Introduction

The Eazix EZWFM04 is a wireless networking solution with Compact Flash interface for embedded consumer, enterprise and industrial applications. It is compliant with the IEEE802.11b network specification for DSSS signaling. It can operate with other 802.11b WLAN compliant wireless adapters, access points and routers. The EZWFM04 Compact Flash module is based on the Conexant Prism 3 chipset.

Features:
- IEEE 802.11b compliant
- Compact Flash host interface
- Frequency range: 2412 MHz to 2484 MHz
- 64-, 128-bit WEP encryptions
- Data rates: 1, 2, 5.5, and 11 Mbps
- Modulation techniques: DBPSK, DQPSK, CCK
- Driver support for Microsoft Windows 98SE/ME/NT4/2000/XP

1 Installation Procedure

1.1 Installing the software drivers

1.1.1 Extract the files in the *PRISM_ForWindows-v302.zip* into a folder.

1.1.2 Run *PRISM_ForWindows.exe* to install the Prism utility and drivers.

1.1.3 Restart Windows.

1.2 Installing the card into the host computer

1.2.1 If the host computer is on and the operating system is running, insert the WLAN card into the PCMCIA slot of the host.

Note: A PCMCIA to CF adapter must be used to insert the module into the PCMCIA slot. The CF module is a "hot-plug" or "hot-swap" unit. It can be inserted and removed while the host computer is on and the operating system is running.

Caution: This device is designed to operate at a supply voltage of 3.3Vdc, in accordance with the PC Card standard. It is mechanically designed and keyed to prevent improper insertion. Do not force engagement of the card into the computer PCMCIA slot.

1.2.2 If the host computer is off, insert the WLAN card into the PCMCIA slot, turn on the computer and start the Windows operating system (Windows XP preferred).

2 Using the Settings window

2.1 The device should appear in the Device Manager list (Figure 2.1) when the card is inserted
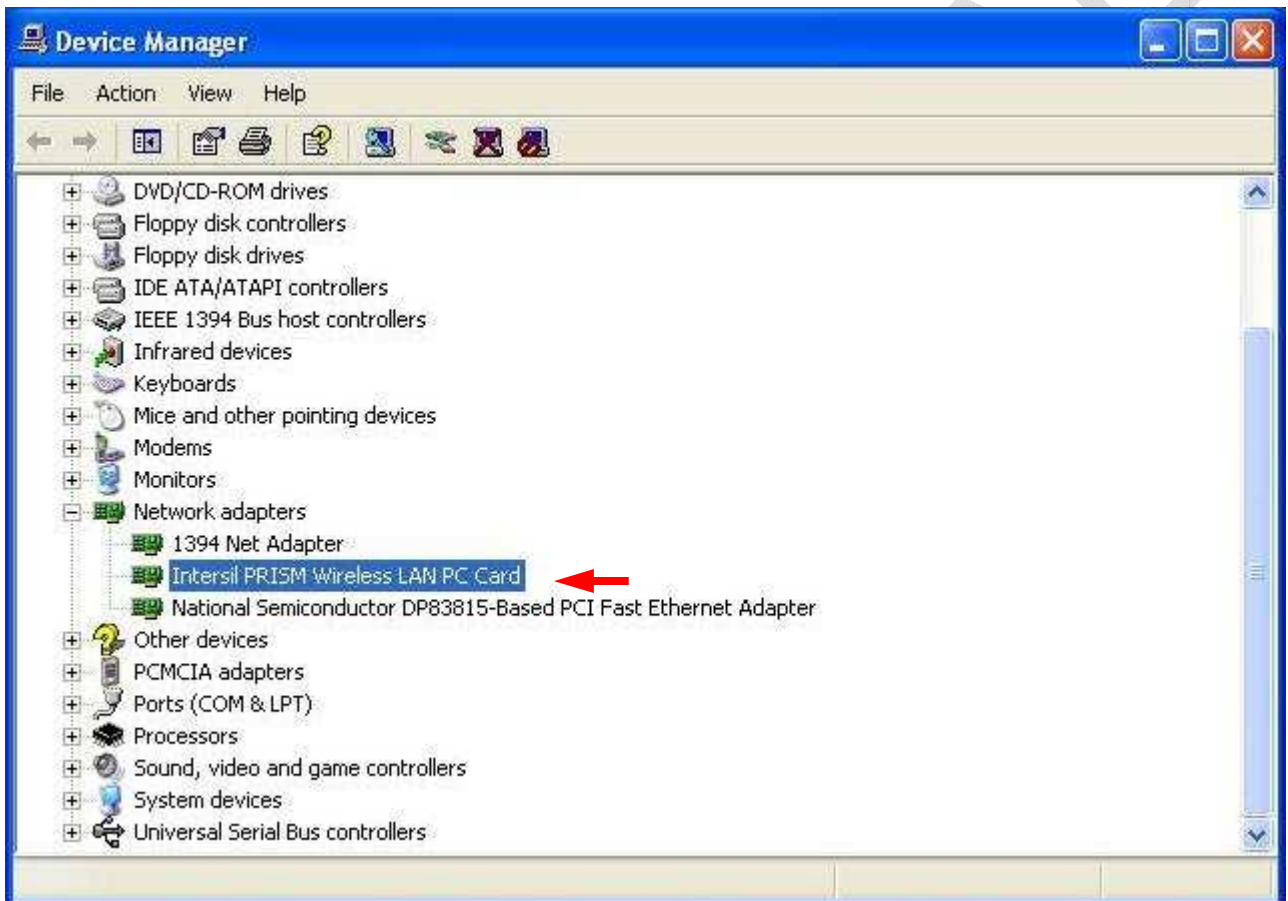

