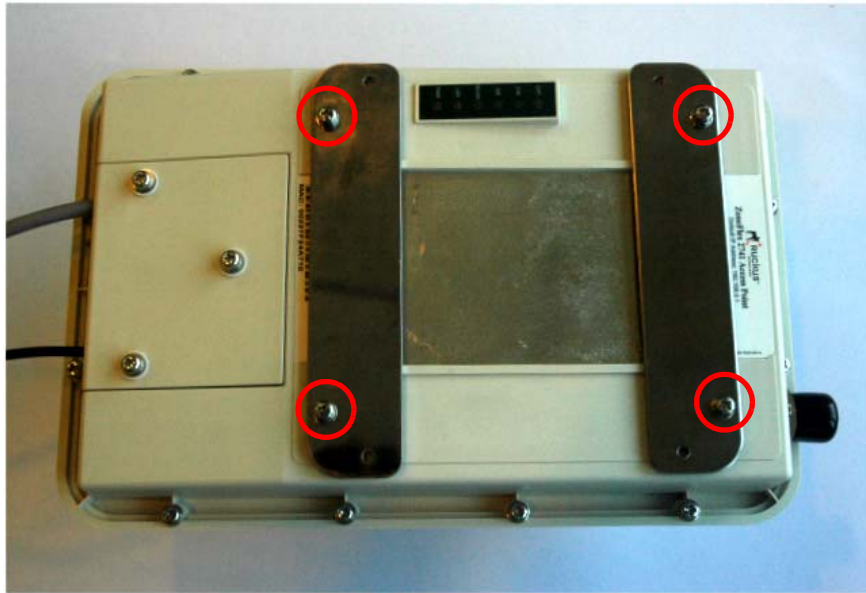
Mounting on a Horizontal Pole

1. Place the two metal plates horizontally on the flat side of the Access Point, as shown in [Figure 1](#). Make sure that the screw holes on the metal plates align with the screw holes on the Access Point.
2. Insert and fasten a machine screw (supplied) into each of the four screw holes.

Attaching the Mounting Brackets

Step 2: Attach the Dynamic Bracket to the Access Point

Figure 20. Position and fasten the metal plates to the Access Point

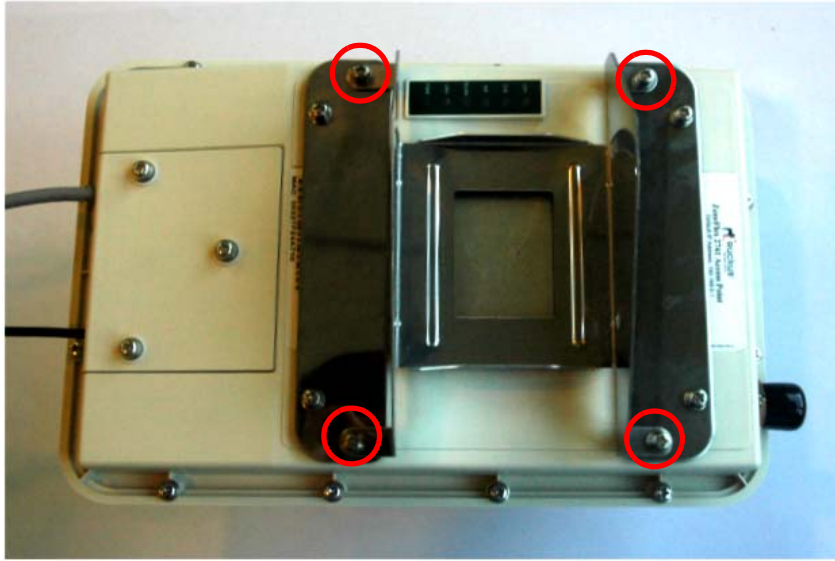


3. Place the dynamic bracket on top of the metal plates. Make sure that:
 - The screw holes on the bracket align with the remaining screw holes on the metal plates.
 - The curved mounting hole is on the same side as the LEDs.
4. Insert and fasten a machine screw (supplied) into each of the four screw holes.

