Installing and using the Expedience® PC card

Part number:

Contents

Welcome

This document describes how to install and use your Expedience PC card to obtain wireless high-speed Internet access. You can plug the Expedience PC card into any laptop computer with a side access cardbus slot.

The Expedience PC card contains an internal antenna that can connect with base stations. Once a connection is established between the Expedience PC card and a base station you can access your service provider's network.

If desired, you can enhance your connection to the network by plugging an external antenna into the PC card.

Before you begin

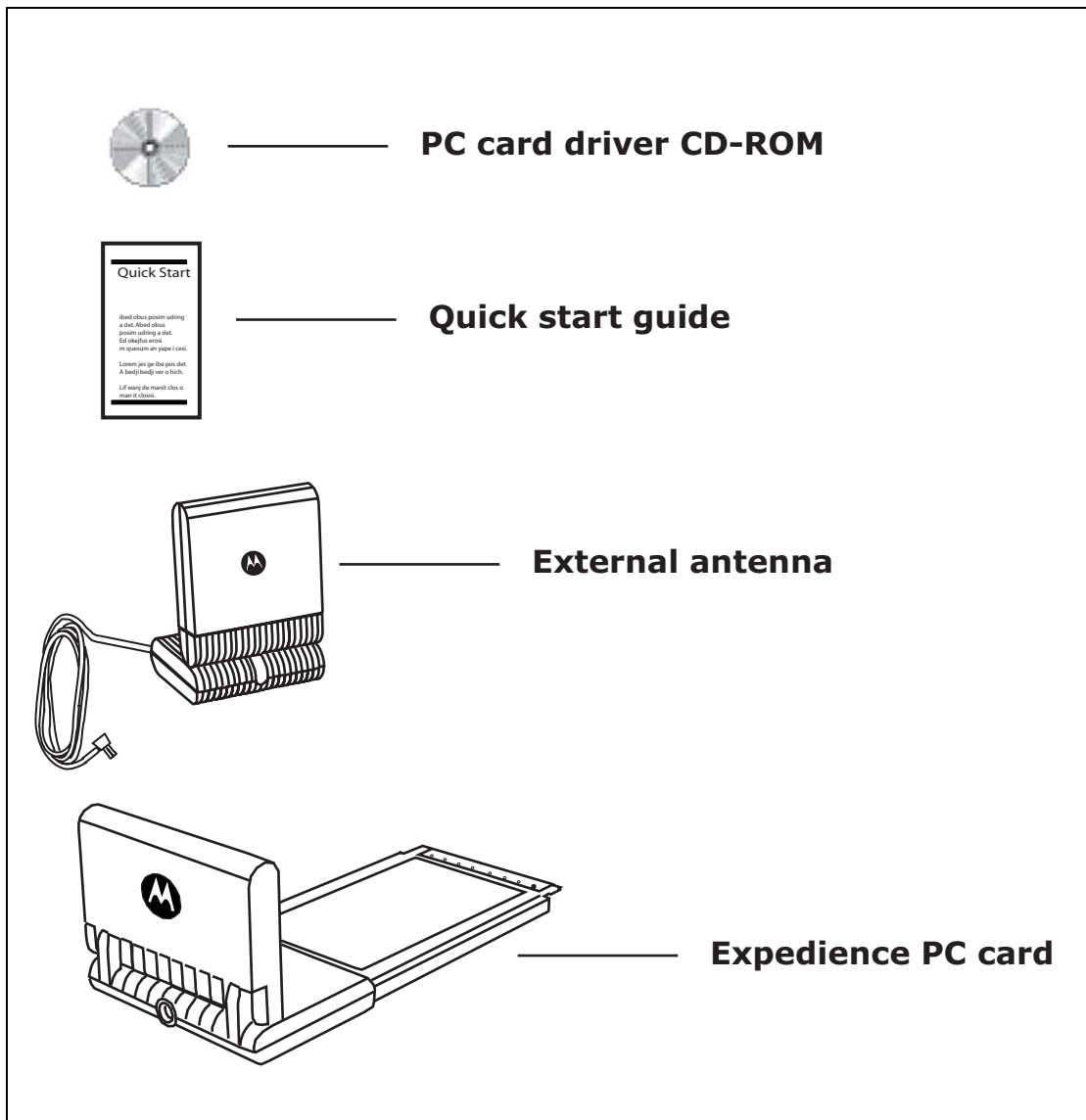Figure 1 illustrates the Expedience PC card package contents.

Figure 1   Expedience PC card package contents

Table 1 lists the standard contents in your Expedience PC card package.

Table 1 Expedience PC card package components

Component	Part number
Expedience PC card	
External antenna	
Expedience PC card diver CD-ROM	
Quick start guide	

Installing the Expedience PC card driver

Before using the Expedience PC card for the first time, install the driver for the card.

