

Quick Install Guide

MeshMAX 5054 Series

Quick Install



Part Number 74432 (Print version)
Part Number 74434 (CD version)

NOTICES

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TECHNICAL SERVICES AND SUPPORT

If you are having trouble utilizing your Proxim product, please review the MeshMAX 5054 User Guide and the additional documentation provided with your product.

If you require additional support, please refer to the "Technical Services and Support" chapter in the MeshMAX 5054 User Guide for details about the information you will need to gather before using the support Options listed below.

Support Options

Proxim eService Web Site Support

The Proxim eService Web Site is available 7x24x365 at: <http://support.proxim.com/>.

Telephone Support

Contact technical support via telephone as follows:

- **US and Canada:** 408-383-7700, 866-674-6626 (Toll Free)
Hours of Operations: 8AM - 6.00PM
- **APAC Countries:** +90 40-23115490
Hours of Operations: 9AM - 6.00PM
- **International:** 408-383-7700
Hours of Operations: 8AM - 6.00PM

ServPak Support

Proxim understands that service and support requirements vary from customer to customer. In recognition of these varying requirements we have developed a support program called ServPak. ServPak is a program of Enhanced Service Options that can be purchased individually or in combinations to meet your needs.

- Advanced Replacement
- Extended Warranty
- 7x24x365 Technical Supports
- Priority Queuing

To learn more, please call Proxim Support at 408-383-7700 or send an email to servpak@proxim.com. To purchase ServPak support services, please contact your authorized Proxim distributor.

CONTENTS

Introduction	4
Package Contents	6
Hardware and Software Installation	8
Step 1: Choose a Location	9
Step 2: Unpack the Shipping Box	10
Step 3: Assemble the Cable	11
Step 4: Assemble Mounting Hardware	12
Step 5: Mount the Unit	13
Step 6: Plug in the Cables	14
Step 7: Power on the Unit	15
Step 8: View LEDs	16
Step 9: Tighten the Cables	17
Step 10: Weatherproof the Connectors	18
Step 11: Align the Antenna	19
Step 12: Install Documentation and Software	20
Unit Initialization	21
Mesh Unit Initialization	21
Subscriber Unit Initialization	28
Technical services and support	30
Support Options	30

INTRODUCTION

The MeshMAX 5054 Series is a ruggedized tri-mode Mesh AP with additional 5 GHz subscriber station functionality. It is optimized for outdoor deployments. It is equipped with the following embedded modules:

- **Mesh Module:** One embedded 5 GHz (802.11a) module and one embedded 2.4 GHz (802.11b/g) module, enabling simultaneous support of 802.11a, 802.11b, and 802.11g clients. Both radios also support Mesh operation.
- **Subscriber Module:** One embedded module operating in the unlicensed 5 GHz band to enable high-speed backhaul

The MeshMAX 5054 Series can operate either using PoE with the combination DC power supply/injector provided or directly from a 100 - 240 VAC power source (AC cable ordered separately).

Each unit is equipped with:

- **Power/Ethernet port:** used for Ethernet connection and Power over Ethernet (PoE) using the supplied power injector.
- **Serial connection:** used for entering commands in the Command Line Interface (CLI).
- **LED indicator(s):** dual LEDs used to indicate the power and operational states of the unit.
- **AC power input:** enables direct power from external AC power source.
- **External antenna connectors (three):** one for 2.4 GHz client access, one for 5 GHz Mesh operation, and one 5 GHz Subscriber operation.
- **Grounding screws (two)**

Note:

This product does not contain internal antennas. At least one external antenna must be used to make the product operational. For information on antennas authorized for use with this product, refer to the Safety and Regulatory Compliance Guide on the installation CD.

Enter the **Read/Write Password** (the default value is **public**) and click **OK** to confirm your changes. The respective module reboots to make the effective.

Accessing the Web Browser

To access the module with a Web Browser:

Start a Web browser (such as Internet Explorer) and enter the IP address of the module in the Address box (for example, **http://10.0.0.1**).

A login window is displayed. Do not fill in the **User name**; enter only the default password **public**.

Upon successful login, the **System Status** window is displayed.

Accessing the Command Line Interface

The CLI is accessible through the Serial RS-232 cable connected through the network, or with a cross-over Ethernet cable between the computer and the module's serial port.

