

# MOTOMESH 1.2 Wireless Modem Card Users Guide

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MOTOMESH 1.2 Wireless Modem Card Users Guide

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# **Chapter 1: Introduction**

This guide will assist you with the use, installation, and configuration of the WMC6300 and the WMC7300 Wireless Modem Card (WMC). Due to the physical similarities of the two WMC cards, many of the explanations and procedures described in this manual apply to both cards except where expressly noted.

In addition, a section describing the MeshTray application, which is used for direct user interface with the Wireless Modem Card, is also included.

# **General System Requirements**

Host computers must comply with the following minimum requirements to ensure optimal performance of the WMC6300 and the WMC7300.

## Windows XP Minimum System Requirements

- Laptop or Notebook PC running the Microsoft Windows XP (Service Pack 1) operating system
- 500 MHz Processor
- 10 MB of available hard disk storage
- Keyboard, Mouse, CD-ROM drive or DVD drive
- Available Type II PCMCIA card slot in the Host device

## Windows 2000 Minimum System Requirements

- Laptop or Notebook PC running Microsoft Windows 2000
- (Service Pack 3) operating system
- 500 MHz Processor
- 10 MB of available hard disk storage

- Keyboard, Mouse, CD-ROM drive or DVD drive
- Available Type II PCMCIA card slot in the Host device

# What's in the Box

Each MEA WMC6300 and WMC7300 (Wireless Modem Card) is a full-featured wireless networking interface. The following is a list of the items provided with each Wireless Modem Card:

- WMC6300 or a WMC7300 Wireless Modem Card
- Antenna with a MMCX connector
- Wireless Modem Card Software and Documentation CD ROM

The CD ROM contains a PDF version of the Wireless Modem Card User's Guide. The CD also contains an installation executable to load Adobe Acrobat Reader software if it is not already resident on your computer.

#### **External Connections and LED Indicators**

The WMC6300 and the WMC7300 Wireless Modem Card is designed for insertion into an industrystandard Type II PCMCIA card slot located in a Host device. The Wireless Modem Cards have an antenna port to connect the external antenna and two LED Indicators. As shown in Figure 1-1 the red LED is the transmit indicator and the green LED is the receive indicator.



#### Figure 1-1 WMC showing Antenna Port and LED Indicators

# **Chapter 2: Software Installation**

This chapter will assist you with the software installation portion of the process and is further separated into two main sections: *Installing MOTOMESH Client Software on Windows XP* and *Installing MOTOMESH Client Software on Windows 2000*.

# Installing MOTOMESH Client Software on Windows XP

The following procedure outlines the installation of the MOTOMESH client software on a typical Windows XP platform. Some of the steps may vary slightly based on the configuration of the individual computers.



If you are running Windows XP Service Pack 2 (SP2), Windows Firewall is turned on by default. It is recommended that you disable the firewall when using your Wireless Modem Card.

TIOCEU	are 2-1 MoromEon cheft Software installation on windows Xi
1	Close and exit any existing MOTOMESH applications running on the computer prior to installation.
2	Insert the Software and Documentation CD into the CD-ROM drive.
3	If the installation program does not start automatically, open the Windows <b>Start</b> menu. Click on <b>Run</b> then type the following into the dialog box: <b>d:\setupmotomeshclient.exe</b> where <b>d:</b> specifies the CD-ROM drive and click the <b>OK</b> button.
4	Click the <b>Next</b> button to continue the installation process.
5	The MOTOMESH Setup dialog box will be displayed as shown in Figure 2-1.

#### Procedure 2-1 MOTOMESH Client Software Installation on Windows XP

6	Click the <b>Next</b> button to c	ontinue the installation process.				
	Figure 2-1 MOTO	MESH Setup - Welcome Dialog (XP)				
	禄 MOTOMESH Client Setup					
		WOTOMESH Client Velcome to the installer for the MOTOMESH Client is strongly recommended that you exit all Windows programs efore continuing with this installation. you have any other programs running (including MOTOMESH pplications such as MeshTray or MeshView), please click Cancel nd close those programs before restarting this installer. The stallation process may fail if it is invoked while a MOTOMESH pplication is still running. Itherwise, click Next to continue.				
	MISSIJ ENABLED ADOUNIGTUDI					
		Next > Cancel				
1	In the <i>Startup Options</i> dial Click on the <b>Next</b> button to It is recommended that the MeshTray to be available of (WMC) is inserted.	"Automatically Launch MeshTray at Startup" checkbox is selected; allowing each time the computer is restarted and whenever a Wireless Modem Card				
	Figure 2-2 MOTO	MESH Setup – Startup Options (XP)				
	Startup Options					
	Select the startup options for I	AleshTray and click Next to continue.				
	Automatically Launch Mes	hTray at Startup				
	I <u>IAdd MeshTray Shortcut to</u>	<u>Desktop</u>				
		Next > Cancel				
8	The <i>Ready to Install</i> dialog be used to install the MOT process.	g displays the <b>Install Folder</b> location and the <b>Shortcut Folder</b> name that will OMESH software. Click on the <b>Next</b> button to proceed with the installation				

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Ready	<b>y to Install</b> 'ou are now re	ady to install MOT	OMESH Client.		MESH ENABLED			
T c J	he installer no omputer. he following :	w has enough info ettings will be use	ormation to install I d:	he MOTOMESH Clie	ent on your			
	nstall folder: C	\Program Files\Mi	otorola\MotoMesł	h				
ç	hortcut folder	Motorola\MotoMi	esh					
F	lease click N	ext to proceed with	n the installation.					
			< Back	Next >	Cancel			
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f MO lisplay Select orocess Figure Infor	FOMESH ed as sho the Unins s. If you e 2-4 TOMESH C mation MOTOMESH Click Uninstal to uninstall th process or cli WARNING: Uninstalling th related netwo	has been pro wn in Figure tall button to thoose not to MOTON ient Setup Client is already in Client software an to run the uninsta existing MOTOM & Cancel to abort e network driver w k connection.	eviously ins 2-4. o remove the o continue, c <b>IESH Setu</b> Istalled on this system and drivers are deten all program of the re- USH Client driver this program. will result in the loss	talled on your e existing MO lick the <b>Cance</b> <b>p - Previous</b> tem tem detected on your system detected MOTOMES s, and to continue th as of any saved conf	Computer, the additional computer of the addition of the addit	the Information of the Informati	<i>mation</i> dialond continue	og box wi the instal
f MO lisplay Select process Figure MO Infor	FOMESH ed as sho the Unins s. If you e 2-4 TOMESH C mation MOTOMESH Click Uninsta to uninstall th process or cli WARNING: Uninstalling th related netwo	has been pro wn in Figure tall button to thoose not to MOTOW ient Setup Client is already in Client software an to run the uninste existing MOTOM ik Cancel to abort e network driver w k connection.	eviously ins 2-4. o remove the o continue, c IESH Setu ISH Setu Istalled on this sys ad drivers are dete all program of the ISH Client driver this program. will result in the los	talled on your e existing MO lick the Cance p - Previous tem tem teted on your system detected MOTOMES s, and to continue th ss of any saved confi	computer, ti TOMESH d el button. Iy Installed CARCHITECT	tivers and Softwork	<i>mation</i> dialond continue	og box w the instat