1 Insert the CD-ROM into laptop PC's CD drive. The installation program automatically runs.

If the installation program does not automatically run:

- From the **Start** menu, select **Run**. The Run dialog box opens.
- In the **Open** field, type x:**setup** where **x** is the letter assigned to the laptop computer's CD drive.
- Click **OK**.

2 To install the Expedience PC card driver software, follow the instructions that appear on your laptop's screen.

Plugging in the Expedience PC card

1 After powering on your laptop, slide the Expedience PC card into the slot on your laptop.
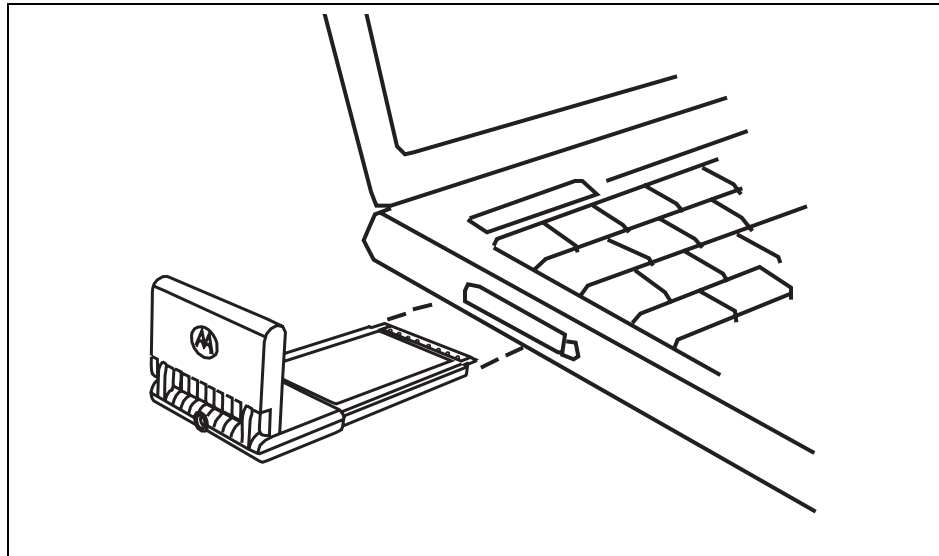

Figure 2   Plugging Expedience PC card into laptop computer

2 If you are already connected to a Wi-Fi network, you cannot connect to the network of the Expedience PC card at the same time.

Connect to the network as described in the section "Choosing an Expedience PC card network connection or a Wi-Fi connection'

3 The Expedience PC card detects the network. You can discover the connection status of your Expedience PC card in the following ways:

- The icons displayed in your laptop's system tray vary depending on the operating state of the Expedience PC card and the signal strength the Expedience PC card detects.

Figure 3   System tray icons: connected/signal strength icons

- You can also show the status of the Expedience PC card by rolling your mouse over the system tray icon. The status tip box appears (Figure 3).

Expedience PC Card Monitor
Signal Strength: Excellent
Status: Connected
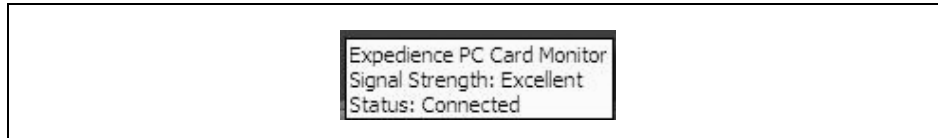
Figure 4   Status tip box

4 If you want to obtain a better signal, review the options described in the section "Optimizing the signal'.

Choosing an Expedience PC card network connection or a Wi-Fi connection

You cannot establish an Expedience PC card connection to a network if your computer is already connected to a Wi-Fi network.

To determine the connection to be used:

1 If a Wi-Fi connection exists when the Expedience PC card is plugged in, the Expedience PC card or Wifi? dialog box opens.

The Expedience PC card or Wifi? dialog box also appears if a Wi-Fi card is inserted into the laptop after the Expedience PC card is operating.

Expedience PC Card or Wifi?

Expedience network connection and Wi-Fi connection cannot operate simultaneously. Please choose your preference.

Use Expedience   Use WiFi
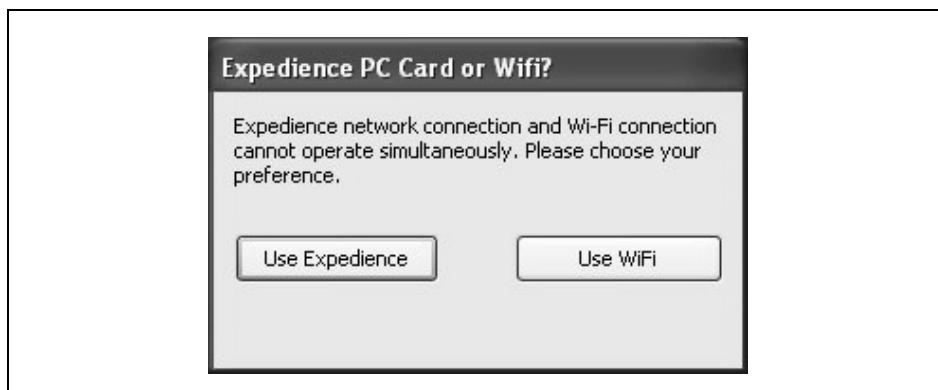
Figure 5   Expedience PC card or Wifi window

2 Perform one of the following:

- If you want to connect to the network using the PC card, click **Use Expedience**.