Ethernet Port

To use the CLI through the Ethernet port, you must have a telnet program, and the module's IP address.

To access the unit through Ethernet on a Windows PC:

Open a DOS command window: from the Windows **Start** menu, Select **Run**; enter **cmd**.

In the DOS window displayed, enter **telnet** and IP address (for example, telnet 10.0.0.1) and type <enter>. You will be prompted for your password. Enter the password (the default is public).

Y-Cable

The Y-cable has two DB9 connectors which connect to the RJ11. The long one connects to the Mesh console and the short one to the Subscriber console.

Subscriber Initialization

Connecting to the module requires either:

- A direct physical connection with an Ethernet cable or with a serial RS-32 cable
- A network connection

Connecting with the Ethernet cable allows you to access the unit through a terminal emulation program, such as HyperTerminal. (See "HyperTerminal Connection Properties" in the MeshMAX 5054 User Guide.

Setting the IP Address

With ScanTool (a software utility that is included on the product installation CD), you can find out the current IP address of the unit and, if necessary, change it so that is appropriate for your network.

ScanTool lets you find the IP address of a module by referencing the MAC address in a Scan List, or to assign an IP address if the correct one has not been assigned. The tool automatically detects the units installed on your network segment, regardless of IP address, and lets you configure each unit's IP settings. In addition, you can use ScanTool to download new software to a unit that does not have a valid software image installed.

To discover and set/change the IP address of the unit:

Run ScanTool on a computer connected to the same LAN subnet as the unit, or a computer directly connected to the module with a cross-over Ethernet cable. Double-click the ScanTool icon on the Windows desktop to launch the program. If the icon is not on your desktop, click **Start > All Programs > MeshMAX 5054 series > ScanTool**.

ScanTool scans the subnet and displays the module it finds in the main window. If necessary, click **Rescan** to re-scan the subnet and update the display. You can assign a new IP address to one module, even if more than one module has the same (default) IP address 10.0.0.1, but the new IP address must be unique to allow the use of the management interfaces.

Select the module for which you want to set the IP address and click **Change**. The **Change** dialog window is displayed.

To set the IP address **manually**, ensure that **Static** is selected as the **IP Address Type** and fill in the **IP Address** and **Subnet Mask** suitable for the LAN subnet to which the unit is connected.

To set the IP address **dynamically**, ensure that **Dynamic** is selected as the **IP Address Type**. The module will request its IP address from a DHCP server on your network.

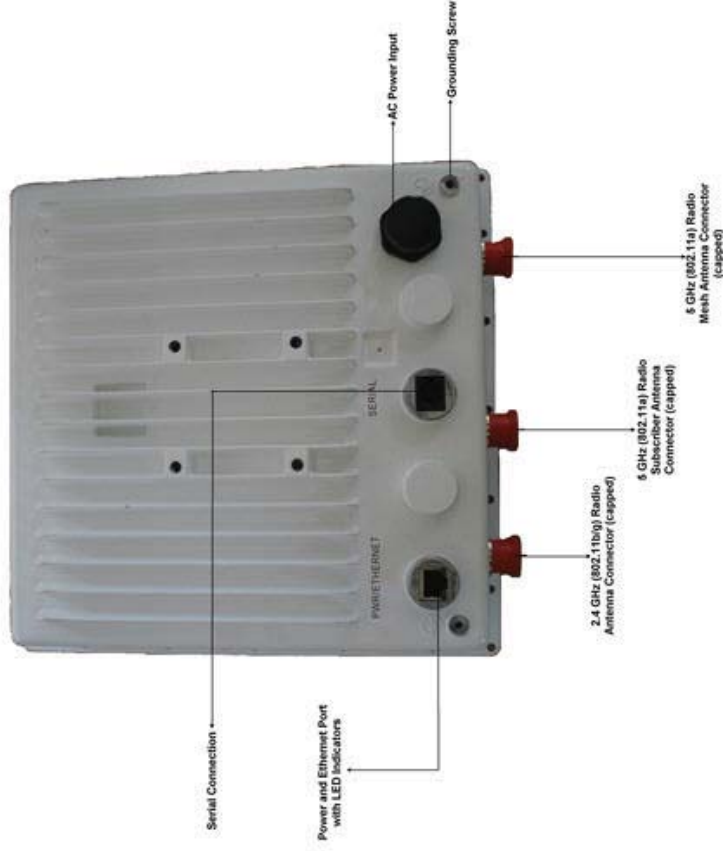




Figure 1: MeshMAX 5054 Unit

PACKAGE CONTENTS

Each shipment includes the items in the following table. Verify that you have received all parts of the shipment.

