

# Low Power Wireless LAN Card

*Type I CompactFlash card for adding Wireless LAN connectivity to the following mobile computers:*

- *Pocket PCs*
- *Pocket PC 2002s*
- *HPC 2000s*
- *Handheld PC Pros*

## User's Guide



## How this Manual is Organized

This manual is designed to help you install and use the Socket Low Power Wireless LAN Card.

Chapter 1, **Introduction**, describes key features of the Low Power Wireless LAN Card and identifies package contents.

Chapter 2, **Settings**, explains the minimum steps needed to install and use the Low Power Wireless LAN Card. This includes selecting the operating mode, the IP address, the power settings and options.

Chapter 3, **Advanced Features**, shows additional steps you may choose to perform while installing and/or operating the Low Power Wireless LAN Card. These optional steps involve viewing the signal properties, the known access point settings, and peer properties. You can also perform a ping test and select and adjust security settings using these Advanced Features.

Appendix A, **Specifications**, provides technical specifications for the Low Power Wireless LAN Card.

Appendix B, **Safety and Usage Tips**, lists guidelines you should follow to use the Low Power Wireless LAN Card safely and efficiently, including information about product care, antenna care, use while driving or in an aircraft, and radio frequency exposure.

Appendix C, **Troubleshooting**, gives advice for fixing the most common problems you may encounter using the Low Power Wireless LAN Card.

Appendix D, **Technical Support**, explains Socket's technical support policy for the Low Power Wireless LAN Card.

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# Chapter 1 Introduction

## Overview

If you're a mobile professional using a Pocket PC or other Windows-CE based mobile computer, Socket's Low Power Wireless LAN Card provides connectivity to enterprise and public Wi-Fi 802.11b Wireless LAN systems for access to the Internet, email, and corporate servers. In the Ad Hoc Mode, you can communicate directly with other Wi-Fi 802.11b users.



The Socket Low Power Wireless LAN Card uses Direct Sequence Spread Spectrum (DSSS) technology operating between 2.4 and 2.5 GHz. The Low Power WLAN Card conforms to IEEE 802.11b specifications and is Wi-Fi Certified for interoperability with other Wi-Fi Certified products. Spread-spectrum communication provides a high-capacity network within large or small environments.

The Low Power Wireless LAN Card has three operating modes. In Infrastructure mode, the default mode, the adapter transmits and receives data with an associated access point (AP). Ad Hoc mode lets you create peer-to-peer networks without access points. This product also supports a proprietary Enhanced Ad Hoc mode that is designed for use when the highest throughput is needed in an Ad Hoc network.

This *User's Guide* shows how to install and use the Low Power Wireless LAN Card. This guide shows Pocket PC screens. Handheld PC 2000's and Handheld PC Pros will have functionally equivalent screens.

For software updates, please check: [www.socketcom.com](http://www.socketcom.com)

## Package Contents

- A Socket Low Power Wireless LAN Card (CompactFlash card Type I)
- The *Socket Low Power WLAN Installation CD*
- The *Quick Start Guide for Low Power Wireless LAN Card*
- A product registration card



## Installation Steps Summary

It takes only five steps to install and use the Socket Low Power Wireless LAN Card.

STEP 1: Register the card with Socket Communications.

STEP 2: Print and complete the Network Information Form.

STEP 3: Install the software.

STEP 4: Insert the card into your Pocket PC.

STEP 5: Enter network settings.

This *User's Guide* covers the features needed to install and use the Low Power Wireless LAN Card.

### SETTINGS FEATURES:

- Select operating mode.
- Set up IP settings and addresses.
- Adjust power settings.
- Configure optional settings.
- View device properties.

### ADVANCED FEATURES:

- View signal strength and properties.
- Set up and perform a network ping test.
- View known access point(s) and properties.
- View peers properties in Ad Hoc mode.
- Set and adjust encryption settings.

## Chapter 2 Basic Setup

This chapter covers the minimum steps you must complete to install and use the Low Power Wireless LAN Card.

