SIERRA WIRELESS

HEART OF THE WIRELESS MACHINE

AirCard CE

Installation Guide

Revision A Draft
Part Number: 2110044
September 1998

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Important Notice

Because of the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sierra Wireless modem are used in a normal manner with a well-constructed network, the Sierra Wireless modem should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless, Inc., accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless modem, or for failure of the Sierra Wireless modem to transmit or receive such data.

Patents

Regulatory Information

The equipment certifications appropriate to your device are marked on the device and the accompanying product specific information. Where appropriate, the use of the equipment is subject to the following conditions.

CAUTION
Unauthorized modifications or changes not expressly approved by Sierra Wireless, Inc. could void compliance with regulatory rules, and thereby your authority to use this equipment.

WARNING (EMI) - United States
This equipment has been tested and found to comply with the limits pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in an appropriate 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 communication. 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*

WARNING (EMI) - Canada
"This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference causing equipment standard entitled 'Digital Apparatus', ICES-003 of the Department of Communications."

"Cet appareil numerique respecte les limites de bruits radioelectriques applicables aux appareils numeriques de Classe B prescrites dans la norme sur le materiel brouilleur: 'Appareils Numeriques', NHB-003 edictee par le ministre des Communications."

RSA Licensee

If you have purchased this product under a United States Government contract, it shall be subject to restrictions as set forth in subparagraph (c)(1)(ii) of Defense Federal Acquisitions Regulations (DFARs) Section 252.227-7013 for Department of Defense contracts and as set forth in Federal Acquisitions Regulations (FARs) Section 52.227-19 for civilian agency contracts or any successor regulations. If further government regulations apply, it is your responsibility to ensure compliance with such regulations.

Safety and Hazards

Do not operate the Sierra Wireless modem in areas where blasting is in progress, where explosive atmospheres may be present, near medical equipment, near life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the Sierra Wireless modem **MUST BE TURNED OFF**. The Sierra Wireless modem can transmit signals, which could interfere with this equipment.

Do not operate the Sierra Wireless modem in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Sierra Wireless modem **MUST BE TURNED OFF**. The reason for this is that when operating in the CDPD or cellular circuit switched mode, the Sierra Wireless modem can transmit signals, which could interfere with various onboard equipment systems.

The driver or operator of any vehicle should not operate the Sierra Wireless modem while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some states and provinces, operating such communications devices while in control of a vehicle is an offence.

Customer Service

Help Desk

Open between 6:00 a.m. and 5:00 p.m. Pacific Standard Time

604 231 1128

Sales Desk

Open between 8:00 a.m. and 5:00 p.m. PST

604 231 1100

Warranty and Service Desk

Open between 8:00 a.m. and 5:00 p.m. PST

604 231 1157

Email

AirCardCE@sierrawireless.com

support@sierrawireless.com

sales@sierrawireless.com

Webpage

Consult our webpage for up-to-date product descriptions, documentation, application notes, firmware upgrades, troubleshooting tips, and press releases:

www.sierrawireless.com

Contents

1. Overview

1.1. Before You Begin

Please take a moment to fill in the warranty registration card that was shipped with this manual. After sending in the warranty, it will be activated.

1.2. Introduction to the AirCard CE

The AirCard CE is a Type II PC Card CDPD cellular radio-modem that works with Handheld PCs (H/PC) or sub-notebook laptop PCs that supports Windows CE 2.0 or later. It gives the user of the CE device immediate mobile access, to network information and mission critical applications needed to do the job.

1.3. Your AirCard CE Components

Each AirCard CE kit contains the following components.

- AirCard CE radio modem
- Extendable antenna

- Installation Guide

- Watcher for Windows CE (one floppy disk)

- Standard 1 year warranty

Optional items for the AirCard CE.

- Rechargeable power pack

- Adapter Connector for HP ac adapter

2. Congratulations!

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3. Applying for Activation

3.1. Packet Data Activation on a CDPD Network

To register your AirCard CE for packet data activation on CDPD networks, contact your local CDPD service provider.

1. Give the CDPD service provider the **EID** (Equipment Identifier or identification number of the radio/modem). The EID number has the following format: 00-A0-D5-xx-xx-xx.

NOTE	Look for this number on the back of your AirCard CE and on a label affixed to the outside of the package that the card was shipped in.

2. The CDPD service provider supplies the following:

   - A Network Entity Identifier (**NEI**) and your Internet Protocol address (**IP**). These identify the AirCard CE on a CDPD network or on the Internet.

- The Domain Name Server (**DNS**) address. The DNS is required for Internet connectivity, i.e., for web browsing. The **DNS** server translates friendly names to Internet addresses. The service provider allocates a primary address and may give out a secondary address. The secondary address is used as a backup if the primary **DNS** is not functioning.

- The service provider's side designation (A or B).

IMPORTANT	Record the NEI, channel designation, and DNS in the following table. This information is needed when installing Watcher for Windows CE.

	Service Provider
NEI	
Side Designation (A or B)	
Primary DNS	

4. Install and Use the AirCard CE

4.1. First Time Installation of the AirCard CE

This section contains instructions for installing the AirCard CE modem and the Watcher for Windows CE software. Also this section has instructions on how to use the AirCard CE on a regular basis.

NOTE	If Windows CE Services software was installed on the desktop PC computer that your H/PC will be connected to, ignore these steps and go to the next section.

1. Install the Windows CE Services software into your desktop computer, unless it was already installed. Follow the instructions in Microsoft's The Handheld PC Companion manual if necessary.