Attaching the Mounting Brackets

Step 2: Attach the Dynamic Bracket to the Access Point

Figure 21. Use machine screws to fasten the bracket to the metal plates

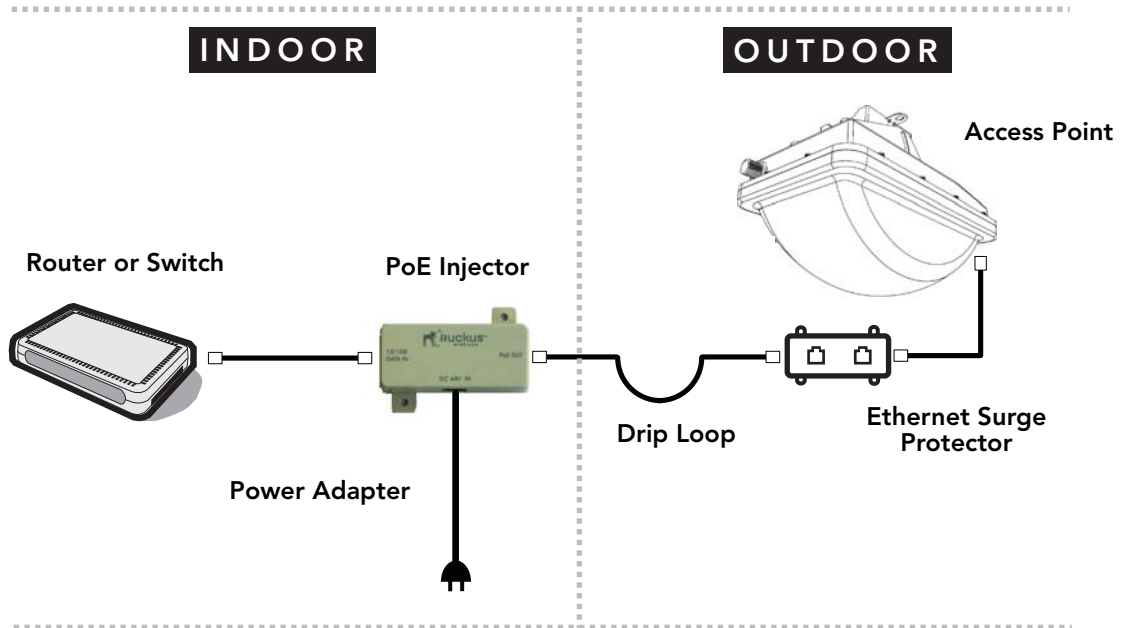


5. Continue to ["Connecting to the Network"](#).

6 Connecting to the Network

For guidance on the connections required for typical installations, refer to [Figure 22](#).

Figure 22. Typical installation components using PoE as the only power source



WARNING: Do not apply power to the Access Point until you finish connecting all other components.

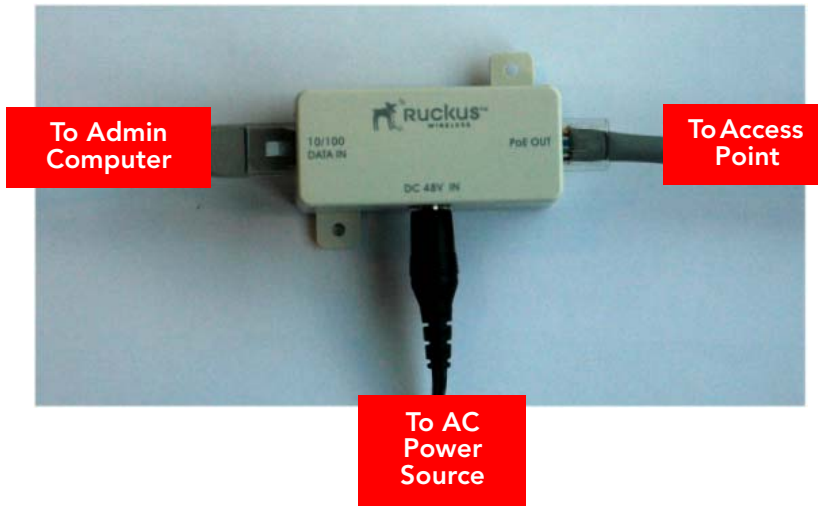
1. Verify that the **RJ45** port on the AP is connected to the **PoE OUT** port on the PoE injector.
2. Connect the Ethernet cable from the **10/100 DATA IN** port on PoE injector to your network router or switch.
3. Apply power to the Access Point.
4. Continue to ["Attaching the Mounting Brackets"](#).
5. Connect one end of the other Ethernet cable to the **PoE OUT** port on the PoE injector, and then connect the other end to the **RJ45** port on the Access Point.

