RayTalk))
wireless professionals

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WIRELESS PROFESSIONALS

RC-505

WIRELESS LAN PC CARD

CE   IEEE802.11b

Link

RC-505

Chapter 4 Troubleshooting

This chapter describes the problems and corresponding solutions that may occur when installing a PC Card.

Symptom	Solution
Windows does not detect the PC Card when installed.	Verify that the PC Card is properly inserted into the PC Card slot. Check whether the computer has a Plug and Play BIOS. Windows 95/98/ME/2000/XP might not detect the PC Card if a previous installation of the PC Card was cancelled before it was finished. Remove the previous driver, and redo the installation again.
Driver fails to load	A resource conflict could exist. For Windows 95/98/ME/2000, use the *Device Manager* to resolve resource conflicts. Select *System* from the *Control Panel*, then click on the *Device Manager* tab.

Device conflict on a Windows system	A device conflict under Windows 95/98/ME/2000/XP may be related to the PC Card. For Windows 95/98/ME/2000, use the Computer properties to identify the used I/O port addresses and IRQ values. If there is a device conflict, select alternative settings for I/O Base Address or IRQ values. If you know which device is conflicting with the PC Card, you have the option of changing that device's I/O address or IRQ instead of changing the PC Card.
No resource conflicts were detected, but the wireless station does not attach to the network	Verify that the *SSID* of the PC Card matches that of the access point. Use the *Network Configuration Properties Application* in the *Control Panel* to modify the *SSID*. Verify that the *Network Mode* of the PC Card is configured correctly.

Nonfunctioning card LED	The PC Card is not powered on. The cause may be: • No Driver loaded or installed. • Card – Driver mismatch, which prevented the driver from loading. • Device conflict, which prevented the driver from loading. Actions: • Verify that a driver has been installed. • Determine if there is a conflict with another device.
Weak signal or intermittent connection.	Try reorienting the antenna. The PC Card antenna is attached to the end of the PC Card. For best use of the antenna: Keep the area around the antenna clear from materials that could block radio transmission, such as metal objects, electronic devices, and cordless telephones. If your signal is weak, change the direction of the antenna slightly. If necessary, move your notebook computer a few inches to find a better signal. Use the Link Quality and Signal Strength display in the *Client Utility* to determine the best location and orientation for a network connection.

Appendix A   Product Specifications

General

Radio Data Rate	11, 5.5, 2 and 1 Mbps, Auto Fall-Back

Range (open environment)	11 Mbps – 150m
	        450m(Long Range PC Card)
	5.5 Mbps –200m
	        600m(Long Range PC Card)
	2 Mbps – 250m
	        750m(Long Range PC Card)
	1 Mbps – 400m
	        1200m(Long Range PC Card)

Operating Voltage	3.3V/5V
Regulation Certifications	FCC Part 15/UL, ETSI 300/328/CE
Compatibility	Fully interoperable with IEEE802.11b compliant products
LED Indicator	RF Link activity

Network Information

Network Architecture	Support ad-hoc, peer-to-peer networks and infrastructure communications to wired Ethernet networks via Access Point
Drivers	Windows 95/98/ME/NT 4.0/2000/XP/CE3.0
Access Protocol	CSMA/CA
Roaming	IEEE802.11b compliant
Security	64/128-bit WEP data encryption

Radio

Frequency Band	2.4 – 2.484 GHz
Radio Type	Direct Sequence Spread Spectrum (DSSS)
Modulation	CCK (11, 5.5Mbps) DQPSK (2Mbps) DBPSK (1Mbps)
Operation Channels	11 for North America, 14 for Japan, 13 for Europe, 2 for Spain, 4 for France
RF Output Power	15 dBm 20 dBm (Long Range PC Card for CE) 23 dBm (Long Range PC Card for FCC)
Antenna	Integrated, with built-in diversity
Sensitivity @FER=0.08	11 Mbps < -85dBm <-87dbm(Long range PC Card) 5.5 Mbps < -88dBm <-90dbm(Long range PC Card)

	2 Mbps < -91dBm
	<-93dbm(Long range PC Card)
	1 Mbps < -93dBm
	<-95dbm(Long range PC Card)

Environmental

Temperature Range	0 to 50 C (operating)
	-20 to 80 C (storage)
Humidity (non-condensing)	5% to 95% typical

Physical Specifications

Form Factor	PCMCIA Type II PC Card
Dimensions	118(L) mm x 54(W) mm x 7.5(H) mm
Weight	40 g

Appendix B
Regulatory Compliance Information

Radio Frequency Interference Requirements

This device complies with Part 15 of FCC Rules and Canada RSS-210.
Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.
3. To comply with RF safety requirements, you must maintain a distance of 20 cm from the antenna when operating the device.
4. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules, These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, (example – use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.