Figure 2.1 Device Manager

2.2 The Intersil WLAN icon will appear in the system tray at the bottom right of the screen (Figure 2.2)
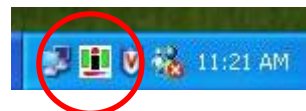

Figure 2.2 Intersil icon

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Notes:
The device name in the Device Manager list may not exactly appear as in Figure 2.1. A number after *Intersil PRISM Wireless LAN PC Card* may appear depending on the association of the driver with the device.

The Intersil icon may not immediately appear as in Figure 2.2. It may show up as colored red or with a red X over it, if the device and software are not yet properly configured.

Reminders:
The Network Connection icon will appear in the system tray at the bottom right of the screen if the "Show icon in notification area when connected" option is checked in the General tab of the Wireless Network Connection Properties window (Figure 2.3)

(Start -> Control Panel -> Network Connections -> Wireless Network Connection -> Properties -> General tab)

Figure 2.3 General Properties Tab

The complete tabs of the Intersil WLAN settings window will be shown if the "Use Windows to configure my wireless network settings" option is unchecked in the Wireless Networks tab of the Wireless Network Connection Properties window (Figure 2.4)

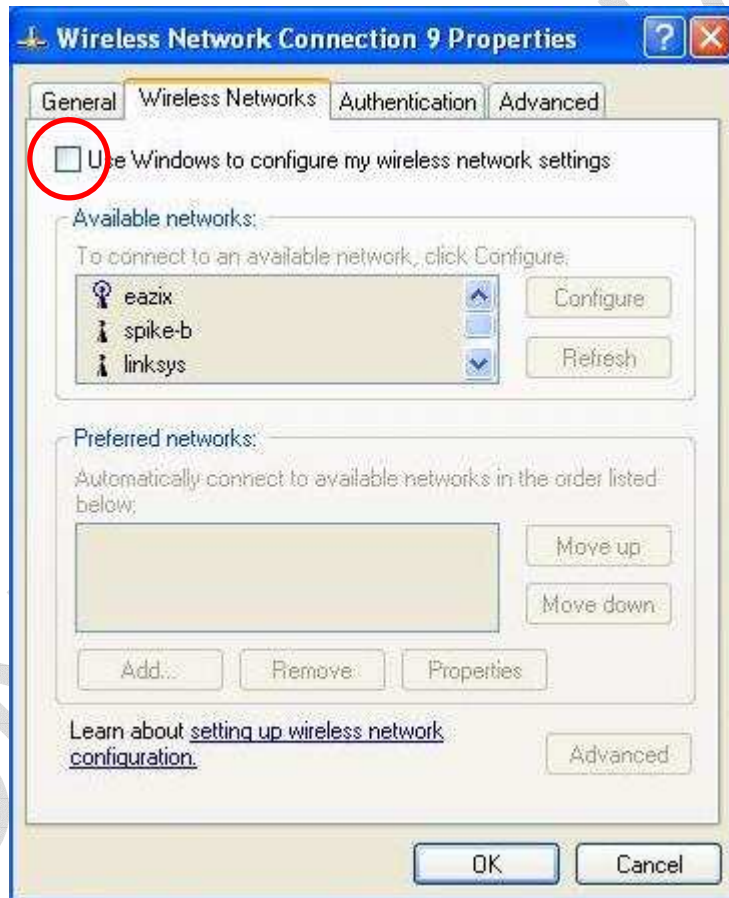(Network Connection icon -> Properties -> Wireless Networks tab)