Note:

Unless listed here, cables are not included with the unit.

MeshMAX 5054 Unit	
Y-cable connector	
Installation CD (1 ea.)	
Power Injector and Cord (1 ea.)	
Cable Termination Kit	<p>Kit includes:</p> <ul style="list-style-type: none"> A. RJ45 connectors (2) B. Sealing caps (2) C. Lock nut D. Sealing nut E. Grounding screws (2) 

3. From the **File Type** drop-down menu, select **Image**.
4. Use the **Browse** button to locate or manually type in the name of the file (including the file extension) you downloaded from the Proxim Knowledgebase. If typing the file name, you must include the full path and the file extension in the file name text box.
5. To initiate the HTTP Update operation, click the **Update AP** button. A warning message advises you that a reboot of the device will be required for changes to take effect.
6. Click **OK** to continue with the operation or **Cancel** to abort the operation.
7. If the operation is unsuccessful, you will receive an error message. See the MeshMAX 5054 User Guide for more information. If the operation is successful, you will receive a confirmation message.
8. Reboot the Mesh radio as follows:
 - a. Click **Commands > Reboot**.
 - b. Enter **0** in the **Time to Reboot** field.
 - c. Click **OK**.

Note:

For instructions on downloading the software via a TFTP Server or the CLI Interface, see the MeshMAX 5054 User Guide.

Software Updates

Proxim periodically releases updated software for the MeshMAX 5054 on its support Web site, <http://support.proxim.com>. Proxim recommends that you check the Web site for the latest updates after you have installed and initialized the unit.

Download the Software

1. In your web browser, go to <http://support.proxim.com>.
2. If prompted, create an account to gain access.

Note:

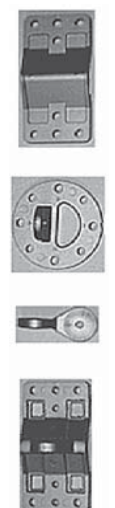






















The Knowledgebase is available to all Web site visitors. First-time users will be asked to create an account to gain access.

3. Click **Search Knowledgebase**.
4. In the **Search Knowledgebase** field, enter **2763**.
5. Click **Search**.
6. Click on the link in the **Summary** column to access the download page.
7. Click on the appropriate link to download the software.

Install the Software

1. Enter the Access Point's IP address in the browser's Address field and press **Enter** or **Go**.
2. Click **Commands** > **Update AP** > **via HTTP**. The Update AP via HTTP screen will be displayed.



<p>Mounting Kit</p>	<p>Kit includes the following:</p> <ul style="list-style-type: none"> A. Mounting clamp for wall/pole B. Extension arm C. Mounting plate to enclosure D. Mounting clamp for pole mounting 																
<p>Mounting Hardware</p>	<p>The following mounting hardware is included with mounting kit:</p> <table border="1"> <thead> <tr> <th>Qty.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>6 ea.</td> <td>Plain washer #5/16 </td> </tr> <tr> <td>2 ea.</td> <td>Hex cap screw NC 5/16-18 x 35 </td> </tr> <tr> <td>2 ea.</td> <td>Nut NC 5/16-18 </td> </tr> <tr> <td>4 ea.</td> <td>Helical spring lock washer # 1/4 </td> </tr> <tr> <td>4 ea.</td> <td>Helical spring lock washer #5/16 </td> </tr> <tr> <td>2 ea.</td> <td>Hex cap screw NC 5/16-18 x 80 </td> </tr> <tr> <td>4 ea.</td> <td>68764, Screw, Machine, Pan, Phillips, 1/4"-20, 5/8"L </td> </tr> </tbody> </table>	Qty.	Description	6 ea.	Plain washer #5/16 	2 ea.	Hex cap screw NC 5/16-18 x 35 	2 ea.	Nut NC 5/16-18 	4 ea.	Helical spring lock washer # 1/4 	4 ea.	Helical spring lock washer #5/16 	2 ea.	Hex cap screw NC 5/16-18 x 80 	4 ea.	68764, Screw, Machine, Pan, Phillips, 1/4"-20, 5/8"L 
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<p>Rubber Tape Strip</p>																	

HARDWARE AND SOFTWARE INSTALLATION

IMPORTANT!

