AP6562 Access Point
INSTALLATION GUIDE

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Service Information

If you have a problem using the equipment, contact your facility's Technical or Systems Support. If there is a problem with the equipment, they will contact Motorola Solutions Support at: *http://motorolasolutions.com/support*.

1   Introduction

The AP6562 access point, a component of the Motorola Solutions wireless controller system, links wireless 802.11abgn devices, enabling the growth of your wireless network with a cost effective alternative to standard access points. The AP6562 access point provides multiple deployment options.

The AP6562 access point receives all power and transfers data through the same CAT-5 or better Ethernet cable. An 802.3at Ethernet switch or power supply (specifically rated for the AP6562) is required.

An AP6562 model access point uses WiNG 5 software as its onboard operating system. The access point's unique WiNG 5 software enables the access point to function as either a Virtual Controller AP capable of adopting and managing up to 24 additional AP6562 access points or a Standalone access point managed by its connected controller.

If new to Motorola Solutions access point technology, refer to the *WiNG Access Point System Reference Guide* to familiarize yourself with access point technology and the feature set supported by the WiNG operating system. The guide is available, at *http://supportcentral.motorola.com/support/product/manuals.do*.

The AP6562 access point is approved under MODEL: AP-6562.

This document is written for the qualified network device installer.

1.1   Document Conventions
The following graphical alerts are used in this document to indicate notable situations:

✓	*NOTE*	Tips, hints, or special requirements that you should take note of.

⚠	*CAUTION*	Care is required. Disregarding a caution can result in data loss or equipment malfunction.

⚡	*WARNING!*	Indicates a condition or procedure that could result in personal injury or equipment damage.

1.2   Warnings

- Read all installation instructions and site survey reports, and verify correct equipment installation before connecting the access point.
- Remove jewelry and watches before installing this equipment.
- Verify the unit is grounded before connecting it to the power source.
- Verify any device connected to this unit is properly wired and grounded.
- Verify there is adequate ventilation around the device, and that ambient temperatures meet equipment operation specifications.

1.3   Site Preparation

- Consult your site survey and network analysis reports.
- Assign installation responsibility to the appropriate personnel.
- Identify and document where all installed components are located.
- Identify and prepare Ethernet and console port connections.
- Verify cable lengths are within the maximum allowable distances for optimal signal transmission.

1.4   AP6562 Package Contents

An AP6562 access point is available in internal antenna and external antenna models. Contents differ depending on the model ordered.

1.4.1   Internal Antenna Model Package Contents

Part Number	Description
AP-6562-66030-US	AP6562: Outdoor Dual Radio 802.11N US
AP-6562-66030-WR	AP6562 Outdoor Dual Radio 802.11N INTL
AP-6562-66030-EU	AP6562 Outdoor Dual Radio 802.11N EU

AP6562 internal antenna models (AP-6562-66030-US, AP-6562-66030-WW and AP-6562-66030-EU) include the following:

- AP6562 access point with internal antennas
- Weatherproof RJ45 plug kit
- AP6562 Installation Guide *(This Guide)*

1.4.2   *External Antenna Model Package Contents*

Part Number	Description
AP-6562-66040-US	AP6562 Outdoor Dual Radio 802.11N US
AP-6562-66040-WR	AP6562 Outdoor Dual Radio 802.11N INTL
AP-6562-66040-EU	AP6562 Outdoor Dual Radio 802.11N EU

AP6562 external antenna models (AP-6562-66040-US, AP-6562-66040-WW and AP-6562-66040-EU) include the following:

- AP6562 access point with external antenna connectors
- Weatherproof RJ45 plug kit
- AP6562 Installation Guide *(This Guide)*

1.4.3   *Features*

- GE1/PoE LAN port
- Console port
- LED indicators (see *AP6562 LED Indicators on page 21*)

The illustration below is of an internal antenna model.

	NOTE	When operating in a Gigabit Ethernet environment, CAT-5e or CAT-6 cable is recommended for Gigabit operation.

The AP6562 access point comes with dual radios supporting 802.11abgn. The access point contains runtime firmware which enables the unit to boot after a power up. The runtime firmware on the access point and the firmware downloaded from the connected controller can be updated via the Ethernet interface.

2   Hardware Installation

2.1   Installation Instructions

To prepare for the installation:

1. Match the model number on the purchase order with the model numbers in the packing list and on the case of the access point.

2. Verify the contents of the box include the intended AP6562 access point, and the included hardware matches the package contents for an internal antenna access point (see *Internal Antenna Model Package Contents on page 7*) or external antenna access point (see *External Antenna Model Package Contents on page 8*).

3. Review site survey and network analysis reports to determine the location and mounting position for the AP6562 access point.

4. Connect a CAT-5 or better Ethernet cable to a compatible 802.3at power source and run the cable to the installation site. Ensure there is sufficient slack on the cable to perform the installation steps.

✓   ***NOTE***   When operating in a Gigabit Ethernet environment, CAT-5e or CAT-6 cable is recommended for Gigabit operation.

2.2   Access Point Placement

For optimal performance, install the access point away from transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators and other industrial equipment. Signal loss can occur when metal, concrete, walls or floors block transmission. Install the access point in an open area or add access points as needed to improve coverage.

Place the access point using the following guidelines:

- Orient the access point antennas vertically for best reception (applies to external antenna models only).
- When deploying outdoor mesh networks using a pole mounted installation, install the access point at an ideal height of 30 to 35 feet from the ground.

To maximize the access point's radio coverage area, Motorola Solutions recommends conducting a site survey to define and document radio interference obstacles before installing the access point.

2.3   AP6562 Hardware Mounting and Installation

It is recommended to use the AP6562 mounting bracket kit (KT-147407-01) for most deployments. When a standoff distance is required for a pole mounted or wall mounted installation, use the extension arm kit (KT-150173-01).

2.3.1   Mounting Bracket Kit

The AP6562 mounting bracket kit (KT-147407-01) includes the access point bracket (left), angle adapter bracket (center), and pole mount bracket (right) sections:
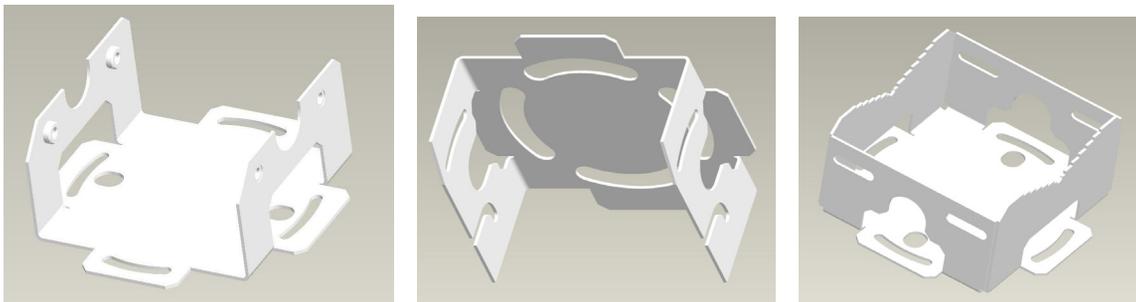
The access point bracket and the angle adapter bracket can rotated (plus or minus 15 degrees) and tilted (up to 45 degrees) to achieve the required angle and rotation.

The following ancillary hardware to assemble the mounting bracket sections is included in the kit::

Description	Quantity
M6 serrated hex flanged screws	8
1/2 inch hex head nut	2
1/2 inch x 3/4 inch hex head bolt	2

A torque wrench or ratchet with a 10mm adapter, or an adjustable wrench, can be used to assemble the mounting brackets. A finished assembly of the mounting bracket kit is shown below. Assembly during deployment may differ to achieve the required angle and rotation.

2.3.2   Extension Arm Kit

When mounting an AP6562 on poles more than 3 inches in diameter, use the extension arm kit (KT-150173-01) to provide a minimum standoff distance of twelve inches to avoid interference with the antennas. The extension arm kit is only required for AP6562 external antenna models.
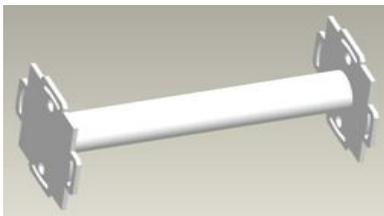
The extension arm kit can also be used in combination with the any of the brackets from the mounting bracket kit.

