

User Guide for Notebooks

2110271 Rev. 1
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Welcome to the AirCard® 510 PCS Modem

The AirCard 510 PCS modem is the **first wireless CDMA (Code Division Multiple Access) modem**. It works in any laptop or handheld computer running Windows 95, 98, NT, 2000, or CE that has a Type II PC card slot.

This modem offers high speed data transmission (14.4 Kbps) and all the benefits of CDMA technology, including:

- coverage that is wide-spread and growing. CDMA currently encompasses most of North America, Asia, and Australia and is spreading throughout other parts of the world.
- continuous power control on the CDMA network means longer battery life for your laptop.
- CDMA uses "soft handoffs" between cells in the cellular network, providing a robust air link and reliable service.
- CDMA transmission is, by nature, extremely secure. Individual transmissions are indiscernable to anyone tapping into a radio frequency channel.

Document Navigation

This guide is designed to provide quick access to any subject. It is intended for those using the AirCard in notebook computers running Windows 95, 98, NT, or 2000. There is a separate [User Guide for Windows CE](#) for those using handheld computers with the Windows CE operating system.

Some material in this guide is applicable only to specific operating systems. So that you can readily identify what material applies to your system, the following colour scheme is used:

Peach	General Information for All Systems
Green	Green - Windows 95/98
Yellow	Yellow - Windows NT
Red	Red - Windows 2000
Blue	Blue - Windows CE

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Your AirCard 510 PCS Components

All AirCard 510 PCS packages include the following components:

- AirCard® 510 PCS Modem with Antenna
- "Jewel Box" Case
- CD-ROM with Enabling Software: Watcher, WirelessExpert, and AirCard Toolkit, PC Card Drivers, and this Documentation including [Standard 1 Year Warranty](#).

Additional accessories are also available from [Sierra Wireless](#). Visit [our web site](#) or [contact sales](#) for details.

System Requirements

The AirCard 510 PCS Modem requires these system resources:

Card Slots	1 Type II Slot			
Disk Drive	CD-ROM			
I/O Resources	1 IRQ, 128 bytes I/O Space			
Memory	16 Mb			
Disk Space	2 Mb			
Windows Versions Supported	95 OSR 2*	98 Any Version	NT 4.0 Service Pack 4 or 5*	2000

* Click on the links for instructions on determining the version of your operating system.

Users of Windows CE should refer to the [User Guide for Windows CE](#) for information regarding system requirements and supported versions.

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 AirCard 510 PCS CDMA modem are used in a normal manner with a well-constructed network, they should not be used in situations where failure to transmit or receive data could result in harm 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 AirCard 510 PCS CDMA modem, or for failure of the AirCard 510 PCS modem to transmit or receive such data.

Safety and Hazards

Do not operate the AirCard modem in areas where blasting is in progress,

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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 AirCard 510 PCS PC Card **MUST BE TURNED OFF**. It can transmit signals that could interfere with this equipment.

Do not operate the AirCard PC Card in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the AirCard modem **MUST BE TURNED OFF**. When operating, it can transmit signals that could interfere with various onboard systems.

The driver or operator of any vehicle should not operate the AirCard 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 jurisdictions, operating such communications devices while in control of a vehicle is an offence.

Regulatory Information

This device complies with Part 15 of the FCC Rules. Operation of this device 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 operations. FCC guidelines stipulate that the antenna should be more than 1.5 cm (0.6") from all persons.

Certifications:

FCC ID: N7NACRD510

Canada ID:

Registration Number:

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 FCC Information - 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 numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le ministre des Communications.

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.



Patents and Trademarks

Portions of this product are covered by some or all of the following US patents: 5515013, 5617106, 5629960, 5682602, 5748449, 5845216, 5845553, 5878234, 5890057, and other patents pending.

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Technical Specifications

AirCard 510 PCS PC Card

Approvals:	IS95B FCC Parts 15 and 24 .
Voltage:	+3.3 and +5 Vdc from PCMCIA Slot
Current:	Sleep mode: 5 mA typical. Transmit: 500 mA typical, 650 mA max.
Transmitter Power:	200 mW (Class II) full duplex.
Transmit:	1850 to 1910 MHz
Receive:	1930 to 1990 MHz
Channel Spacing:	50 kHz
Freq. Stability:	±1.0 ppm

Environmental Specifications

These specifications apply to the AirCard 510 PCS radio modem only, not to the accessory components.

Operating Temp:	-30 to +60° C (ambient, outside PCMCIA enclosure)
Storage Temp:	-30 to +85° C
Humidity:	95%, non-condensing
Vibration:	15G peak 10-2000 Hz (not operating)
Drop:	30" (76.2 cm) on to vinyl covered concrete

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