10	If you choose to continue with the installation, the <i>Removing Programs From Your Computer</i> dialog will be displayed to indicate the progress of the uninstall operation.
	When the operation has completed, click on the Close button to dismiss the dialog.
	Figure 2-5 MOTOMESH Setup - Uninstalling Software (XP)
	Removing Programs From Your Computer
	Uninstalling Software Please wait while the software is uninstalled. MESH ENABLED ORDUTEDTURE
	'Motorola MOTOMESH' will now be removed from your computer. Please wait while the uninstallation is performed.
	Close
11	The Installing Files window will be automatically dismissed as soon as file installation has completed.
	Figure 2-6 MOTOMESH Setup - Installing Files Window (XP)
	17 Installing Files
	Installing Files
	The program files are being installed.
	Please wait while the necessary files are installed.
	Installing C:\WINDOWS\system32\MFC71u.dll
	Cancel
40	The Dayforming Satur Actions dialog dianlarge a status has to indiaste the area and a file installation
12	The reforming setup Actions dialog displays a status par to indicate the progress of the installation.

13	A <i>Software Installation</i> dialog indicates that the software is not Windows Logo tested, select the <b>Continue Anyway</b> button to complete the installation process.
	Figure 2-7 Software Installation Dialog Box
	Software Installation
	The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. ( <u>Tell me why</u> this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly
	recommends that you stop this installation now and contact the software vendor for software that has
	passed windows Logo testing.
	Continue Anyway
14	If a second <i>Software Installation</i> dialog box is displayed as shown in Figure 2-8. Click on the <b>Continue Anyway</b> button to complete the installation process.
	Figure 2.8 Software Installation Dialog Box
	Software Installation
	The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. ( <u>Tell me why</u> this testing is important.)
	Continuing your installation of this software may impair
	or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly
	contact the software vendor for software that has passed Windows Logo testing.
15	Select the <b>Continue Anyway</b> button if additional windows display on the screen containing the same
	screen contents as in the step above.

16

The *Select Options* dialog box will be displayed as shown in Figure 2-9. This installation screen allows the user to view the *ReadMe* file during the installation and to run MeshTray immediately following installation. Click on the **Next** button to proceed with the installation process.

#### Figure 2-9 Software Installation Dialog Box – Select Options

	🔀 MOTOMESH Client Setu	p		
	Select Options Select the options below	and click Next to continue.	ENABLED	
	Please select from the op	ions below:		
	✓ Run MeshTray ✓ View Readme File			
		Next >		
17	If selected, the <i>ReadMe</i> dialog box by clicking You MUST close the <i>R</i>	file will be displayed. Review the constant $\mathbf{X}$ located in the upper right constant $\mathbf{X}$ file to complete the installation	ontents of th rner of the d on.	he file and then dismiss the lialog.
18	From the MOTOMESH	Installed Successfully dialog click or	n the Finish	button to exit.
	Be sure to close the <i>Rea</i> shown below will not b	<i>dMe</i> file (if you elected to view it in e displayed.	the earlier s	teps), otherwise the dialog
	Figure 2-10 MC	TOMESH Setup - MOTOMESH I	nstalled S	uccessfully (XP)
	HotoMESH Client Setu	p		
		MOTOMESH Client Installe	ed	
		Setup is complete and the MOTOMESH software is	installed.	
		The MOTOMESH drivers will finish installing shortly button is clicked. "Found New Hardware" banners you screen marking the beginning of the driver insta process.	after the Finish will appear on allation	
		Please do not remove the card until the driver instal is finished.	lation process	
		Thank you for choosing MOTOMESH Client.		
		Please click Finish to exit this installer.		
	MESU ENABLED ADQUIJEGTURE			
		Finish		

# Installing MOTOMESH Client Software on Windows 2000

The following procedure outlines the installation of MOTOMESH client software on a typical Windows 2000 platform. Some of the steps may vary slightly based on the configuration of an individual computer.

Complete the following procedure to install the MOTOMESH client software:

#### Procedure 2-2 MOTOMESH Client Software Installation on Windows 2000

1	Close and exit any existing MOTOMESH applications running on the computer prior to installation.			
2	Insert the MOTOMESH Software and Documentation CD into the CD-ROM drive. The installation should begin automatically.			
3	If the installation program does not start automatically, select <b>Start</b>   <b>Run</b> then type <b>d:\setupmotomeshclient.exe</b> (where <b>d:</b> specifies the CD-ROM drive) Click the <b>OK</b> button.			
4	The MOTOMESH Setup program will be displayed as shown in Figure 2-11, select the Next button to continue the installation process.  Figure 2-11 MOTOMESH Setup - Installer Setup Dialog Box (W2K))			
	MOTONESTICATION     MOTOMESH Client     Melcome to the installer for the MOTOMESH Client     It is strongly recommended that you exit all Windows programs     before continuing with this installation.     If you have any other programs running (including MOTOMESH     applications such as MeshTray or MeshView), please click Cancel     and close those programs before restarting this installer. The     installation process may pail if it is invoked while a MOTOMESH     application is still running.     Otherwise, click Next to continue.			
	Next > Cancel			

5	In the <i>Startup Options</i> dialog make your selection by checking or un-checking the available options. Click on the <b>Next</b> button to continue the installation process.					
	It is recommended that the "Automatically Launch MeshTray at Startup" checkbox is selected; allowing MeshTray to be available each time the computer is restarted.					
Figure 2.42 MOTOMECH Seture Starture Ortigers Dislage Day (MOK)						
	Figure 2-12 MOTOMESH Setup – Startup Options Dialog Box (W2K)					
	Startup Options					
	Select the startup options for MeshTray and click Next to continue.					
	V Automaticallu Launch MeshTrau at Startun					
	Add MeshTray Shortcut to Desktop					
6	The <i>Ready to Install</i> dialog box will be displayed as shown in Figure 2-13. This dialog box displays the <i>Install Folder</i> location and the <i>Shortcut Folder</i> name that will be used to install the MOTOMESH software. Click on <b>Next</b> to proceed with the installation process.					
	Figure 2-13 MOTOMESH Setup - Ready to Install (W2K)					
	🐻 MOTOMESH Client Setup					
	Beady to Install           You are now ready to install MOTOMESH Client.					
	The installer now has enough information to install the MOTOMESH Client on your					
	The following settings will be used:					
	Install folder: C:\Program Files\Motorola\MotoMesh					
	Shortcut folder: Motorola\MotoMesh					
	Please click Next to proceed with the installation.					
	< Back Next > Cancel					
7	If MOTOMESH was previously installed on your computer, the <i>Information</i> dialog box will be displayed as shown in Figure 2-14.					

