Infrastructure Mode : The difference between Infrastructure network and Ad-hoc network is that the former one includes an Access Point. In an Infrastructure network, the Access Point can manage the bandwidth to maximize bandwidth utilization. Additionally, 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 Ad-hoc network are larger and wider than that of the Ad-hoc networking.



# >>> 1.3 Specifications

-

### Hardware Specifications

#### **Compliant Standards**

- IEEE 802.11g/b

#### **Bus and Connector Types**

- 32-bit 3.3V Type IIIA
- 124-pin Golden Finger

#### Security Mechanism

- Hardware-Base WEP Privacy
- Hardware-Base AES Privacy (driver update)

#### **Operational Environment**

- Operational Temperature: 0 ~ 55°C
- Humidity: 10 ~ 90% (Non-Condensing)

#### Weight and Dimension

- Weight:11.5g
- Dimension: 50.8 x 59.6 x 4.9mm

### **Q** Radio Frequency Specifications

#### **Raw Data Rates and Modulation Types**

- IEEE802.11b (Auto-Fallback)
  - CCK: 11 and 5.5Mbps DQPSK: 2Mbps
    - DBPSK: 1Mbps
  - IEEE802.11g (Auto-Fallback)

OFDM: 54, 48, 36, 24, 18, 12, 9, 6Mbps

#### **Communication Protocol**

- DSSS (Direct Sequence Spread Spectrum) with ACK
- Half-Duplex

#### Access Method

- Infrastructure Mode: Station-To-LAN Architecture
- Ad-Hoc Mode: Station-To-Station Architecture

#### Frequency, Bandwidth, and Channels

- 2.4 ~ 2.4835GHz Frequency Band
- 11 Channels
- Maximum 3 Non-Overlapped Channels
- 25MHz Bandwidth Per Channel

#### **Transmitter Output Power**

- Output Power: 14dBm ± 1dBm

#### Wireless Coverage

- Up to 500m

#### **Receiving Sensitivity**

- ≤ -82dBm @ 11Mbps (DSSS/CCK)
- $\leq$  -68dBm @ 54Mbps (OFDM)

### **Software Specifications**

#### **Security Mechanism**

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- 64-/128-Bit WEP Key
- AES-CCM Authentication Mode (driver update)
- WPA Support (driver update)
- LEAP/PEAP Support (firmware upgrade)

#### **Authentication Mechanism**

- Open Authentication (Default)
- Shared-Key Authentication

#### **Operating System**

- Microsoft® Windows® 98SE/ME/2000/XP

## >>> 1.4 System Requirements





Before installing the MP54G, your PC should meet the following:

Desktop/notebook PC with an available MiniPCI slot.

Windows<sup>®</sup> 98SE/ME/2000/XP operating system.



Minimum 5M bytes 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 MiniPCI Card.

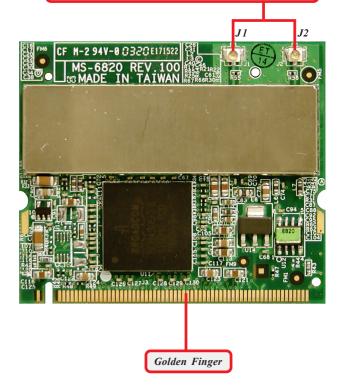


One Quick Installation Guide.

One CD title including drivers, utilities, user's manual and quick guide.

## >>> 1.6 Product View

**External antenna connectors (J1: Main, J2: Aux)** Connect to external antennas for enhanced data transmission and reception. The external antennas are well designed on the desktop or notebook computers. NOTE: Please connect the J1(Main) connector if there is only one antenna to connect.

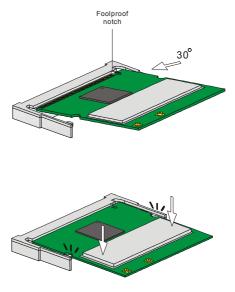




The following diagrams provide you with a basic installation for the MP54G, including how to install and remove the MiniPCI card. The instruction below is suitable for most computers with MiniPCI slot. For more information about the MiniPCI module, please refer to your computer's manual.

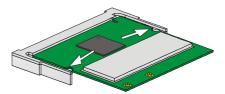
## >>> 2.1 Installing the MP54G

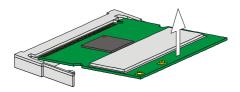
- 1. Locate the Mini PCI slot on the mainboard.
- 2. Place the MP54G over the MiniPCI slot (at an angle of 30 degrees). Then, gently insert it into the slot until the golden finger of the card gets fully inserted.
- Press down the card, and the retaining clips (on two sides of the slot) will lock onto the notches of the card.



# >>> 2.2 Removing the MP54G

- 1. Locate the MiniPCI slot with MP54G installed.
- 2. Press the retaining clips outwards, and the card should bound upwards slightly after being released from the slot.
- 3. Remove the card from the MiniPCI slot carefully.







This section describes the procedures of installing the driver and utility. Follow the instruction step by step to finish the installation. If you use Windows<sup>®</sup> 98SE/ME, please prepare the Windows<sup>®</sup> Setup CD at hand before installing the driver; because the system will ask you to insert the Setup CD to copy files during the installation.

## >>> 3.1 Installing on Windows<sup>®</sup> 98SE/ME

Step 1. Insert the driver CD into your CD-ROM drive, and the Setup program should launch automatically.

The card should be installed into your computer before installing the driver and utility. If the Autorun program doesn't launch, click **Start** at the taskbar and select **Run...**; type **E:\setup.exe** in the Open box and click **OK**, where **E** is your CD-drive.



Windows 98SE