Before installing this product, see Safety and Regulatory Compliance Information on the product CD for important information.

IMPORTANT!

All units must be installed by a suitably trained professional installation technician or by a qualified installation service.

WARNING!

To ensure proper grounding, use the hole at the bottom point on the back of each unit and the provided grounding screws to attach a ground wire of at least 10 AWG stranded to each unit. Use proper wire grounding techniques in accordance with local electric codes.

Notes:

- Be sure to read the Release Notes file on the product CD as it contains software version and driver information that may not have been available when this document was produced.
- Equipment is to be used with, and powered by, the power injector provided or by a power injector that meets these requirements:
 - UL-Listed/ITE (NMGQ)
 - Limited Power Source Output per UL/IEC 60950
 - CE-marked
 - Approved for Power-over-Ethernet
 - Rated output, 48 Vdc/0.42 A
 - Pinout follows 802.3af standard for mid-span devices



1. Click Setup Wizard to begin. The Setup Wizard supports the following navigation options:
 - **Save & Next Button:** Each Setup Wizard screen has a Save & Next button. Click this button to submit any changes you made to the unit's parameters and continue to the next page. The instructions below describe how to navigate the Setup Wizard using the Save & Next buttons.
 - **Navigation Panel:** The Setup Wizard provides a navigation panel on the left-hand side of the screen. Click the link that corresponds to the parameters you want to configure to be taken to that particular configuration screen. Note that clicking a link in the navigation panel will not submit any changes you made to the unit's configuration on the current page.
 - **Exit:** To exit from the Setup Wizard at any time, click Step 1: Introduction on the navigation panel, and then click the Exit button.

CAUTION:
If you exit from the Setup Wizard, any changes you submitted (by clicking the Save & Next button) up to that point will be saved to the unit but will not take effect until it is rebooted.
2. Follow the prompts provided by the Setup Wizard to perform an initial configuration of the Mesh radio. See the MeshMAX 5054 User Guide for more detailed Setup Wizard instructions and for advanced configuration instructions.

1. Open a Web browser on a network computer.

2. If necessary, disable the browser's Internet proxy settings.

3. Enter the Access Point's IP address in the browser's **Address** field and press **Enter** or **Go**. This is either the dynamic IP address assigned by a network DHCP server or the static IP address you manually configured. See the [Using ScanTool](#) section above for information on how to determine the unit's IP address and manually configure a new IP address, if necessary.

4. The login screen appears.



5. Enter the HTTP password in the **Password** field. Leave the **User Name** field blank. **For new units, the default HTTP password is public.**

If you are logging on for the first time the Setup Wizard will launch automatically.

Note

Setup Wizard will not relaunch on subsequent logins. To force the Setup Wizard to launch upon login, click **Management** > **Services** and choose **Enable** from the **Setup Wizard** drop down menu.

6. To configure the Mesh radio using the Setup Wizard, see [Using the Setup Wizard](#), below. To configure the radio without using the Setup Wizard, click **Exit**. Upon clicking **Exit**, the System Status screen will appear. See the "Advanced Configuration" chapter in the MeshMAX 5054 User Guide for configuration instructions.

Using the Setup Wizard

The Setup Wizard provides step-by-step instructions for how to configure the Access Point's basic operating parameters, such as Network Name, IP parameters, system parameters, and management passwords.

Step 1: Choose a Location

To make optimal use of the unit, you must find a suitable location for the hardware. The range of the radio unit largely depends upon the position of the antenna. Proxim recommends you do a site survey, observing the following requirements, before mounting the hardware.

- The location must allow easy disconnection of power to the radio if necessary.
- Air must be able to flow freely around the hardware.
- The radio unit must be kept away from vibration and excessive heat.
- The installation must conform to local regulations at all times.

The unit is designed to directly mount to a pole or wall. Using the supplied mounting clamps and hardware, you can mount the unit to a 1.25 inch to 4.5-inch pole (outside diameter). Using just one of the mounting clamps brackets, you can mount it to a wall or other flat surface.

Caution!