	Information MOTOMESH Client is already installed on this system MESH ENABLED TARCHITECTURE
	MOTOMESH Client software and drivers are detected on your system. Click Uninstall to run the uninstall program of the detected MOTOMESH Client software, to uninstall the existing MOTOMESH Client drivers, and to continue the installation process or click Cancel to abort this program. WARNING: Uninstalling the network driver will result in the loss of any saved configuration for the related network connection.
	Cancel
3	From the <i>Confirm Action</i> dialog select the <b>Yes</b> button to remove all of the previously installed components. If you do not want to continue, click on the <b>No</b> button.
	Figure 2-15 Confirm Action – Remove Existing Components
	Confirm Action
	Are you sure that you want to remove 'Motorola MOTOMESH Client' and all of its components?
	Are you sure that you want to remove 'Motorola MOTOMESH Client' and all of its components?

	🚏 Removing Progr	ams From Your Computer	x x	
	Uninstalling Soft	ware		
	Please wait wł	ile the software is uninstalled.	MESH ENABLED	
	'Motorola MOT while the uning	OMESH Client' will now be removed from your co tallation is performed.	mputer. Please wait	
	Executing file			
			Cancel	
10	If the Confirm Fi	ile Delete dialog displays on the sci	reen, select the Yes to All button.	
	Figure 2-17	Confirm File Deletion (W2K	)	
	Confirm File Delete		×	
	The uninstaller would	ike to remove the following shared system file:		
	C:\Program Files\Moto	prola\ATLCommon.dll		
	No other application h is still a possibility that	as registered their use of it, however there another application requires it in order to work.		
	Is it OK to remove the	file?		
	Yes	Yes to All No		
11	The Uninstalling	Software dialog will display the de	eleting file status, select Close when done.	
	Figure 2-18	Uninstalling Software – Del	eting Files (W2K)	



	🖓 Performing Setup Actions 📃 🔍			
	Setup 🖉			
	Installation actions are now being performed.			
	<u>ANCHISECIUNE</u>			
	Please wait while setup actions are performed on your system.			
	Executing file			
	Cancel			
14	The Select Ontions dialog box will be displayed as shown in Figure 2-21. This installation screen allows			
	the user to view the <i>ReadMe</i> file during the installation and to run MeshTray immediately following			
	installation.			
Click on the <b>Next</b> button to proceed with the installation process.				
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box           Image: Motomesh Client Setup           Select Options           Select the options below and click Next to continue.			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box           MOTOMESH Client Setup           Select Options           Select the options below and click Next to continue.			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box          Image: Motomesh Client Setup         Select Options         Select the options below and click Next to continue.         MESH ENABLED         Please select from the options below:			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box          Image: Motomesh Client Setup         Select Options         Select the options below and click Next to continue.         Please select from the options below:			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box          Image: Motomesh Client Setup         Select Options         Select the options below and click Next to continue.         Image: Please select from the options below:         Image: Run MeshTray         Image: Run MeshTray			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box          Image: Motomesh Client Setup         Select Options         Select the options below and click Next to continue.         Please select from the options below:         Image: Run MeshTray         Image: View Readme File			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box          Select Options         Select the options below and click Next to continue.         Please select from the options below:         Run MeshTray         View Readme File			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box          Image: Select Options         Select Options         Select from the options below and click Next to continue.         Please select from the options below.         Image: Run MeshTray         Image: View Readme File			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box Select Options Select the options below and click Next to continue. Please select from the options below: I Run MeshTray I View Readme File			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box Select Options Select the options below and click Next to continue.  Please select from the options below:  Run MeshTray  View Readme File			
	Figure 2.21 MOTOMESH Setup - Select Options Dialog Box   Image: Motomesh Setup   Select Options   Select the options below and click Next to continue.     Please select from the options below:   Image: Run MeshTray   Image: View Readme File			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box          Select Options         Select the options below and click Next to continue.         Please select from the options below:         Image: Run MeshTray         Image: View Readme File			
	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box			
15	Figure 2-21 MOTOMESH Setup - Select Options Dialog Box			



Chapter 2: Software Installation

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# Chapter 3: Wireless Modem Card Installation

This chapter will assist you with the physical installation and configuration of the Wireless Modem Card.

# **Prerequisite Installation Information**

The previous chapter's installation instructions must be completed before following the procedures outlined in this chapter.

# Working with the Antenna

The following sections will focus on the proper handling and usage of antennas when using a wireless modem card.

## **Connecting the Antenna Assembly**

Complete the following procedure to connect the Antenna Assembly (Knuckle or Pigtail type) to the Wireless Modem Card for use in a standard laptop computer.



Always eject card when not in use.

#### Procedure 3-1 Connecting the Antenna Assembly

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# **Disconnecting a Pigtail Antenna Assembly**

Complete care should be taken when disconnecting an antenna from the WMC6300 or the WMC7300 card. Follow the procedure below for correct antenna disconnection instructions:

#### Procedure 3-2 Disconnecting the Antenna Assembly

 1
 When disconnecting a pigtail antenna from the Wireless Modem Card use caution not to damage the card, connector, or cable.

 Image: Caution Image: Caut

	result in excess pressure being applied to the connection between the WMC connector and the board, which could crack or otherwise damage a solder joint.
2	Pull straight out at the connector to avoid damaging the card, connector or cable.

# **Connecting the Magnetic Antenna Assembly (Optional)**

Complete the following procedure to install the Magnetic Mount Antenna on the rooftop of a vehicle. The length of the Antenna cable is approximately 12 feet.

It is recommended that you use an (optional) N-Type SMA to MMCX adapter with your antenna cable, and then connect the MMCX directly to the card.

#### Procedure 3-3 Installing the Magnetic Mount Antenna Assembly



	WARNING
	<i>Never use the WMC</i> 6300 or the WMC7300 with the Antenna removed from the rooftop, or with the Antenna disconnected from the Card.
4	Connect the Antenna Cable end to the MMCX adapter cable (from detail of <b>Circle A</b> in Figure 3-2).
	Figure 3-3 Antenna Cable end connecting to MMCX adapter
5	Connect the MMCX adapter cable to the WMC6300 (or the WMC7300) by pressing it firmly into the card's antenna port (shown in <b>Circle B</b> , Figure 3-2).
	Figure 3-4 N-Type SMA to the MMCX adapter connecting to the WMC6300
	<image/>
6	Insert the WMC6300 card into the Host computer's PCMCIA slot.
	haste ale in meesses care into the most computer of content stot.