- If you want to connect to the WiFi network, click **Use WiFi**.

3 One of the following dialog boxes appears, asking you to confirm your choice of networks.

- If a Wi-Fi card is present when you disable the Expedience PC card, you are asked if you want to re-enable Wi-Fi:

Disconnect from Expedience

You have disconnected from the Expedience network. Do you wish to re-connect to Wi-Fi networking?

Yes   No   Help
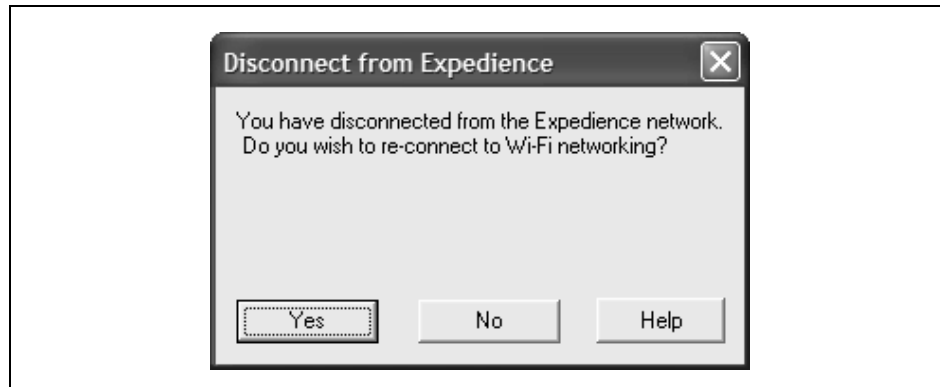
Figure 6   Disconnect from Expedience window

- If Wi-Fi networking is operating when you choose to enable the Expedience PC card, you must confirm if you want to establish the Expedience PC card connection.

Connect using Expedience

Wi-Fi networking will be disconnected to prevent interference with the Expedience network. Wi-Fi will be re-connected when you disconnect from Expedience.

Continue   Cancel   Help

Figure 7   Connect using Expedience window

Optimizing the signal

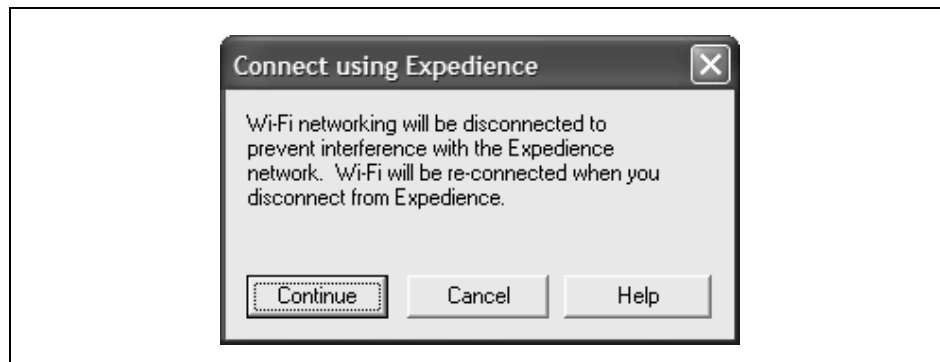You can optimize the PC card's connection to the network receives in either of the following ways:

- Using the optional, external antenna
- Using the Signal Optimizer

Using the optional, external antenna

The Expedience PC card has an internal antenna. If you want to obtain a strong connection to your network, you can plug an optional, external antenna into the PC card.

To obtain a better connection to the network:

1 Plug the optional antenna into the PC card.
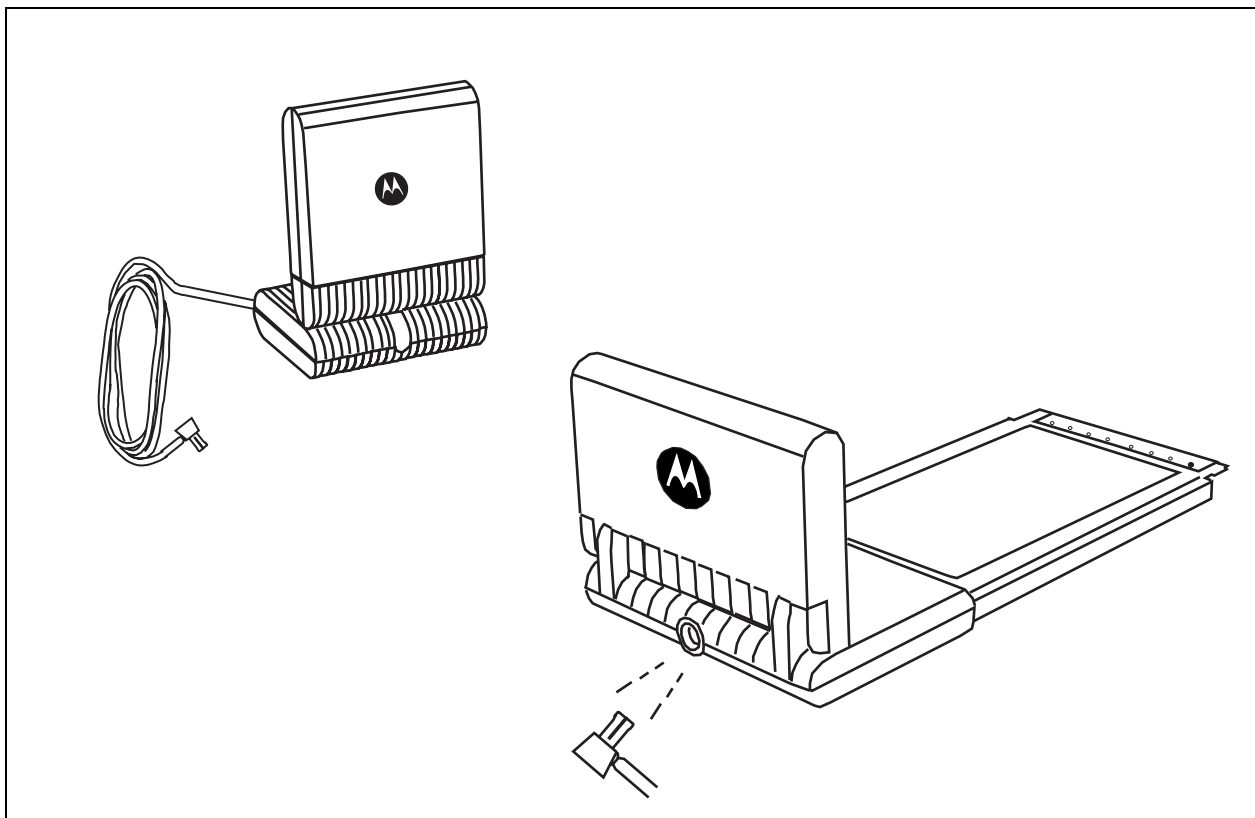
Figure 8   Optional Expedience PC card antenna/plugging in antenna

2 To optimize the connection, orient the external antenna in several directions. Use the icons in the system tray to note the strength of the connection at each orientation.

Using the Signal Optimizer

The Signal Optimizer is a graphic software tool that makes it easier to orient the antenna.

To open the Signal Optimizer:

1 In the Windows system tray, right click on the connection icon.

2 From the menu that appears, select **Signal Optimizer.**

The Expedience Signal Strength window opens. The appearance of this window depends on the strength of the connection to the network.

The number of arcs displayed is a measure of signal quality.
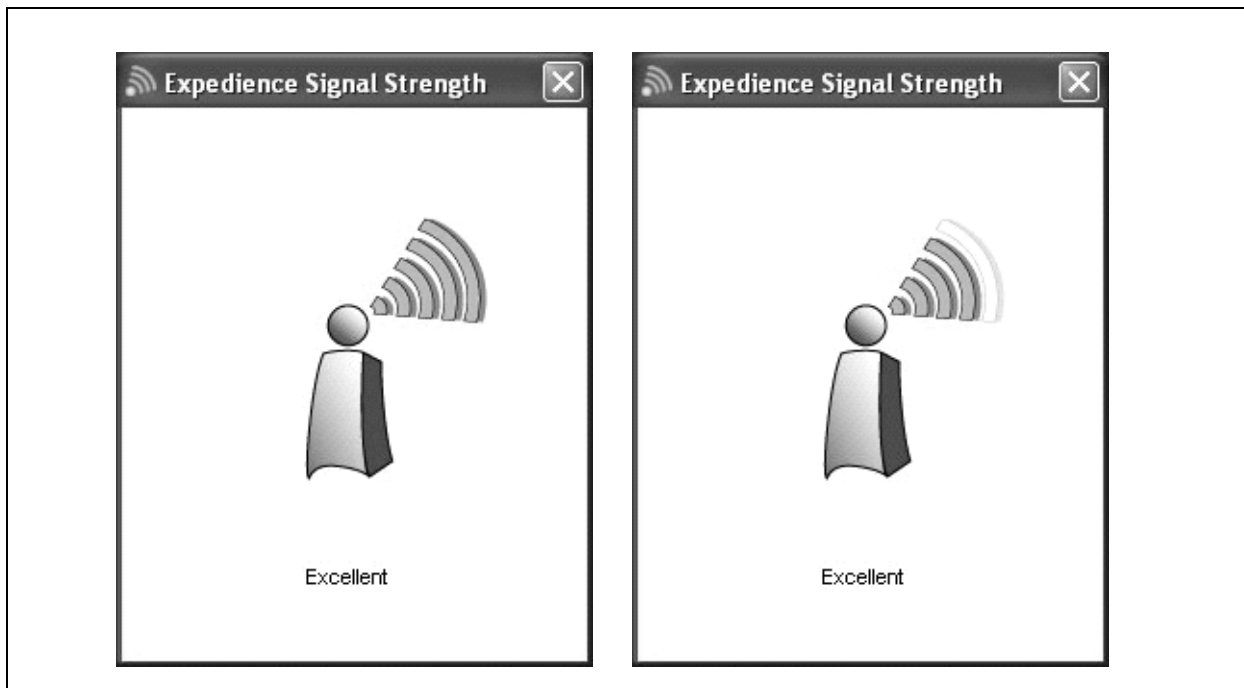
Figure 9   Signal quality dialog box