### STEP 1: Register the Card

Register your Socket Low Power Wireless LAN Card online at [www.socketcom.com/product/prodreg.htm](http://www.socketcom.com/product/prodreg.htm)

You can also use the product registration form in your product package.

### STEP 2: Network Information Form

Consult with your office network administrator/MIS technician for the information below. For a text-only form you can email, go to the *Docs* folder on the installation CD or visit:

[ftp://ftp.socketcom.com/wlan/WLAN\\_NetworkForm.txt](ftp://ftp.socketcom.com/wlan/WLAN_NetworkForm.txt)

1. What is your wireless LAN's ESSID (Extended Service Set Identifier)?

\_\_\_\_\_

2. Please identify the encryption method and any necessary encryption data:

Open System

40-bit \_\_\_\_\_; \_\_\_\_\_

128-bit \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_;  
\_\_\_\_\_;

*(Continued on next page)*

3. Does the network support DHCP (Dynamic Host Configuration Protocol)?
- YES.** If *Yes*, then you do not need any of the IP address info below.
- NO.** If *No*, then please specify any applicable IP addresses:
- (a) Mobile Computer IP address: \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_
  - (b) Subnet Mask: \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_
  - (c) Gateway: \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_
  - (d) DNS: \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_
  - (e) WINS\*: \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_
  - (f) MAC Address: \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_ . \_\_\_\_\_
  - (g) Host Name: \_\_\_\_\_

*\*For Remote ActiveSync Only:* If your server does NOT have WINS services enabled, you must use the IP address of your host computer instead of a WINS address.

4. What transmission power level is appropriate? More transmission power is needed for devices spread far apart and/or for high interference.
- Maximum     50%     25%     10%     Minimum
5. Are the access points in your coverage area at maximum throughput?
- YES**     **NO**
6. Is there any other important information from the site survey report? You may want to ask your network administrator for a copy of this report.

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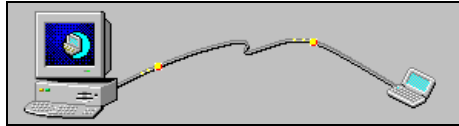
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### STEP 3: Install the Software

Follow these steps BEFORE inserting the Low Power WLAN Card:

1. Make an active partnership between your Pocket PC and a host PC.



An active partnership exists if data can be moved between the mobile computer and the host PC via a serial/USB/Ethernet cable or cradle.

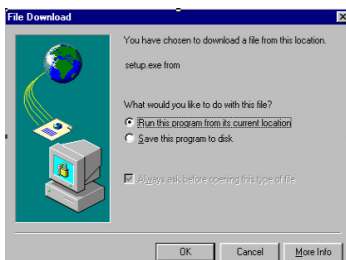
2. Insert the *Socket Low Power WLAN Card Installation CD* into the host computer.



3. IF YOUR DEFAULT WEB BROWSER IS INTERNET EXPLORER, you can install either the SETUP.HTM or the SETUP.EXE:

- (a) Click **Start** then **Run** on the host PC.
- (b) Type **X:\SETUP.HTM** or **X:\SETUP.EXE**  
(Replace X with your CD drive letter.)
- (c) In the **File Download** screen, select the option that lets you run (or open) the file from its current location.

**IMPORTANT! YOU MUST RUN THE FILE! DO NOT SAVE IT!**



*File Download screen from Internet Explorer 5.5*

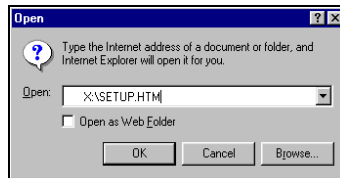
- (d) A **Security Warning** screen will appear. Click **Yes**.



IF YOUR DEFAULT WEB BROWSER IS [NETSCAPE](#), DO **NOT** run the SETUP.HTM file on Netscape, because it will not work properly. Instead, choose either of two options:

[OPTION ONE](#): Use Internet Explorer to run the SETUP.HTM file.

- (a) In the Internet Explorer screen, click **File | Open**.
- (b) In the **Open** screen, type **X : \SETUP . HTM**  
(Replace X with your CD drive letter.)



