PC54G2, MS-6834
Wireless 11g PCI Card

User's Guide

FCC Caution

1. The 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.
2. FCC RF Radiation Exposure Statement: The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.
3. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
4. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

Copyright Notice

Trademarks

Revision History

Revision	History	Date
V 1.0	First Release	December 2003

Important Safety Precautions

Always read and follow these basic safety precautions carefully when handling any piece of electronic component.

1. Keep this User's Manual for future reference.

2. Keep this equipment away from humidity.

3. Lay this equipment on a reliable flat surface before setting it up.

4. The openings on the enclosure are for air convection hence protects the equipment from overheating.

5. All cautions and warnings on the equipment should be noted.

6. Never pour any liquid into the opening that could damage or cause electrical shock.

7. If any of the following situations arises, get the equipment checked by a service personnel:

     Liquid has penetrated into the equipment

     The equipment has been exposed to moisture

     The equipment has not work well or you can not get it work according to User's Manual

     The equipment has dropped and damaged

     If the equipment has obvious sign of breakage

8. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE ABOVE 60°C OR BELOW -20°C, IT MAY DAMAGE THE EQUIPMENT.

❶ Introduction

PC54G2 (MS-6834) Wireless 11g PCI Card, compliant with IEEE802.11g, is a high-efficiency wireless adapter for wireless networking at home, in office or in public places. The data transmission rate can be up to 54 Mbps and auto-negotiated to 48, 36, 24, 18, 12, 9, 6 Mbps (IEEE802.11g), or 11, 5.5, 2, 1 Mbps (IEEE802.11b).
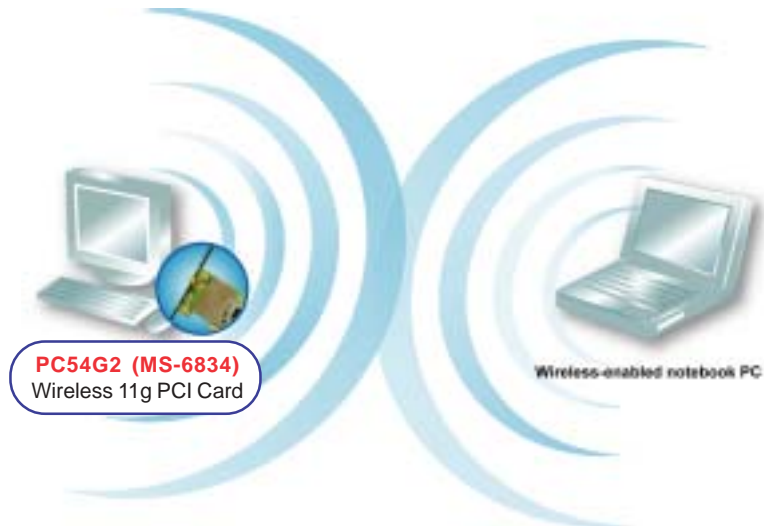
With PC54G2 (MS-6834), you can roam between conference room and office without being disconnected the LAN cables; in addition, sharing files and printers can be easy tasks.

The PC54G2 (MS-6834) is available to Microsoft Windows operating systems (Windows® XP/2000/ME/98SE) and can be integrated into networking with either **Ad-hoc mode** (computer-to-computer, without an Access Point) or **Infrastructure mode** (computer-to-access point, an Access Point is required).

>>> 1.2 How PC54G2 (MS-6834) works

■ **Ad-hoc Mode :** An Ad-hoc network is a local area network, especially one with wireless or temporary plug-in connections. Therefore, some of the network devices are part of the network only for the duration of a communications session. Users in the network can share files, print to a shared printer, and access the Internet with a shared Gateway or Access Point. In this kind of network, new devices can be quickly added; however, users can only communicate with other wireless LAN devices that are in this wireless LAN workgroup, and are within range.