Figure 2.4 Wireless Networks Properties Tab

2.3 Double-click the Intersil icon to open the PRISM Wireless Settings window (Figure 2.5)
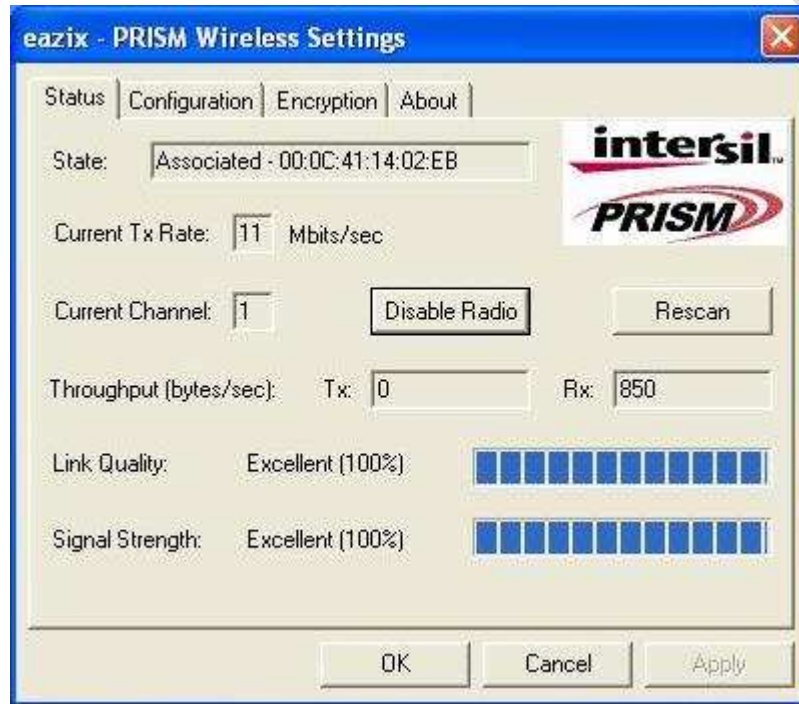

Figure 2.5 PRISM Wireless Settings window

2.4 Click on the Status tab to display the connection status: State, Current Tx Rate, Current Channel, Tx and Rx Throughput, Link Quality and Signal Strength (Figure 2.5)