Proxim recommends the use of a lightning arrester at the building ingress point. You can purchase the Proxim Lightning Protector; see the documentation that comes with the Lightning Protector for more information and installation instructions.

Step 2: Unpack the Shipping Box

1. Unpack the unit and accessories from the shipping box.
2. Note the Ethernet and wireless MAC addresses of the unit, as well as the serial number. The serial number is required to obtain support from Proxim. Keep this information in a safe place.

Change

MAC-Address: 00:20:05:03:43:00

Name: MeshPortal

IP Address Type: Static Dynamic

IP-Address: 192.168.8.80

Subnet Mask: 255.255.255.0

Gateway IP Address: 192.168.8.1

TFTP Server IP Address: 192.168.8.73

Image File Name: MeshMak_ominooc_001240.exe

Read/Write Password:

Web Configuration OK Cancel

- c. Set **IP Address Type** to Static.
- d. Enter a static IP Address for the Mesh radio in the field provided. You must assign the unit a unique address that is valid on your IP subnet.
- e. Enter your network's **Subnet Mask**.
- f. Enter your network's **Gateway IP Address**.
- g. Enter the SNMP read/write password in the **Read/Write Password** field. **For new units, the default password is public.**
- h. Click **OK** to save your changes.
- i. The Access Point will need to reboot to apply any changes you made. When the reboot message appears, click **OK** to reboot the device and return to the Scan List screen.
- j. After allowing sufficient time for the device to reboot, click **Rescan** to verify that your changes have been applied.
- k. Click the **Change** button to return to the Change screen.
- l. Click the **Web Configuration** button at the bottom of the Change screen.
- m. Proceed to the [Logging In](#) section, below.

Logging In

Once the Mesh radio has a valid IP Address, you may use your web browser to monitor and configure the Mesh radio. (To configure and monitor using the command line interface, see the MeshMAX 5054 User Guide.)



Note:

If your unit does not appear in the Scan List, click the **Rescan** button to update the display. If the unit still does not appear in the list, see the Troubleshooting chapter in the MeshMAX 5054 User Guide for suggestions. Note that after rebooting an Access Point, it may take up to five minutes for the unit to appear in the Scan List.

4. Do one of the following:
 - If the Mesh radio has been assigned an IP address by a DHCP server on the network:
 - a. Highlight the entry for the unit you want to configure.
 - b. Click the **Change** button. The Change screen appears (see below).
 - c. Click on the **Web Configuration** button at the bottom of the change screen.
 - d. Proceed to the [Logging In](#) section, below.
 - If the Mesh radio has not been assigned an IP address (in other words, the unit is using its default IP address, 169.254.1.132), follow these steps to assign it a static IP address that is valid on your network:
 - a. Highlight the entry for the unit you want to configure.
 - b. Click the **Change** button. The Change screen appears.

Step 3: Assemble the Cable

Use the Cable Termination Kit to assemble the cable. You will be attaching an outdoor-rated 24 AWG CAT5 cable (diameter .114 to .250 inches/2.9 to 6.4 mm) (not provided) to the Power-over-Ethernet port on the back of the unit and weatherproofing the assembly later in the installation procedure. First, you must construct the cable and assemble the weatherproofing cable covers as described in the following steps. Proxim greatly simplifies this assembly process by offering pre-assembled CAT5 cable kits in 25m, 50m, and 75m lengths (part numbers 69819, 69820, and 69821, respectively).

1. Slide the sealing nut (A) over the bare end of the CAT5 cable.
2. Slide the lock nut (B) over the bare end of the CAT5 cable.
3. Slide the sealing cap (C) over the bare end of the CAT5 cable. Make sure the red rubber gasket is inside the cap.
4. Apply two wraps of 0.5" wide Teflon tape (not supplied with unit) around the threads of the lock nut (B) that will go inside the sealing cap.
5. Thread the lock nut (B) onto the sealing cap (C), and hand tighten.
6. Terminate the RJ45 connectors (D) to both ends of the CAT5 cable; test for proper wiring (using a straight-through cable).

