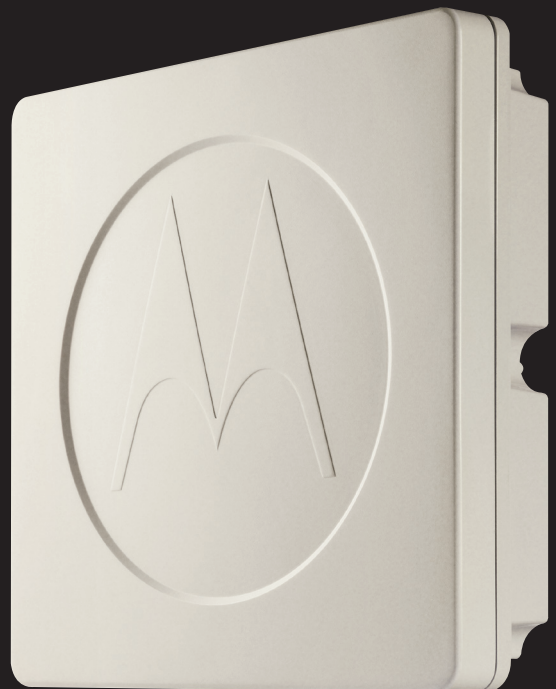




MOTOROLA

CPEo 400
Series



Accuracy

While reasonable efforts have been made to assure the accuracy of this document, Motorola, Inc. assumes no liability resulting from any inaccuracies or omissions in this document, or from use of the information obtained herein. Motorola, Inc. reserves the right to make changes to any products described herein to improve reliability, function, or design, and reserves the right to revise this document and to make changes from time to time in content hereof with no obligation to notify any person of revisions or changes. Motorola, Inc. does not assume any liability arising out of the application or use of any product, software, or circuit described herein; neither does it convey license under its patent rights or the rights of others. It is possible that this publication may contain references to, or information about Motorola products (machines and programs), programming, or services that are not announced in your country. Such references or information must not be construed to mean that Motorola intends to announce such Motorola products, programming, or services in your country.

Copyrights

This document, Motorola products, and 3rd Party Software products described in this document may include or describe copyrighted Motorola and other 3rd Party supplied computer programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola, its licensors, and other 3rd Party supplied software certain exclusive rights for copyrighted material, including the exclusive right to copy, reproduce in any form, distribute and make derivative works of the copyrighted material. Accordingly, any copyrighted material of Motorola, its licensors, or the 3rd Party software supplied material contained in the Motorola products described in this document may not be copied, reproduced, reverse engineered, distributed, merged or modified in any manner without the express written permission of Motorola. Furthermore, the purchase of Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Motorola or other 3rd Party supplied software, except for the normal non-exclusive, royalty free license to use that arises by operation of law in the sale of a product.

A list of 3rd Party supplied software copyrights are contained in the Supplemental information section of this document.

Restrictions

Software and documentation are copyrighted materials. Making unauthorized copies is prohibited by law. No part of the software or documentation may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, without prior written permission of Motorola, Inc.

License Agreements

The software described in this document is the property of Motorola, Inc and its licensors. It is furnished by express license agreement only and may be used only in accordance with the terms of such an agreement.

High Risk Materials

Components, units, or 3rd Party products used in the product described herein are NOT fault-tolerant and are NOT designed, manufactured, or intended for use as on-line control equipment in the following hazardous environments requiring fail-safe controls: the operation of Nuclear Facilities, Aircraft Navigation or Aircraft Communication Systems, Air Traffic Control, Life Support, or Weapons Systems (High Risk Activities). Motorola and its supplier(s) specifically disclaim any expressed or implied warranty of fitness for such High Risk Activities.

Trademarks



MOTOROLA

Motorola and the Stylized M Logo are registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners.



The CE mark confirms Motorola, Inc. statement of compliance with EU directives applicable to this product. Copies of the Declaration of Compliance and installation information in accordance with the requirements of EN50385 can be obtained from the local Motorola representative or by contacting the Customer Network Resolution Center (CNRC). The 24 hour telephone numbers are listed at <https://mynetworksupport.motorola.com>. Select **Customer Network Resolution Center contact information**. Alternatively if you do not have access to CNRC or the internet, contact the Local Motorola Office.

Contents

WiMAX CPEo400 Series User Guide

Revision History	2
Version Information	2

Chapter 1: WiMAX CPEo400 Series User Guide

Product Overview	1-2
WiMAX CPEo400 Series Overview	1-2
Powerful Features in a Single Unit.	1-3
Operating Information	1-3

Chapter 2: Installation

Hardware Installation Overview	2-2
Software Installation Overview	2-3
What You Need to Begin	2-3
Advanced Setup	2-3
Procedure to Log into the CPE.	2-4
Before you Begin Configuration	2-4
Logging into the CPE	2-4
Setup Wizard and Authentication	2-6
Wizard Step One — Enable Login Password Protection	2-6
Wizard Step Two — Device Time	2-6
Wizard Step Three — WiMAX Security.	2-6
CPE User Screens	2-8

Chapter 3: Basic Configuration

Basic Configuration Overview	3-2
Personalize Menu	3-2
Internet Menu	3-4
Status Menu	3-7

Chapter 4: Advanced Configuration

Advanced Configuration Overview	4-2
Port Forwarding Menu.	4-2
Local Address Menu	4-3
Control Panel Menu	4-6

Chapter 5: Glossary and Troubleshooting

Glossary of Terms	5-2
-----------------------------	-----

Glossary	5-2
Basic Troubleshooting Overview	5-3
A Computer Cannot Log On to the CPE	5-3
Cannot Connect to the Internet	5-3
Additional Troubleshooting Support	5-3

Chapter 6: Configuring TCP/IP and DNS Settings

Configuring TCP/IP	6-2
Configuring TCP/IP in Windows 2000	6-2
Configuring TCP/IP in Windows XP	6-6

Chapter 7: Important Safety and Legal Information

Important Safety Information	7-2
This Product complies with the following RF energy exposure standards and guidelines:	7-2
Caring for the Environment	7-7
Disposal of Motorola Equipment in EU Countries	7-7
Disposal of Motorola Networks Equipment in Non EU Countries	7-7
CMM Disclosure	7-7
Copyrights and Trademarks	7-9
Notice	7-9
Copyrights	7-9
Usage Disclosure Restrictions	7-9

List of Figures

Figure 1-1: CPEo400 Unit	1-2
Figure 2-1: CPE Login Screen	2-4
Figure 2-2: CPE Status Screen.	2-7
Figure 2-3: User Buttons.	2-8
Figure 3-1: Personalize Menu	3-2
Figure 3-2: CPE Internet Menu	3-5
Figure 3-3: CPE Status Menu	3-7
Figure 4-1: CPE Port Forwarding Menu New	4-2
Figure 4-2: CPE Local Address Menu	4-4
Figure 4-3: CPE Control Panel Menu.	4-6
Figure 6-1: Windows Control Panel	6-2
Figure 6-2: Network and Dial-up Connections	6-3
Figure 6-3: Local Area Connection.	6-3
Figure 6-4: Properties	6-4
Figure 6-5: Select Network Connection Type	6-4
Figure 6-6: Select Network Protocol	6-5
Figure 6-7: Internet Protocol (TCP/IP) Properties	6-5
Figure 6-8: Windows XP Start Window.	6-6
Figure 6-9: Control Panel	6-6
Figure 6-10: Network and Internet Connections.	6-7
Figure 6-11: Control Panel Classic View	6-7
Figure 6-12: Network Connections	6-8
Figure 6-13: Local Area Connection Properties	6-8
Figure 6-14: Internet Protocol (TCP/IP) Properties	6-9
Figure 7-1: EU RoHS	7-7
Figure 7-2: China Management Methods (CMM) Disclosure Table.	7-8

List of Tables

Table 1: Manual version history	2
Table 2-1: User Screens	2-8
Table 3-1: Password Fields.	3-3
Table 3-2: Device Time Fields	3-3
Table 3-3: Device Name Fields.	3-3
Table 3-4: Restore Factory Settings Fields.	3-4
Table 3-5: WiMAX Security Fields	3-5
Table 3-6: Firewall Fields	3-6
Table 3-7: Dynamic DNS Fields	3-6
Table 4-1: Port Forwarding Basic Fields	4-3
Table 4-2: Port Forwarding Forwarding Screen Fields	4-3
Table 4-3: DHCP Server Fields.	4-4
Table 4-4: Lease Status Fields	4-5
Table 4-5: Lease Reservation Fields	4-5
Table 4-6: Software Tab Fields.	4-7
Table 4-7: System Tab Fields.	4-7
Table 5-1: Glossary Terms	5-2
Table 7-1: Compliance Statement	7-3

WiMAX CPEo400 Series User Guide

Revision History

The following shows the issue status of this manual since it was first released.

