# 11Mbps High Speed Wireless LAN PC Card



Date of Issue: Jan. 16th, 2002

#### **Technical Support**

The firmware version of the 11Mbps Wireless LAN PC Card is displayed on the utility main window. Users could download and upgrade the most recent software version from the supplier's web site or refer to the selling contact for the latest software information. If you have difficulty resolving the problem while installing or using the 11Mbps Wireless LAN PC Card, please contact the supplier for support.

#### **About This Manual**

11Mbps Wireless LAN PC Card User's Manual is first published on January, 2002. The manual includes procedures for the setup of the 11Mbps Wireless LAN PC Card under Windows XP, Windows 2000, Windows NT, Windows 98 or Windows ME. Take a moment to read through this manual and familiarize yourself with wireless technology.

# **FCC 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.

Federal Communications Commission (FCC) 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 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.



FCC RF Radiation Exposure Statement:

- 1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- 2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment, under 47 CFR 2.1093 paragraph (d)(2)"

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# 1

# **About Wireless LAN PC Card**

The 11Mbps IEEE 802.11b Wireless LAN PC Card is a standard PCMCIA adapter that fits into any standard PCMCIA Type II slot in a notebook computer. Its 11Mbps data rate gives equivalent Ethernet speed to access corporate network or the Internet in a wireless environment. In addition, a detachable antenna version is specifically designed for system integrator application. When installed, 11Mbps Wireless LAN PC Card is able to communicate with any 802.11 and 802.11b compliant products.

### 1-1 Features and Benefits

- 1. Fully IEEE 802.11b compatible.
- 2. Direct Sequence Spread Spectrum (DSSS) technology provides robust, interference-resistant and secure wireless connection.
- 3. Supports 1, 2, 5.5 and 11 Mbps data rate.
- 4. Working range up to 800 ft. in an open environment.
- 5. Seamless connectivity to wired Ethernet and PC network LAN's augments existing networks quickly and easily.
- 6. Greater flexibility to locate or move networked PCs.
- 7. Wireless connection without the cost of cabling.
- 8. Easy to install and user friendly, just Plug and Play.
- 9. Low power consumption.
- 10. Supports a variety of operating systems (Win98/ME/NT/2000/XP)
- 11. 64-bit and 128-bits WEP encryption capable.
- 12. Provides Window-based Diagnostic Tools, most notably, Site Survey, Link Quality Test and Access Point Browser.

# 1-2 Applications

11Mbps Wireless LAN PC Card offers a fast, reliable, cost-effective solution for wireless client access to the network in applications like these:

#### 1. Remote access to corporate network information

E-mail, file transfer and terminal emulation.

#### 2. Difficult-to-wire environments

Historical or old buildings, asbestos installations, and open area where wiring is difficult to deploy.

#### 3. Frequently changing environments

Retailers, manufacturers and those who frequently rearrange the workplace and change location.

#### 4. Temporary LANs for special projects or peak time

- C1- Trade shows, exhibitions and construction sites where a temporary network will be practical.
- C2- Retailers, airline and shipping companies need additional workstations during peak period.
- C3- Auditors requiring workgroups at customer sites.

#### 5. Access to database for mobile workers

Doctors, nurses, retailers, accessing their database while being mobile in the hospital, retail store or office campus.

#### 6. SOHO (Small Office and Home Office) users

SOHO users need easy and quick installation of a small computer network.

#### 7. High security connection

The secure wireless network can be installed quickly and provide flexibility. (Please refer to page 27 for encryption configuration.)

## 1-3 Product Kit

11Mbps Wireless LAN PC Card comes with the following items. Please go through each item below. If any of listed items appears to be damaged or missing, please contact your local dealer.

#### 11Mbps Wireless LAN PC Card

• 11Mbps Wireless LAN PC Card. ..... x1



- 11Mbps PC Card Software and Documentation CD or Floppy Diskette...... x 1
- 11Mbps Wireless LAN PC Card User Manual..... x 1



## 1-4 About Wireless LAN PC Card LED Indicators

The 11Mbps Wireless LAN PC Card has two LED indicators. The behavior of the indicators is described as below:

#### Power LED

- OFF No light
- ON Solid Yellow



#### <u>Link LED</u>

- Solid Green Associated with the Access Point or Ad-Hoc wireless workstation.
- Blinking Green Not connecting to the Access Point or Ad-Hoc wireless workstation.

# 2

# **Getting Started**

This chapter describes the instructions that guide you through the proper installation of your 11Mbps Wireless LAN PC Card for the Windows XP/2000/NT/ME/98 operating systems.

The complete installation of the 11Mbps Wireless LAN PC Card consists of the following steps:

STEP 1: Insert your Wireless LAN PC Card into your notebook.

STEP 2: Install the corresponding driver and utility.

STEP 3: Set basic settings.

STEP 4: Finish Installation.