2.5   Click on the Configuration tab and place the required settings (Figure 2.6)

   2.5.1   Type the Network Name

   2.5.2   Select the Network Type: Access Point or Peer-to-Peer

   2.5.3   Select the Transmit Rate: Fully Automatic, 11, 5.5, or Auto 1 or 2 Mbps

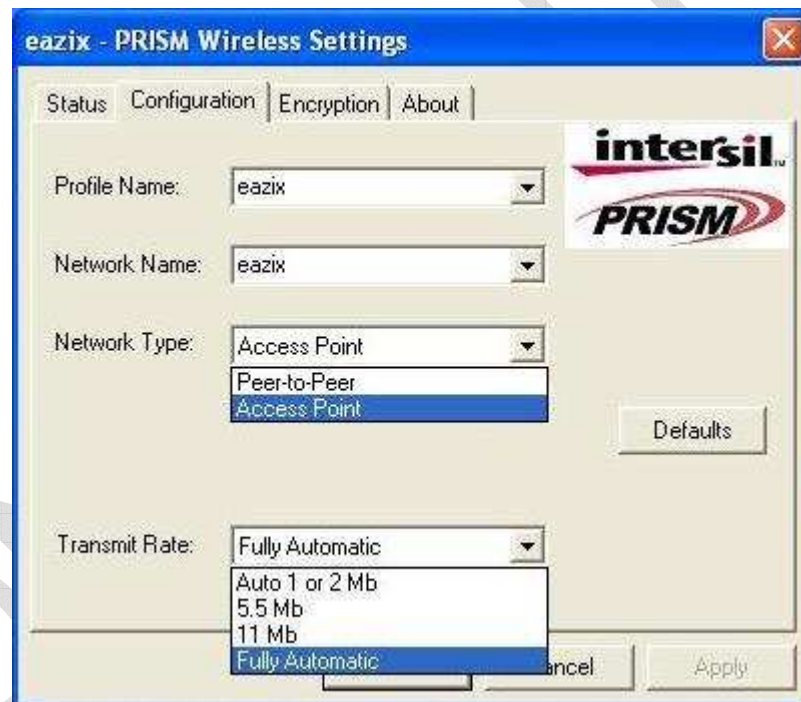   2.5.4   Save the Profile for later use

Figure 2.6 Configuration tab

2.6   Click on the WEP tab and fill out with the necessary settings (Figure 2.7)

   2.6.1   Select the required Encryption (WEP security) type: Disabled, 64 bit, 128 bit

   2.6.2   Create encryption Keys, if needed

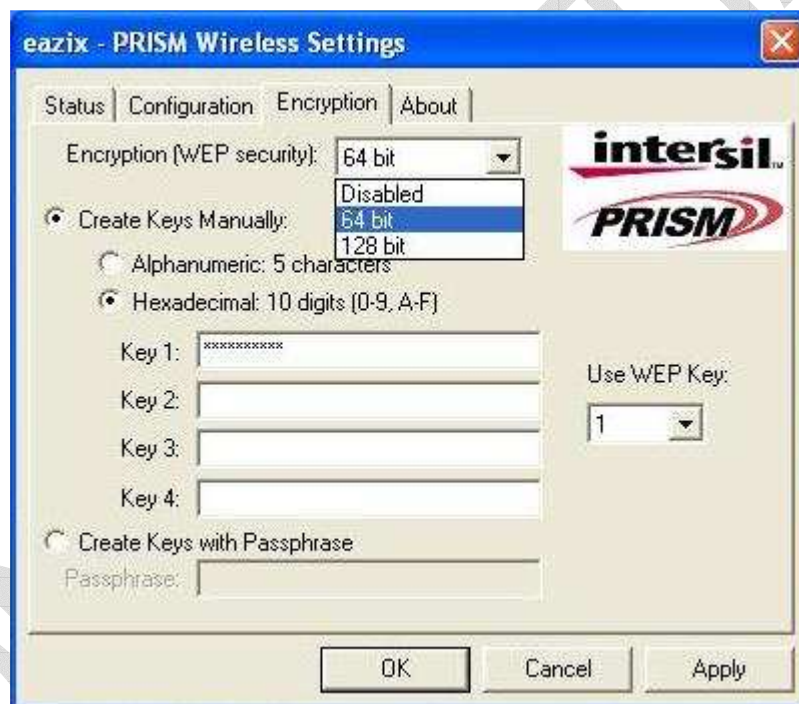   2.6.3   Select which WEP Key to use when trying to connect

Figure 2.7 WEP tab

2.7   Click on the About tab to display the details of the Network Driver, Configuration Utility, NIC Firmware, and MAC Address (Figure 2.8)

Figure 2.8 About tab

3 Connecting the WLAN Card to the Access Point

3.1 GSV Utility

3.1.1 Click on the Network Connection icon in the system tray at the bottom right of the screen (Figure 3.1)

Figure 3.1 Network Connection icon

3.1.2 Click on the Advanced button

3.1.3 Click on the Wireless Networks tab

3.1.4 Uncheck the "Use Windows to configure my wireless network settings" option (Figure 2.4)

3.1.5 Click OK

3.1.6 Double-click on the Intersil icon in the system tray (Figure 2.2)

3.1.7 Click on the Configuration tab in the PRISM Settings Window (Figure 2.5)

3.1.8 Fill out the Network Name

3.1.9 Select Access Point on the Network Type

3.1.10 Click on the WEP tab if the network requires authentication. Select the Encryption type. Type in the WEP key(s). Choose which key to use.