Version Information

Table 1 Manual version history

Manual issue	Date of issue	Remarks
A	AUG 2007	CPEo400 User Guide Release
B	SEP 2007	Upissue to Initial Release
C	OCT 2007	Includes review comments
D	MAR 2008	Update to remove Desktop

WiMAX CPEo400 Series User Guide

Product Overview

WiMAX CPEo400 Series Overview

Figure 1-1 CPEo400 Unit



Thank you for purchasing the Motorola Customer Premises Equipment Outdoor (CPEo) 400 device. The Outdoor CPE allows you to connect to the wireless world easily and seamlessly.

The CPE outdoor (CPEo) device provides the user:

- Convenience — with easy plug and play functionality. Flexible connectivity. Compact design.
- Performance — high gain antenna providing Best in Class range in outdoor environment.
- Control — remote management capability allows easy detection and authentication once the unit is setup.

The features and the physical appearance of your Outdoor CPE device may differ slightly from the illustration. This product is subject to change. For the most recent documentation, visit the Product Documentation page on www.motorola.com.

Powerful Features in a Single Unit

The CPE device provides the following features:

- WiMAX (Worldwide Interoperability for Microwave Access) Access
- WAN DHCP Client
- LAN DHCP Server
- Home Gateway Functions

Operating Information

Operating temperature for this unit is -40C to 55C (-40F to 131F).

Installation

Hardware Installation Overview

The CPEo400 is an outdoor unit and the hardware installation is beyond the scope of this document. Please arrange with your service provider for professional installation.

Software Installation Overview

What You Need to Begin

Once the CPEo400 has been professionally installed by your service provider, you will need:

- A computer

Ensure your computer is plugged in, and the ethernet cable is connected from your computer to the CPE.

Advanced Setup

The CPE can also be used to connect to a multi-port switch (hub) - purchased separately from the CPE. Connecting the CPE device to a hub will allow you to connect more than one computer to your CPE device.

Procedure to Log into the CPE

Before you Begin Configuration

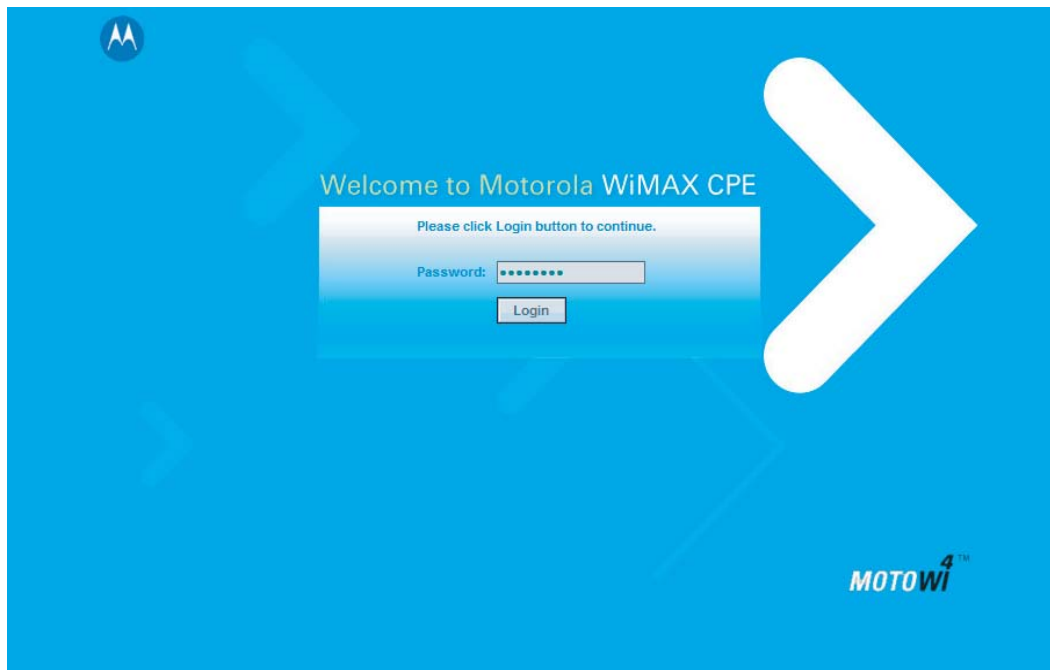
Some settings on your computer must be verified or changed to ensure that your computer configuration can support the Outdoor CPE.

Verify that the Network Settings of your LAN Connection on your computer are set to Automatically Obtain IP Addresses and Automatically Obtain DNS Server Addresses. Refer to [Chapter 6 Configuring TCP/IP and DNS Settings](#) for instructions.

Logging into the CPE


Use the following procedure to log into the CPE

Figure 2-1 CPE Login Screen



Continued

Procedure 2-1 Logging into the CPE

1	Verify that the Network Settings of your LAN Connection on your computer are set to Automatically Obtain IP Addresses and Automatically Obtain DNS Server Addresses. Refer to Chapter 6 Configuring TCP/IP and DNS Settings
2	On a computer that is connected to the CPE, open a web browser.
3	In the Address or Location field, type <code>http://mywimax.</code> and press ENTER to display the login screen. <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>NOTE</p> <p>You must include the period (.) after <code>http://mywimax.</code> in order to access the login screen.</p> </div> </div>
4	The Welcome to Motorola WiMAX CPE screen will be displayed and will prompt you for a password.
5	In the Password field, enter <code>motorola</code> for the password.
6	Click Login
7	First time users will see a pop-up box that states: Result: The Wizard application will guide you through for the first time configuration. Click OK button to continue.
8	Click the OK button to launch the wizard application.

Setup Wizard and Authentication

You can use the setup Wizard to quickly set up your CPE for use.

Wizard Step One — Enable Login Password Protection

The setup Wizard automatically enables Password Protection. It is recommended that you keep the password protection enabled to protect your device and network.

Procedure 2-2 Enable Password Protection

The Setup Wizard automatically enables Password Protection. When Password Protection is enabled, users are prompted for and must supply the correct password prior to gaining access the CPE.

1	Ensure the Enable Login Password Protection box is checked. The password will always be <code>motorola</code> .
2	Click Next

Wizard Step Two — Device Time

This screen allows you to set the time zone for your location and to enable automatic adjustment for Daylight Savings Time (when applicable)..

Procedure 2-3 Device Time

1	Select the appropriate time zone for your location from the drop down box.
2	Check the box called Auto Adjust for Daylight Savings Time if you live in a region that observes Daylight Savings Time (this box is checked by default).
3	Click the Next button.

Wizard Step Three — WiMAX Security


The WiMAX Security tab will contain your authentication method. Check with your service provider to determine if they require a user name and password for authentication purposes.

Procedure 2-4 WiMAX Security

1	Select one of the following:
	IF: _____ THEN... _____

Continued

Procedure 2-4 WiMAX Security (Continued)

	<p>The Authentication Method is EAP-TLS .</p> <ol style="list-style-type: none"> 1. Enter the Realm information as provided by your service provider 2. Click the Apply button
	<p>The Authentication Method is EAP-TTLS/MS-CHAPv2</p> <ol style="list-style-type: none"> 1. Enter the User Name and Password as supplied by your service provider. 2. Enter the Realm information as provided by your service provider. 3. Click the Finish button when finished
	<p>Congratulations! You have now completed the setup of your WiMAX connection.</p> <p> NOTE</p> <p>You can confirm a successful WiMAX connection by seeing a green check mark on the globe symbol at the top of your User Screen.</p>
2	Click OK on the Congratulations! dialog box.

A WiMAX Status Screen will appear. This screen will provide any status associated with your WiMAX Wireless Broadband connection. See the example Status Screen below.