If the Expedience PC card is using an external antenna, an additional icon—a satellite dish—appears in the window.

Figure 10   Signal quality dialog box, with optional Expedience PC card antenna in use

3 To obtain a stronger connection, move the laptop around and point the Expedience PC card in different directions.

Other signal quality messages in the Signal Optimizer

Other messages are displayed by the Signal Optimizer when the following events occur:

- Card ejected from PC
- Card disabled

If you eject the Expedience PC card from the laptop, the message "Expedience card removed" appears in the Expedience Signal Strength window.

Figure 11   Signal Optimizer: Expedience card removed

When you disable the PC card, perhaps to switch to a WiFi network, the message "Expedience card disabled" appears in the Expedience Signal Strength window.

Figure 12   Signal Optimizer: Expedience card disabled

Enabling or disabling the Expedience PC card connection

You might want to disable the Expedience PC card connection when you are not using the network, in order to preserve the power of your laptop computer's battery.

You also might want to disable the Expedience PC card connection in order to connect to a WiFi network by using a WiFi Card/Connection available on your computer.

To enable or disable the Expedience PC card connection:

1 In the Windows system tray, right click on the connection icon.

2 From the menu that appears, select one of the following:

- To use the Expedience PC card to connect to an network, select **Enable**.

- To disable the Expedience PC card connection, select **Disable**.

  If you select **Disable**, the Expedience PC card connection is disabled.The connection icon is removed from the system tray.

3 To enable your Wi-Fi connection, use the Windows control panel.

4 To re-enable the Expedience PC card connection, select **Enable**

Disconnected

Figure 13   System tray icon: Expedience PC card disconnected

Displaying Expedience PC card properties

1 In the Windows system tray, right click on the connection icon.

2 From the menu that appears, select **Properties.** The Expedience PC card Properties window opens, displaying 2 tabs.

- Base List

- Advanced

Base List tab overview

The Base List tab shows all the base stations that the Expedience PC card detects. The channel, MAC address, modulation level and score are displayed for each base station.
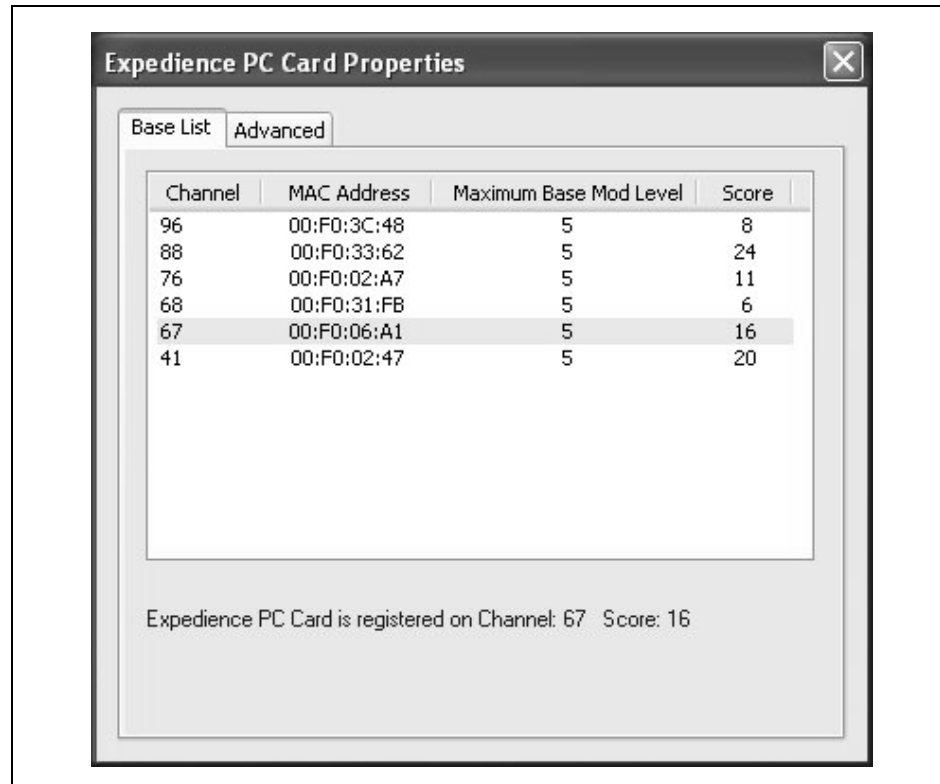
Figure 14   Expedience PC card Properties window: Base List tab

The base station with which the Expedience PC card is currently registered is highlighted in gray. A message at the bottom of the tab shows the radio channel on which the Expedience PC card is communicating with a base station.