Connecting to the Network

Step 2: Attach the Dynamic Bracket to the Access Point

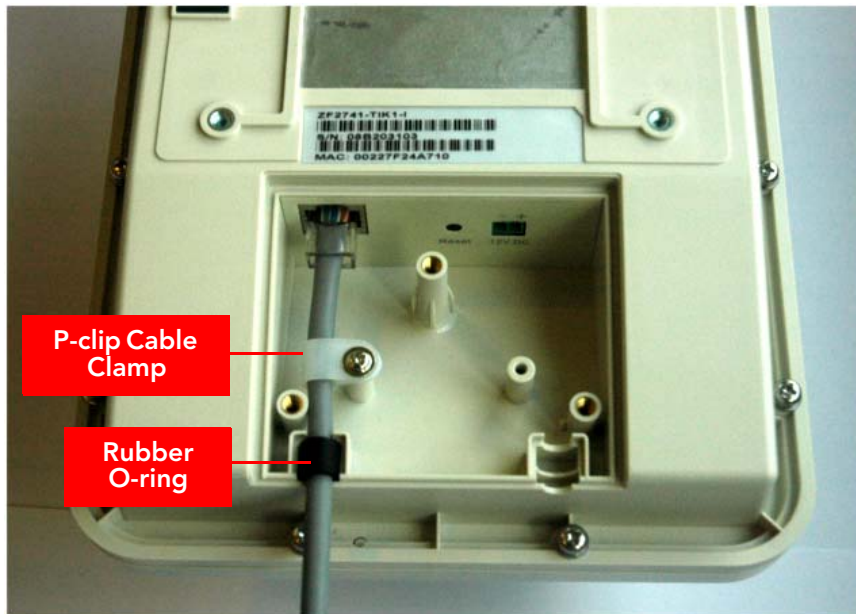
6. Connect the power jack to the **DC 48V IN** connector on the PoE injector, and then plug the power adapter to a power source. Verify that the **PWR** LED on the back of the Access Point is steady green.

Figure 23. Connect the Ethernet cables and power adapter to the PoE injector



7. Wrap the white P-clip cable clamp around the Ethernet cable, and then fasten it to the Access Point chassis using one of the short machine screws supplied with the Access Point.
8. Wrap the black rubber O-ring around the Ethernet cable, and then place the wrapped section into the left cable groove. The black rubber O-ring can support 5.6mm to 6.0mm cable.

Figure 24. Install the white P-clip clamp and the black rubber O-ring



9. (Optional) Connect a DC cable (not supplied with the Access Point) into the DC terminal block.



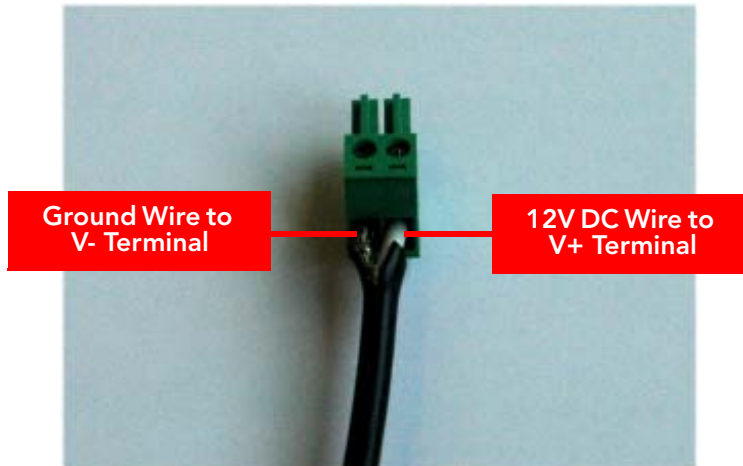
WARNING: Do not connect the DC cable to the DC power source at this point. You will connect it later after you finish mounting the Access Point.

- a. Take out the DC terminal block from the small plastic bag that contains the bottom cover of the Access Point.
- b. Connect the ground wire to V- terminal. If you are looking at the terminal block with the wiring terminal screws on top, the V- terminal is on the *left side*.
- c. Connect the +12v DC wire to the V+ terminal. If you are looking at the terminal block with the wiring terminal screws on top, the V+ terminal is on the *right side*.