Figure 2-2 CPE Status Screen



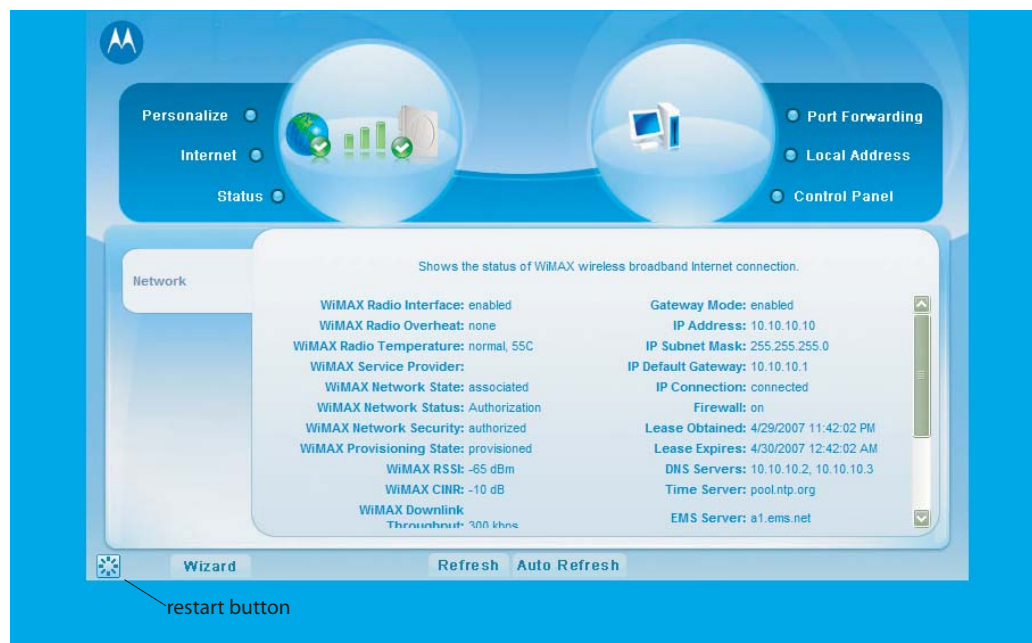
CPE User Screens

There are buttons that appear on each CPE User Screen. These buttons and their functions are described here.

Table 2-1 User Screens

Button	Function
Restart	Shuts down and restarts the CPE device.
Wizard	Prompts you to start the set-up wizard over again.
Refresh	Refreshes the status data
Auto Refresh	Allows the web browser to automatically refresh at the interval determined in the Control Panel menu.

Figure 2-3 User Buttons



Basic Configuration

.....

Basic Configuration Overview

Once the CPE set up has been completed, you can login to your CPE from any computer on your home network by typing the device name in the address bar. The default device name is mywimax. The Basic Configuration Menus that are available are:

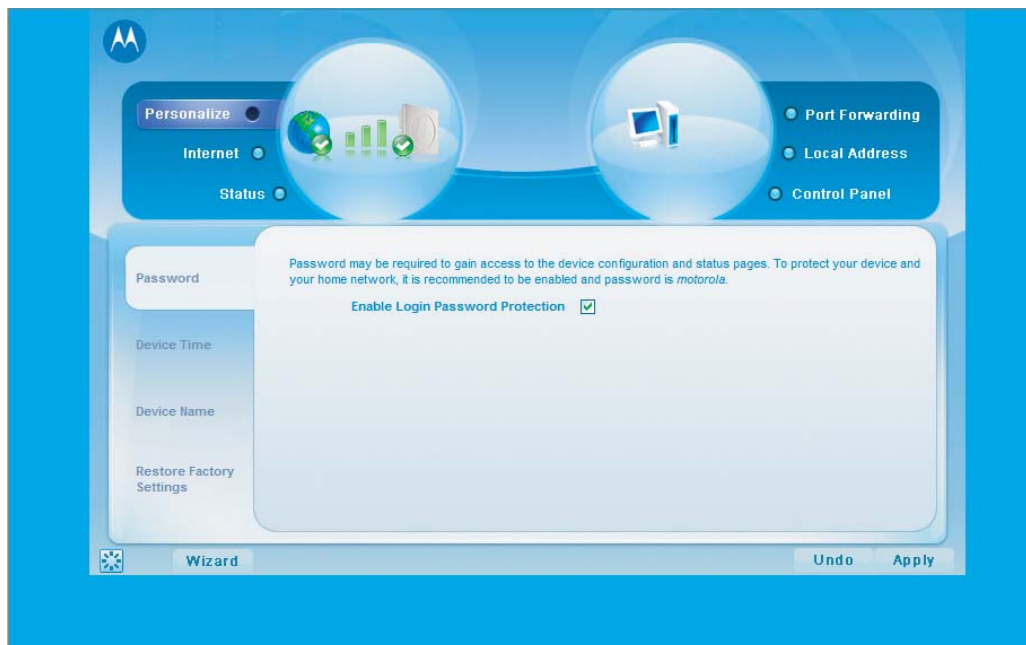
- Personalize
- Internet
- Status

Personalize Menu

The Personalize menu provides the following tabs:

- Password
- Device Time
- Device Name
- Restore Factory Settings

Figure 3-1 Personalize Menu



Password Tab

The password tab allows you to enable/disable password protection.

The Setup Wizard automatically enables Password Protection. When Password Protection is enabled, users are prompted for and must supply the correct password prior to gaining access the CPE.

Table 3-1 Password Fields

Field or Button	Description
Enable Login Password Protection	Checking this box will require login password protection. Password will always be motorola .

Device Time Tab

The Device Time tab allows you to establish the time zone for your location. It also allows you to automatically adjust for Daylight Savings Time if applicable. Be sure to click the **Apply** button when finished

Table 3-2 Device Time Fields

Field or Button	Description
Current Local Time	Shows the current local date and time
Time Zone	Select your local time zone from the drop down box
Auto Adjust for Daylight Savings Time	Check this box if your location observes Daylight Savings Time (default is checked).

Device Name Tab

The Device Name tab allows you to re-name your CPE device. This is the Device Name you enter on an internet browser address bar to access your CPE device. For example, during the setup process you typed **http://mywimax..** "mywimax." is the device name. If you change the Device Name, subsequent logins would require you to type in the new Device Name. Be sure to click the **Apply** button when finished.

Table 3-3 Device Name Fields

Field or Button	Description
New Device Name	Enter the new name for the CPE device. Maximum 20 characters.

Restore Factory Settings Tab

The Restore Factory Settings Tab will reset your CPE to the manufacturer's default settings. Be sure to click the **Apply** button when finished.

CAUTION

Only perform a Restore Factory Settings tab under the guidance of your service provider.

Table 3-4 Restore Factory Settings Fields

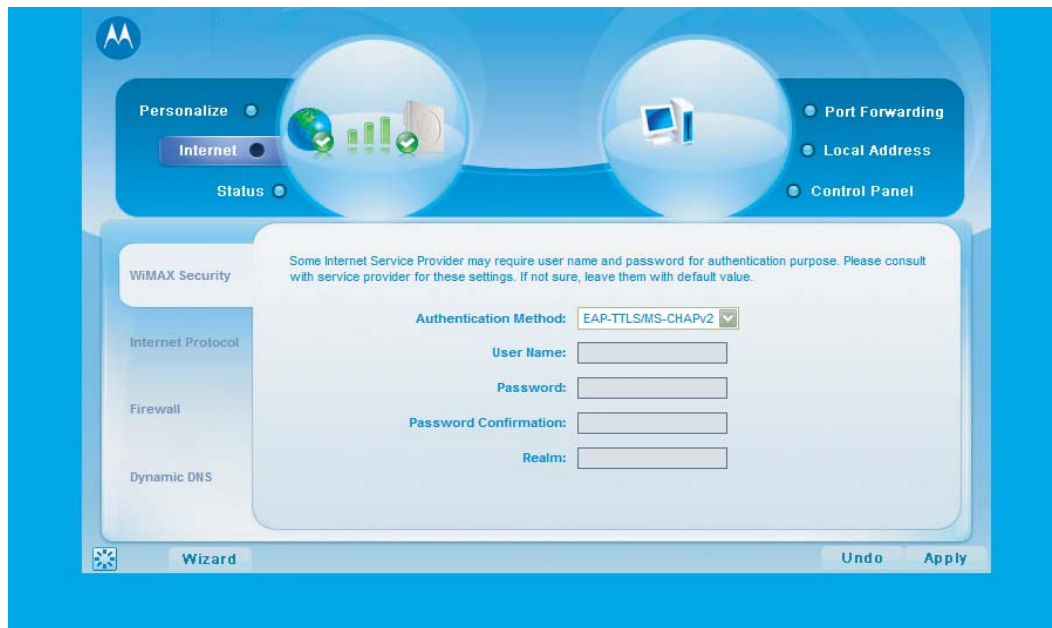
Field or Button	Description
Restore Factory Settings	Checking this box will restore the CPE to factory default settings. The device will restart when you click Apply .

Internet Menu

The Internet menu provides the following tabs:

- WiMAX Security
- Internet Protocol
- Firewall
- Dynamic DNS

Figure 3-2 CPE Internet Menu



WiMAX Security Tab

The WiMAX Security tab will contain your authentication method. Check with your service provider to determine if they require a user name and password for authentication purposes. Be sure to click the **Apply** button when finished.