*Open screen from Internet Explorer 5.5*

- (c) Proceed with the instructions described on the previous page for Internet Explorer.

[OPTION TWO](#): Run the SETUP.EXE file.

Click on **My Computer** or use Windows Explorer to manually browse the CD to the WinCE (or other appropriate directory) and manually launch the **SETUP . EXE** file found there.

***Important! Be sure to choose the SETUP.EXE file, NOT the SETUP.HTM file. The two file types have different icons:***



*EXE icon*



*HTM icon for Netscape*

4. Follow the instructions on the host PC screen until setup is done.  
*Note: After completing setup, your host PC may display an **Application Downloading Complete** screen. Click **OK**.*
5. Disconnect the mobile computer from the host PC.
6. Soft reset the mobile computer. Push the reset button, often on the back of the mobile computer.

## STEP 4: Insert the Card

***Important!***

***Do NOT insert the card upside down or shove the card in too hard. Damage may occur!***

### **CompactFlash I/O Slot**

Insert the card directly into the slot. Make sure the orange label is on top.



After the mobile computer recognizes the card, a **Socket Status** icon



will appear in the task tray (visible in the **Today** screen for Pocket PCs). If connected to an access point, the Link LED will flash.


### **About the Link Indicator**

The Low Power Wireless LAN Card Link Indicator is an LED that flashes a green light to indicate connection with an access point.

<u>LED Status</u>	<u>Function</u>
Off	The Low Power Wireless LAN Card radio is disabled or incapable of transmission.
Slow Flash	The Low Power Wireless LAN Card has connected with an access point.
Rapid Flash	Indicates data traffic between the Low Power Wireless LAN Card and an access point. The faster the flash, the more data traffic on the network.

## STEP 5: Enter Network Settings

You will need your completed Network Information Form for this step.

1. Tap on the card icon  in the task tray (visible from the **Today** screen for Pocket PCs). In the pop-up menu, select **Settings**.
2. The **Socket WLAN Utilities** screen will appear, with the **Mode** page open. Following your completed Network Information Form, tap on the tabs to enter any necessary settings. See instructions for each page below.

*Important! When done entering the settings on each page, tap **Apply**. To exit the utilities, tap **Ok**.*

### Mode Page



*Infrastructure mode*



*Ad-Hoc mode*

**Operating Mode:** The **Mode** page varies depending on operating mode.

**Infrastructure** — Select this to connect via an access point.

- Enter the **802.11 ESSID** (maximum 32 characters).  
*Note: Enter “any” to connect to the nearest AP and show all APs in range on the Advanced – APs Page*

**Ad-Hoc** — Select this to network directly with other wireless mobile devices without an access point.

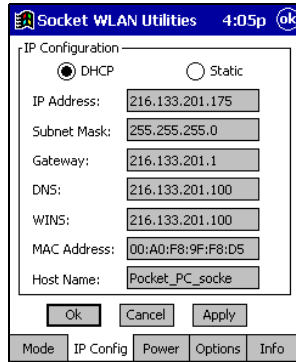
- Enter the **802.11 ESSID** (maximum 32 characters).
- Select the **Channel**, which must be identical for all network devices. The device starting the network sets the number.
- Check **Send long preamble headers** if other network devices are using long preambles.

**Enhanced Ad-Hoc** — An ad-hoc network with highest throughput. This mode is proprietary to Symbol Technologies and works only with other Socket WLAN Cards or Symbol products.

- Select the **Channel**, which must be identical for all network devices. The device starting the network sets the number.
- Check **Send long preamble headers** if other network devices are using long preambles.

## **IP Configuration Page**

Use the **IP Configuration** page to configure any necessary IP addresses.