Connecting to the Network

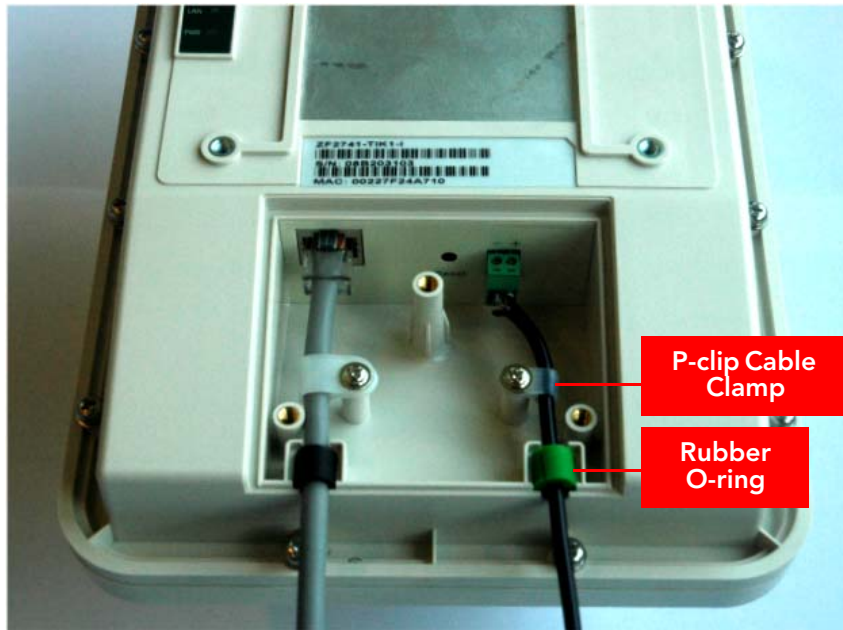
Step 2: Attach the Dynamic Bracket to the Access Point

Figure 25. Connect the ground wire to the V- terminal and the +12v DC wire to the V+ terminal



- d. Using a 3mm Phillips screw, tighten the wiring terminal screws.
- e. Wrap the white P-clip cable around the DC cable, and then fasten it to the Access Point chassis using one of the short machine screws supplied with the Access Point.
- f. Wrap the green rubber O-ring around the DC cable, and then place the wrapped section into the right cable groove.

Figure 26. Install the white P-clip clamp and the black rubber O-ring



CAUTION: If you are not connecting the DC cable to the DC terminal block, make sure you cover the right cable groove with one of the supplied solid rubber stoppers.

10. Place the bottom cover of the Access Point onto the bottom section, and then fasten it using the three machine screws that are supplied with the Access Point.



CAUTION: Before installing the bottom cover, verify that the perimeter rubber gasket on the underside of the cover is clear of debris.

Verifying the Installation

Associate a Wireless Client with the Access Point

Figure 27. Fasten the bottom cover using three machine screws




You have completed connecting the Access Point to the administrative computer and a power source.


7 Verifying the Installation

Ruckus Wireless strongly recommends that you verify that the Access Point is operating correctly and that wireless clients are able to associate with it before you mount the unit. Perform the following tasks to verify the installation.

Associate a Wireless Client with the Access Point

1. On the administrative computer, verify that the wireless interface is enabled. On Windows XP, click **All Programs > Connect To > Wireless Network Connection** to enable the wireless interface.
2. In the system tray, right-click the  (Wireless Network Connection) icon, and then click **View Available Wireless Networks**.
3. In the list of available wireless network, click the network with the same SSID as you configured in ["Configure Wireless # Settings"](#) on [page 21](#). For example, if you set the SSID to Ruckus Wireless AP, click the wireless network named **Ruckus Wireless AP**.

4. Click **Connect**.

Your wireless client connects to the wireless network. After the wireless client connects to the wireless network successfully, the wireless client icon in the system tray changes to .

Check the LEDs

Perform a spot-check using the LEDs to verify that the Access Point is operating normally. If the Access Point is operating normally and your wireless client was able to associate with it:

- The **PWR** LED is green.
- The **LAN** LED is green, and if traffic is passing through, it flashes green. Open a Web browser window, type `www.ruckuswireless.com` in the address bar, and then press `<Enter>`. The **LAN** LED should flash green as your wireless client connects to the Ruckus Wireless Web site through the Access Point.
- The **WLAN** LED is green. This indicates that at least one wireless client is connected to the Access Point's WLAN service.
- If you do not have Ruckus Wireless ZoneDirector on the network, the **DIR** LED is off. This indicates that the Access Point is operating in standalone mode. If there is a ZoneDirector device on the network, the **DIR** LED is green.