PC54G2 (MS-6834)
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Wireless-enabled notebook PC

Infrastructure Mode : The difference between Infrastructure network and Ad-hoc network is that the former one includes an Access Point. In network environment, the Access Point can manage the bandwidth to maximize bandwidth utilization. Moreover, the Access Point enables users on a wireless LAN to access an existing wired network, allowing wireless users to take advantage of the wired networks resources, such as Internet, email, file transfer, and printer sharing. The scale and range of the Infrastructure networking are larger and wider than that of the Ad-hoc networking.

>>> 1.3 Specifications

❏ General

Operating system	Microsoft® Windows® 98 SE/ ME/2000/XP
Compliance	- IEEE 802.11g/b - WECA WiFi - WHQL (Windows ME/2000/ XP)
Operating Temperature	0 ~ 55°C
Operating Humidity	10 ~ 90%, non-condensing

❏ Physical

Form Factor	32-bit PCI v2.2
Dimensions (WxDxH)	122 X 64 X 19 mm
Antenna	Dipole
Weight	52 g
Operation Voltage	3.3 V

❏ Radio

Frequency Range	2.4GHz to 2.4835GHz
Operating Channels	US & Canada: 11; Europe: 1 to 13 France: 4; Spain: 2; Japan: 14
Data Rate and Modulation Types	IEEE 802.11b (Auto-Fallback): - CCK @ 5.5 and 11 Mbps. - DQPSK @ 2Mbps. - DBPSK @ 1 Mbps. IEEE 802.11g (Auto-Fallback): - OFDM @ 54, 48, 38, 24, 18, 12, 9, 6 Mbps

Wireless Medium	Direct Sequence Spread Spectrum (DSSS) with ACK; Half-Duplex
Media Access Protocol	Carrier Sense Multiple Access with Collision Avoidance (CDMA/CA)
Transmitter Output Power	14 ± 1dBm

❏ **Performance**

Range	Up to 150 m @ 11 Mbps.

❏ **Security**

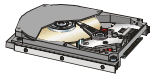|	
Security Mechanism	- 64-/128-bit WEP - WPA support

>>> 1.4 System Requirements

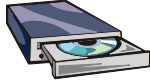Before installing the PC54G2 (MS-6834), your PC should meet the following:

- Desktop PC with standard PCI slot.

- Windows® 98SE/ME/2000/XP operating system.

- Minimum 5MB free disk space for installing the driver and utilities.

- CD-ROM drive, double speed or higher.

>>> 1.5 Package Contents

Unpack the package and check all the items carefully. If any item contained is damaged or missing, please contact your local dealer as soon as possible. Also, keep the box and packing materials in case you need to ship the unit in the future. The package should contain the following items:

- One Wireless 11g PCI Card - **PC54G2**.
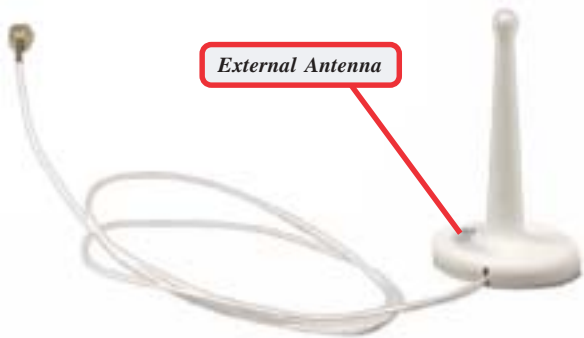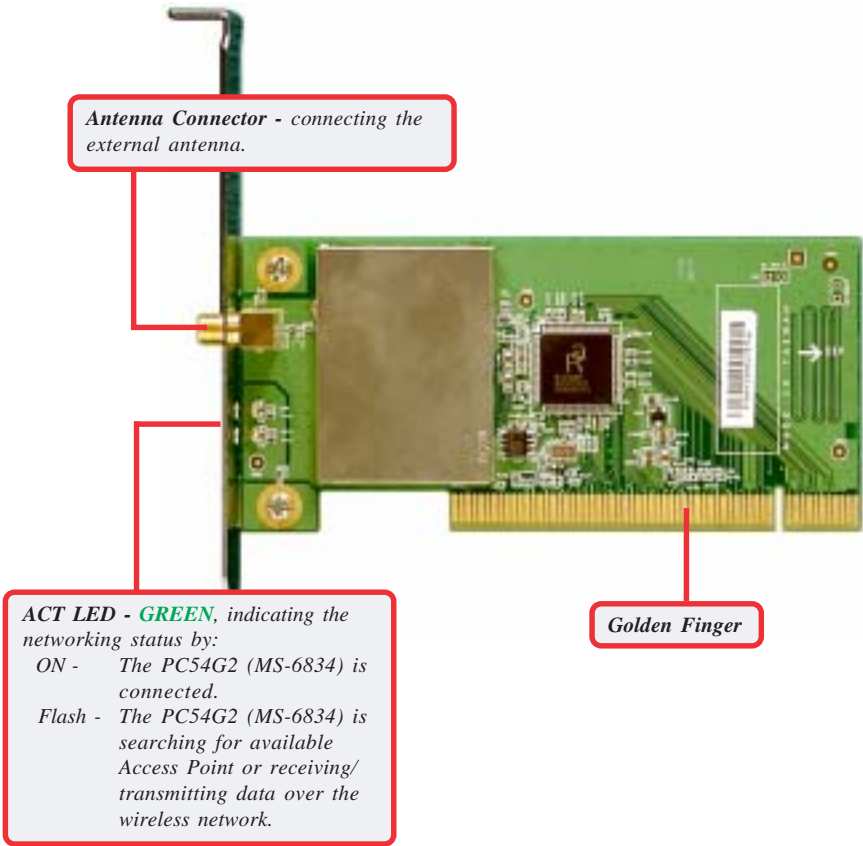
- One external antenna.

- One User's Guide and Quick Start Guide.

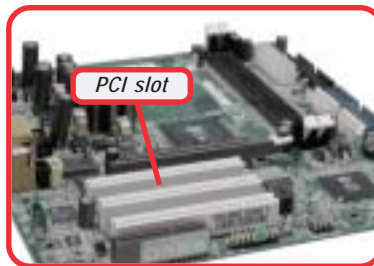- One Installation CD-ROM including drivers, utilities, and manuals.

>>> 1.6 Product View

Antenna Connector - *connecting the external antenna.*

ACT LED - *GREEN*, *indicating the networking status by:*
- *ON - The PC54G2 (MS-6834) is connected.*
- *Flash - The PC54G2 (MS-6834) is searching for available Access Point or receiving/ transmitting data over the wireless network.*

Golden Finger

External Antenna

② Hardware Installation

The following diagrams provide you a basic installation for your PC54G2 (MS-6834), which is suitable for most desktop PCs. For more information about the PCI slot, please refer to the user's manual of your mainboard.
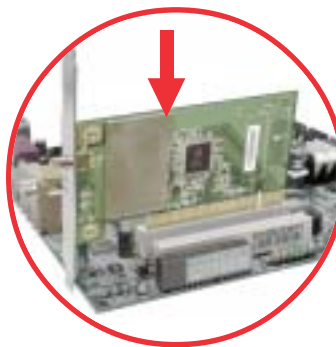
Step 1. Remove the computer cover. Locate the available PCI slot on your mainboard.

NOTE: Turn off your system and disconnect the power cable before installing the PC54G2 (MS-6834).

PCI slot

Step 2. Put the PC54G2 (MS-6834) directly over the PCI slot and press it into the slot firmly.

Do not hold the PC54G2 (MS-6834) on the golden finger while installing; doing this may cause interference or damage.

Step 3. Replace the computer cover after securing the PC54G2 (MS-6834) with a bracket screw.

Step 4. Connect the external antenna to the connector on the PC54G2's (MS-6834) bracket.

Connecting the external antenna

If your are not skilled at installing the PCI adapter, please ask the vendor or an experienced technician for help.