### 2-1 Before Installation

In addition to the items shipped with the client adapter, you will also need the following in order to install the adapter:

- 1. A computer equipped with a Type II or Type III PCMCIA slot, and a PCMCIA card and socket services compliant with revision 2.10 of the PCMCIA specification (or higher).
- 2. Windows XP/2000/NT/98/ME (with a Windows installation CD-ROM, diskettes for use during installation)
- 3. Minimum 500 Kbytes free disk space for installing driver and utility program.

## 2-2 Insert the 11Mbps Wireless LAN PC Card

To install the 11Mbps Wireless LAN PC Card, please do the following:

- 1. Find an available Type II or Type III PCMCIA slot on your computer.
- 2. With the Wireless LAN PC Card's 68-pin connector facing the PCMCIA slot and its label facing up, slide the PCMCIA adapter completely into the PCMCIA slot.



Fig Insert the 11Mbps PC Card into the notebook.



**CAUTION:** Do not force the client adapter into the slot. Forcing it will damage both the client adapter and the slot. If the client adapter does not go in easily, remove the card and reinsert it.

# 3

# **Install Driver for Windows**

This section describes the installation of the 11Mbps Wireless LAN PC Card driver for the Windows 98/ME/NT4.0/2000 and Windows XP operating systems. The installation procedures for Windows XP refer to 3-1 Set up Wireless LAN PC Card for Windows XP; for Windows 2000 please see 3-2 Set up Wireless LAN PC Card for Windows 2000; for Windows NT please go to 3-3 Set up Wireless LAN PC Card for Windows NT; for Windows 98/ME refer to 3-4 Set up Wireless LAN PC Card for Windows 98/ME refer to 3-4 Set up Wireless LAN PC Card for Windows 98/ME refer to 3-4 Set up Wireless LAN PC Card for Windows 98/ME refer to 3-4 Set up Wireless LAN PC Card for Windows 98/ME refer to 3-4 Set up Wireless LAN PC Card for Windows 98/ME refer to 3-4 Set up Wireless LAN PC Card for Windows 98/ME.

**Note:** Before you start the installation, you are advised to keep the Windows CD-ROM in case you might need certain system files.

### 3-1 Set up Wireless LAN PC Card for Windows XP

**Step 1:** After inserting the 11Mbps Wireless LAN PC Card into the PCMCIA slot on your notebook, the Windows will auto-detect the Wireless LAN PC Card and a "Found New Hardware Wizard" window will show up. Select "Install from a list or specific (Advanced)" to install the driver.



**Step 2:** Insert the Product CD-ROM into the CD-ROM drive. Specify the location where the driver is placed. Click on **Next** to install the driver.

Found New Hardware Wizard				
Please choose your search and installation options.				
Search for the best driver in these locations.				
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.				
Search removable media (floppy, CD-ROM)				
Include this location in the search:				
A:\ Browse				
O Don't search. I will choose the driver to install.				
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.				
< Back Next> Cancel				

**Step 3:** The windows will find "**IEEE 802.11 Wireless LAN/PC Card (5V)**" and start copying corresponding files into the system. Click on **Next** to continue.



**Step 4:** Click **Finish** to complete the installation.



**Step 5:** Right click "**My Computer**" from **Start**, select **Properties**, go to the **Hardware** tab and click the **Device Manager** button to see if any error icon appears next to the **Network Adapter/IEEE 802.11 Wireless LAN/PC Card**. If no, your 11Mbps Wireless LAN PC Card is working well.



After installing the Wireless LAN PC Card, the Windows XP will display a "Wireless Network Connection #" message.



Click on the message and the "*Automatic Wireless Network Configuration*" will then appear automatically and allow users to connect to an available wireless infrastructure network (Access Point), shown as follows. You may click the **Advanced** button to make advanced configuration for the Wireless LAN PC Card, shown as below.

Conn	ect to Wireless Network 🛛 🛛 🛛 🔀
The it froi Avai	following network(s) are available. To access a network, select m the list, and then click Connect. lable networks:
1	WLAN
i i	hschung demolab
This this r	network requires the use of a network key (WEP). To access network, type the key, and then click Connect.
Netv	vork key:
lf yo	u are having difficulty connecting to a network, click Advanced.
Ad	vanced Connect Cancel

For more information on using the automatic wireless network configuration please refer to Windows XP **Help** file.

	🕹 Wireless Network Connection 8 Properties 👘 [?] 🔀
	General Wireless Networks Authentication Advanced
If you desire to use our WLAN Utility, you need to disable the Windows XP <i>Automatic Wireless</i> <i>Network Configuration</i> first by un-checking this check box.	Use Windows to configure my wireless network settings  Available networks:  To connect to an available network, click Configure.  WirelessLAN  Marty  Marty
<b>J</b>	Preferred networks: Automatically connect to available networks in the order listed
	below:
	Move up
	Move down
	Add Remove Properties
	Learn about <u>setting up wireless network</u> <u>configuration.</u> Advanced
	OK Cancel

However, the WLAN Utility, which comes with the Wireless LAN PC Card, provides you more tools to configure the Wireless LAN PC Card and monitor the wireless connection. For more information on installing and using the WLAN Utility, please refer to the following sections "*Installation of the WLAN Utility*" and "*Usage of the WLAN Utility*".