# Installing the WMC6300 and the WMC7300

The following sections will describe the proper installation and removal of the WMC6300 and the WMC7300 wireless modem cards.

# Installing the Wireless Modem Card

Complete the following procedure to install the WMC6300 and the WMC7300 wireless modem cards. The same installation procedure applies to both wireless modem card model numbers.

#### Procedure 3-4 Installing the Wireless Modem Card



**3** The antenna must be attached using the clip and vertically oriented when the laptop is in use as shown in Figure 3-6.



**5** The Windows *Found New Hardware Wizard* for the Serial PC Card will start as shown in Figure 3-8. Verify that the "Install the software automatically (Recommended)" radio button is selected, and then click on the **Next** button.

Found New Hardware W	izard	
	Welcome to the Found New Hardware Wizard This wizard helps you install software for: mea Serial PC Card	
	What do you want the wizard to do?	
	<ul> <li>Install the software automatically (Recommended)</li> <li>Install from a list or specific location (Advanced)</li> </ul>	
	Click Next to continue.	
	< Back Next > Cancel	

Found New Hard	ware Wizard			
Please wait wh	ile the wizard inst	alls the software		
J mea	Serial PC Card			
	ò	Ø	B	
	Setting a system res case your system ne	tore point and backing eds to be restored in th	up old files in ne future.	
		< <u>B</u> ack	Next >	Cancel

-	
7	As soon as the above step is complete, the <i>Hardware Installation</i> dialog box shown in Figure 3-10 will be displayed. Click on the <b>Continue Anyway</b> button in the <i>Hardware Installation</i> dialog box
	be displayed. Click on the <b>Continue</b> Anyway button in the <i>Huruware Installation</i> dialog box.
	Figure 3-10 Hardware Installation Dialog Box
	Hardware Installation
	The software you are installing for this hardware:
	mea Serial PC Card
	has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
	Continuing your installation of this software may impair
	or destabilize the correct operation of your system
	either immediately or in the future. Microsoft strongly recommends that you stop this installation now and
	contact the hardware vendor for software that has
	passed Windows Logo testing.
	Continue Anyway STOP Installation
8	The Found New Hardware Wizard Complete dialog box will appear as shown in Figure 3-11. Click on
	the Finish button.
	Figure 3-11 Found New Hardware Wizard - Complete
	Found New Hardware Wizard
	Completing the Found New
	Hardware Wizard
	The wizard has finished installing the software for:
	mea Serial PC Card
	Uick Hinish to close the wizard.
	< Back Finish Cancel

An additional Found New Hardware Wizard will be displayed as shown in Figure 3-12. Verify that the *Install the software automatically (Recommended)* radio button is selected, and then click on the **Next** button.

9

	Found New Hardware Wizard	
	Welcome to the Found New Hardware Wizard	
	This wizard helps you install software for:	
	WMC6300 PC Card	
	If your hardware came with an installation CD or floppy disk, insert it now.	
	What do you want the wizard to do?	
	Install the software automatically (Recommended)	
	Install from a list or specific location (Advanced)	
	Click Next to continue.	
	< <u>Back</u> Next > Cancel	
10	A Loading Files dialog box will appear as shown in Figure 3-13. Go on	to the next step.
	Figure 3-13 Found New Hardware Wizard Loading Files	
	Found New Hardware Wizard	
	Please wait while the wizard installs the software	
	WMC6300 PC Card	
	anet.sys To C:\WINDOWS\System32\DRIVERS	
	< Back Next > Cancel	

11	From the <i>Hardware Installation</i> dialog box, Figure 3-14, click on the <b>Continue Anyway</b> button.				
	Figure 3-14 H	lardware Installation Dialog Box - WMC630	0 PC Card		
	Hardware Installa	tion			
	The software WMC6300	are you are installing for this hardware: ) PC Card			
	has not pa with Wind	ssed Windows Logo testing to verify its compatibility ows XP. ( <u>Tell me why this testing is important.</u> )			
	or destal either im recomme contact passed V	bilize the correct operation of your system mediately or in the future. Microsoft strongly ends that you stop this installation now and the hardware vendor for software that has Vindows Logo testing.			
		Continue Anyway			
12	The Found <i>New Hard</i> Click on the <b>Finish</b> b	dware Wizard Complete dialog box will be display utton.	red as shown in Figure 3-15.		
	Figure 3-15 F	ound New Hardware Wizard Complete			
	Found New Hardware	Wizard			
		Completing the Found New Hardware Wizard			
		The wizard has finished installing the software for:			
		Windoud Pe Cald			
		Click Finish to close the wizard.			
		< <u>B</u> ack Finish Cancel			



# **Removing the Wireless Modem Card**

This section details specific Wireless Modem Card removal instruction to ensure that power to the card is disabled prior to removal.

Complete the following procedure prior to ejecting the Wireless Modem Card from the computer.

Procedure 3-5 Removing the Wireless Modem Card





# Chapter 4: MeshTray

MeshTray<sup>™</sup> is a status and configuration application that reports vital and statistical information about the Wireless Modem Card (WMC). Because MeshTray is a "tray" application, it stays in the desktop system status tray when it is minimized.

In this chapter you will learn about the available MeshTray features, the different ways to start MeshTray, and how to remove the application from your computer.

# MeshTray System Tray Icon Status

The MeshTray icon resides in the System Tray and indicates the current mode of operation as well as the state of the wireless interface.

There are two main modes of operation: *Infrastructure* or *Peer-to-Peer*. In *infrastructure* mode the device is able to associate with an IAP, while in *peer-to-peer* mode, IAP association is not possible (intentionally or unintentionally), and a wireless mesh network is automatically accessed with the use of any available peer devices instead.

The table below describes all the possible states that the MeshTray icon will exhibit in the Windows system tray.

Icon State	Explanation
Peer to Peer with Neighbors	The icon indicates that the device is running in peer-to-peer mode; the MeshTray icon displays the Link Quality to the associated IAP as color-coded bars. The greater the number of bars, the better the Link Quality.
Peer to Peer without Neighbors	The icon indicates that the IP address has not yet been acquired from the DHCP server. When this happens, the IP field in the Status Tab displays a flashing "X" or "0" IP.
Inactive or Disconnected	The inactive state applies when a WMC is not inserted. The disconnected state applies if a card is inserted but is not yet associated with an IAP.