3.1.11 Click Apply or OK

Notes:
The Intersil icon is colored green if there is a proper wireless connection between the card and the Access Point. (Figure 2.2)

If the Intersil icon is colored green with a red X over it (Figure 3.2), then a connection exists but there is a problem in authentication (wrong WEP key, if it is required).
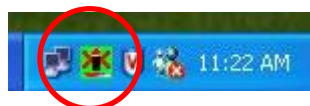

Figure 3.2

If the Intersil icon is colored red (Figure 3.3), then a link cannot be established between the WLAN card and the Access Point.

Figure 3.3

3.2 Windows Utility

3.2.1   Click on the Network Connection icon in the system tray

3.2.2   Click on the Advanced button.

3.2.3   Click on the Wireless Networks tab

3.2.4   Check the "Use Windows to configure my wireless network settings" option

3.2.5   Click on the Advanced button.

3.2.6   Choose the "Any available network (access point preferred)" or the "Access Point (infrastructure) networks only" option (Figure 3.4).
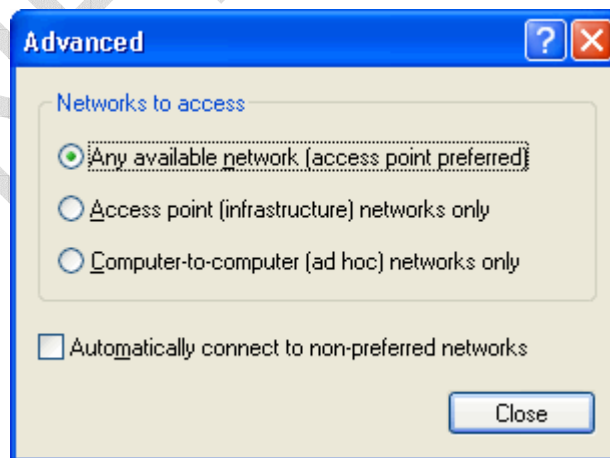
3.2.7   Press Close

Figure 3.4 Advanced options

3.2.8   Add an Access Point to the Preferred networks. Select from the Available Networks list

3.2.9 Fill out the Network Name (SSID) and check the appropriate options (Figure 3.5). Type the Network Key, if required

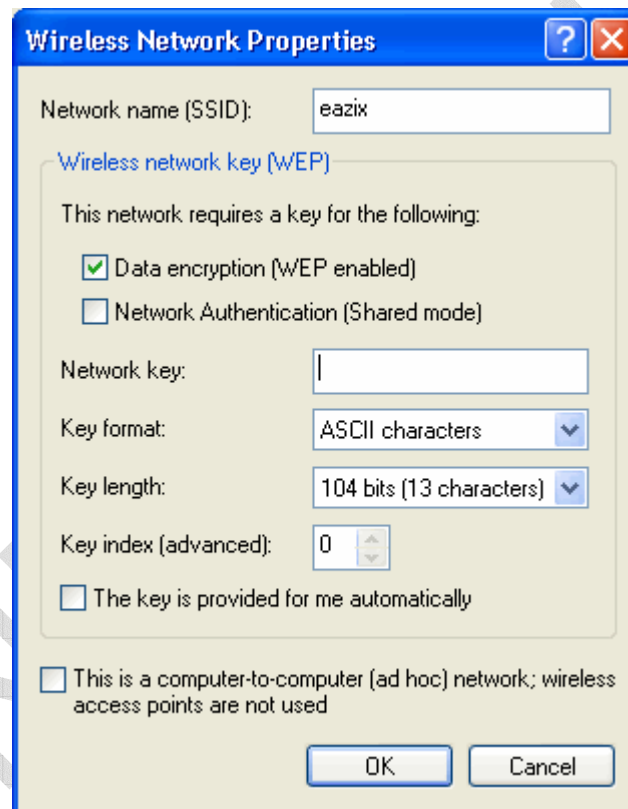3.2.10 Click OK

3.2.11 Add as many Access Points as applicable

Figure 3.5 Wireless Network Properties

3.2.12 Move the items in the Preferred Networks list up or down. Automatic connection will be made in top-to-bottom order