Table 3-5 WiMAX Security Fields

Field or Button	Description
Authentication Method	Drop down box allows you to select either EAP-TLS (default) or EAP-TTLS/MS-CHAPv2
User Name (EAP-TTLS/MS-CHAPv2 only)	Enter the User Name supplied by your service provider.
Password (EAP-TTLS/MS-CHAPv2 only)	Enter the Password supplied by your service provider.
Password Confirmation (EAP-TTLS/MS-CHAPv2 only)	Re-enter the Password supplied by your service provider.
Realm	Enter the Realm as supplied by your service provider.

Internet Protocol Tab



Please check with your service provider for these settings. If you are unsure of the settings, leave the default values set and click the **Apply** button. If your service provider has instructed you to change any of these settings, be sure to click the **Apply** button when you are finished.

Firewall Tab

A firewall helps to protect your home network from unauthorized access. It will also help to manage authorized access from the Internet to your CPE. Be sure to click the **Apply** button when finished.

Table 3-6 Firewall Fields

Field or Button	Description
Enable Firewall	Check this box to enable the firewall for your home network.
Enable Web Login from Internet	Check this box to enables you to access your CPE device from a network other than your own.
Web Login Port from Internet	This is a non-editable field.
Enable ping from Internet	Enables the CPE to respond to a ping from the Internet. This option would be enabled to allow testing only. Do not leave this enabled.

Dynamic DNS Tab

Dynamic Domain Name Service (DDNS) allows a user with a non-static IP address to keep their domain name associated with an ever changing IP address. As an example, DDNS is used when you are hosting your own website. Be sure to click the **Apply** button when finished.

Table 3-7 Dynamic DNS Fields

Field or Button	Description
Enable DDNS	Check this box to Enable DDNS (default is unchecked)
DDNS Service Provider	Select DDNS Service Provider that you belong to from the drop down box.
DDNS User Name	Only valid if Enable DDNS is checked. Enter your DDNS account user name.

Continued

Table 3-7 Dynamic DNS Fields (Continued)

Field or Button	Description
DDNS Password	Only valid if Enable DDNS is checked. Enter your DDNS account password.
DDNS Host Name	Only valid if Enable DDNS is checked. Enter the DDNS Host Name. This is assigned by the DDNS service.

Status Menu

Use the status window to check the status of your WiMAX wireless broadband internet connection.

Figure 3-3 CPE Status Menu



This completes the Basic Configuration information for your CPEo400 unit. The rest of the manual contains Advanced User information for use in conjunction with your Service Provider’s support.

Advanced Configuration

Advanced Configuration Overview

The Advanced Configuration section describes the following advanced menus:

- Port Forwarding
- Local Address
- Control Panel

NOTE

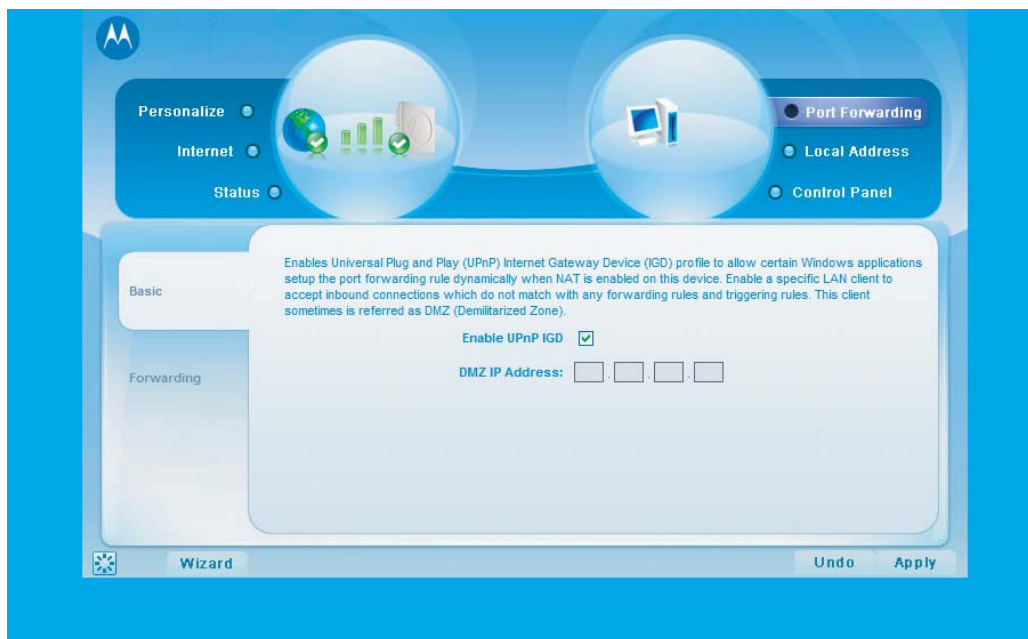
Contact your service provider for support with this functions.

Port Forwarding Menu

Port forwarding enables you to direct incoming traffic to specific LAN hosts (computers on your network) based on the protocol and port number. The port forwarding menu provides the following tabs:

- Basic
- Forwarding

Figure 4-1 CPE Port Forwarding Menu New



Basic Tab

Be sure to click the **Apply** button when finished.

Table 4-1 Port Forwarding Basic Fields

Field or Button	Description
Enable UPnP IGD	Enables Universal Plug and Play (UPnP) Internet Gateway Device (IGD) profile to allow certain Windows applications to setup the port forwarding rule dynamically when NAT is enabled on this device.
DMZ (De-Militarized Zone) IP Address	Enter the DMZ IP Address

Forwarding Screen

Click on the **ADD** button to create additional Port Forwarding rules. Be sure to click the **Apply** button when finished.

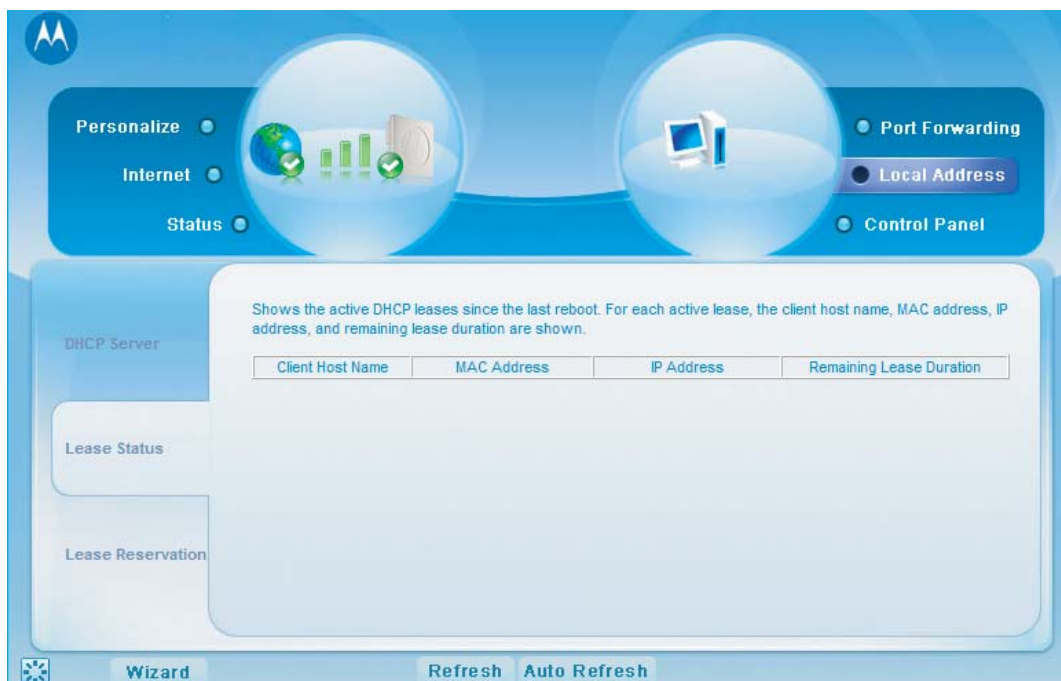
Table 4-2 Port Forwarding Forwarding Screen Fields

Field or Button	Description
Select	Select a box when you want to delete the specific row.
Protocol	Select TCP (Transmission Control Protocol) or UDP (User Datagram Protocol).
WAN Port Start	Enter the beginning port range for external network access.
WAN Port End	Enter the ending port range for external network access.
LAN IP Address	Enter the IP address to host the service.
LAN Port Start	Enter the beginning port range for internal network access.
LAN Port End	Enter the ending port range for internal network access.
Enabled	Check to enable specific port forwarding.