The following ancillary hardware to attach the extension arm to the mounting bracket kit sections is included in the extension arm kit:
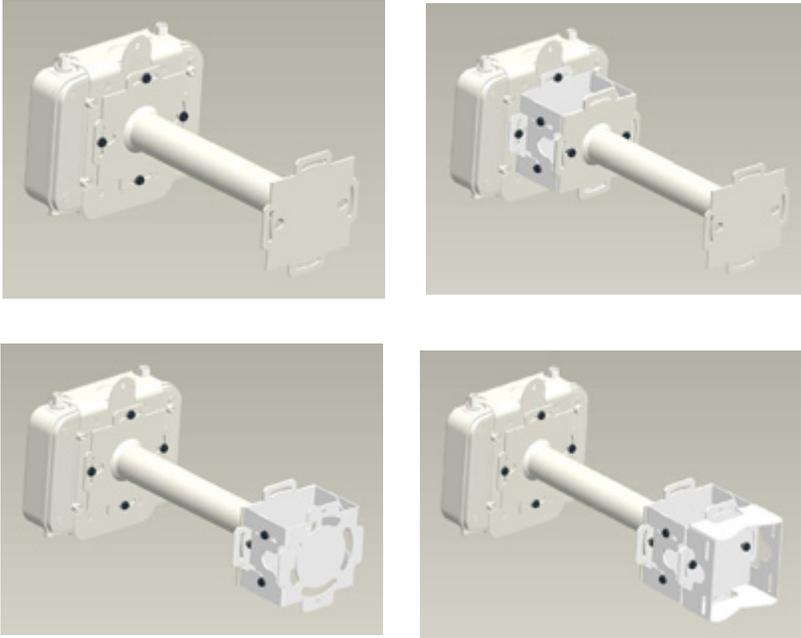
Description	Quantity
1/2 inch hex head nut	2
1/2 inch x 3/4 inch hex head bolt	2

2.3.3   Pole Mounted Installations

The mounting hardware kit and extension arm can be used in various combinations to properly install the AP6562 on a pole. For poles of up to 3 inches in diameter, attach the pole mount bracket of the mounting hardware kit at the desired position on the pole using band clamps up to 3/4 inch width, or a 1/2 inch x 4 inch wide U-bolt and nuts. For poles greater than 3 inches in diameter, attach the pole mount bracket using band clamps.

NOTE   The U-bolt and band clamps are not included in the mounting bracket kit.

✓	**NOTE**	The extension arm is recommended for installations on poles greater than 3 inches in diameter.

2.3.4 *Vertical Pole Mount*

Use the following procedures for vertical pole mount installations. The extension arm is recommended when mounting the access point to poles greater than 3 inches is diameter.

For poles up to 3 inches in diameter when using a U-bolt

1. Thread the two inner nuts onto the U-bolt. Place the U-bolt at the desired mounting location.

2. Place the pole mount bracket section on the U bolt. Adjust the inner nuts until the pole mount bracket section is against the pole and the U-bolt can be secured tightly to the pole.

3. Place the angle adapter bracket section on the U-bolt with the open slot connections on the bottom and align it with the pole mount section.

4. Put the two outer nuts on the U-bolt to attach the angle adapter bracket section to the pole mount bracket section.

5. Tighten all nuts to 300 inch pounds (lbf-in).

6. Position the access point bracket section so that the bottom of the section with the straight (not bevel cut) side is oriented toward the bottom side of the access point. Using a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, attach (but don't tighten) the access point bracket section to the AP6562 with the with four M6 hex flange screws.

7. Insert two M6 hex flange screws into the bottom holes on the sides of the access point bracket section.

8. Insert the two M6 hex flange screws in the bottom holes on the sides of the access point bracket section into the open slot connections on the bottom of the angle adapter bracket section.

9. Rotate the access point bracket section upward and align the top holes on the sides with the top holes on the angle adapter bracket section. Insert two M6 hex flange screws into the top holes on the angle adapter bracket section.

10. Use a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, to finish attaching the access point bracket section to the angle adapter bracket section with the M6 hex flange screws in the open slot connections and the top holes on the angle adapter bracket section. Do not tighten the screws until all rotation and tilt adjustments are complete.

11. To adjust the position of the access point, rotate the access point bracket section (plus or minus 15 degrees) and tilt the angle adapter bracket section (up to 45 degrees).

12. Tighten all hex flange screws to 60 inch pounds (lbf-in).

13. If required, install and attach a Kensington security cable (customer supplied) to the unit's lock port.

14. Attach an Ethernet cable from the access point to a controller with an 802.3at-compatible power source or use the designated outdoor rated power supply (AP-PSBIAS-7161-US or AP-PSBIAS-7161-WW) to supply power to the AP6562 (once fully cabled).

15. Verify the unit has power by observing that the LEDs are lit or flashing.

⚠	**CAUTION** If not using a 802.3at capable controller to power the AP6562, ensure only the AP6562's designated outdoor power supply (AP-PSBIAS-7161-US or AP-PSBIAS-7161-WW) is used to supply power to the access point. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

For mounting with band clamps:

1. Attach the pole mount bracket section at the desired mounting location using band clamps.

2. With the angle adapter bracket section positioned so that the open connector slots are on the bottom, attach the angle adapter bracket section to the pole mount bracket section using two 1/2 inch bolts and nuts. Tighten the nuts to 30 inch pounds (lbf-in).

3. Position the access point bracket section so that the bottom of the section with the straight (not bevel cut) sides is oriented toward the bottom side of the access point. Using a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, attach (but don't tighten) the access point bracket section to the AP6562 with the with four M6 hex flange screws.

4. Insert two M6 hex flange screws into the bottom holes on the sides of the access point bracket section.

5. Insert the two M6 hex flange screws in the bottom holes on the sides of the access point bracket section into the open slot connections on the bottom of the angle adapter bracket section.

6. Rotate the access point bracket section upward and align the top holes on the sides with the top holes on the angle adapter bracket section. Insert two M6 hex flange screws into the top holes on the angle adapter bracket section.

7. Use a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, to finish attaching the access point bracket section to the angle adapter bracket section with the M6 hex flange screws in the open slot connections and the top holes on the angle adapter bracket section. Do not tighten the screws until all rotation and tilt adjustments are complete.

8. Tighten all hex flange screws to 60 inch pounds (lbf-in).

9. If required, install and attach a Kensington security cable (customer supplied) to the unit's lock port.

10. Attach an Ethernet cable from the access point to a controller with an 802.3at-compatible power source or use the PWRS-14000-148R power supply to supply power to the AP6562 (once fully cabled).

11. Verify the unit has power by observing that the LEDs are lit or flashing.

	CAUTION	If not using a 802.3at capable controller to power the AP6562, ensure only the AP6562's designated outdoor power supply (AP-PSBIAS-7161-US or AP-PSBIAS-7161-WW) is used to supply power to the access point. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

To use the extension arm with the mounting hardware kit:

1. Attach the pole mount section at the desired mounting location using a U-bolt or band clamps.

2. Complete the steps for assembling and positioning the mounting bracket sections for poles less than or greater than 3 inches (see *Vertical Pole Mount on page 13*).

3. Using a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, attach the extension arm to the access point bracket section with four M6 hex flange screws. Tighten the hex flange screws to 60 inch pounds (lbf-in).

4. With the access point properly positioned, attach the extension arm to the access point with four M6 hex flange screws. Tighten the hex flange screws to 60 inch pounds (lbf-in).

5. If required, install and attach a Kensington security cable (customer supplied) to the unit's lock port.

6. Attach an Ethernet cable from the access point to a controller with an 802.3at-compatible power source or use the AP-PSBIAS-7161 power supply to supply power to the AP6562 (once fully cabled).

7. Verify the unit has power by observing that the LEDs are lit or flashing.

	CAUTION	If not using a 802.3at capable controller to power the AP6562, ensure only the AP6562's designated outdoor power supply (AP-PSBIAS-7161-US or AP-PSBIAS-7161-WW) is used to supply power to the access point. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

2.3.5   *Wall Mounted Installation*

For wall mounted installations, use only the access point bracket and if required the angle adapter bracket. The access point can also be installed using the sheet metal tab on the top of the enclosure.