3.2.13 Click OK

3.2.14 Right-click on the Network Connection icon in the system tray. Select the "View Available Networks" option

3.2.15 Choose an Access Point from the Available Networks list (Figure 3.6)

3.2.16 Type the Network Key, if necessary

3.2.17 Press Connect

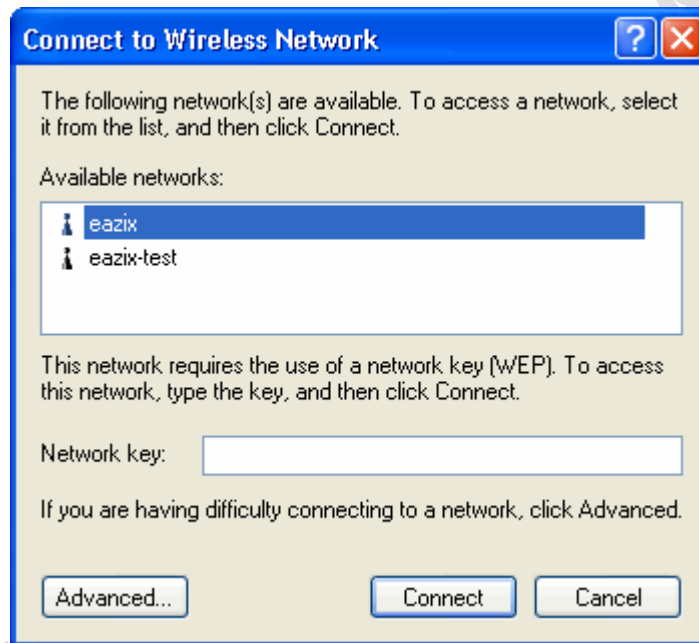*Note:* Click on the Advanced button to go to the Wireless Networks tab directly.

Figure 3.6 List of available networks

Notes:
The Network Connection icon is blinking (flashing, Figure 3.7) if there is a proper wireless connection between the card and the Access Point.

Figure 3.7

If the Network Connection icon is not blinking (Figure 3.8), then a connection exists but there is a problem in authentication (wrong WEP key, if it is required).

Figure 3.8

If the Network Connection icon has a red X beside it (Figure 3.9), then a link cannot be established between the WLAN card and the Access Point.

Figure 3.9

4 Technical Specifications

Radio Technology	IEEE 802.11b (DSSS)
Operating Frequency	2412 – 2484 MHz (under ISM band)
Modulation Schemes	DSSS: DQPSK, DBPSK, CCK
RF Channel Availability	United States: 11 channels (2412 MHz to 2462 MHz) Europe: 13 channels (2412 MHz to 2472 MHz) Japan: 14 channels (2412 MHz to 2484 MHz)
Data Rate	CCK: 11 and 5.5 Mbps DQPSK: 2 Mbps DBPSK: 1 Mbps
Media Access Protocol	CSMA/CA with ACK
Transmitter RF Output Power	< 20.0 dBm EIRP (typical) including antenna gain
Operating Voltage	3.3 Vdc (PCMCIA slot of host computer)
Interface	Compact Flash
Device Driver Support	Microsoft Windows 98SE/ME/NT4/2000/XP

5 FCC Rules and Regulations

15.19

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.

15.21

Caution! Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

15.105

NOTE: 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 EXPOSURE INFORMATION

WARNING! *Read this information before using your phone*

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.

⚠ CAUTION

Operating Requirements

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antennas or transmitters. Please maintain 20 cm separation distance from the antenna to meet FCC RF exposure compliance requirements.