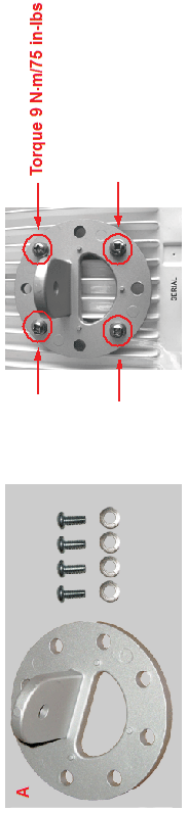


Notes:

- The cable must feed through all parts of the weatherproof cap before the RJ45 is crimped on the outdoor Ethernet cable.
- The cable between the power injector and the unit must be a straight-through Ethernet cable (without crossover).
- Due to variance in CAT5 cable diameter, termination techniques of the installer, and the application of proper tightness of the connectors, it is strongly recommended that all cable connectors are secured by external weatherproofing. This process will be described in [Step 10: Weatherproof the Connectors](#).

Step 4: Assemble Mounting Hardware

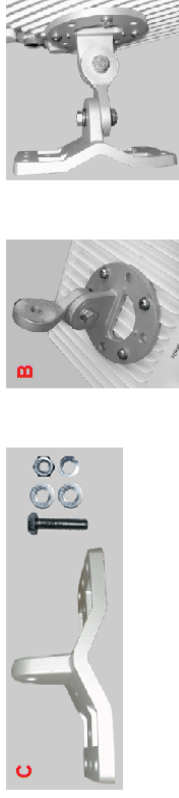
1. Attach the mounting plate (A) using the provided screws and washers



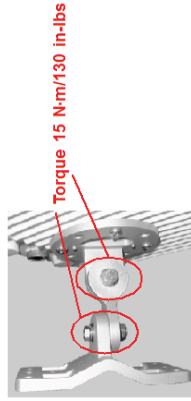
2. Attach the extension arm (B) to mounting piece (A) with the screw, nut, and washers.



3. Attach the mounting bracket (C) to extension arm (B) with the screw, nut, and washers provided.



4. Tighten assembly (Torque 15 N·m/130 in-lbs).



The following figure shows the full assembly attached to the unit.



UNIT INITIALIZATION

Mesh Initialization

Using ScanTool

ScanTool is a software utility that is included on the installation CD-ROM. It is an initial configuration tool that allows you to find the IP address of an Access Point by referencing the MAC address in a Scan List, or to assign an IP address if one has not been assigned.

The tool automatically detects the MeshMAX units installed on your network, regardless of IP address, and lets you configure each unit's IP settings. In addition, you can set initial device parameters that will allow the Mesh radio to retrieve a new software image if a valid software image is not installed.

To access the HTTP interface and configure the Mesh unit, the unit must be assigned an IP address that is valid on its Ethernet network. By default, the Mesh unit is configured to obtain an IP address automatically from a network Dynamic Host Configuration Protocol (DHCP) server during boot-up. If your network contains a DHCP server, you can run ScanTool to find out what IP address the Mesh radios have been assigned. If your network does not contain a DHCP server, the IP address for the Mesh radios defaults to 169.254.128.132. In this case, you can use ScanTool to assign the unit a static IP address that is valid on your network.

Scan Tool Instructions

1. Power up, reboot, or reset the unit.
2. Double-click the ScanTool icon on the Windows desktop to launch the program. If the icon is not on your desktop, click **Start > All Programs > Proxim > MeshMAX 5054 > ScanTool**.

Note:

If your computer has more than one network adapter installed, you will be prompted to select the adapter that you want ScanTool to use before the Scan List appears. You can use either an Ethernet or wireless adaptor.

If prompted, select an adapter and click **OK**. You can change your adapter setting at any time by clicking the **Select Adapter** button on the Scan List screen.

ScanTool scans the subnet and displays all detected units. The ScanTool's Scan List screen appears, as shown in the following example.

Step 12: Install Documentation and Software

To install the documentation and software on a computer or network:

1. Place the installation CD in a CD-ROM drive. The installer normally starts automatically. (If the installation program does not start automatically, click setup.exe on the installation CD).
2. Follow the instructions displayed on the installer windows.

Step 5: Mount the Unit

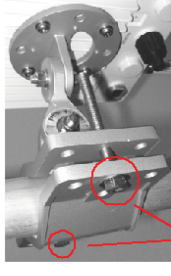
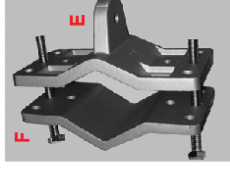
IMPORTANT!