#### Table 4-1 MeshTray Icon States

Jacon Ctota

Excellent IAP Association (Infrastructure mode)	When the WMC is associated with an IAP (not peer-to-peer), the MeshTray icon displays the Link Quality to the associated IAP as color-coded bars. The greater the number of bars, the better the Link Quality.
	Same explanation as listed for the <i>Excellent IAP</i> icon, except that the IAP link quality is measured to be Very Good.
Very Good IAP Association	
	Same explanation as listed for the <i>Excellent IAP</i> icon, except that the IAP link quality is measured to be Medium.
Medium IAP Association	
	Same explanation as listed for the <i>Excellent IAP</i> icon, except that the IAP link quality is measured to be Poor
Poor IAP Association	
	Same explanation as listed for the <i>Excellent IAP</i> icon, except that the IAP link quality is measured to be Very Poor.
Very Poor IAP Association	

# Starting MeshTray

During the software installation process, you can choose to run MeshTray immediately upon completion of the installation process.

#### Procedure 4-1 Starting MeshTray

1	To start the MeshTray application, double-click on the MeshTray icon located on the desktop. The icon will be available on the desktop only if the election to place it on the desktop has been selected at the time of MeshTray installation.
2	As an alternative to the above step, you can also: Click on <b>Start   Programs   Motorola   MotoMesh   MeshTray.exe.</b>
3	As an alternative to the previous steps, you can also: Click on the MeshTray icon in the Windows System Tray to restore the application to a property sheet (tab-style) interface as shown in Figure 4-1

# **MeshTray Tab Contents**

The following sections will describe the contents of all the available tabs within the MeshTray application, and their respective functionality.

. . . . . . . . . .

# **Status Tab**

Geo Position	Security	Authentication Activity
Status	Configuration	Routing
A	dapter Information	
Description:	WMC PC Card	
MAC Address:	00-05-12-04-97-14	
RF Frequency:	2.4 GHz	
Adapter Type:	MEA-WMC6300	
Firmware Version:	8.0.55	
Build Date;	7/18/2005 2:32:57 PM	
	IAP Address 00-05-12	-0B-00-86
	IAP Link Quality	
	mea Quality: 95%	

#### Figure 4-1 MeshTray Status Tab

Table 4-2 Status Tab - Adapter Information Section

Status Tab Item	Explanation
Description	Indicates the device type.
MAC Address	Displays the MAC Address assigned to the Wireless Modem Card on the current computer being viewed through MeshTray.
RF Frequency	Displays either 2.4 or 4.9 GHz RF operating frequency.
Adapter Type	Describes the type of adapter.
Firmware Version	Current version of the firmware version running on the device.
Build Date	Current Build Date of the firmware version

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	running on the device.
IAP Address	The IAP Address of the Access Point linked to by the device.
	If the device is operating in Peer-to-Peer mode, the IP address will be shown as all zeros.
IAP Link Quality	The Access Point link quality is represented as
IAP Link Quality	considered Excellent. It is also an indication
mea Quality: 97%	that the device is running in Infrastructure mode as opposed to Peer-to-Peer.
Infrastructure Mode (%)	A device that is running in Peer-to-Peer mode
IAP Link Quality	will display a yellow percentage bar along with the word "inactive"
Inactive	the word matrixe .
Peer-to-Peer Mode (IAP link inactive)	
• <u>•</u> •	The two modes that a MOTOMESH or a MEA wireless device operates in is: <i>Infrastructure</i> or <i>Peer-to-Peer</i> . Within the MeshTray <b>Status</b> tab, the graphic mode automatically adjusts to the
Operating Mode Graphic - Infrastructure	operating mode. The <i>Infrastructure</i> mode is intuitively represented by two hops and a globe connected with dotted links.
•	The <i>Peer-to-Peer</i> mode is represented by three hops connected with dotted links. See explanation for the previous <i>mode</i> graphic for more details.
Operating Mode Graphic - Peer-to-Peer	

# **Configuration Tab**

The contents of the MeshTray Configuration tab are described in the following sections and tables.

Figure 4-2 MeshTray Configuration Tab

Geo Position		Security	1	Aut	thentication Activity
Status		Configura	ition		Routing
Display Geograp	hic Position (req	uires license)			
Geographic Repor	ting				
Antenna Cable Le	ingth:		Feet: 0		Meters: 0
Reporting interv	al in seconds:		10 -	4	
			-		
IP Address of se	rver to report po	osition to:			
0.0	. 0 . 0				
0.0	. 0 . 0				
0.0	, 0 , 0 Physical Ch	nannel			
0.0	, 0 , 0 Physical Ch Channel 3 (2.47	nannel 70 GHz)			
0 , 0	, 0 , 0 Physical Ch Channel 3 (2,47 Change Contro	nannel 70 GHz)			
0,0	. 0 . 0 Physical Ch Channel 3 (2.47 Change Contro	nannel 70 GHz)			
0,0	0 0 0 Physical Ch Channel 3 (2,47 Change Contro s Internal DHCP	nannel 70 GHz) V ol Channel Server			
0 0	. 0 . 0 Physical Ch Channel 3 (2,47 Ghange Contro s Internal DHCP i Unassociated	nannel 70 GHz) 💌 91 Channel Server			(
0 0 0	. 0 . 0 Physical Ch Channel 3 (2.47 Change Contro s Internal DHCP i Unassociated	nannel 70 GHz) 💌 91 Channel Server			Undo

#### **Geographic Position**

The **Display Geographic Position** option is selectable and the user may configure the reporting interval as shown in Figure 4-2, if the license for this licensed feature has been purchased and enabled on the network. Another indicator that this feature is enabled is that the **Geo Position** tab is viewable; otherwise the Geo Position tab would not be shown. For additional information about the **Geo Position** tab and its use, please see the *Geo Position tab* section of this documentation.

If the **Display Geographic Position** checkbox is grayed out, and a license has been purchased, check with your company's Network Administrator about enabling this option from within the MOTOMESH MeshManager application.

## **Geographic Reporting**

The Geographic Reporting feature becomes enabled when the Geographic Position checkbox is both enabled (licensed, not grayed out) and contains a check mark.

Table 4-3	Geographic Reporting section
-----------	------------------------------

Section Item	Explanation
	To ensure a detailed Geographic Positioning calculation, the length of the antenna needs to be entered in feet or meters. Only whole

Antenna Cable Length	numbers can be used in these entry fields.
	Do not enter decimal point values as they will be dropped after, the "Apply" button is selected.
Reporting Interval in seconds	The reporting interval must be entered in seconds (up to a maximum of 180 seconds) and is used for updating the <i>Geo Position</i> tab data contents for longitude and latitude or X, Y, Z positions for the Spherical Coordinate Use the Up arrow to set the number of seconds.
IP Address of server to report position to	This is the IP Address where the geo position is forwarded or reported to. Typically, this is a centralized server that displays the position of all devices on the network.