Local Address Menu

The Local Address menu allows you to configure your Local Area Network (LAN) connections. The Local Address menu provides the following tabs:

- DHCP Server
- Lease Status
- Lease Reservation

Figure 4-2 CPE Local Address Menu

DHCP Server Tab

The DHCP Server Tab enables Dynamic Host Configuration Protocol (DHCP) server functionality on the LAN, allowing the CPE to dynamically assign lease IP addresses to clients that connect to it from the local network. Be sure to click the **Apply** button when finished making any changes

Table 4-3 DHCP Server Fields

Field or Button	Description
Enable DHCP Server	If selected, the DHCP server on the gateway assigns IP addresses to the computers and other hosts on your network if they have DHCP enabled. By default, the gateway server is enabled. If there is another DHCP server running on your network (on another router), you must disable one of the DHCP servers.
DHCP Server IP Address	Enter the port forwarding LAN Client IP Address.
DHCP Starting IP Address	Sets the first IP address assigned by the DHCP server, in dotted-decimal format. It must be greater than the IP address value of the gateway. For example, if the IP address of the gateway is 192.168.15.1 (default), the starting IP address must be 192.168.15.2 (or higher)

Continued

Table 4-3 DHCP Server Fields (Continued)

Field or Button	Description
DHCP Ending IP Address	Sets the final IP address assigned by the DHCP server. If the DHCP server runs out of DHCP addresses, users cannot access network resources. If this happens, increase the Ending IP or reduce the Lease Time.
DHCP Lease Time	Sets the time, in seconds, that a network computer remains connected to the gateway using its current assigned IP address. At the end of this time, the DHCP server renews the lease or assigns the computer a new IP address. The default is 3600 seconds (1 hour). The maximum is 999999 seconds (approx. 278 hours).

Lease Status Tab

The Lease Status tab in the Local Address menu displays the active DHCP leases since the last reboot. Be sure to click the **Apply** button when finished making any changes.

Table 4-4 Lease Status Fields

Field or Button	Description
Client Host Name	Displays the client host name. The Name field is limited to 20 characters (only 5 appear in display)
MAC Address	Media Access Control (MAC) address.
IP Address	Shows the IP Address for each active lease.
Remaining Lease Duration	Shows the amount of time, in seconds, remaining in the lease. When the Remaining Lease Duration reaches 0, a new IP address will automatically be assigned.

Lease Reservation Tab

The lease reservation tab manages the lease reservations to ensure the same client gets the same IP address every time. Be sure to click the **Apply** button when finished making any changes

Table 4-5 Lease Reservation Fields

Field or Button	Description
Select	Select this box if you want to delete an established lease reservation. Be sure to click the Delete button once you have selected your exception to be deleted.

Continued

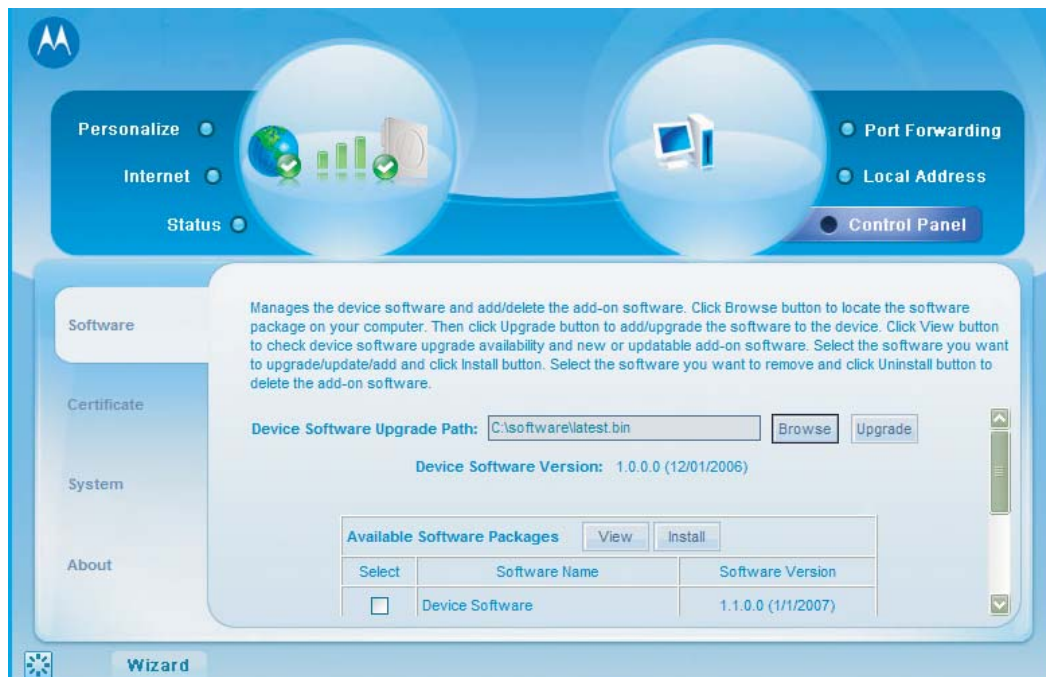
Table 4-5 Lease Reservation Fields (Continued)

Field or Button	Description
Client Host Name	Enter the client host name. The Name field is limited to 20 characters (only 5 appear in display)
MAC Address	Media Access Control (MAC) address. Enter the MAC address of the device.
IP Address	Enter the IP address that you want assigned to the MAC Address.
Enabled	Checking this box enables the lease reservation.

Control Panel Menu

The Control Panel sections allows you to view/update your software information. The Control Panel menu provides access to the following tabs:

- Software
- Certificate
- System
- About

Figure 4-3 CPE Control Panel Menu

Software Tab

The Software Tab manages the software on your CPE device. It is also where you can upgrade device software.

CAUTION

Do not upgrade or remove software without first contacting your service provider.

Table 4-6 Software Tab Fields

Field or Button	Description
Browse	Use this button to browse your computer for additional software packages.
Upgrade	Click this button once you have located the software package/update you would like to add to your device.
View	Use this button to view any available software packages.
Install	Click this button once you have selected an available software package that you would like installed.
Uninstall	Select the software package you would like removed and select this button.

Certificate Tab

The certificate tab is where you manage the certificates that are stored on the device.

Use the **BROWSE** button to locate the certificate file on your computer, and then click the **IMPORT** button. Use the **REMOVE** button to remove any selected certificate(s).

System Tab


This tab allows you to manage additional features of your CPE device. Be sure to click the **Apply** button when finished making any changes

Table 4-7 System Tab Fields

Field or Button	Description
Language Used in User Interface	Select the desired language for the user interface. The default language is English.
Enable WiMAX Radio Interface	Check this box to enable the WiMAX Radio Interface. If this box is disabled, the WiMAX radio will not transmit any signal.

Continued

Table 4-7 System Tab Fields (Continued)

Field or Button	Description
Auto Refresh Interval	Enter, in seconds, the interval for status Auto Refresh. Valid range is 1 second - 9999 seconds.
Re-bootstrap EMS (Element Management System)	Check this box to reconnect the device with the EMS. <div style="text-align: right;">  NOTE Only perform this function under the supervision of a Customer Support Representative. </div>
Enable Buzzer	Check this box to enable/disable the buzzer for the initial set-up and installation of your CPE device. The default is enabled (checked).

About Tab

The About Tab will display basic properties of your CPE device such as: Product Name, Model ID, Hardware Version, Serial Number and the WiMAX MAC Address.

Glossary and Troubleshooting

Glossary of Terms

Below is a list of acronyms and their definitions.

Glossary

Table 5-1 Glossary Terms

Acronym	Definition
CPE	Customer Premise Equipment
EMS	Element Management System
IEEE	Institute of Electrical and Electronic Engineers
IP	Internet Protocol
LOS	Line Of Site
MAC	Media Access Control
NLOS	Non-Line Of Site
VoIP	Voice Over Internet Protocol
Wi-Fi	Wireless Fidelity
WiMAX	Worldwide Interoperability for Microwave Access
WLAN	Wireless Local Area Network

Basic Troubleshooting Overview

This section provides basic troubleshooting for your CPEo400 device.

A Computer Cannot Log On to the CPE

Check that the Ethernet cable is properly connected to the CPE unit and the computer.

Cannot Connect to the Internet

Check the Outdoor CPE connection status from the Web Interface, refer to the Connection Status section to verify the connection status.

If the Outdoor CPE connection is down, and the gateway has not received an IP for 5 to 10 minutes, rerun the setup wizard.

Additional Troubleshooting Support

Please contact your service provider for additional Troubleshooting Support.

Configuring TCP/IP and DNS Settings

.....