Check the TR069 Status (FlexMaster Management Only)

If you configured the Access Point to report to a FlexMaster server on the network, make sure you verify that it can successfully communicate with the FlexMaster server. You can do this by checking the TR069 status on the Access Point's Web interface.

1. Log in to the Access Point's Web interface.
2. Go to the **Administration > Management** page.
3. Scroll down to the **TR069 Status** section.
4. Check the value for **Last successful contact**. If it shows a date in green, this indicates that the Access Point was able to successfully communicate with FlexMaster.

8 Joining the Mounting Brackets

What You Will Need

- Hex bolts
- 10mm ratchet wrench

Joining the Mounting Brackets

Mounting on a Flat Surface or Vertical Pole

Mounting on a Flat Surface or Vertical Pole

1. Join the two brackets as shown in [Figure 28](#). Make sure that:
 - The dynamic bracket (attached to the Access Point) encloses the static bracket (attached to the mounting surface).
 - The side of the Access Point with the antenna connector is at the bottom, especially if you are planning to install an external antenna.

Figure 28. Join the two brackets



2. Align the mounting holes on the dynamic bracket with the mounting holes on the static bracket.
3. Place a split lock washer, and then a flat washer onto a hex bolt. Then insert the hex bolt into one of the mounting holes.



NOTE: Make sure the screw-washer assembly is in correct order. The split-lock washer should be in the middle and the flat washer should touch the bracket.

4. Repeat Step 3 for each of the mounting holes. There are four mounting holes on the bracket – two on each side.

Figure 29. Insert hex bolts into the mounting holes



5. Finger tighten the hex bolts.
6. Adjust the Access Point to your desired orientation.



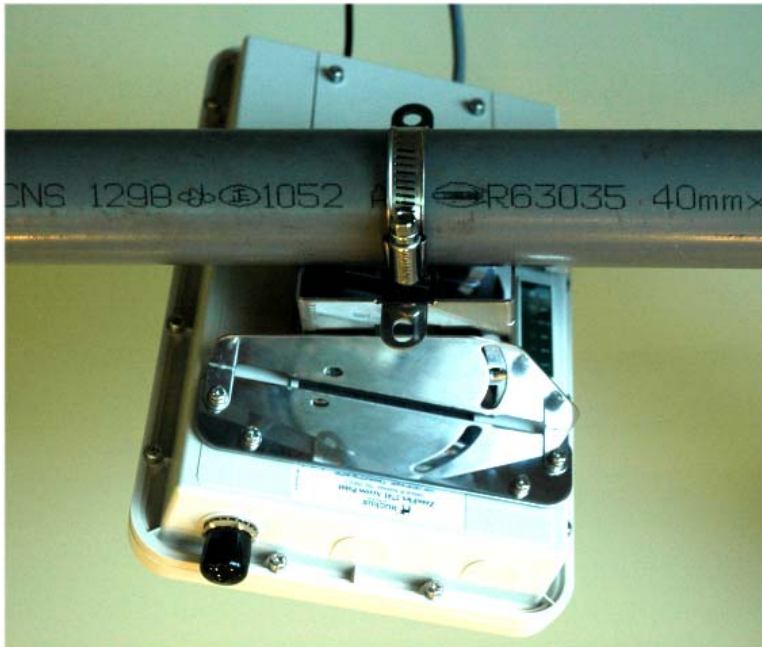
NOTE: If you have not yet determined the optimal orientation for your Access Point, refer to [“Determine the Optimal Mounting Location and Orientation”](#) on [page 9](#) for orientation guidelines.

7. Using a 10mm ratchet wrench, tighten the hex bolts to fix the Access Point’s orientation.
- You have completed mounting the Access Point on a flat surface or vertical pole.

Mounting on a Horizontal Pole

1. Join the two brackets as shown in [Figure 30](#). Make sure that:
 - The dynamic bracket (attached to the Access Point) encloses the static bracket (attached to the mounting surface).
 - The side of the Access Point with the antenna connector is at the bottom, especially if you are planning to install an external antenna.