#### **Control Channel Configuration**

There are four channels available for 2.4 GHz network communications. The Network Administrator can map the four available Physical channels to three Data channels and one Control channel. The Data channels will be used for data transmission between subscriber devices, infrastructure devices, and the network. When the using the 2.4 GHz Wireless Modem Card (WMC), the Control channel is designated for internal MEA communication. By default, it is set to the physical channel 3 (2.47 GHz).

When working with the 4.9 GHz WMC the available channels are 4.950, 4.955, 4.960, and 4.965.

#### **Changing the Control Channel**

A user should never change the channel mappings unless specifically instructed to do so by the Network Administrator.

Procedure 4-2 Changing the Control Channel

1	Click on the <b>Change Control Channel</b> button located on the <b>Configuration</b> tab, if you are required to change the control channel at the request of a Network Administrator. A <i>Password</i> window will display.
	Figure 4-3 Password Protection Panel
	Password
	Please enter the password OK Cancel
	Password:
2	Enter the password provided by your network administrator and then select the <b>OK</b> button.

3	Click on the newly enabled <b>Control Channel</b> dropdown arrow and then select the Control Channel specified by your Network Administrator.	
4	Select the Apply button located on the Configuration tab to finalize your selection.	
	WARNING           Any unauthorized change can cause the WMC6300 to stop communication with the network and other subscriber devices.	

#### **Enabling the WMCs Internal DHCP Server Feature**

If a DHCP server is not available on your network, you may choose to either provide a viable static IP address in Windows or select the **Enable Adapter's DHCP Server** checkbox. The two scenarios lead to several TCP/IP setting considerations which will be explored in the following sections, please see the figure below for a visual explanation.

When the **Enable Adapter's DHCP Server** checkbox is selected, an IP address will be provided to Windows by the adapter's internal DHCP server. A unique IP address will be created from the device's MAC address and a subnet mask will be available. To complete the configuration, the default gateway, and the DNS settings need to be provided in the *TCPIP Properties* window, as specified in the section <u>Setting a User Supplied IP Address</u>. See <u>Figure 4-4</u> for a visual explanation of the available configurations.

#### Link Down When Unassociated Checkbox

Select the **Link Down When Unassociated** checkbox when you want the WMC card to be invisible to the Windows operating system, only during the times when the card is no longer connected to an IAP. This feature does not apply when the card is running in Peer-to-Peer mode of operation.





## Setting a User Supplied IP Address

To setup a User Supplied IP address, first obtain a valid IP address from your Network Administrator. This is the IP address to be entered in the IP Address box on the *Internet Protocol (TCP/IP) Properties* dialog's *General* tab.





Connect using:	
Connect using:	
WMC6300 PC Card	
	<u>C</u> onfigure
This connection uses the fo	ollowing items:
Client for Microsoft	t Networks
🗹 县 File and Printer Sh	aring for Microsoft Networks
🗹 🚚 QoS Packet Sche	duler
🗹 🐨 Internet Protocol (*	TCP/IP)
Install	Uninstall Properties
Allows your computer to	access resources on a Microsoft
network.	
Show icon in notification	n area when connected

# **Configuring the DNS Address**

Manual DNC configuration is only necessary when a DHCP server does not exist on the Network.

 1
 Select Start | Control Panel to display the Windows Control Panel.

 2
 On the Control Panel, double-click on the Network and Internet Connections icon, and then double-click on the Network Connections icon.

3	Right-click on the Local Area Connection corresponding to the Wireless Modem Card and select the <b>Properties</b> button.
	Figure 4-8 Local Area Connection Properties Dialog Box
	Local Area Connection 9 Properties
	General Authentication Advanced
	Connect using:
	B WMC6300 PC Card
	Configure This connection uses the following items:
	Elient for Microsoft Networks      Elie and Printer Sharing for Microsoft Networks
	QoS Packet Scheduler
	Install Uninstall Properties
	Description Transmission Control Protocol/Internet Protocol. The default
	wide area network protocol that provides communication across diverse interconnected networks.
	Show icon in notification area when connected
	OK Cancel
4	Highlight Internet Protocol (TCP/IP) in the <i>Components</i> dialog box as shown in Figure 4-8.
5	Click on the <b>Properties</b> button.
6	Click on the Advanced button.
7	Click on the DNS tab
8	Click on the DNS Add button.
9	Enter the DNS Server IP Address provided by the Network Administrator and then click the Add button.
10	Click on the <b>OK</b> button to close the <i>Advanced TCP/IP Settings</i> dialog box.
11	Click on the <b>OK</b> button to close the Internet Protocol (TCP/IP) Properties dialog box.
12	Click on the <b>OK</b> button to close the Local Area Connection Properties dialog box.
	This configuration should remain in the Windows XP host.

## **Geo Position Tab**

If your Wireless Modem Card has been licensed for Geo-Location, an optional *Geo Position* tab will be displayed as shown in the figure below. For the parameters to be enabled (not grayed-out), the **Display Geographic Position** checkbox needs to be selected in the *Configuration* tab.

Figure 4-9 MeshTray Geo Position Tab

Status     Configuration     Geo Position       turrent Position (Geodetic Coordinates)     0       Degrees Longitude:     0       urrent Position (Cartesian Coordinates)       verrent Position (Cartesian Coordinates)       < Position:     0       2 Position:     0       2 Position:     0	Status		
Current Position (Geodetic Coordinates)         Degrees Longitude:       0         Degrees Latitude:       0         urrent Position (Cartesian Coordinates)         X Position:       0         Y Position:       0         Z Position:       0         Z Position:       0	Seacas	Configuration	Geo Position
Degrees Longitude: 0 Degrees Latitude: 0 Current Position (Cartesian Coordinates) X Position: 0 Y Position: 0 Z Position: 0	Current Position (Geodetic Co	ordinates)	
Degrees Latitude: 0 Uurrent Position (Cartesian Coordinates) X Position: 0 Y Position: 0 Z Position: 0 Z Position: 0	Degrees Longitude:	0	
urrent Position (Cartesian Coordinates) X Position: 0 Y Position: 0 z Position: 0	Degrees Latitude:	0	
X Position (Cartesian Coordinates) X Position: 0 Y Position: 0 Z Position: 0			
K Position:     0       r Position:     0       2 Position:     0	urrent Position (Cartesian Co	oordinates)	
Y Position: 0 2 Position: 0	X Position:	0	
Z Position: 0	Y Position:	0	
	Z Position:	0	

# **MeshTray Routing Tab**

The MeshTray Routing Tab contains data pertaining to the local Subscriber Device and associated Routing and Neighbor table information. The Threshold setting can be set to a minimum of -100 dBm.