Configuring TCP/IP

This chapter is needed for setup procedures. Refer to for more information regarding this chapter.

All client computers on your network must be configured for TCP/IP (the protocol that controls communication among computers). Perform one of:

- Configuring TCP/IP in Windows 2000
- Configuring TCP/IP in Windows XP

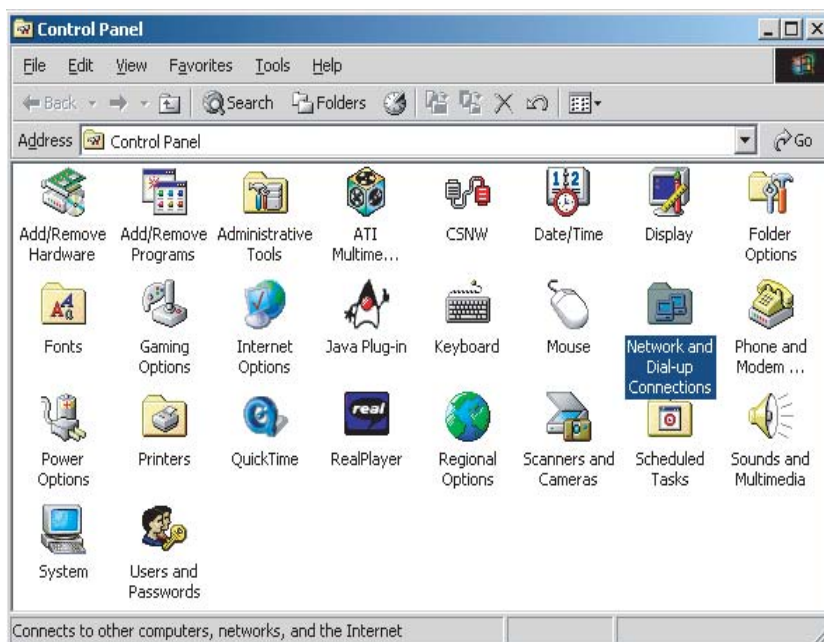
NOTE

Follow the instructions in your Macintosh or UNIX user manual.

Configuring TCP/IP in Windows 2000

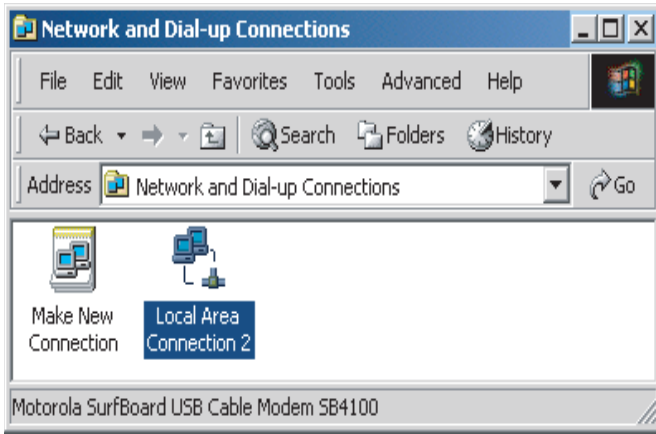
1. On the Windows Desktop, click **Start**.
2. Select **Settings** and then **Control Panel** from the pop-up menus to display the Control Panel window:

Figure 6-1 Windows Control Panel



3. Double-click the **Network and Dial-up Connections** icon to display the Network and Dial-up Connections window:

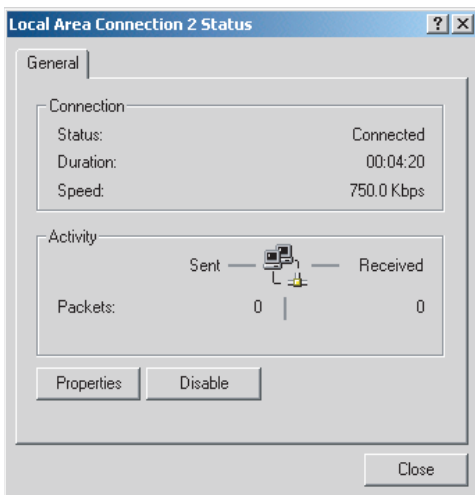
Figure 6-2 Network and Dial-up Connections



In the steps that follow, a connection *number* like 1, 2, 3, etc., is a reference that is displayed on computers with multiple network interfaces. Computers with only one network interface may only see the label: Local Area Connection.

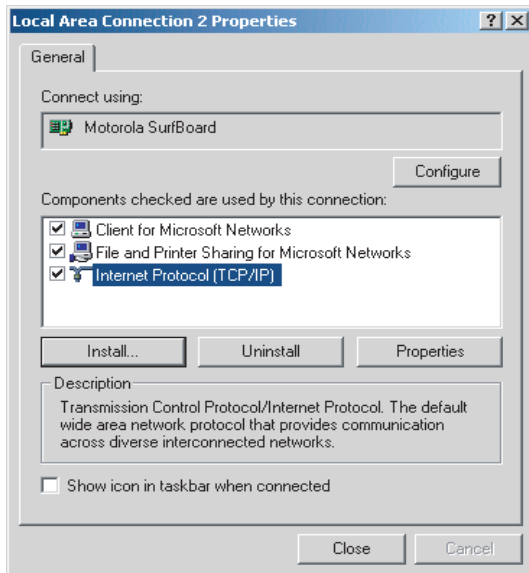
4. Click **Local Area Connection** number. The value of number varies from system to system. The Local Area Connection number Status window is displayed:

Figure 6-3 Local Area Connection



5. Click **Properties**. Information similar to the following window is displayed:

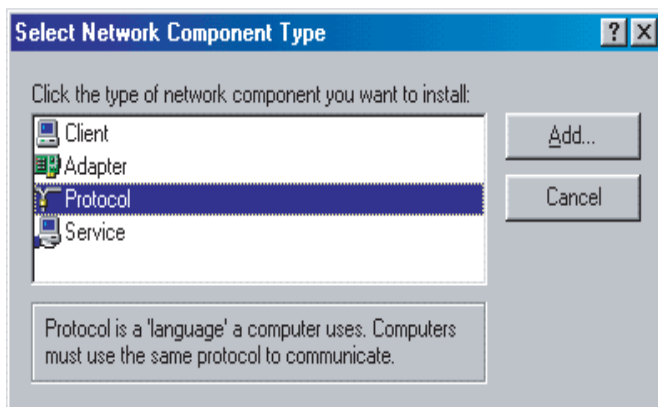
Figure 6-4 Properties



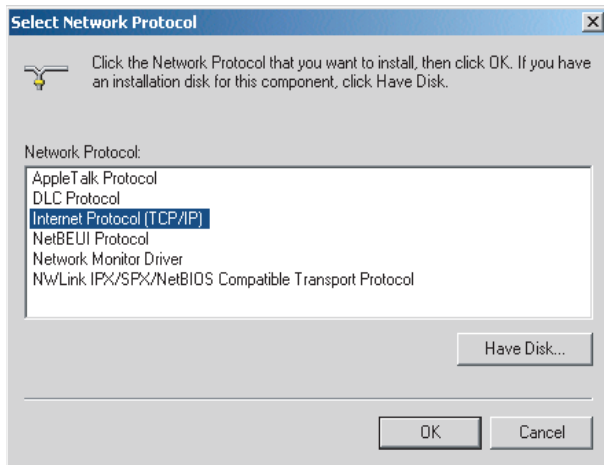
6. If Internet Protocol (TCP/IP) is in the list of components, TCP/IP is installed. You can skip to [Step 10](#)

If Internet Protocol (TCP/IP) is not in the list, click **Install**. The Select Network Component Type window is displayed:

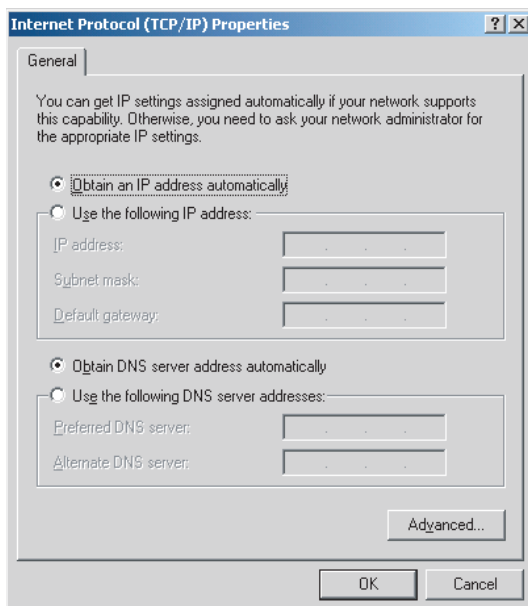
Figure 6-5 Select Network Connection Type