Figure 30. Join the two brackets



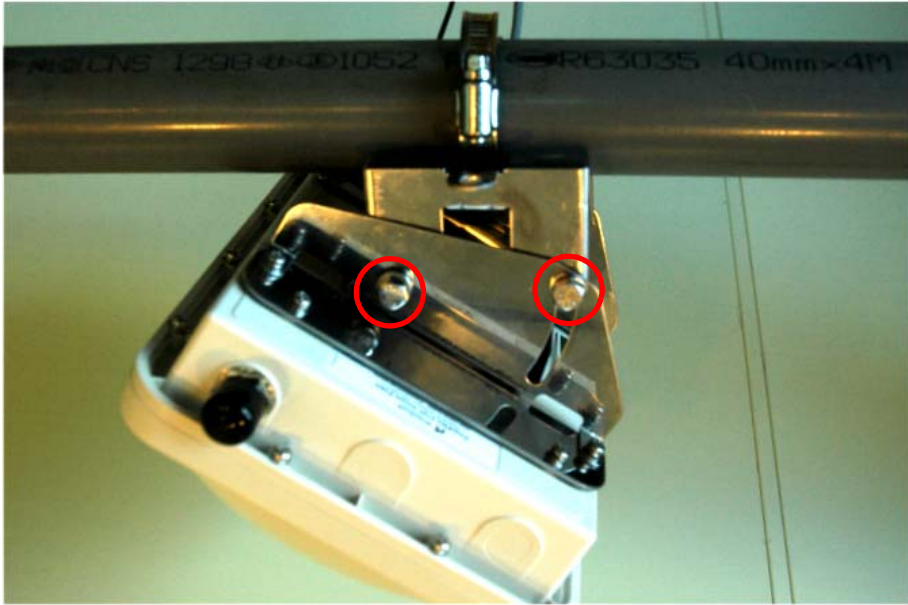
2. Align the mounting holes on the dynamic bracket with the mounting holes on the static bracket.
3. Place a split lock washer, and then a flat washer onto a hex bolt. Then insert the hex bolt into one of the mounting holes.



NOTE: Make sure the screw-washer assembly is in correct order. The split-lock washer should be in the middle and the flat washer should touch the bracket.

4. Repeat Step 3 for each of the mounting holes. There are four mounting holes on the bracket – two on each side.

Figure 31. Insert hex bolts into the mounting holes



5. Finger tighten the hex bolts.
6. Adjust the Access Point to your desired orientation.



NOTE: If you have not yet determined the optimal orientation for your Access Point, refer to [“Determine the Optimal Mounting Location and Orientation”](#) on [page 9](#) for a list of guidelines.

7. Using a 10mm ratchet wrench, tighten the hex bolts to fix the Access Point’s orientation. You have completed mounting the Access Point on a horizontal pole.

9 (Optional) Mounting and Connecting the External Antenna

If you want to extend the range of your wireless network, you can connect a 2.4GHz-5GHz, 9dBi (or lower) external antenna to the standard N-type female connector on the Access Point.



WARNING: Only trained and qualified personnel should be allowed to install, replace, or service this equipment.



WARNING: Before connecting the antenna to the Access Point, make sure that you disconnect the Access Point from the power source.

1. Disconnect the Access Point from the power source.
2. Remove the black waterproof antenna cover from the antenna connector. Put the antenna cover in a safe place, in case you need it later.
3. Connect the antenna to the standard N-type female antenna connector.

If the antenna comes with an RF coaxial cable (for example, a patch antenna), do the following:

- a. Physically mount the antenna on your desired location, preferably on the same supporting mounting structure as the Access Point.
- b. Connect the RF coaxial cable to the standard N-type female connector on the Access Point.

(Optional) Mounting and Connecting the External Antenna

Mounting on a Horizontal Pole

Figure 32. Connect the RF coaxial cable to the standard N-type female connector on the Access Point.



If the antenna comes with a standard N-type male connector for direct connection (for example, an omnidirectional antenna), connect the standard N-type male connector to the standard N-type female connector on the Access Point.

(Optional) Mounting and Connecting the External Antenna

Mounting on a Horizontal Pole

Figure 33. Connect the standard N-type male connector to the standard N-type female connector on the Access Point



4. Apply weatherproofing tape to the antenna connector to help prevent water from entering the connector.
5. Reconnect the Access Point to the power source.