✓ **NOTE**   The U-bolt and band clamps are not included in the mounting bracket kit.

✓ **NOTE**   The lag bolts are not included in the mounting bracket kit.

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1. With the open slot connections facing down, attach the angle adapter bracket section at the desired mounting location using four #10/32 lag bolts.

2. Using a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, attach (but don't tighten) the access point bracket section to the AP6562 with four M6 hex flange screws and insert two M6 hex flange screws into the bottom holes on the sides of the access point bracket section.

3. Insert the two M6 hex flange screws in the bottom holes on the sides of the access point bracket section into the open slot connections on the bottom of the angle adapter bracket section.

4. Rotate the access point bracket section upward and align the top holes on the sides with the top holes on the angle adapter bracket section. Insert two M6 hex flange screws into the top holes on the angle adapter bracket section.

5. Use a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, to finish attaching the angle adapter bracket section to the access point bracket section with the four M6 hex flange screws in the open slot connections and the top holes on the angle adapter bracket section. Do not tighten the screws until all rotation and tilt adjustments are complete.

6. To adjust the position of the access point, rotate the access point bracket section (plus or minus 15 degrees) and tilt the angle adapter bracket section (up to 45 degrees).

7. Tighten all hex flange screws to 60 inch pounds (lbf-in).

8. If required, install and attach a Kensington security cable (customer supplied) to the unit's lock port.

9. Attach an Ethernet cable from the access point to a controller with an 802.3at-compatible power source or use the designated outdoor rated power supply (AP-PSBIAS-7161-US or AP-PSBIAS-7161-WW) to supply power to the AP6562 (once fully cabled).

10. Verify the unit has power by observing that the LEDs are lit or flashing.

	CAUTION	If not using a 802.3at capable controller to power the AP6562, ensure only the AP6562's designated outdoor power supply (AP-PSBIAS-7161-US or AP-PSBIAS-7161-WW) is used to supply power to the access point. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

To use only the extension arm:

1. Using four #10/32 lag bolts, attach the extension arm at the desired mounting location.
2. Using a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, attach the mounting extension arm to the access point with four M6 hex flange screws. Tighten the hex flange screws to 60 inch pounds (lbf-in).

To use the extension arm with the mounting hardware kit:

1. With the open slot connections facing down, attach the angle adapter bracket section at the desired mounting location using four #10/32 lag bolts.
2. Complete the steps for assembling and positioning the angle adapter bracket and access point bracket sections as outlined above (see *Vertical Pole Mount on page 13*).
3. Attach the extension arm to the access point bracket section of the assembled mounting bracket already in position using four M6 hex flange screws. Tighten the hex flange screws to 60 inch pounds (lbf-in).
4. Using a torque wrench or a ratchet and a 10mm socket, or an adjustable wrench, attach the extension arm to the access point with four M6 hex flange screws. Tighten the hex flange screws to 60 inch pounds (lbf-in).

2.4 AP6562 Internal Antenna Model

AP6562 internal antenna models (AP-6562-66030-US, AP-6562-66030-WR and AP-6562-66030-EU) are configured with four internal antennas.

2.5 AP6562 External Antenna Model

AP6562 external antenna models (AP-6562-66040-US, AP-6562-66040-WR and AP-6562-66040-EU) are configured with four external N type connectors.

✓ **NOTE** If an antenna connector is unused, the open connector must be covered with an appropriate threaded metal or plastic antenna connector cover.

The labels for Radio 1-0, Radio 1-1, Radio 2-0 and Radio 2-1 are molded into the AP6562 access point enclosure beside the antenna connectors. When mounting antennas to the connectors, ensure that you have selected the appropriate band for the configured radio. Radio 1 is a 2.4 GHz radio.

Motorola Solutions offers three antenna suites to support 2.4 GHz band, 5 GHz band, and dual band options. Select an antenna model best suited to the intended operational environment of your access point.

The 2.4 GHz antenna suite includes the following models:

Part Number	Antenna Type	Maximum Gain
ML-2499-HPA8-01	Outdoor rated dipole antenna; N-Male Connector	8
ML-2499-HPA4-01	Outdoor rated dipole antenna; N-Male Connector	4
ML-2499-HPA3-01R	Outdoor rated dipole antenna; N-Male Connector	8

The 5 GHz antenna suite includes the following models:

Part Number	Antenna Type	Maximum Gain
ML-5299-HPA5-01	Outdoor rated dipole antenna; N-Male Connector	5
ML-5299-FHPA6-01	Outdoor rated dipole antenna; N-Male Connector	8

The dual band antenna suite includes the following model:

Part Number	Antenna Type	Maximum Gain
ML-2452-HPAG5A8-01	Outdoor rated dipole antenna; N-Male Connector	5

✓ **NOTE** Dual band antennas should only be used on Radio 2-0 and Radio 2-1 connectors.

For up-to-date information on supported antennas and antenna specifications, please refer to the *Motorola Solutions Enterprise Wireless LAN Antenna Specification Guide* available on the Motorola Solutions Web site. For more information, refer to *http://supportcentral.motorola.com/support/product/manuals.do*.

2.6   AP6562 LED Indicators

Both internal antenna and external antenna models have LED activity indicators on the front of the case.

The LEDs provide a status display indicating error conditions, transmission, and network activity for the 5 GHz 802.11an (amber) radio or the 2.4 GHz 802.11bgn (green) radio.

Task	*5 GHz Activity LED* (Amber)	*2.4 GHz Activity LED* (Green)
Unadopted	Off	Blink interval at 5 times a second
Normal Operation	• If this radio band is enabled: Blink at 5 second interval • If this radio band is disabled: Off • If there is activity on this band: Blink interval at 1 time per second	• If this radio band is enabled: Blink at 5 second interval • If this radio band is disabled: Off • If there is activity on this band: Blink interval at 1 time per second
Firmware Update	On	Off
Sensor Mode	Blink interval at 5 times a second	Blink interval at 5 times a second

3   Initial Access Point Configuration

Once the access point is installed and powered on, complete the following steps to get the device up and running using the Initial Setup Wizard:

1. Attach an Ethernet cable from the access point to a controller with an 802.3at compatible power source or use the PWRS-14000-148R power supply to supply power to the AP6562 (once fully cabled).

    If your host system is a DHCP server, an IP address is automatically assigned to the AP6562 and can be used for device connection. However, if a DHCP server is not available, you'll need to derive the IP address from the AP6562 MAC address. Using this method, the last two bytes of the AP6562 MAC address become the last two octets of the IP address.

    AP6562 MAC address - 00:C0:23:00:F0:0A
    AP6562 IP address equivalent - 169.254.240.10

    To derive the AP6562's IP address using its factory assigned MAC address:

    a. Open the Windows calculator be selecting *Start* > *All Programs* > *Accessories* > *Calculator*. This menu path may vary slightly depending on your version of Windows.
    b. With the Calculator displayed, select *View* > *Scientific*. Select the **Hex** radio button.

    c. Enter a hex byte of the AP6562's MAC address. For example, F0.

    d. Select the **Dec** radio button. The calculator converts F0 into 240. Repeat this process for the last AP6562 MAC address octet.

2. Point the Web browser to the AP6562's IP address (using https://). The following login screen displays:
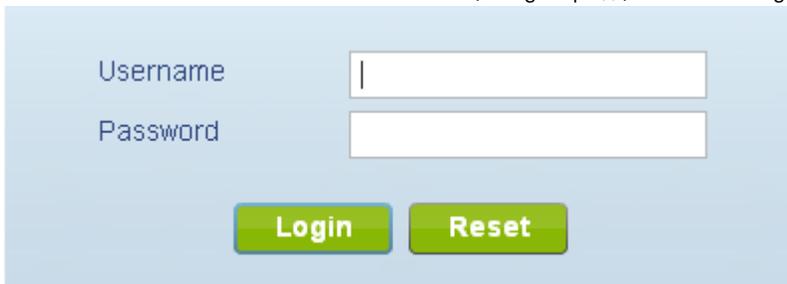
3. Enter the default username *admin* in the **Username** field.
4. Enter the default password *motorola* in the **Password** field.

5. Click the **Login** button to load the management interface.

✓ *NOTE* When logging in for the first time, you're prompted to change the password to enhance device security in subsequent logins.