7. Click **Protocol** on the Select Network Component Type window and click **Add**. The Select Network Protocol window is displayed:

Figure 6-6 Select Network Protocol

8. Click **Internet Protocol (TCP/IP)**.
9. Click **OK**. The Local Area Connection number Properties window is re-displayed.
10. Be sure the box next to Internet Protocol (TCP/IP) is checked.
11. Click **Properties**. The Internet Protocol (TCP/IP) Properties window is displayed:

Figure 6-7 Internet Protocol (TCP/IP) Properties

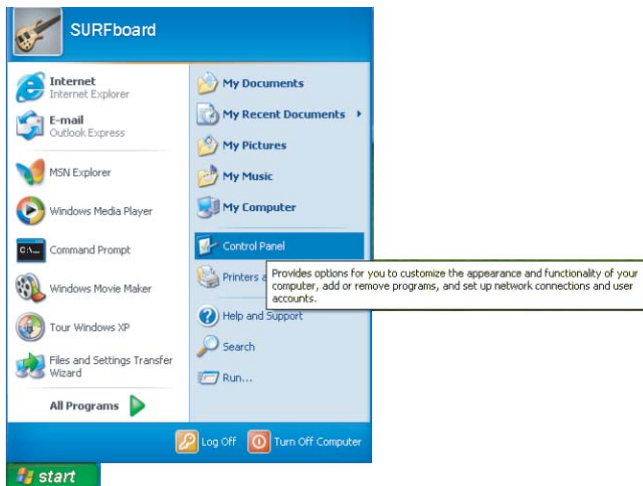
12. Be sure Obtain IP address automatically and Obtain DNS server address automatically are selected.
13. Click OK to accept the TCP/IP settings.

14. Click Close to close the Local Area Connection number Properties window.
15. Click OK when prompted to restart the computer and click OK again.

Configuring TCP/IP in Windows XP

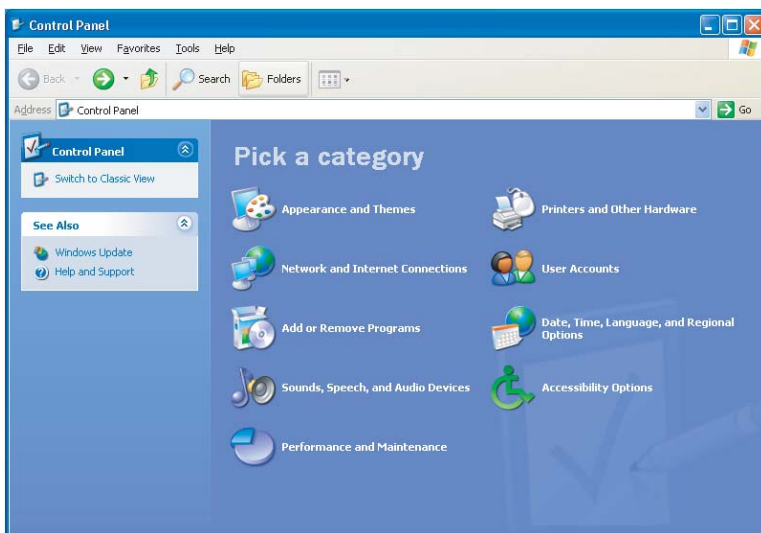
1. On the Windows desktop, click **Start** to display the Start window:

Figure 6-8 Windows XP Start Window



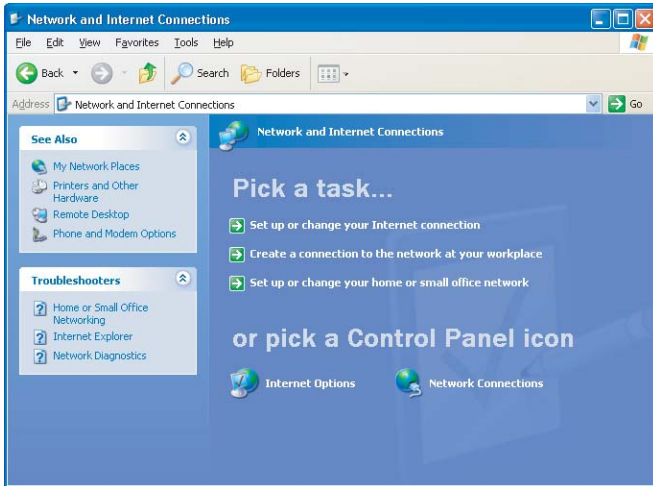
2. Click **Control Panel** to display the Control Panel window. The display varies, depending on your Windows XP view options. If the display is a Category view as shown below, continue with [Step 3](#). Otherwise, skip to [Step 5](#)

Figure 6-9 Control Panel



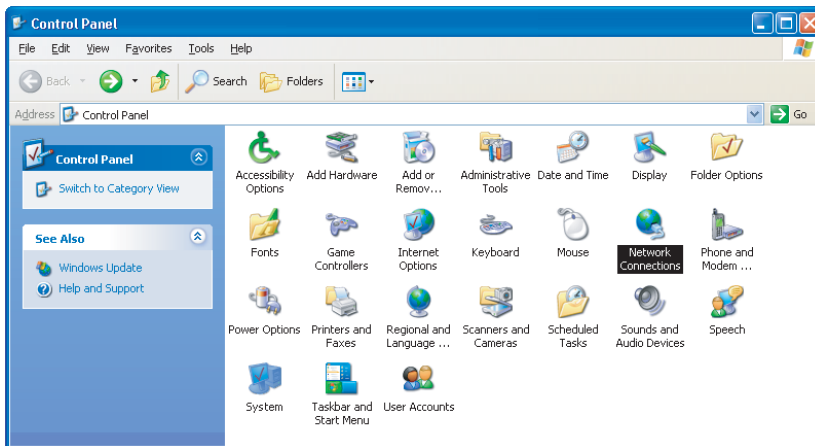
3. Click **Network and Internet Connections** to display the Network and Internet Connections window:

Figure 6-10 Network and Internet Connections



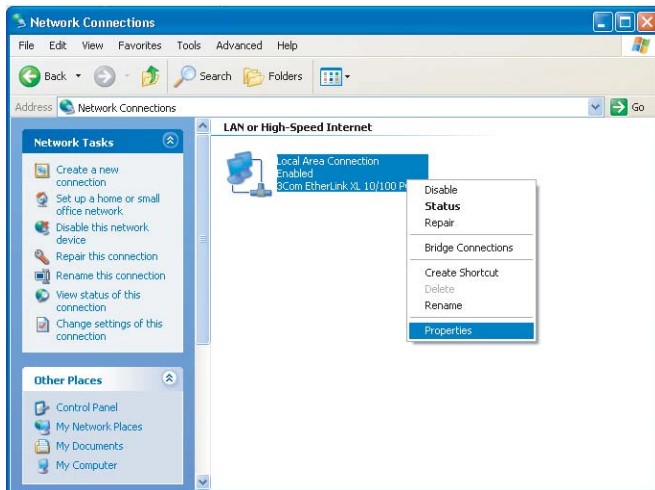
4. Click **Network Connections**. Skip to [Step 6](#).
5. If a classic view similar to below is displayed, double-click **Network Connections** to display the LAN or High-speed Internet connections.

Figure 6-11 Control Panel Classic View



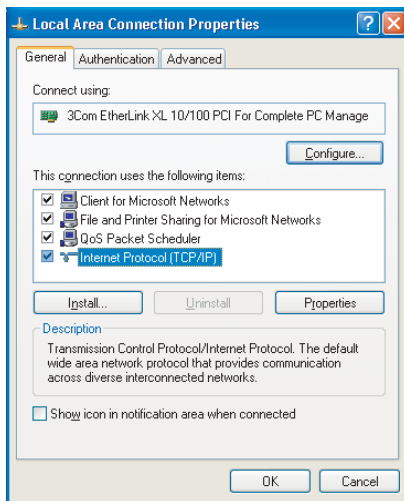
6. Right-click the **Local Area Connection**. If more than one connection is displayed, be sure to select the one for your network interface.