CAUTION: If you are not connecting an external antenna to the standard N-type antenna interface on the Access Point, make sure that the waterproof antenna cover remains installed to protect the interface from elements, such as water or dirt.

You have completed connecting the external antenna to the Access Point.

10 What to Do Next

The following are some of the post-installation tasks that Ruckus Wireless recommends. Refer to the *ZoneFlex 2741 802.11g Outdoor Access Point User Guide* for more information on configuring and managing the Access Point.

Change the Administrative Password

Management access to the Web interface of the Access Point is controlled through administrative user name and password. Make sure you change the default administrative user name and password as soon as you complete the Access Point setup. This will help prevent unauthorized users from logging in to the Access Point's Web interface and changing the access point settings to compromise your network.

Configure the Security Settings

Unlike wired networks, anyone with a compatible wireless adapter can receive wireless data transmissions from your network well beyond your walls. To prevent unauthorized users from entering your wireless network and accessing your computers and files, Ruckus Wireless strongly recommends enabling and configuring wireless security on the Access Point. The Access Point supports several types of encryption and authentication methods to help prevent unauthorized access to your wireless network.

Read Related Documentation

If you are using FlexMaster or ZoneDirector to manage the Access Point, make sure you read the accompanying documentation to learn how to configure and manage the Access Point from the FlexMaster and ZoneDirector Web interface.

The latest versions of Ruckus Wireless product documentation are available for download on the Ruckus Wireless Support Web site at:

<http://support.ruckuswireless.com/documents>

11 Professional Installation Instructions

Personal Installation

This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

Installation Location

The product shall be installed at a location where the radiating antenna can be kept 20 cm from nearby person in normal operation condition to meet regulatory RF exposure requirement.

External Antenna

Use only the antennas which have been approved by Ruckus Wireless. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC limit and is prohibited.

Installation Procedures

Please refer to user's manual for the detail.

Warning

Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in US Rule CFR 47 part 15 section 15.247 & 15.407. The violation of the rule could lead to serious federal penalty.

Federal Communications Commission Notices

This product 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.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This equipment shall not be collocated with any other transmitter.

Harmful Interference Notice

This product has been tested and complies with the specifications 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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to 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 or television reception, which is found 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 or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

Changes or modifications to this equipment that have not been approved by Ruckus Wireless may void the user's authority to operate this equipment.

External Antenna

This device has been designed to operate with a patch antenna, and having a maximum gain of 9 dBi. Other antennatypes or having a gain greater than 9 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

Industry Canada Statement

This device complies with Industry Canada ICES-003 and RSS210 rules. Operation is subject to the following two conditions:

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.

Cet appareil est conforme aux normes NMB003 et RSS210 d'Industrie Canada. Le fonctionnement est soumis aux conditions suivantes :

1. Ce périphérique ne doit pas causer d'interférences;
2. Ce périphérique doit accepter toutes les interférences reçues, y compris celles qui risquent d'entraîner un fonctionnement indésirable.

Australia Statement

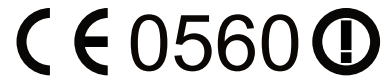
This device complies with the ACMA requirements for a Wi-Fi device namely Radio Communications (Low Impact Potential Devices) Class Licence 2000 Amd. 1:2007 and Radiocommunications (Compliance Labelling – Electromagnetic Radiation) Notice 2003. The equipment complies with the ACMA requirements for radiation exposure for a "general user/non-aware user". This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This equipment complies with the Australian safety requirements and should only used with the specified power adapter carrying a C-tick N136 and Electrical Approval Number V06649.

European Union Notices

Compliance Information for 2.4-GHz Wireless Products

The following standards were applied during the assessment of the product against the requirements of the Directive 1999/5/EC:

- Radio: EN 300 328
- EMC: EN 301 489-1, EN 301 489-17
- Safety: EN 60950, EN 50385



National Restrictions

This product may be used in all EU countries (and other countries following the EU directive 1999/5/EC) without any limitation except for the countries mentioned below: *Ce produit peut être utilisé dans tous les pays de l'UE (et dans tous les pays ayant transposés la directive 1999/5/CE) sans aucune limitation, excepté pour les pays mentionnés ci-dessous:*

Questo prodotto è utilizzabile in tutte i paesi EU (ed in tutti gli altri paesi che seguono le direttive EU 1999/5/EC) senza nessuna limitazione, eccetto per i paesi menzionati di seguito:

Das Produkt kann in allen EU Staaten ohne Einschränkungen eingesetzt werden (sowie in anderen Staaten die der EU Direktive 1999/5/CE folgen) mit Ausnahme der folgenden aufgeführten Staaten:

France

In case the product is used outdoors, the output power is restricted in some parts of the band. See the table below or check <http://www.arcep.fr/> for more details.