✓ *NOTE* If you get disconnected when running the wizard, you can connect again with the access point's actual IP address (once obtained) and resume the wizard.

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6. Select the **Start Wizard** button to run the initial setup wizard.

    The setup wizard displays the first time the AP6562 user interface is accessed in order to define the AP6562's initial configuration.

    An initial setup wizard is available to aid in configuring a simple WLAN deployment. The wizard will guide configuration of the following features:

    1. Access Point Type
    2. Bridge or Router Operation
    3. LAN Configuration
    4. Radio Mapping
    5. WAN Configuration
    6. Wireless LAN Configuration
    7. Location, Country, and Time Zone

    Would you like to use the wizard?

    [Start Wizard]   [Not Now]   [Never]

7. If this is the first time the management interface has been accessed, a dialogue displays to start the wizard. Select **Start Wizard** to run the wizard.

Navigation Panel

✔ **Introduction**

🖱 **Access Point Type**

🖱 **Access Point Mode**

🖧 **LAN Configuration**

🖧 **WAN Configuration**

📡 **Radio Configuration**

🖧 **Wireless LAN Setting**

🌐 **Country/Date/Time**

📄 **Summary and Commit**

The first page of the Initial AP Setup Wizard displays the *Navigation Panel* and *Introduction* for the configuration activities comprising the access point's initial setup

A green checkmark to the left of an item in the Navigation Panel defines the listed task as having its minimum required configuration parameters set correctly. A red X defines the task as still requiring at least one parameter be defined correctly.

The Introduction screen displays a list of the basic configuration activities supported by the Initial Setup Wizard.

⊞ Function Highlight ———————————————————————————

    1. Access Point Types: Virtual Controller AP or Standalone AP

    2. Access Point Mode: Bridge or Router Operation

    3. LAN Configuration

    4. Radio Configuration

    5. WAN Configuration

    6. Wireless LAN Configuration

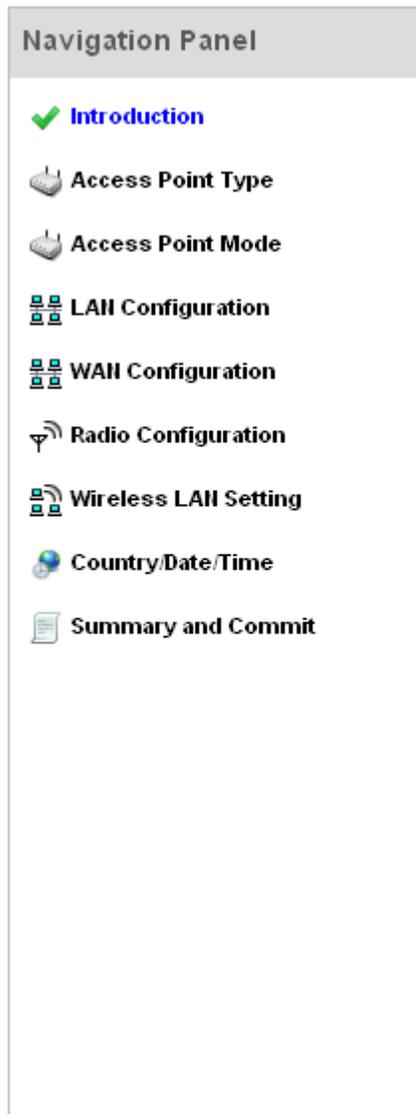   7. Location, Country Code, Time Zone, Date and Time

    8. Summary and Save/Commit

8.   Select **Save/Commit** within each page to save the updates made to that page's configuration. Select **Next** to proceed to the next page listed in the Navigation Panel. Select **Back** to revert to the previous screen in the Navigation Panel without saving your updates.

> ✓ | *NOTE* | While you can navigate to any page in the navigation panel, you cannot complete the Initial AP Setup Wizard until each task in the Navigation Panel has a green checkmark.

9.   Select **Next**. The Initial AP Setup Wizard displays the **Access Point Type** screen to define the access point's Standalone versus Virtual Controller AP functionality and the way the access point is adopted to a controller.

Access Point Type Selection

○ Virtual Controller AP - When multiple access points are deployed, a single access point can function as a Virtual Controller AP and manage other access points. The Virtual Controller AP can adopt and configure other access points of the same model in a 24-cell (maximum) deployment.

◉ Standalone AP - Select this option to deploy this access point as an autonomous "fat" access point. A standalone AP isn't managed by a Virtual Controller AP, or adopted by a controller.

○ Adopted to Controller - Select this option when you want the AP to adopt to a controller. The AP will discover L2 connected controllers automatically. It will also try to discover controllers over L3 using DHCP or DNS discovery mechanism. For this, no further configuration is required on the AP. Please see the System Reference Guidefor details on how to setup your DHCP or DNS server to enable this. If the AP is not on the same L2 segment as the controller and your network is not setup for DHCP or DNS based discover, you can specify the controller IP manually below.

10. Select an **Access Point Type** from the following options:

- *Virtual Controller AP* - When more than one access point is deployed, a single access point can function as a Virtual Controller AP. Up to 24 access points can be connected to, and managed by, a single Virtual Controller AP of the same AP6562 model.

- *Standalone AP* -Select this option to deploy this access point as an autonomous fat access point. A Standalone AP isn't managed by a Virtual Controller AP, or adopted by a controller.

> **NOTE** If designating the access point as a Standalone AP, Motorola Solutions recommends the access point's UI be used exclusively to define its device configuration, and not the CLI. The CLI provides the ability to define more than one profile and the UI does not. Consequently, the two interfaces cannot be used collectively to manage profiles without an administrator encountering problems.

- *Adopted to Controller* - Select this option when deploying the access point as a controller managed (Dependent mode) access point. Selecting this option closes the Initial AP Setup Wizard. An adopted access point obtains its configuration from a profile stored on its managing controller. Any manual configuration changes are overwritten by the controller upon reboot.

Select the *Automatic controller discovery* option to enable the access point to be discovered and adopted using layer 2 settings. If preferring layer 3 adoption, select the *Static Controller Configuration* option, and define the addresses of the preferred controllers. If using the static method, you'll also need to define whether the access point receives an IP address using DHCP or if IP resources are provided statically.

Adoption Settings

     ○ Automatic controller discovery (L2, DHCP or DNS based)

     ◉ Static Controller Configuration

        Controller 1 ✱ [157 . 235 . 121 . 21]   Controller 2 [. . .]

        AP IP Address

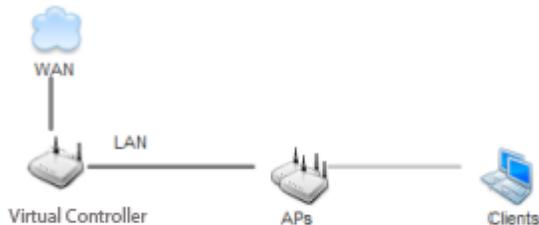   ○ Use DHCP ◉ Static IP Address/Subnet   ✱ [192 . 168 . 0 . 1 / 24 ▾]

                      Default Gateway   ✱ [192 . 168 . 0 . 1]

11. Select **Next**. The Initial AP Setup Wizard displays the **Access Point Mode** screen to define the access point's routing or bridging mode functionality.

12. Select an **Access Point Mode** from the available options.

- *Router Mode* - In Router Mode, the access point routes traffic between the *local network* (LAN) and the Internet or *external network* (WAN). Router mode is recommended in a deployment supported by just a single access point.

- *Bridge Mode* - In Bridge Mode, the AP depends on an external router for routing LAN and WAN traffic. Routing is generally used on one device, whereas bridging is typically used in a larger network. Thus, select Bridge Mode when deploying this access point with numerous peer APs supporting clients on both the 2.4 and 5GHz radio bands.

13. Select **Next**. The Initial AP Setup Wizard displays the **LAN Configuration** screen to set the access point's LAN interface configuration.

品 LAN Configuration

Please configure interface settings for LAN (VLAN 1) which will be used by wireless clients

○ Use DHCP   *What is this?*

⦿ Static IP Address/Subnet   *What is this?*   ✳ 192.168. 0 . 1 / 24 ▾

DHCP Server

☐ Use on-board DHCP server to assign IP addresses to wireless clients

Range   192.168. 0 .100   --   192.168. 0 .200

Default Gateway   192.168. 0 . 1

Domain Name Server (DNS)

☑ DNS Forwarding

Primary DNS   .   .   .