2. Connect the H/PC to the desktop computer following the instructions in Microsoft's The Handheld PC Companion manual.

4.1.1.   Installing the Watcher for Windows CE Software

NOTE	The H/PC must be running Windows CE version 2.0 or later for the Watcher for Windows CE software to operate properly.

To install the Watcher for Windows CE software, follow these steps.

1.   Insert the software for AirCard CE floppy disk into the desktop computer's floppy disk drive.

2.   Click on Start, then Run. Type A: setup, then click on OK.

NOTE	If the floppy disk drive has a different drive letter, use that drive letter in place of the A, e.g., B: setup.

3.   The Watcher for Windows CE software automatically starts the wizard, and shows the Welcome screen.

4.   Follow the steps in the wizard.

NOTE	The applications and AirCard CE device drivers are now installed on the H/PC.

5.   After the wizard finishes, reset your H/PC. Refer to instructions in Microsoft's The Handheld PC Companion manual and the manual that came with your handheld PC, if necessary.

4.1.2.   Inserting AirCard CE in H/PC

1.   With the top label facing up, gently push the
     AirCard CE into the empty PC card slot in the
     H/PC computer.

CAUTION	Use caution when inserting the card into the H/PC card slot. Forcing the card may damage the connector pins. If you feel resistance while inserting the card, remove it immediately and check for bent pins.

4.1.3.   Install the Battery

1.

2.

4.1.4.   Setting Up CDPD Mode

At this point, you are ready to activate the Air Card CE.
After activating the software on your H/PC, you can use
the AirCard CE on the CDPD network.

1.   Double tap the Wireless Expert icon on your
     H/PC to show the Wireless Expert for Windows
     CE screen.

2.   Tap the Next tab until the screen shows the
     Modem address (NEI) field, the Name of the
     internet host (DNS) fields with zeros in them, and
     the Side designator, A or B field.

NOTE	The identification number (EID) shown in this screen should match up with the EID shown on the back of the AirCard CE H/PC card, and on the label affixed to the outside of the package the AirCard CE was shipped in.

3. Tap the NEI field to move the cursor to it, and enter the NEI received from the CDPD service provider.

4. Tap the DNS field to move the cursor to it, and enter the DNS (name server of the CDPD service provider) received from the CDPD service provider.

5. Tap the down arrow in the side designator, A or B field and set the side designation received from the CDPD service provider.

6. Tap the Next tab to finish and at this point, you should be able to register with the CDPD network.

4.1.5.   Warranty Registration

Product registration is important because it ensures that you will stay up to date on product upgrades and accessories and receive warranty service and technical support. Please be sure to register your radio/modem by either sending in the Warranty card, using the Warranty registration feature of Watcher for Windows CE, or via the Sierra Wireless Webpage.

4.2.   Using the AirCard CE

1. With the top label facing up, gently push the AirCard CE into the empty PC card slot in the H/PC computer.

2. If necessary, gently push the AirCard CE's battery pack onto the end of the AirCard CE.

3. Double-tap the Watcher icon to connect????

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5. Troubleshooting

For more up-to-date and detailed troubleshooting tips, visit Sierra Wireless website at <http://www.sierrawireless.com>.

Problem	Suggestion
1. There is no response after inserting the AirCard CE.	
2. No confirmation beeps sound when inserting the AirCard CE into a H/PC.	
3. You cannot register with a CDPD service provider.	Make sure the NEI is configured correctly. Check that you are in the CDPD coverage area, or your immediate location is preventing the radio/modem from receiving a signal, e.g., you are in an area of weak signal strength. Make sure that the antenna is inserted correctly.
4. Watcher for Windows CE will	

not work with the TCP/IP stack.	
5. There is no response from the AirCard CE or the COM port is busy.	

6. Technical Specifications

6.1. AirCard CE

Modem	V.34 protocol, AMPS, and CDPD R1.1 protocol stack.
Voltage	+5 Vdc at 300 mA supplied by the H/PC.
Transmitter Power	600 mW (Class III) full duplex.
CDPD accounts	Up to 4 NEIs.

6.2.   AirCard CE Approvals

Compliant with CDPD 1.1 part 409 and FCC part 15.

6.3.   AirCard CE Environmental

Operating Temperature	0 to +55º C (ambient, outside PCMCIA enclosure)
Storage Temperature	-20 to +65º C
Humidity	95% non-condensing
Vibration	As per PCMCIA spec 15-g peak 10-20 000 Hz (non-operating).
ESD	As per PCMCIA spec.
Shock	As per PCMCIA spec.
Drop	76 cm (30") onto non-cushioning vinyl covered concrete.

7. Warranty and Customer Service

7.1. Warranty

Sierra Wireless Inc. warrants AirCard CE radio/modem against all defects in materials and workmanship for a period of one year from the date of purchase.

The sole responsibility of Sierra Wireless Inc. under this warranty is limited to either repair or, at the option of Sierra Wireless Inc., replacement of the AirCard CE radio/modem. There are no expressed or implied warranties, including those of fitness for a particular purpose or merchantability, which extend beyond the face hereof.

Sierra Wireless Inc. is not liable for any incidental or consequential damages arising from the use, misuse, or installation of the AirCard CE radio/modem.

This warranty does not apply if the serial number label has been removed, or if the AirCard CE radio/modem have been subjected to physical abuse, improper installation, or modification.

7.2.   Service Requirements

In the event of equipment malfunction, Sierra Wireless Inc., or one of its authorized agents should perform all repairs.

7.3.   Registering the Warranty

To register the warranty:

Complete the Registration Card located at the end of this Guide.

Return the Registration Card to Sierra Wireless Inc., by one of the following:

- Service Mail

- E-mail

- Fax