The information displayed on the tab is real-time and updates every second.

If you have not installed the card driver or if you remove the card from the computer:

• The list box is blank.

• The message "Expedience PC card is not installed or has been removed!" appears at the bottom of the tab.

Advanced tab overview

The Advanced tab displays the driver version information and some statistical data.

Figure 15   Expedience PC card Properties window: Advanced tab

Disclaimer

Statements included in this manual indicating support provided by Motorola are subject to changes at any time. Motorola reserves the right to make changes to this manual.

Declaration of Conformity

Per FCC CFR 47 Part 2 Section 2.1077(a)

Responsible Party Name: Motorola, Inc.

Address: 2900 W. Cty. Rd. 42, Burnsville, MN 55337

USA Phone Number: 1-952-929-4008

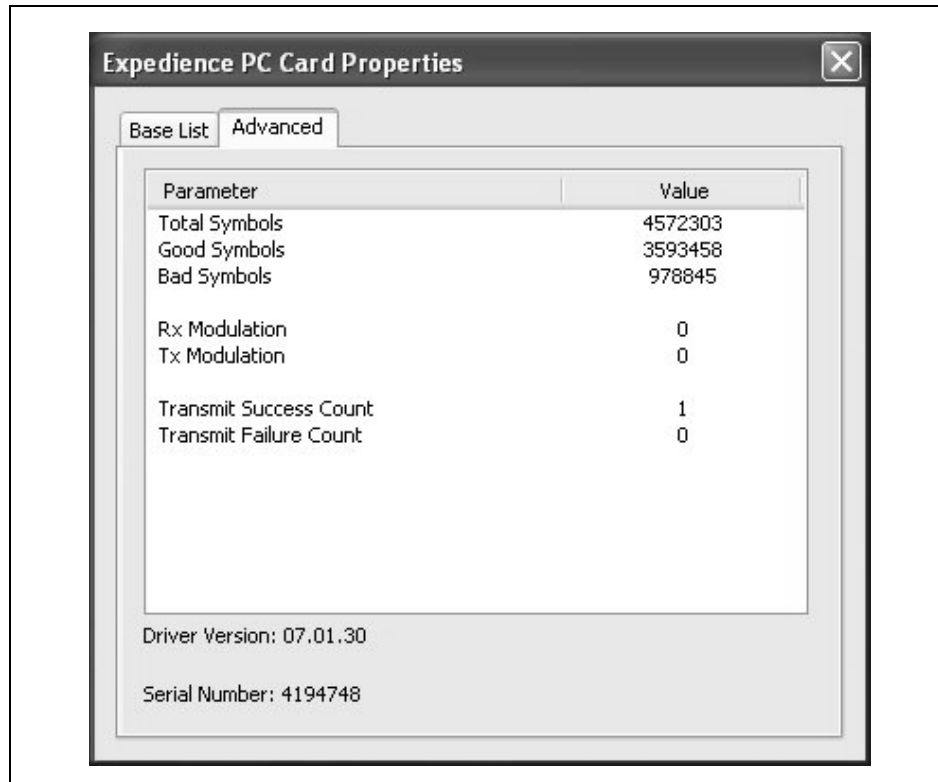Hereby declares that the product:

Product Name: PCC-2510

Model Number: 900-0512-xxxx

Conforms to the following regulations:

FCC Part 15, subpart B, section 15.107(a), 15.107(d) and section 15.109(a)

Class B Digital Device

As a personal computer peripheral, 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.

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.

Regulatory Requirements

The Federal Communications Commission (FCC) requires application for certification of digital devices in accordance with CFR Title 47, Part 15 and Part 27. This includes Electromagnetic Energy Exposure (EME) testing. As the PCC-2510 is not a stand-alone modem but is a PC card, the PCC-2510 cannot be tested by itself for EME certification and was tested while inserted in a laptop computer.

Modification of this device may void the user's authority to operate this equipment.

When using the PCC-2510 product, other wireless networking devices contained within the laptop computer must be disabled. For example, most modern laptop computers contain wireless networking functions that are integrated into the computer which utilize a Wi-Fi or WLAN protocol product such as 802.11a@4.9GHz and 802.11b/g@2.4GHz.

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.

NOTE: The PCC-2510 was approved by the United States Federal Communications Commission (FCC) for use with the integral antenna and optional external accessory antenna which is available from your service provider.

NOTE: Safety and General Information

IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION. READ THIS INFORMATION BEFORE USING YOUR MOTOROLA PCC-2510.