Secondary DNS   .   .   .

14. Set the following DHCP and Static IP Address/Subnet information for the LAN interface:

   • *Use DHCP* - Select the checkbox to enable an automatic network address configuration using the access point's DHCP server.

   • *Static IP Address/Subnet* - Enter an IP Address and a subnet for the access point's LAN interface. If Use DHCP is selected, this field is not available. When selecting this option, define the following *DHCP Server* and *Domain Name Server (DNS)* resources, as those fields will become enabled on the bottom portion of the screen.

      • *Use on-board DHCP server to assign IP addresses to wireless clients* -Select the checkbox to enable the access point's DHCP server to provide IP and DNS information to clients on the LAN interface.

      • *Range* - Enter a starting and ending IP Address range for client assignments on the LAN interface. Avoid assigning IP addresses from x.x.x.1 - x.x.x.10 and x.x.x.255, as they are often reserved for standard network services. This is a required parameter.

      • *Default Gateway* - Define a default gateway address for use with the default gateway. This is a required parameter.

- *DNS Forwarding* - Select this option to allow a DNS server to translate domain names into IP addresses. If this option is not selected, a primary and secondary DNS resource must be specified. DNS forwarding is useful when a request for a domain name is made but the DNS server, responsible for converting the name into its corresponding IP address, cannot locate the matching IP address.
  - *Primary DNS* - Enter an IP Address for the main Domain Name Server providing DNS services for the access point's LAN interface.
  - *Secondary DNS* - Enter an IP Address for the backup Domain Name Server providing DNS services for the access point's LAN interface

15. Select **Next.** The Initial AP Setup Wizard displays the **WAN Configuration** screen to set the access point's WAN interface configuration.

WAN Configuration

Please configure interface settings for WAN port

- ● Use DHCP   What is this?
- ○ Static IP Address/Subnet   0 . 0 . 0 . 0 / 24 ▾   What is this?

Default Gateway   .   .   .

The port connected to the WAN   ● GE1 Port   What is this?

                                  ○ GE2 Port   What is this?

☐ Enable NAT on the WAN Interface   What is this?

16. Set the following DHCP and Static IP Address/Subnet information for the WAN interface:

- *Use DHCP* - Select the checkbox to enable an automatic network address configuration using the access point's DHCP server.
- *Static IP Address/Subnet* - Enter an IP Address/Subnet and gateway for the access point's WAN interface. These are required fields
- *The port connected to the WAN* - Select the port used as the physical access point connection to the external network. This ports available differ depending on the access point model deployed. Access point models with a single port have this option fixed.

- *Enable NAT on the WAN Interface* - Select the checkbox to allow traffic to pass between the access point's WAN and LAN interfaces.

17. Select **Next.** The Initial AP Setup Wizard displays the **Radio Configuration** screen to define support for the 2.4GHz radio band, 5GHz radio band or to set the radio's functionality as a dedicated sensor.

✓   *NOTE*   The **ADSP Sensor Server** field displays at the bottom of the screen only if a radio has been dedicated as a sensor.

Radio 1

◯ Configure as a Data Radio   What is this?

    Radio Frequency Band   ◉ 2.4GHz   ◯ 5.0GHz

    Power Level   [1] ⬆⬇ (1 -- 23)   Channel Mode   [Random ▼]

◉ Configure as a Sensor Radio   What is this?

◯ Disable the Radio   Radio 1 will be disabled. Please make sure this is what you want to do.

ADSP Sensor Server

ADSP Primary IP ✱ [157 . 235 . 121 . 21]   Secondary IP   [157 . 235 . 121 . 31]

18. Set the following parameters for the radio:

- *Configure as a Data Radio* - Select this option to dedicate this radio for WLAN client support in either the selected 2.4 or 5GHz radio band.
  - *Radio Frequency Band* - Select either the 2.4GHz or 5.0GHz radio band to use with the radio when selected as a Data Radio. The selected band is used for WLAN client support. Considers selecting one radio for 2.4GHz and another for 5GHz support when supporting clients in both the 802.11bg and 802.11n bands.
  - *Power Level* - Use the spinner control to select a 1 - 23 dBm minimum power level to assign to this radio in selected 2.4 or 5.0 GHz band. 1 dBm is the default setting.

- • *Channel Mode* - Select either *Random*, *Best* or *Static*. Select **Random** for use with a 802.11an radio. To comply with *Dynamic Frequency Selection* (DFS) requirements in the European Union, the 802.11an radio uses a randomly selected channel each time the access point is powered on. Select **Best** to enable the access point to scan non-overlapping channels and listen for beacons from other access points. After the channels are scanned, it will select the channel with the fewest access points. In the case of multiple access points on the same channel, it will select the channel with the lowest average power level. When **Constantly Monitor** is selected, the access point will continuously scan the network for excessive noise and sources of interference. Select **Static** to assign the access point a permanent channel and scan for noise and interference only when initialized.
- • *Configure as a Sensor Radio* - Select this option to dedicate the radio to sensor support exclusively. When functioning as a sensor, the radio scans in sensor mode across all channels within the 2.4 and 5.0GHz bands to identify potential threats within the access point managed network. If dedicating a radio as a sensor resource, a primary and secondary ADSP server must be specified as an ADSP management resource.
- • *Disable the Radio* - Select this option to disable this radio, thus prohibiting it from either providing WLAN or sensor support. Verify this course action with your network administrator before rendering the radio offline.
19. Select **Next**. The Initial AP Setup Wizard displays the **Wireless LAN Setting** screen to define network address and security settings for two WLAN configurations available to the access point as part of the Initial Setup Wizard. Once the access point has an initial configuration defined, numerous additional WLAN configurations can be set.

20. Set the following parameters for each of the two WLAN configurations available as part of this Initial AP Setup Wizard:

- *SSID* - Enter or modify the *Services Set Identification* (SSID) associated with the WLAN. The WLAN name is auto-generated using the SSID until changed by the user. The maximum number of characters is 32. Do not use < > | " & \ ? , This is a required parameter for each WLAN.

- *WLAN Type* - Set the data protection scheme used by clients and access points within the WLAN. The following options are available:

    - *No Authentication and no Encryption* - Select this option to provide no security between the access point and connected clients on this WLAN.

    - *Captive Portal Authentication and No Encryption* - Select this option to use a Web page (either internally or externally hosted) to authenticate users before access is granted to the network. If using this option, define whether a local or external RADIUS authentication resource is used.

    - *PSK Authentication and WPA2 Encryption* - Select the option to implement a pre-shared key that must be correctly shared between the access point and requesting clients using this WLAN. If using this option, specify a WPA key in either ASCII (8-63 characters) or HEX (64 characters) format.

    - *EAP Authentication and WPA2 Encryption* - Select this option to authenticate clients within this WLAN through the exchange and verification of certificates. If using this option, define whether a local or external RADIUS authentication resource is used.

- *WPA Key* - If a WPA key is required (PSK Authentication and WPA2 Encryption), enter an alphanumeric string of 8 to 63 ASCII characters or 64 HEX characters as the primary string both transmitting and receiving authenticators must share. The alphanumeric string allows character spaces. This passphrase saves the administrator from entering the 256-bit key each time keys are generated.

- *RADIUS Server* - If the WLAN requires a RADIUS server to validate user credentials, designate whether the access point is using an **External RADIUS Server** resource or the access point's own **Onboard RADIUS Server**. If using an external RADIUS server resource, provide the IP address of the external server and the shared secret used to authenticate the request.

✓	*NOTE*	If using the access point's onboard RADIUS server, an additional **RADIUS Server Configuration** screen displays within the Navigation Panel on the left-hand side of the screen. Use this screen to create user accounts validated when the access point authenticates client connection requests to the onboard RADIUS server.

21. Select **Next**. The Initial AP Setup Wizard displays the **RADIUS Server Configuration** screen if the access point's onboard RADIUS server is required to validate user requests. If an onboard RADIUS server is not required, the Initial AP Setup Wizard displays the **Country/Date/Time** screen to set device deployment, administrative contact and system time information.

Some WLANs require authentication using the on-board RADIUS server. User accounts must be added for all users that should be authorized by the server.