▶ Note: To use the WLAN utility under Windows XP, you need to disable the *Automatic Wireless Network Configuration* first. Steps are described as follows:

- Right click the **Network Connections** icon. Select **Properties**.
- Go to the **Wireless Networks** tab.
- Uncheck the "Use Windows to configure my wireless network settings" check box and click the OK button (see the above picture).

## 3-2 Set up Wireless LAN PC Card for Windows 2000

**Step 1:** After inserting the 11Mbps Wireless LAN PC Card into the PCMCIA slot on your notebook, Windows will auto-detect the 11Mbps Wireless LAN PC Card.

Found New Hardware			
	_IEEE_802.11_Wireless_LAN/PC_Card		

Step 2: A "Found New Hardware Wizard" window shows up. Click Next to proceed.



#### Step 3: Select "Search for a suitable driver for my device (recommended)".

A dev an op	ardware Device Drivers vice driver is a software program that ena verating system.	ables a hardware d	evice to work with
This v	vizard will complete the installation for th	s device:	
2	_ IEEE_802.11_Wireless_LAN/PC_	Card.	
A dev needs install	ice driver is a software program that mal s driver files for your new device. To loca ation click Next.	kes a hardware de ate driver files and (	vice work. Windows complete the
What	do you want the wizard to do?		
۹	Search for a suitable driver for my devi	ce (recommended)	
C	Display a list of the known drivers for th driver	nis device so that l	can choose a specific
			No. 1 Co. 1

**Step 4:** Insert the Product CD-ROM into the CD-ROM drive. Specify the location where the driver is placed. Click on **Next** to install the driver.



**Step 5:** The windows will find "IEEE 802.11 Wireless LAN/PC Card (5V)". Click on Next to continue.

nd New Ha	rdware Wizard
<b>Driver File</b> The wiz	s Search Results ard has finished searching for driver files for your hardware device.
The wiz	ard found a driver for the following device:
- P	IEEE 802.11 Wireless LAN/PC Card(5V)
Window	is found a driver for this device. To install the driver Windows found, click Next.
	c:\nb 1.0.3\wlannic.inf
	< Back Next

Step 6: Click Finish to complete the installation.



**Step 7:** Open **Control Panel/System/Device Manager**, and check **Network Adapters** to see if any error icon appears. If no, your 11Mbps Wireless LAN PC Card is working well.



## 3-3 Set up Wireless LAN PC Card for Windows NT

**Step 1:** From the desktop, select **Control Panel**, double-click **Network**, go to the **Adapters** tab, and then click the **Add** button.

twork		26. W.	?
dentification Sei	rvices   Protocol	s Adapters Bind	lings
<u>N</u> etwork Adapter	s:		
l			
	<u>H</u> emove	Properties	<u>U</u> pdate
Item Notes:			
		10	- 23
		Class	Concel

**Step 2**: Windows NT will present a list of all its supported adapters. Windows NT will present a list of all its supported adapters. Click **Have Disk** to continue.

Select No	letwork Adapter	? X
	Click the Network Adapter that matches your hardware, an click OK. If you have an installation disk for this componer Have Disk.	id then ht, click
<u>N</u> etwork	k Adapter:	
■2300 ■233Co ■233Co ■233Co ■233Co ■233Co	om 3C508 ISA 16-bit Ethernet Adapter om Etherlink II Adapter (also II/16 and II/16 TP) om Etherlink III ISA/PCMCIA Adapter om EtherLink III PCI Bus-Master Adapter (3C590) om Etherlink16/EtherLink16 TP Adapter om East EtherLink: PCL10/100PASE T Adapter (3C595) Have	Disk
4		Cancel

**Step 3:** Windows NT will ask for the path containing the 11Mbps Wireless LAN PC Card driver for Windows NT. Insert the Product CD-ROM into the CD-ROM drive, and then click **OK** to continue.



**Step 4:** The Windows will find "**IEEE 802.11 Wireless LAN PC Card**". Click **OK** and Windows will then copy the necessary files into the system.

elect	OEM Option		
Choo	se a software supp	orted by this hardwa	are manufacturer's disk.
	802.11 Wireless L	AN PC Card	
	QV I	Cancel	Help

**Step 5:** Restart the Windows to finish the installation.

System S	Settings Change 🛛 🔀
?	To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?

**Step 6:** To ensure whether the 11Mbps Wireless LAN PC Card works fine or not, go to **Control Panel**, double-click **Devices**, then verify whether the 11Mbps PC Card driver has started.

De <u>v</u> ice	Status	Startup	11 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -
v7vram		Disabled 🔺	Close
VgaSave	Started	System	
VgaStart		System	<u>S</u> tart
wd33c93		Disabled	
wd90c24a		Disabled	Stop
wdvga		Disabled	1 A. J.
weitekp9		Disabled	Oh e ale suite atthe endth a
wINS Client(TCP/IP)	Started	Automatic	Check whether the
WLAN11 Adapter Driver	Started	Automatic	driver is successfully
Xga		Disabled 🔄	installed and started