The screenshot shows a dialog box titled "Socket WLAN Utilities" with a clock showing "4:05p". The main title is "IP Configuration". There are two radio buttons: "DHCP" (selected) and "Static". Below the radio buttons are several input fields:

IP Address:	216.133.201.175
Subnet Mask:	255.255.255.0
Gateway:	216.133.201.1
DNS:	216.133.201.100
WINS:	216.133.201.100
MAC Address:	00:A0:F8:9F:F8:D5
Host Name:	Pocket_PC_socke

At the bottom of the dialog box are three buttons: "Ok", "Cancel", and "Apply". Below the dialog box is a navigation bar with five tabs: "Mode", "IP Config", "Power", "Options", and "Info".

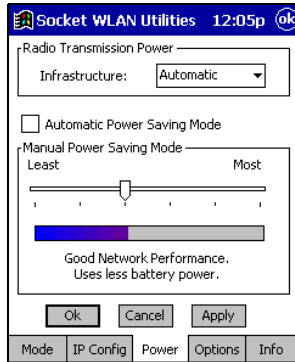
**DHCP** — Select this if your network supports DHCP. The IP addresses and other information will be automatically assigned.

**Static** — Select this to manually enter the necessary IP addresses.

## **Power Settings Page**

The **Power** page varies depending on operating mode.

### **Infrastructure mode:**

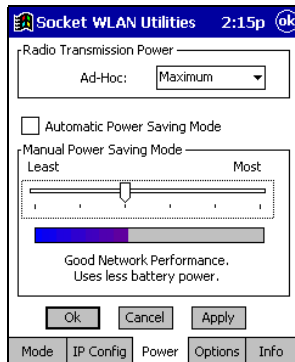


**Radio Transmission Power** — Select **Automatic** to use the same power level as the access point. Other options will be available in future releases.

**Automatic Power Saving Mode** — Recommended.

If desired, uncheck this box and use the sliding scale to manually set the power savings.

### **Ad-Hoc or Enhanced Ad-Hoc mode:**



**Radio Transmission Power** — Select the proper power level. More power is needed for greater transmit distances and/or dealing with high interference.

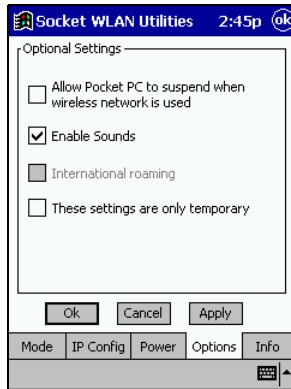
**Automatic Power Saving Mode** — Recommended.

If desired, uncheck this box and use the sliding scale to manually set the power savings.

*Important! When done entering the settings on each page, tap **Apply**. To exit the utilities, tap **Ok**.*

## Options Page

The **Options** page is the same for all operation modes.



**Allow Pocket PC to suspend when wireless network is used** — Check this box to allow the device to use its automatic power-off feature when the adapter is still active to save battery power.

**Enable Sounds** — Check this box for sounds while performing a ping test or connecting to an access point. A sound will emit every time a ping is received, and every time the adapter has roamed to a new access point.

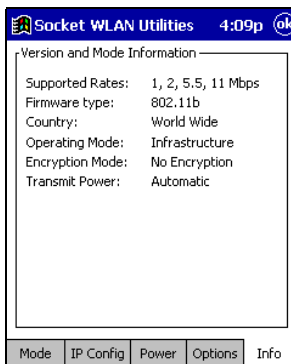
**International roaming** — This option will be supported in a future release.

**These settings are only temporary** — Check this box to discard the current settings when you shut off your mobile computer.

Important! When done entering the settings on each page, tap **Apply**.  
To exit the utilities, tap **Ok**.

## Info Page

Use the Info page to view information about the card settings.



# Chapter 3 Advanced Features

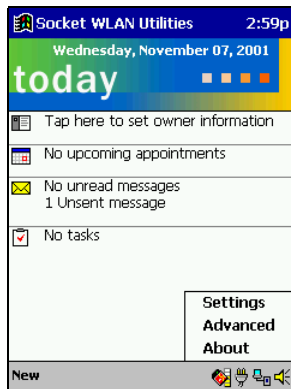
This chapter explains advanced features available while using the Low Power Wireless LAN Card.