Username	Description	Actions

Add On-Board RADIUS Server Users

Username ✱ [   ]

Password ✱ [   ]

Confirm Password ✱ [   ]

Description [   ]

[Add User]   [Modify User]   [Reset]

22. Refer to the *Username*, *Password*, *Description* and *Actions* columns to review credentials of existing RADIUS Server user accounts. Add new accounts or edit the properties of existing accounts as updates are required.

23. Refer to the **Add On-Board RADIUS Server Users** field to set the following parameters for a user account:

- *Username* - If adding a new user account, create a username up to X characters in length. The username cannot be revised if modifying the user configuration. This is a required parameter.
- *Password* - Provide (or modify) a password between X - X characters in length entered each time a requesting client attempts access to the AP managed network using the access point's onboard RADIUS server. This is a required parameter.
- *Confirm Password* - Re-enter (or modify) the password as a means of confirming the password. This is a required parameter.
- *Description* - Optionally provide a description of the user account as means of further differentiating it from others.

24. When completed, select **Add User** to commit a new user, **Modify User** to commit a modified user or **Reset** to clear the screen without updating the configuration. Selecting Reset clears the field of all entered user account information.

25. Select **Next**. The Initial AP Setup Wizard displays the **Country/Date/Time** screen to set device deployment, administrative contact and system time information. The system time can either be set manually or be supplied by a dedicated *Network Time Protocol* (NTP) resource.

26. Refer to the **Country and Time Zone** field to set the following device deployment information:

- *Location* - Define the location of the access point. The Location parameter acts as a reminder of where the AP is deployed within the Motorola Solutions managed wireless network.
- *Contact* - Specify the contact information for the administrator. The credentials provided should accurately reflect the individual responding to service queries.
- *Country* - Select the Country where the access point is deployed. The access point prompts for the correct country code on the first login. A warning message also displays stating an incorrect country setting may result in illegal radio operation. Selecting the correct country is central to legal operation. Each country has its own regulatory restrictions concerning electromagnetic emissions and the

maximum RF signal strength that can be transmitted. This is a required parameter.

- *Time Zone* - Set the time zone where the access point is deployed. This is a required parameter. The setting should be complimentary with the selected deployment country.

27. If an NTP resource is unavailable, set the **System Date and Time** (calendar date, time and AM/PM designation).

28. Optionally enter the IP address of a server used to provide system time to the access point. Once the IP address is entered, the **Network Time Protocol (NTP)** functionality is engaged automatically for synchronization with the NTP resource.

29. If an NTP resource is unavailable, set the **System Date and Time** (calendar date, time and AM/PM designation).

30. Optionally enter the IP address of a server used to provide system time to the access point. Once the IP address is entered, the **Network Time Protocol (NTP)** functionality is engaged automatically for synchronization with the NTP resource.

31. Select **Next**. The Initial AP Setup Wizard displays the **Summary and Commit** screen to summarize the screens (pages) and settings updated using the Initial AP Setup Wizard.

There's no user intervention or additional settings required within this screen. It's an additional means of validating the configuration before its deployed. However, if a screen displays settings not intended as part of the initial configuration, the screen can be selected from within the Navigation Panel and its settings modified accordingly.

Access Point Type Page ─────────────────────────

Access Point Type   Standalone AP

Access Point Mode Page ────────────────────────

Access Point Mode   Router Mode

LAN Configuration Page ────────────────────────

LAN Configuration Type   Static IP Address/Subnet

Static IP Address/Subnet   192.168.0.1/24

WAN Configuration Page ───────────────────────

WAN Configuration Type   Use DHCP

Port to External   GE1 Port

Radio Configuration Page ──────────────────────

Radio 1   Configure as a Sensor Radio

ADSP Primary IP   157.235.121.21

Secondary IP   157.235.121.31

If the configuration displays as intended, select the **Save/Commit** button to implement these settings to the access point's configuration. If additional changes are warranted based on the summary, either select the target page from the Navigational Panel, or use the **Back** and **Next** buttons to scroll to the target screen

For information on how use a Motorola Solutions RFS Series controller to manage an AP6562 access point, refer to *http://supportcentral.motorola.com/support/product/manuals.do*.

4   Specifications

4.1   AP6562 Internal Antenna Model Power Specifications

An AP6562 internal model access point has the following power specifications:

Operating voltage	36-57 VDC
Power in (PoE)	802.3at

4.2   AP6562 Internal Antenna Model Physical Specifications

An AP6562 internal antenna model access point has the following physical specifications:

Dimensions	9.1 in W x 9.8 in H x 2.6 in D 23.1cm W x 24.9cm H x 24.9cm D
Enclosure	IP 67 rated, polymeric corrosion resistant, ASTM B117 salt, fog, and rust resistent
Weight	2.90 lbs / 1.3 kg
Operating temperature	-22°F to +140°F/-30°C to +60°C
Storage temperature	-40°F to +185°F/-40°C to +85°C
Operating humidity	5 to 95% Relative Humidity non-condensing
Storage humidity	85% Relative Humidity non-condensing
Operating altitude (maximum)	8,000 ft/2438.4 m
Storage altitude (maximum)	30,000 ft/9144.0 m
Electrostatic discharge	EN61000-4-2 Air +/-15kV, Contact +/-8kV
Operational shock	IE60721-3-4, Class 4M3, MIL STD 810F
Operational vibration	IE60721-3-4, Class 4M3

4.3   AP6562 Internal Antenna Model Antenna Specifications

An AP6562 internal antenna model access point has the following antenna specifications:

Radio 1	2.4GHz@5.0dBi
Radio 2	2.4GHz@3.0dBi, 5.0GHz@6.0dBi

4.4   AP6562 External Antenna Model Power Specifications

An AP6562 external antenna model access point has the following power specifications:

Operating voltage	36-57 VDC
Power in (PoE)	802.3at

4.5   AP6562 External Antenna Model Physical Specifications

An AP6562 external antenna model access point has the following physical specifications:

Dimensions	9.1 in W x 9.8 in H x 2.6 in D
	23.1cm W x 24.9cm H x 24.9cm D
Enclosure	IP 67 rated, polymeric corrosion resistant, ASTM B117 salt, fog, and rust resistent
Weight	2.90 lbs / 1.3 kg
Operating temperature	-22°F to +140°F/-30°C to +60°C
Storage temperature	-40°F to +185°F/-40°C to +85°C
Operating humidity	5 to 95% Relative Humidity non-condensing
Storage humidity	85% Relative Humidity non-condensing
Operating altitude (maximum)	8,000 ft/2438.4 m
Storage altitude (maximum)	30,000 ft/9144.0 m
Electrostatic discharge	EN61000-4-2 Air +/-15kV, Contact +/-8kV
Operational shock	IE60721-3-4, Class 4M3, MIL STD 810F
Operational vibration	IE60721-3-4, Class 4M3

4.6   Radio Specifications

AP6562 model access points have the following radio specifications:

Data rates supported	802.11b/g: 1,2,5.5,11,6,9,12,18,24,36,48, and 54Mbps 802.11a: 6,9,12,18,24,36,48, and 54Mbps 802.11n: MCS 0-15 up to 300Mbps
Network standard	802.11a, 802.11b, 802.11g, 802.11n
Wireless medium	*Direct Sequence Spread Spectrum* (DSSS), *Orthogonal Frequency Division Multiplexing* (OFDM) *Spatial multiplexing* (MIMO)
Uplink	Auto-sensing 10/100/1000 Base-T Ethernet
Operating Channels	Radio 1: 2.4GHz channel 1-13 (2412-2472Mhz), Channel 14 (2484MHZ) Japan only Radio 2: 2.4GHz2.4GHz channel 1-13 (2412-2472Mhz), Channel 14 (2484MHZ) Japan only, 5GHz all channels from 5200MHz-5825MHz Actual operating frequencies depend upon national regulatory limits.
Maximum available transmit power	2.4GHz: 21dBm per chain 5.0GHz: 20dBm per chain
Maximum radio transmit power	2400MHz band: Single antenna transmit power: +21dBm Dual antenna composite transmit power: +24dBm 5200MHz band: Single antenna transmit power: +20dBm Dual antenna composite transmit power: +23dBm
Transmit power adjustment	1dB increments

5   Regulatory Information

This device is approved under Motorola Solutions, Inc.