Figure 6-12 Network Connections

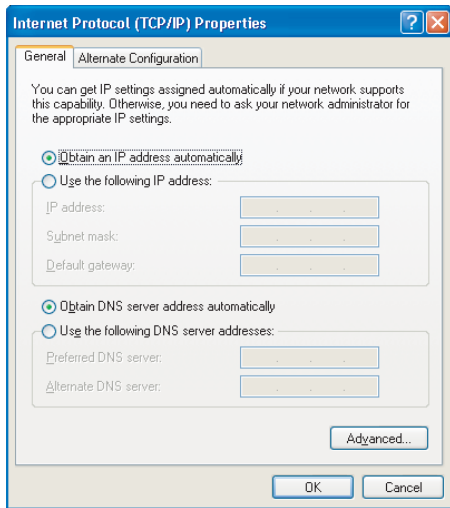


7. Select **Properties** from the pop-up menu to display the Local Area Connection Properties window:

Figure 6-13 Local Area Connection Properties



8. On the Local Area Connection Properties window, select **Internet Protocol (TCP/IP)** if it is not selected.
9. Click **Properties** to display the Internet Protocol (TCP/IP) Properties window:

Figure 6-14 Internet Protocol (TCP/IP) Properties

10. Be sure Obtain IP address automatically and Obtain DNS server address automatically are selected.

11. Click **OK** to close the TCP/IP Properties window.

12. Click **OK** to close the TCP/IP Properties window.

Click **OK** to close the TCP/IP Properties window.

Important Safety and Legal Information

.....

Important Safety Information

Your Motorola WiMAX Wireless Broadband Gateway is designed and tested to comply with a number of national and international standards and guidelines (listed below) regarding human exposure to RF electromagnetic energy.

This Product complies with the following RF energy exposure standards and guidelines:

- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J
- American National Standards Institute (ANSI)/ Institute of Electrical and Electronic Engineers (IEEE) C95 1-2005
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard, 2003
- ANATEL ANNEX to Resolution No. 303 of July 2, 2002 "Regulation of Limitation of Exposure to Electrical, Magnetic, and Electromagnetic Fields in the Radio Frequency Range Between 9 kHz and 300 GHz" and "Attachment to Resolution #303 from July 2, 2002"

RF Exposure Compliance and Guidelines Operating Instructions

To comply with FCC RF energy exposure requirements, this Gateway transmitter should be operated at a minimum separation distance of 55 cm from all persons. For additional information on exposure requirements or other training information, visit <http://www.motorola.com/rfhealth>

FCC Regulatory 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.

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.

EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC

IEC 60950-1: 2001 (1st Edition)

Safety of Information Technology Equipment

EN50385 : (2002-08)

Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz) - General public

EN 301 489-1 V1.6.1: (2005-09)

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-4 V1.3.1: (2002-08)

Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 4: Specific conditions for fixed radio links and ancillary equipment and services

EN 302 326-2 V1.1.1(2006-03)

Fixed Radio Systems; Multipoint Equipment and Antennas; Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for Digital Multipoint Radio Equipment

EN 302 326-3 V1.1.1(2006-03)

Fixed Radio Systems; Multipoint Equipment and Antennas; Part 3: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive for Multipoint Radio Antennas



Table 7-1 Compliance Statement

Language	Statement
Česky [Czech]	[Jméno výrobce] tímto prohlašuje, že tento [typ zařízení] je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.

Continued

Table 7-1 Compliance Statement (Continued)

Language	Statement
Dansk [Danish]	Undertegnede [fabrikantens navn] erklærer herved, at følgende udstyr [udstyrets typebetegnelse] overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erkläre [Name des Herstellers], dass sich das Gerät [Gerätetyp] in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab [tootja nimi = name of manufacturer] seadme [seadme tüüp = type of equipment] vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, [name of manufacturer], declares that this [type of equipment] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente [nombre del fabricante] declara que el [clase de equipo] cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνικ [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [name of manufacturer] ΔΗΛΩΝΕΙ ΟΤΙ [type of equipment] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente [nom du fabricant] déclare que l'appareil [type d'appareil] est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente [nome del costruttore] dichiara che questo [tipo di apparecchio] è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo [name of manufacturer / izgatavotāja nosaukums] deklare, ka [type of equipment / iekartas tips] atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Continued

Table 7-1 Compliance Statement (Continued)

Language	Statement
Lietuvių [Lithuanian]	Šiuo [manufacturer name] deklaruoja, kad šis [equipment type] atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart [naam van de fabrikant] dat het toestel [type van toestel] in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, [isem tal-manifattur], jiddikjara li dan [il-mudel tal-prodott] jikkonforma mal-htigijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, [gyártó neve] nyilatkozom, hogy a [...] típus] megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym [nazwa producenta] oświadczam, że [nazwa wyrobu] jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	[Nome do fabricante] declara que este [tipo de equipamento] está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	[Ime proizvajalca] izjavlja, da je ta [tip opreme] v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	[Meno výrobcu] týmto vyhlasuje, že [typ zariadenia] spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	[Valmistaja = manufacturer] vakuuttaa täten että [type of equipment = laitteen tyyppimerkintä] tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar [företag] att denna [utrustningstyp] står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

In compliance with national requirements, a power supply cord with a cross-sectional area of 0.75mm² minimum for each individual conductor, will be provided when the product is submitted for national approval.

Caring for the Environment

The following information is provided to enable regulatory compliance with the European Union (EU) Directive 2002/96/EC Waste Electrical and Electronic Equipment (WEEE) when using Motorola Networks equipment in EU countries.

Disposal of Motorola Equipment in EU Countries

This product is compliant with the requirements of the European Union Restriction of Hazardous Substances (EU RoHS) directive.

Figure 7-1 EU RoHS



Please do not dispose of Motorola Networks equipment in landfill sites.

In the EU, Motorola Networks in conjunction with a recycling partner will ensure that equipment is collected and recycled according to the requirements of EU environmental law.

Disposal of Motorola Networks Equipment in Non EU Countries

In non-EU countries, dispose of Motorola Networks equipment in accordance with national and regional regulations.

CMM Disclosure

The China Management Methods (CMM) Disclosure Table is intended only to communicate compliance with China requirements; it is not intended to communicate compliance with EU RoHS or any other environmental requirements.

Figure 7-2 China Management Methods (CMM) Disclosure Table

Disclosure table

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr ⁶⁺)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件	×	○	×	×	○	○
电路模块	×	○	×	×	○	○
电缆及电缆组件	×	○	×	×	○	○
塑料和聚合物部件	○	○	○	○	○	×

○： 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
 ×： 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。

Copyrights and Trademarks

Notice

While reasonable efforts have been made to assure the accuracy of this document, Motorola, Inc. assumes no liability resulting from any inaccuracies or omissions in this document, or from use of the information obtained herein. The information in this document has been carefully checked and is believed to be entirely reliable. However, no responsibility is assumed for inaccuracies or omissions. Motorola, Inc. reserves the right to make changes to any products described herein and reserves the right to revise this document and to make changes from time to time in content hereof with no obligation to notify any person of revisions or changes. Motorola, Inc. does not assume any liability arising out of the application or use of any product, software, or circuit described herein; neither does it convey license under its patent rights or the rights of others.

It is possible that this publication may contain references to, or information about Motorola products (machines and programs), programming, or services that are not announced in your country. Such references or information must not be construed to mean that Motorola intends to announce such Motorola products, programming, or services in your country.

Copyrights

This instruction manual, and the Motorola products described in this instruction manual may be, include or describe copyrighted Motorola material, such as computer programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola and its licensors certain exclusive rights for copyrighted material, including the exclusive right to copy, reproduce in any form, distribute and make derivative works of the copyrighted material. Accordingly, any copyrighted material of Motorola and its licensors contained herein or in the Motorola products described in this instruction manual may not be copied, reproduced, distributed, merged or modified in any manner without the express written permission of Motorola. Furthermore, the purchase of Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Motorola, as arises by operation of law in the sale of a product.

Usage Disclosure Restrictions

License Agreements

The software described in this document is the property of Motorola, Inc and its licensors. It is furnished by express license agreement only and may be used only in accordance with the terms of such an agreement.

Copyrighted Materials

Software and documentation are copyrighted materials. Making unauthorized copies is prohibited by law. No part of the software or documentation may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, without prior written permission of Motorola, Inc.

High Risk Materials

Components, units, or third-party products used in the product described herein are NOT fault-tolerant and are NOT designed, manufactured, or intended for use as on-line control equipment in the following hazardous environments requiring fail-safe controls: the operation of Nuclear Facilities, Aircraft Navigation or Aircraft Communication Systems, Air Traffic Control, Life Support, or Weapons Systems (High Risk Activities). Motorola and its supplier(s) specifically disclaim any expressed or implied warranty of fitness for such High Risk Activities.

Trademarks

MOTOROLA and the Stylized M Logo are registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners.

© Motorola, Inc., 2007

motorola.com



68P09285A67-D

MOTOROLA and the Stylized M Logo are registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners.
© Motorola, Inc., 2008.