If the unit is going to be used as part of a Mesh network, you will need to perform initial configuration of the parameters mentioned in the **Pre-requisites** section of this MeshMAX 5054 User Guide before you mount the unit. See the User Guide for more information on configuring these parameters.

Caution:

To ensure that water does not gather around the antenna connectors, mount the unit with the antenna connectors facing downward.

1. To pole-mount, insert the provided screws through bracket F. Fasten around the pole to bracket E and secure (Torque 11 N·m/100 in-lbs).



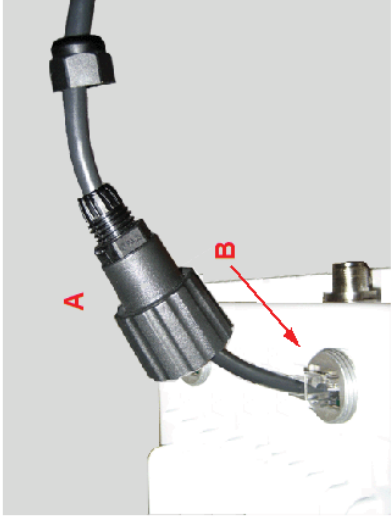
Torque 11 N·m/100 in-lbs
2 screws

2. To wall-mount the unit, mount bracket (E) to the wall using 4 screws (not provided), as shown.



Step 6: Plug in the Cables

1. Plug one end of the CAT5 cable (A) into the RJ45 jack of the unit (B).



2. Connect the free end of the CAT5 cable to the "Data and Power Out" port on the power injector.



3. To connect the unit through a hub or a switch to a PC, connect a straight-through Ethernet cable between the network interface card in the PC and the hub, and between the hub and the RJ45 "Data In" port on the PoE adapter.

To connect the unit directly to a PC, connect a cross-over Ethernet cable between the network interface card in the PC and the RJ45 "Data In" port on the power injector.

If you are connecting the PC directly to the unit, use a **crossover** Ethernet cable between the network interface card in the PC and the RJ45 "Data In" port on the power injector.

Step 11: Align the Antenna

Antenna Alignment Display (AAD) provides a measurement of signal quality in an easy-to-interpret manner - a numeric printed signal value at the CLI and serial ports. The SNR is numerically displayed on the CLI serial port by two decimal characters representing a number from 00 to 99. On the serial port, AAD is enabled by default after booting.

To start the display, you must enable AAD and a wireless link must be established between the BSU and the SU.

Aiming is complete if moving in any direction results in a falling SNR value.

Antenna alignment commands

The following CLI commands are used to initiate and stop the antenna alignment process. After the process has been successfully initiated, the CLI displays the current-local/current-remote/average SNR values (in 500 ms intervals) to indicate the link quality.

Set aad enable local

Enables display of the local SNR (the SNR as measured by the receiver at the far end).

Set aad enable remote

Enables display of the remote SNR (the SNR as measured by the receiver at the far end).

Set aad enable average

Enables display of the remote SNR (the average of local and remote SNR).

Set aad disable

Disables Antenna Alignment Display (Ctrl-C also disables AAD).

Step 10: Weatherproof the Connectors

After you have fully assembled and tightened the cable, use the provided self-fusing, rubber-based tape strip and electrical tape (not provided; Proxim recommends Scotch™ Super 33+ Vinyl Electrical Tape) to seal the connection, as follows.

1. Remove the film liner from the rubber-based tape strip, and stretch the tape until it is approximately half of its original width. This activates the self-fusing action of the tape, which will set up over time to create a single, waterproof mass.



2. Stretch and wrap the tape around the connector tightly, starting below the connector cap and against the unit and wrapping in a clockwise direction. Wrap the tape once around the base of the connector cap (A). Continue to wrap the tape spirally around the connector in a clockwise direction, maintaining a 50% width overlap (B). Continue wrapping the tape spirally upward (C) until the tape extends onto the cable and you have used the entire length of tape. Seal the tape tightly against the connector and the cable (D).



Start below connector cap



Continue onto cable

Note:

Be sure to wrap the tape in a clockwise direction; wrapping the tape in a counterclockwise direction may loosen up the connector.