Although the first two digits of the QDMA Transceiver MAC address on the label for a Subscriber Device (WMC) may read **00**, due to the operational requirements of a MOTOMESH network, the Routing and Neighbor tables in MeshTray will display **02** for the first two digits (local bit set) for all QDMA Transceivers devices. When adding WMC devices to the network through MeshManager, **02** must be used for the first two digits of the MAC address to be able to successfully manage the device. Refer to the MeshManager Users Guide for details on adding devices to the network.

Jacob By	Authentical	tion Activity	9	iea Poettian
Status	Configu	nation	R	suting
Routing Table:				
Destination	Next Hop	Hop	6	
00-05-12-08-00-86	02-05-12-0A-81	-EE 3		
leighbor Table:	Neid	nborsbelow mi	ninum threshol	d 0 Threshold
	,			
Destination	Signal Lavel	Last Rate		-100 dBr
Deutination	Signal Level -85 dBm	Last Rate 1.5		-100 dBr
Destination 02-05-12-04-80-01 2 02-05-12-04-81-03	Signal Level - 45 dBm - 43 dBm	Last Rate 1.5 1.5		-100 dBe
Deutination 02-05-12-04-80-01 02-05-12-04-81-03 02-05-12-04-81-65	Signal Level -95 dBin -93 dBin -70 dBin	Last Rate 1.5 1.5 6.0		-100 dBr
Deutination 02-05-12-04-80-01 02-05-12-04-81-03 02-05-12-04-81-65	Signal Level -95 dBin -93 dBin -70 dBin	Last Rate 1.5 1.5 6.0		-100 dBr
Destination	Signal Level -95 dBin -93 dBin -70 dBin	Last Rate 1.5 1.5 6.0		-100 dbr
Destination (2016-12-04-60-01) (2010-05-12-04-61-03 (02-05-12-04-61-65 (02-05-12-04-61-65	Signal Level -95 dBn -93 dBn -70 dBn	Last Rate 1.5 1.5 6.0		-100 dbr
Deutonation Deutonationation Deutonation Deutonationation Deutonationation Deutonationation Deutonationationation Deutonationationation Deutonationationationationation Deutonationationationationationationationat	Signal Laval - 45 dBn - 43 dBn - 70 dBn	Last Rabs 1.5 1.5 6.0		-100 dbr
Deutination Deutonation Deuto-12-04-80-01 Deuto-12-04-81-00 De-06-12-04-81-65	Signal Level - 45 dBn - 43 dBn - 70 dBn	Last Rate 1.5 1.5 6.0		

Figure 4-10 MeshTray Routing Tab

#### **Routing Table**

The Routing Table displays the MAC address for the *Destination* node and the node to be utilized for the *Next Hop*, the number of *Hops* to the Destination node.



The **minimum** hop count from an SD to an IAP is 2. This is due to the inherent design of the IAP which contains MWR device components internally. This means that the first hop is from the SD to the IAP while the second hop is inside the IAP itself (IAP to internal WR component).

#### **Neighbor Table**

The Neighbor Table displays the MAC address and the *Signal Level* for the adjacent nodes that the WMC may route through, depending on the desired end node.

The Last Rate column displays the last data rate used to transmit user data to the neighbor destination.

#### Threshold

Adjusting the threshold control allows the user to view neighbors that have a signal level greater than or equal to the selected threshold level.

#### **Routing Icons**

#### Table 4-4 Routing Tab Icons

6881011Y52-D January 2007

lcon	Description
8	Indicates a device type not known to MeshTray.
Unknown	
	The Computer icon represents a Subscriber Device using a MEA Wireless Modem Card in the network.
Subscriber Device (SD)	
Wireless Router	The Arrow icon represents a Wireless Router (WR), or Mesh Wireless Router (MWR) in the MEA network. The WR is an infrastructure device dedicated to routing data.
IAP	The Globe icon represents an Intelligent Access Point (IAP) in the MEA network. A MEA Intelligent Access Point is an infrastructure device that allows access to the wired network.

# **MeshTray Security Tab**

The *Security* tab is used to set the *IAP* and *Peer Authentication* passwords to gain access to the network.

Figure 4-11 MeshTray Security Tab

HeshTray						
Status	Configuration	Geo Position				
Routing	Security	Authentication Activity				
Require Authentication to D Authentication Contr () (acal - Authentica ) Force guthorized ) Force Ugauthorized	Require Authentication to IAP Connections  Authentication Control for Tracening Connections:					
JAP Authentication Upertit	JAP Authentication Peer Authentication: Uperfat Group Name Save Pwd					
PESHMEANET	GLORD]	Yes Ago				
Bessword	sword					
Number of groups available: 9						
Paraverd Hinds						
OK Apply Hulp						

### **Require Authentication to IAP Connections**

When the *Require Authentication to IAP Connections* checkbox option is unchecked, it allows authentication of any device currently being monitored and authentication of devices added to the

network configuration as they are discovered. Alternately, when the checkbox is selected, authentication to the IAP becomes a requirement.

# **Authentication Control for Incoming Connections**

When in peer-to-peer mode, select one of the radio buttons to select the desired authentication option.

Table 4-5	Authentication	<b>Control Icons</b>

Icon	Description
Local – Authenticate all wireless access	Authentication is based on Peer information. (See the <i>Peer Authentication</i> section in this chapter).
Force Authorized – Allow any wireless access	Allow all clients.
Force Unauthorized – Deny all wireless access	Deny all clients.

#### **IAP** Authentication

To gain access to the IAP, the user must enter a UserId and Password recognized by that IAP.

Note: This is only true when IAP is not set to Force Authorized.

	•
Parameter	Description
User ID	Will be used for authentication and authorization for network access.
Password	Will be used for authentication and authorization for network access.
Remember User ID and Password	Allows the encrypted form of the UserId and Password to be written to the registry for future reference. Selecting this option creates a potential weakness in network security since it will allow anyone who has access to the Windows user account

#### Table 4-6 IAP Authentication Dialog

#### **Peer Authentication**

The Peer Authentication pane displays a table containing the *Group Name* and *Save Pwd* stats for all users within a Peer Authorization group, as shown in the figure below.

In a Peer-to-Peer network, the user can specify a group name and password to gain access to all other devices associated as peers. The same group name and password must be specified on each node included in the group.

Clicking the Add button launches the *Add New Group* window for the user to add the *Group Name* and *Password*. The *Remember this Name and Password* checkbox provides the option to save the *Group Name* and *Password* settings.