This guide applies to MODEL: AP6562

All Motorola devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Local language translations are available at the following web site: *http://supportcentral.motorola.com*

Any changes or modifications to Motorola equipment, not expressly approved by Motorola, could void the user's authority to operate the equipment.

Motorola devices are professionally installed, the Radio Frequency Output Power will not exceed the maximum allowable limit for the country of operation.

Antennas: Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could cause damage and may violate regulations.

This device is only to be used with a Motorola Wireless Switch.

Wireless Device Country Approvals

Regulatory markings, subject to certification, are applied to the device signifying the radio(s) is/are approved for use in the following countries: United States, Canada, Japan, China, S. Korea, Australia, and Europe.

Please refer to the Declaration of Conformity (DoC) for details of other country markings. This is available at

http://www.motorola.com/doc

Note: Europe includes, Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

⚠️   Operation of the device without regulatory approval is illegal.

Country Selection

Select only the country in which you are using the device. Any other selection will make the operation of this device illegal.

Frequency of Operation – FCC and IC

You are reminded of the need to observe restrictions on the radio devices in fuel depots, chemical plants etc. and areas where the air contains chemicals or particles (such as grain, dust, or metal powders).

5 GHz Only

The use in the UNII (Unlicensed National Information Infrastructure) band 1 (5150-5250 MHz) is restricted to Indoor Use Only; any other use will make the operation of this device illegal.

Industry Canada Statement:

Caution: The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-Channel mobile satellite systems. High power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

The professional installer should utilize the Motorola Antenna Guides 72E-162906-01 at *http://www.motorolasolutions.com* to ensure a compliant configuration consistent with the FCC Grant and the IC Listing. The transmitter power settings for each of the authorized antennas are contained in the Motorola Antenna Guide.

Avertissement: Le dispositive fonctionnant dans la bande 5150-5250 MHz est réservé uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux. Les utilizations de radars de haute puissance son designs utilizations principii (c.-à-d., quills not la priority) pour les bands 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

L'installateur professionnel devrait utiliser les Guides d'Antenne Motorola 72E-162906-01 à *http: // www.motorolasolutions.com* pour garantir une configuration accommodante en accord avec la Subvention de FCC et la Liste d'IC. Les cadres de pouvoir de transmetteur pour chacune des antennes autorisées sont contenus dans le Guide d'Antenne Motorola.

2.4 GHz Only

The available channels for 802.11 b/g operation in the US are Channels 1 to 11. The range of channels is limited by firmware.

Health and Safety Recommendations

Warnings for Wireless Devices

Please observe <u>all</u> warning notices with regard to the usage of wireless devices.

Potetially Hazerdous Atmospheres - Fixed Installations

You are reminded of the need to observe restrictions on the radio devices in fuel depots, chemical plants etc. and areas where the air contains chemicals or particles (such as grain, dust, or metal powders).

Safety in Hospitals

Wireless devices transmit radio frequency energy and may affect medical electrical equipment. When installed adjacent to other equipment, it is advised to verify that the adjacent equipment is not adversely affected.

Pacemakers

Pacemaker manufacturers recommended that a minimum of 15cm (6 inches) be maintained between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with independent research and recommendations by Wireless Technology Research.

Persons with Pacemakers:

• Should ALWAYS keep the device more than 15cm (6 inches) from their pacemaker when turned ON.

• Should not carry the device in a breast pocket.

• Should use the ear furthest from the pacemaker to minimize the potential for interference.

• If you have any reason to suspect that interference is taking place, turn OFF your device.

Other Medical Devices

Please consult your physician or the manufacturer of the medical device, to determine if the operation of your wireless product may interfere with the medical device.

RF Exposure Guidelines

Safety Information

Reducing RF Exposure - Use Properly

Only operate the device in accordance with the instructions supplied.

International

The device complies with internationally recognized standards covering human exposure to electromagnetic fields from radio devices. For information on "International" human exposure to electromagnic fields refer to the Motorola Declaration of Conformity (DoC) at http://www.motorola.com/doc

For further information on the safety of RF energy from wireless devices - see *http://responsibility.motorolasolutions.com/index.php/ourapproach/wirelesscommhealth/*

Europe

Remote and Standalone Antenna Configurations

To comply with EU RF exposure requirements, antennas that are mounted externally at remote locations or operating near users at stand-alone desktop of similar configurations must operate with a minimum separation distance of 20 cm from all persons.

US and Canada

Co-located statement

To comply with FCC RF exposure compliance requirement, the antennas used for this transmitter must not be co-located or operating in conjunction with any other transmitter/antenna except those already approved in this filling.

Remote and Standalone Antenna Configurations

To comply with FCC RF exposure requirements, antennas that are mounted externally at remote locations or operating near users at stand-alone desktop of similar configurations must operate with a minimum separation distance of 20 cm from all persons.

To satisfy FCC RF exposure requirements, a mobile transmitting device must operate with a minimum separation distance of 20 cm or more from a person's body.

Power Supply

Use ONLY a LISTED Motorola, Type no. PWRS-14000-148R (12VDC @ 4.16A), direct plug-in power supply, marked Class 2 (IEC60950-1, SELV).

This device can be powered from a 802.3at compliant power source which is certified by the appropriate agencies.

 alternative Power Supply will invalidate any approvals given to this unit and may be dangerous.

Radio Frequency Interference Requirements—FCC

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

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

Radio Transmitters (Part 15)

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

Radio Frequency Interference Requirements – Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with Industry Canada licence-exempt RSS standard(s) 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.

Cet appareil se conforme Canada et Industrie Règles de normes de RSS permis-exempt. L'opération est assujetti au suivre deux conditions : (1) cet appareil ne peut pas causer l'intervention nuisible, et (2) cet appareil doit accepter de l'intervention reçue, y compris l'intervention qui peut causer l'opération non désirée.

Radio Transmitters

For RLAN Devices:

The 5 GHz RLAN's, for use in Canada, have the following restrictions:

- Restricted Band 5.60 – 5.65 GHz

This device complies with RSS 210 of Industry Canada. 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.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

This radio transmitter (identify the device by certification number, or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed in the Motorola Antenna Guides 72E-162906-01 at *http://www.motorolasolutions.com* with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in guide, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Cet émetteur radio (identifient l'artifice par le nombre de certification, ou nombre modèle si la Catégorie II) a été approuvé par l'Industrie le Canada pour opérer avec les types d'antenne énumérés dans l'Antenne Motorola Guide 72E-162906-01 à
http: // www.motorolasolutions.com avec l'augmentation permise maximum et a exigé l'impédance d'antenne pour chaque type d'antenne indiqué. Les types d'antenne non inclus dans le guide, en ayant une augmentation plus grande que l'augmentation maximum indiquée pour ce type, sont sévèrement interdits pour l'utilisation avec cet artifice.

Label Marking: The Term "IC:" before the radio certification signifies that Industry Canada technical specifications were met.

⟨€ CE Marking and European Economic Area (EEA)

The 2.4GHz RLAN's, for use through the EEA, have the following restrictions:

- Maximum radiated transmit power of 100 mW EIRP in the frequency range 2.400 -2.4835 GHz.
- France outside usage, the equipment is restricted to 2.400-2.45 GHz frequency range.
- Italy requires a user license for outside usage.

Statement of Compliance

Motorola hereby, declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. A Declaration of Conformity may be obtained from *http://www.motorola.com/doc*.

Korea Warning Statement for Class B

기 종 별	사 용 자 안 내 문
B급 기기〈 (가정용 방송통신기기)	이 기기는 가정용 (B급) 으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적 으로 하며 , 모든 지역에서 사용할 수 있습니다
Class B (Broadcasting Communication Device for Home Use)	This device obtained EMC registration mainly for home use (Class B) and may be used in all areas.

Other Countries

Australia

 5GHz RLAN's in Australia is restricted in the following band 5.50 – 5.65GHz.

Brazil

Declarações Regulamentares para AP6562 - Brasil

Nota: A marca de certificação se aplica ao Transceptor, modelo AP6562. Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário. Para maiores informações sobre ANATEL consulte o site: *www.anatel.gov.br*

Chile

Este equipo cumple con la Resolución No 403 de 2008, de la Subsecretaria de telecomunicaciones, relativa a radiaciones electromagnéticas.