3. In the same manner as described in Step 2 above, apply a layer of black electrical tape (not provided) over the rubber-based tape for further protection. Make sure the electrical tape also extends beyond the rubber-based tape to seal it.



4. Repeat the weatherproofing procedure for other connectors as appropriate.

Step 7: Power on the Unit

The power injector provides Power-over-Ethernet (PoE), supplying electricity and wired connectivity to the unit over a single 24 AWG CAT5 (diameter .114 to .250 inches/2.9 to 6.4 mm). The unit is not 802.3af-compatible. Always use the supplied power injector to ensure that the unit is powered properly. Note that the Active Ethernet module provides +48 VDC over a standard CAT5 Ethernet cable.

Once you have connected the power injector to the Ethernet cabling and plugged the power injector cord into an AC outlet, the unit is powered on. There is no ON/OFF switch on the unit. To remove power, unplug the AC cord from the AC outlet or disconnect the RJ45 connector from the "Data and Power Out" port on the power injector.

Press the **Reload** button (on the side of the power injector) for five seconds during power-up remotely resets the Mesh radios to their factory default settings. You will need to use the end of a pin or paperclip to depress the button.

WARNING!

To avoid damaging your router/switch, do not connect the RJ45 port labeled either "Data & Power Out" from the power injector to your router/switch.

Press the **Reload** button (on the side of the power injector) to initiate the Reload/Reset functionality. You may have to use the end of a pin or paperclip to press the button.

If the Reload button is pressed for 5 to 10 seconds and then released, then Mesh module moves to the bootloader state. If Reload button is pressed beyond 10 seconds, then the Mesh module's Reload functionality is ignored.

If the Reload button is pressed for 10 to 20 seconds and released, then none of the operation is performed and the Reload button is aborted.

If the Reload button is pressed for 20 seconds and above, then the Subscriber module moves to reload state.

NOTE:

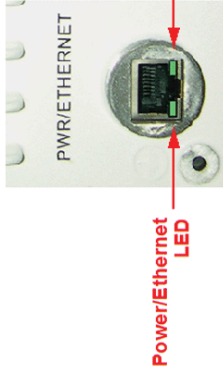
Bootloader will display all events to the serial console, which will guide user to perform the Reload functionality.

Step 8: View LEDs

The LEDs are present at the unit's Ethernet connector; unscrew the watertight cap if necessary to view the LEDs.

NOTE:

Make sure the domed sealing nut is loose before unscrewing the cap or the Ethernet cable may be twisted and damaged.



When the unit is powered on, it performs startup diagnostics. When startup is complete, the LEDs show the unit's operational state, as follows:

LED State	Power/Ethernet LED	Radio LED
Blinking Green	Power is on, unit is booting up, Ethernet link is down.	Mesh radios are being initialized.
Steady Green	Power is on, Ethernet link is up.	Mesh radios are being operational.

Step 9: Tighten the Cables

1. Apply two wraps of Teflon tape around the threads of the unit's RJ45 jack (A) in a clockwise direction.
2. Make sure that the red rubber gasket is still seated in the sealing cap of the sealing cap/lock nut assembly (B).
3. Slide the sealing cap/lock nut assembly (B) over the RJ45 jack (A) and thread onto enclosure. Hand tighten first, then use a pipe wrench or similar tool to tighten one more quarter turn.

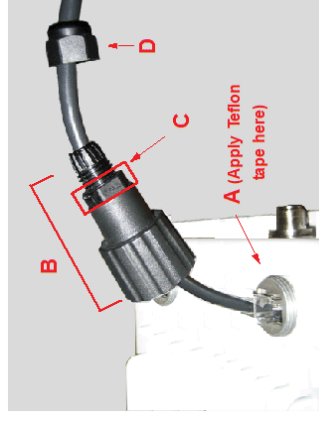
Caution!

Do not over-tighten!

4. Tighten the lock nut (C) (Torque 4 N.m/35 in-lbs).
5. Thread the sealing nut (D) onto the sealing cap/lock nut assembly (B) and tighten (Torque 3 N.m/25 in-lbs).

Caution!

The lock nut (C) on the sealing cap/lock nut assembly (B) must be fully tightened over the RJ45 connector before the sealing nut (D) is fully tightened. Otherwise, the Ethernet cable may twist and damage.



Torque 4 N.m/35 in-lbs
Torque 3 N.m/25 in-lbs