RF Operational Characteristics

Your Motorola product contains a radio frequency transmitter to convey the information you wish to send as well as occasional automatic signals used to sustain connection to the wireless network, and a receiver which enables you to receive communication and connection information from the network.

Antenna Care

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the radio product and may violate FCC regulations. When using any approved accessory antenna, position it at least eight inches (20 cm) from any part of any person.

DO NOT hold the antenna when the radio product is "IN USE". Holding the antenna affects communication quality and may cause the product to operate at a higher power level than needed.

Product Operation and EME Exposure

Your Motorola product is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy (EME):

- United States Federal Communications Commission,Code of Federal Regulations; 47 CFR part 2 sub-part J.
- American National Standards Institute (ANSI) / Institute of Electrical and Electronics Engineers (IEEE). C95. 1-1992.
- Institute of Electrical and Electronics 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 Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999.
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 2003.
- ANATEL, Brasil Regulatory Authority, Resolution 303 (July 2, 2002) "Regulation of the limitation of exposure to electrical, magnetic, and electromagnetic fields in the radio frequency range between 9 kHz and 300 GHz." "Attachment to Resolution 303 from July 2, 2002."

The PCC-2510 has been tested for compliance with FCC RF exposure limits in laptop computer configurations with side PCMCIA slots, and can be used in laptop computers with substantially similar physical dimensions, construction, and electrical and RF characteristics.

FCC ID: PHX-PCC2510 MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your PCC-2510 is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for the PCC-2510 employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg.(1) Tests for SAR are conducted using standard operating positions reviewed by the FCC with the PCC-2510 transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the PCC-2510 while operating can be well below the maximum value. This is because the PCC-2510 is designed to operate at multiple power levels so as to use only the power required to reach the network.

Before a PCC-2510 model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations as required by the FCC for each model.

The FCC has granted an Equipment Authorization for this PCC-2510 with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this PCC-2510 is on file with the FCC and can be found under the Display Grant section of

http://www.fcc.gov/oet/fccid after searching on FCC ID:

PHX-PCC2510.

(1) In the United States and Canada, the SAR limit for modems used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

Electro Magnetic Interference/Compatibility

Facilities

To avoid electromagnetic interference and/or compatibility conflicts, turn off your PCC-2510 immediately in any facility where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

Aircraft

When instructed to do so, turn off your PCC-2510 when on board an aircraft. Any use of a PCC-2510 must be in accordance with applicable regulations per airline crew instructions.

Medical Devices

Pacemakers

The Advanced Medical Technology Association (AdvaMed) recommends that a minimum separation of 6 inches (15 cm) be maintained between a PCC-2510 and a pacemaker. These recommendations are consistent with those of the U.S. Food and Drug Administration. Persons with pacemakers should:

• ALWAYS keep the PCC-2510 more than 6 inches (15 cm) from their pacemaker when the PCC-2510 is turned ON.

• Turn the PCC-2510 OFF immediately if you have any reason to suspect that interference is taking place.

Hearing Aids

Some digital wireless modem products may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

Operational Cautions

Cleaning and Drying Considerations

This product is not water proof, and exposing the unit to liquids may result in permanent damage to the unit. If your PCC-2510 interior gets wet, do not try to accelerate drying with the use of an oven or a dryer as this will damage the PCC-2510 and void the warranty. Instead, do the following:

1. Immediately power off the PCC-2510.

2. Shake excess liquid from PCC-2510.

3. Place the PCC-2510 in an area that is at room temperature and has good air flow.

4. Let the PCC-2510 dry for 72 hours before powering on again.

If the PCC-2510 does not work after following the steps listed above, contact your dealer for servicing information.

Clean the external surfaces of the PCC-2510 with a damp cloth, using a mild solution of dishwashing detergent and water. Some household cleaners may contain chemicals that could seriously damage the PCC-2510. Avoid the use of any petroleum-based solvent cleaners. Also, avoid applying liquids directly on the PCC-2510.

Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed or otherwise configured for electromagnetic compatibility.

Operational Warnings

For Vehicle With Air Bags

Do not place a PCC-2510 in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a PCC-2510 is placed in the air bag deployment area and the air bag inflates, the PCC-2510 may be propelled with great force and cause serious injury to occupants of the vehicle.

Potentially Explosive Atmospheres

Turn off your PCC-2510 prior to entering any area with a potentially explosive atmosphere.

Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death. The areas with potentially explosive atmospheres referred to above include fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, and areas where the air contains chemicals or particles such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often but not always posted.

Blasting Caps and Blasting Areas

To avoid possible interference with blasting operations, turn off your PCC-2510 when you are near electrical blasting caps, in a blasting area, or in areas posted: "Turn off two-way radio." Obey all signs and instructions.

Warranty Information

If the affected product is being purchased pursuant to a written Communications System Agreement signed by Motorola, the warranty contained in that written agreement will apply. Otherwise, the following warranty applies.