Mexico

Restrict Frequency Range to: 2.450 – 2.4835 GHz.

"La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada."

Taiwan
臺灣

低功率電波輻射性電機管理辦法

第十二條
經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻
率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即
停用，並改善至無干擾時方得繼續使用。
前項合法通信，指依電信規定作業之無線電通信。
低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

在 5.25-5.35 秭赫頻帶內操作之無線資訊傳輸設備，限於室內使用

Korea

당해 무선설비는 운용 중 전파혼신 가능성이 있음

당해 무선설비 는전파혼 신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다 .

Turkish WEEE Statement of Compliance

EEE Yönetmeliğine Uygundur

Waste Electrical and Electronic Equipment (WEEE)

English: For EU Customers: All products at the end of their life must be returned to Motorola for recycling. For information on how to return product, please go to: http://www.motorola.com/recycling/weee.

Français: Clients de l'Union Européenne: Tous les produits en fin de cycle de vie doivent être retournés à Motorola pour recyclage. Pour de plus amples informations sur le retour de produits, consultez : http://www.motorola.com/recycling/weee.

Español: Para clientes en la Unión Europea: todos los productos deberán entregarse a Motorola al final de su ciclo de vida para que sean reciclados. Si desea más información sobre cómo devolver un producto, visite: http://www.motorola.com/recycling/weee.

Bulgarish: За клиенти от ЕС: След края на полезния им живот всички продукти трябва да се връщат на Motorola за рециклиране. За информация относно връщането на продукти, моля отидете на адрес: http://www.motorola.com/recycling/weee.

Deutsch: Für Kunden innerhalb der EU: Alle Produkte müssen am Ende ihrer Lebensdauer zum Recycling an Motorola zurückgesandt werden. Informationen zur Rücksendung von Produkten finden Sie unter http://www.motorola.com/recycling/weee.

Italiano: per i clienti dell'UE: tutti i prodotti che sono giunti al termine del rispettivo ciclo di vita devono essere restituiti a Motorola al fine di consentirne il riciclaggio. Per informazioni sulle modalità di restituzione, visitare il seguente sito Web: http://www.motorola.com/recycling/weee.

Português: Para clientes da UE: todos os produtos no fim de vida devem ser devolvidos à Motorola para reciclagem. Para obter informações sobre como devolver o produto, visite: http://www.motorola.com/recycling/weee.

Nederlands: Voor klanten in de EU: alle producten dienen aan het einde van hun levensduur naar Motorola te worden teruggezonden voor recycling. Raadpleeg http://www.motorola.com/recycling/weee voor meer informatie over het terugzenden van producten.

Polski: Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji nale¿y zwróciæ do firmy Motorola w celu ich utylizacji. Informacje na temat zwrotu produktów znajduj¹ siê na stronie internetowej http://www.motorola.com/recycling/weee.

Čeština: Pro zákazníky z EU: Všechny produkty je nutné po skonèení jejich životnosti vrátit spoleènosti Motorola k recyklaci. Informace o zpùsobu vrácení produktu najdete na webové stránce: http://www.motorola.com/recycling/weee.

Eesti: EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Motorola'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: http://www.motorola.com/recycling/weee.

Magyar: Az EU-ban vásárlóknak: Minden tönkrement terméket a Motorola vállalathoz kell eljuttatni újrahasznosítás céljából. A termék visszajuttatásának módjával kapcsolatos tudnivalókért látogasson el a http://www.motorola.com/recycling/weee weboldalra.

Svenska: För kunder inom EU: Alla produkter som uppnått sin livslängd måste returneras till Motorola för återvinning. Information om hur du returnerar produkten finns på http://www.motorola.com/recycling/weee.

Suomi: Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kierrätettäväksi Motorola-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteen palauttamisesta on osoitteessa http://www.motorola.com/recycling/weee.

Dansk: Til kunder i EU: Alle produkter skal returneres til Motorola til recirkulering, når de er udtjent. Læs oplysningerne om returnering af produkter på: http://www.motorola.com/recycling/weee.

Ελληνικά: Για πελάτες στην Ε.Ε.: Όλα τα προϊόντα, στο τέλος της διάρκειας ζωής τους, πρέπει να επιστρέφονται στην Motorola για ανακύκλωση. Για περισσότερες πληροφορίες σχετικά με την επιστροφή ενός προϊόντος, επισκεφθείτε τη διεύθυνση http://www.motorola.com/recycling/weee στο Διαδίκτυο.

Malti: Għal klijenti fl-UE: il-prodotti kollha li jkunu waslu fl-aħħar tal-ħajja ta' l-użu tagħhom, iridu jiġu rritornati għand Motorola għar-riċiklaġġ. Għal aktar tagħrif dwar kif għandek tirritorna l-prodott, jekk jogħġbok żur: http://www.motorola.com/recycling/weee.

Românesc: Pentru clienţii din UE: Toate produsele, la sfârşitul duratei lor de funcţionare, trebuie returnate la Motorola pentru reciclare. Pentru informaţii despre returnarea produsului, accesaţi: http://www.motorola.com/recycling/weee.

Slovenski: Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Motorola za reciklažo. Za informacije o vračilu izdelka obiščite: http://www.motorola.com/recycling/weee.

Slovenčina: Pre zákazníkov z krajín EU: Všetky výrobky musia byť po uplynutí doby ich životnosti vrátené spoločnosti Motorola na recykláciu. Bližšie informácie o vrátení výrobkov nájdete na: http://www.motorola.com/recycling/weee.

Lietuvių: ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti grąžinti utilizuoti į kompaniją „Motorola". Daugiau informacijos, kaip grąžinti gaminį, rasite: http://www.motorola.com/recycling/weee.

Latviešu: ES klientiem: visi produkti pēc to kalpošanas mūža beigām ir jānogādā atpakaļ Motorola otrreizējai pārstrādei. Lai iegūtu informāciju par produktu nogādāšanu Motorola, lūdzu, skatiet: http://www.motorola.com/recycling/weee.

Türkçe: AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüştürme için Motorola'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için lütfen şu adresi ziyaret edin: http://www.motorola.com/recycling/weee.

6   Motorola Solutions Support Center

If you have a problem with your equipment, contact Motorola Solutions Support for your region. Support and issue resolution is provided for products under warranty or that are covered by an Motorola Solutions Support agreement. Contact information and web self-service is available by visiting *http://motorolasolutions.com/support*.

When contacting Motorola Solutions support, please provide the following information:

• Serial number of the unit

• Model number or product name

• Software type and version number

Motorola Solutions responds to calls by e-mail, telephone, or fax within the time limits set forth in support agreements. If you purchased your product from a Motorola Solutions business partner, contact that business partner for support.

Customer Support Web Sites

The Motorola Solutions Support Central Web site, located at *http://supportcentral.motorola.com/* provides information and online assistance including developer tools, software downloads, product manuals and online repair requests.

Manuals

http://supportcentral.motorola.com/support/product/manuals.do

General Information

Obtain additional information by contacting Motorola Solutions at:

Telephone (North America): 1-800-722-6234

Telephone (International): +1-631-738-5200

Website: *http://www.motorolasolutions.com*

7   Motorola Solutions End-User Software License Agreement

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8   AP6562 Access Point China ROHS Compliance

部件名称 **(Parts)**	有毒有害物质或元素					
	铅 **(Pb)**	汞 **(Hg)**	镉 **(Cd)**	六价铬 **(Cr^{6+})**	多溴联苯 **(PBB)**	多溴二苯醚 **(PBDE)**
金属部件 (Metal Parts)	O	O	O	O	O	O
电路模块 (Circuit Modules)	X	O	O	O	O	O
电缆及电缆组件 (Cables and Cable Assemblies)	X	O	O	O	O	O
塑料和聚合物部件 (Plastic and Polymeric Parts)	O	O	O	O	O	O
光学和光学组件 (Optics and Optical Components)	O	O	O	O	O	O
电池 (Batteries)	O	O	O	O	O	O

O：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

对销售之日的所售产品，本表表示，公司供应链的电子信息产品可能包含这些物质。注意：在所售产品中可能会也可能不会含有所有所列的部件。

This table was created to comply with China RoHS requirements for Motorola Solutions' AP6562 Access Point.

MOTOROLA

72E-170532-01 Revision A
January 2013