Clicking on the **Remove** button, located on the Security tab removes all group names highlighted in the table.

Figure 4-12 Peer Authentication – Add New Group

Add New Group		×
Group <u>N</u> ame:		Save
Password:		Cancel
<u>⊂</u> onfirm Password:		
<u>R</u> emember this Group'	s Password	

# **MeshTray Authentication Activity Tab**

The Authentication Activity tab displays *Infrastructure (IAP) Activity* and *Peer-to-Peer (Group) Activity* with an associated *Time* stamp and *Count* for the number of attempted authentications. The icons displayed in the *Time* column identify whether attempted authentications were successful (*IP)* or if they failed.

MeshTray				
Status	Conf	iguration	Geo Po	sition
Routing	Security		Authenticati	on Activity
Infrastructure (IAP) Activity:		Peer-to-Pee	r (Group) Activity:	
Time	Count	Time		Count
of 5/10/2005 2:26:18 PM	1			
of 5/10/2005 2:22:57 PM	1			
of 5/10/2005 2:21:39 PM	2			
		_		
		_		
		_		
		_		
		_		
		_		
		_		
		_		
		_		
		_		
		_		
		_		
			Clear	
		ОК		Help

Figure 4-13 MeshTray Authentication Activity Tab

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# **Chapter 5: Customer Information**

This chapter lists the relevant FCC Certification and Product Safety Information for the MOTOMESH devices described in this manual.

# **Customer Service Information**

If you have read this document and made every effort to resolve installation or operation issues yourself and still require help, please contact Motorola System Support Center (SSC) using the following contact information:

#### **Hours of Operation**

7 days a week, 24 hours

Technical Support: 800-221-7144 (USA)

## **Obtaining Support**

Motorola provides technical support services for your system and recommends that you coordinate warranty and repair activities through the Motorola System Support Center (SSC). When you consult the Motorola SSC, you increase the likelihood that problems are rectified in a timely fashion and that warranty requirements are satisfied. Check your contract for specific warranty and service information.

#### **System Information**

To be provided with the best possible opportunity for support, collect the following system information and have it available when obtaining support.

- Location of the system
- Date the system was put into service
- Software or firmware version information for components of your system

- Serial number(s) of the device(s) or component(s) requiring support
- A written description of the symptom or observation of the problem:
  - When did it first appear?
  - Can it be reproduced?
  - What is the step-by-step procedure to cause it?
- Do other circumstances contribute to the problem? For example, changes in weather or other conditions?
- Maintenance action preceding problem:
  - Upgrade of software or equipment
  - Change in the hardware or software configuration
  - Software reload from backup or from CD-ROM (note the version and date)

#### **Return Material Request**

After collecting system information, contact the Motorola System Support Center for assistance or to obtain a Return Material Authorization (RMA) number for faulty Field Replaceable Entities (FREs):

North America: 800-221-7144

#### **Radio Products and Services Division**

The Radio Products and Services Division is your source for manuals and replacement parts.

#### **Radio Products and Services Division Telephone Numbers**

The telephone numbers for ordering are: (800)-422-4210 (US and Canada orders)

The Fax numbers are: (800)-622-6210 (US and Canada orders)

The number for help identifying an item or part number is (800)-422-4210; select choice "3" from the menu

#### **Returning System Components to Motorola**

Motorola's service philosophy is based on field replaceable entities (FREs). FREs are system components identified by Motorola to be returned to Motorola for repair. In turn, Motorola sends you a replacement FRE component to help you maintain maximum operating performance for your system.

#### **Returning FREs**

Return faulty FREs to Motorola for repair. When you return an assembly for service, follow these best practices:

 Place any assembly containing CMOS devices in a static-proof bag or container for shipment.

- Obtain a return authorization (RA) number from the Motorola System Support Center.
- Include the warranty, model, kit numbers, and serial numbers on the job ticket, as necessary.
- If the warranty is out of date, you must have a purchase order.
- Print the return address clearly, in block letters.
- Provide a phone number where your repair technician can be reached.
- Include the contact person's name for return.
- Pack the assembly tightly and securely, preferably in its original shipping container.

Chapter 5: Customer Information

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# Chapter 6: Certification and Safety Information

This chapter lists the relevant FCC Certification and Product Safety Information for the MOTOMESH devices described in this manual.

# **FCC Regulatory Information**

### **FCC Information**

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.

Federal Communications Commission (FCC) Statement:

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

# FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.

# Safety Information for the MEA WMC7300

The Federal Communications Commission (FCC) with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. MOTOROLA products meet the uncontrolled environmental limits found in OET-65 and ANSI C95.1, 1991. Proper operation of this radio according to the instructions found in this manual and the hardware and software guides on the MOTOMESH CD will result in user exposure that is substantially below the FCC recommended limits.

- Do not touch or move the antenna(s) while the unit is transmitting or receiving.
- Do not hold any component containing a radio such that the antenna is very close to or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate a portable transmitter near unshielded blasting caps or in an explosive environment unless it is a type especially qualified for such use.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; otherwise, the radio may be damaged.



Use the antenna supplied by Motorola. Use of other antennas is prohibited and may violate FCC regulations.



The manufacturer is not responsible for any unauthorized modifications to this equipment. Unauthorized modifications could void user's authority to operate device.

# FCC RF Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

# **Safety Information for MOTOMESH Products**

The Federal Communications Commission (FCC) with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. Motorola MOTOMESH products meet the uncontrolled environmental limits found in OET-65 and ANSI C95.1, 1991. Proper operation of this radio according to the instructions found in this manual and the hardware and software guides on the MOTOMESH CD will result in user exposure that is substantially below the FCC recommended limits.

- Do not touch or move the antenna(s) while the unit is transmitting or receiving.
- Do not hold any component containing a radio such that the antenna is very close to or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate a portable transmitter near unshielded blasting caps or in an explosive environment unless it is a type especially qualified for such use.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; otherwise, the radio may be damaged.

## **Safety Certification**



Conforms to UL STD ANSI/UL 60950 3<sup>rd</sup> Edition Certified to CAN/CSA C22.2 NO. 60950-00 Equipment shall be suitable for use in Air pressure: 86kPa to106kPa

# WMC7300 Product Label Example



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# Glossary

**IAP** – Intelligent Access Point

**MEA –** Mesh Enabled Architecture

MiSC – Mobile Internet Switching Controller

**MWR –** Mesh Wireless Router

**SBC –** Single Board Computer

**SD** – Subscriber Device, a general description to a device type that is usually a WMC or a VMM.

Ĵ

VMM– Vehicle Mounted Modem

WMC - Wireless Modem Card, can apply to any model number

**WR –** Wireless Router same as MWR

Glossary

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