Dans la cas d'une utilisation en extérieur, la puissance de sortie est limitée pour certaines parties de la bande. Reportez-vous à la table 1 ou visitez <http://www.arcep.fr/> pour de plus amples détails.

Location	Frequency Range (MHz)	Power (EIRP)
Indoor (No restrictions)	2400-2483.5	100 mW (20 dBm)
Outdoor	2400-2454 [2454-2483.5]	100 mW (20 dBm) [10 mW(10 dBm)]

Italy

This product meets the National Radio Interface and the requirements specified in the National Frequency Allocation Table for Italy. Unless operating within the boundaries of the owner's property, the use of this 2.4 GHz Wireless LAN product requires a 'general authorization'. Please check with <http://www.comunicazioni.it/> for more details.

Questo prodotto è conforme alla specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN a 2.4 GHz richiede una "Autorizzazione Generale". Consultare <http://www.comunicazioni.it/> per maggiori dettagli.

Belgium

The Belgian Institute for Postal Services and Telecommunications (BIPT) must be notified of any outdoor wireless link having a range exceeding 300 meters. Please check <http://www.bipt.be> for more details.

Draadloze verbindingen voor buitengebruik en met een reikwijdte van meer dan 300 meter dienen aangemeld te worden bij het Belgisch Instituut voor postdiensten en telecommunicatie (BIPT). Zie <http://www.bipt.be> voor meer gegevens.

Les liaisons sans fil pour une utilisation en extérieur d'une distance supérieure à 300 mètres doivent être notifiées à l'Institut Belge des services Postaux et des Télécommunications (IBPT). Visitez <http://www.ibpt.be> pour de plus amples détails.

Taiwan Statement

The control, adjustment and on/off operation of this device does not violate the "Administrative regulations on low power radio waves radiated devices". Any adjustments to the device should be carried out or be monitored by a specialist who has expertise on radio frequency devices. Replacement of components which may lead to the violation to the regulations is not allowed. Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to an approved low power radio-frequency devices. The low power radio-frequency device shall not influence aircraft security and interfere with legal communications; if found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications is operated in compliance with the Telecommunications Act. The low power radio-frequency devices must not be susceptible with the interference from legal communications or ISM radio wave radiated devices.

Thailand Statement

The output power is restricted to 100 mW (20 dBm) EIRP.

Česky [Czech]	Ruckus Wireless tímto prohlašuje, že tento Radio LAN je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede Ruckus Wireless erklærer herved, at følgende udstyr Radio LAN overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erkläre Ruckus Wireless, dass sich das Gerät Radio LAN in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab Ruckus Wireless seadme Radio LAN vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, Ruckus Wireless declares that this Radio LAN is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente Ruckus Wireless declara que el Radio LAN cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Ruckus Wireless ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente Ruckus Wireless déclare que l'appareil Radio LAN est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente Ruckus Wireless dichiara che questo Radio LAN è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo Ruckus Wireless deklarē, ka Radio LAN atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo Ruckus Wireless deklaruoją, kad šis Radio LAN atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart Ruckus Wireless dat het toestel Radio LAN in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, Ruckus Wireless, jiddikjara li dan Radio LAN jikkonforma mal-htigijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Direttiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, Ruckus Wireless nyilatkozom, hogy a Radio LAN megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym Ruckus Wireless oświadcza, że Radio LAN jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	Ruckus Wireless declara que este Radio LAN está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	Ruckus Wireless izjavlja, da je ta Radio LAN v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	Ruckus Wireless týmto vyhlasuje, že Radio LAN spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	Ruckus Wireless vakuuttaa täten että Radio LAN tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar Ruckus Wireless att denna Radio LAN står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Íslenska [Icelandic]	Hér með lýsir Ruckus Wireless yfir því að Radio LAN er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
Norsk [Norwegian]	Ruckus Wireless erklærer herved at utstyret Radio LAN er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.