What This Warranty Covers And For How Long

Motorola Inc. or, if applicable, Motorola Canada Limited ("Motorola") warrants the Motorola manufactured Broadband Data communications product, against material defects in material and workmanship under normal use and service for a period of One (1) Year from the date of shipment. Motorola, at its option, will at no charge either repair the Product (with new or reconditioned parts), replace it with the same or equivalent Product (using new or reconditioned Product), or refund the purchase price of the Product during the warranty period provided purchaser notifies Motorola according to the terms of this warranty. Repaired or replaced Product is warranted for the balance of the original applicable warranty period. All replaced parts of the Product shall become the property of Motorola. This express limited warranty is extended by Motorola to the original end user purchaser purchasing the Product for purposes of leasing or for commercial, industrial, or governmental use only, and is not assignable or transferable to any other party. This is the complete warranty for the Product manufactured by Motorola. Motorola assumes no obligations or liability for additions or modifications to this warranty unless made in writing and signed by an officer of Motorola. Unless made in a separate written agreement between Motorola and the original end user purchaser, Motorola does not warrant the installation, maintenance or service of the Product. Motorola cannot be responsible in any way for any ancillary equipment not furnished by Motorola which is attached to or used in connection with the Product, or for operation of the Product with any ancillary equipment, and all such equipment is expressly excluded from this warranty. Because each system which may use the Product is unique, Motorola disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

General Provisions

This warranty sets forth the full extent of Motorola's responsibilities regarding the Product. Repair, replacement or refund of the purchase price, at Motorola's option, is the exclusive remedy. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. MOTOROLA DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL MOTOROLA BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, FOR ANY LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, LOST PROFITS OR SAVINGS OR OTHER INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SUCH PRODUCT, TO THE FULL EXTENT SUCH MAY BE DISCLAIMED BY LAW.

How To Get Warranty Service

Purchaser must notify Motorola's representative or call Motorola's Customer Response Center at 1-800-247-2346 within the applicable warranty period for information regarding warranty service.

What Is Not Covered By The Warranty

1. Defects or damage resulting from use of the Product in other than its normal and customary manner.

2. Defects or damage from misuse, accident, water, or neglect.

3. Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.

4. Breakage or damage to antennas unless caused directly by defects in material workmanship.

5. A Product subjected to unauthorized Product modifications, disassemblies or repairs (including, without limitation, the addition to the Product of non-Motorola supplied equipment) which adversely affect performance of the Product or interfere with Motorola's normal warranty inspection and testing of the Product to verify any warranty claim.

6. Product which has had the serial number removed or made illegible.

7. Batteries (they carry their own separate limited warranty).

8. Freight costs to the repair depot.

9. A Product which, due to illegal or unauthorized alteration of the software/firmware in the Product, does not function in accordance with Motorola's published specifications or with the FCC type acceptance labeling in effect for the Product at the time the Product was initially distributed from Motorola.

10. Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.

11. That the software in the Product will meet the purchaser's requirements or that the operation of the software will be uninterrupted or error-free.

12. Normal and customary wear and tear.

13. Non-Motorola manufactured equipment unless bearing a Motorola Part Number in the form of an alpha numeric number (i.e., TDE6030B).

14. Lift trucks for installation, removal, replacement or repair of the Motorola supplied products from light, power, telephone poles etc.

15. Dispatch to remote site locations.

16. Loading of software upgrades or fixes into the devices.

Governing Law

In the case of a Product sold in the United States and Canada, this Warranty is governed by the laws of the State of Illinois and the Province of Ontario, respectively.

Patent and Software Provisions

Motorola will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or its parts infringe a United States patent, and Motorola will pay those costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following:

1 that Motorola will be notified promptly in writing by such purchaser of any notice of such claim;

2 that Motorola will have sole control of the defense of such suit and all negotiations for its settlement or compromise;

and

3 should the Product or its parts become, or in Motorola's opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit Motorola, at its option and expense, either to procure for such purchaser the right to continue using the Product or its parts or to replace or modify the same so that it becomes non-infringing or to grant such purchaser a credit for the Product or its parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or its parts as established by Motorola.

Motorola will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or its parts furnished hereunder with software, apparatus or devices not furnished by Motorola, nor will Motorola have any liability for the use of ancillary equipment or software not furnished by Motorola which is attached to or used in connection with the Product. The foregoing states the entire liability of Motorola with respect to infringement of patents by the Product or any its parts thereof.

Laws in the United States and other countries preserve for Motorola certain exclusive rights for copyrighted Motorola software such as the exclusive rights to reproduce in copies and distribute copies of such Motorola software. Motorola software may be used in only the Product in which the software was originally embodied and such software in such Product may not be replaced, copied, distributed, modified in any way, or used to produce any derivative thereof. No other use including, without limitation, alteration, modification, reproduction, distribution, or reverse engineering of such Motorola software or exercise of rights in such Motorola software is permitted. No license is granted by implication, estoppel or otherwise under Motorola patent rights or copyrights.

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