The features covered in this chapter involve the five **Advanced Socket WLAN Utilities** pages. Some pages only appear in certain operating modes. The **Advanced** pages include:

- Signal
- Peers
- Ping
- Encryption
- APs

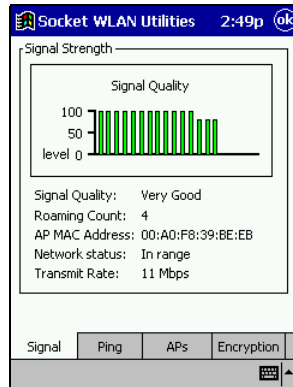
## Accessing the Utility

Tap on the WLAN card icon in the task tray (visible from the **Today** screen for Pocket PCs). In the pop-up menu, select **Advanced**.



## Signal Page

Use the **Signal** page to view radio signal transmission strength from the WLAN Card to the associated access point.



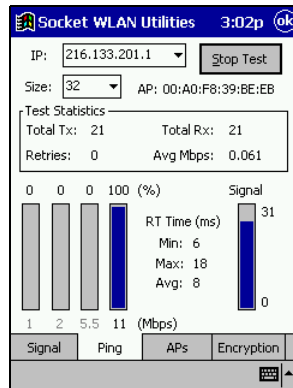
The **Signal** page displays a real-time graph of the signal quality received by the adapter, the number of times the adapter has roamed between APs, the current data rate and the network in-range status.

*Note: The Signal property page is only accessible in the **Infrastructure** operating mode.*



## Ping Page

Use the **Ping** page to view the signal strength, data rate transmission, test statistics and to perform data transmission test. This test sends an ICMP ping packet across the network to a selected address to test data transmissions between wireless devices or between a wireless device and the associated access point. .



Use the **IP** field to enter the IP address of the target device (ie: 122.78.3.141).

Select the size of packets sent from the **Size** pull-down menu.

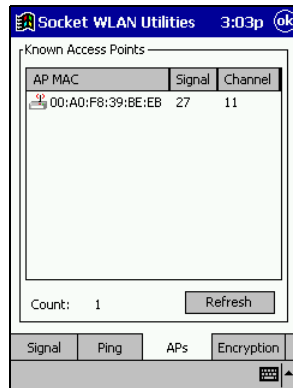
Tap **Start Test** to begin the test. Each ping displays the round trip time it took the ICMP ping to complete. The minimum, maximum and average values are displayed as results. A real-time graph indicates the signal strength and data rate transmission.

Tapping **Stop Test**, another page tab or **OK** will stop the ping test.

## APs Page

Use the **APs** page in Infrastructure mode to view access points with the same ESSID as the adapter within the wireless network.

View the AP MAC address, signal and direct sequence channel of each located access point. Radiation marks beside the antenna indicate the currently associated access point. If the current WLAN Card signal strength is poor, one of the access points displayed could provide a stronger signal.



Select and tap on an access point to display a pull-down menu used for setting the adapter's access point roaming capabilities.

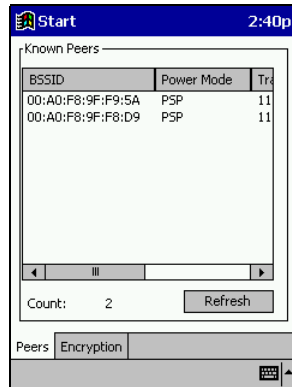
- Selecting **Set Mandatory** prohibits the adapter from associating with a different access point. The letter **M** displays on top of the AP diagram when the **Set Mandatory** option is selected.
- Selecting **Set Roaming** enables the adapter to roam to another access point.

Tap **Refresh** to update the list of the known APs.

In the Ad Hoc or Enhanced Ad Hoc operating mode, the **Signal** and **APs** pages disappear.

## Peers Page

When Ad Hoc is selected as the operating mode, the **Signal** and **APs** property pages disappear and display the **Peers** property page.



Use the **Known Peers** field to view the BSSID or MAC addresses of the other adapters (peers) in the wireless network, their power mode, their transmit rate, supported rate and the length of time an adapter has been out of the Ad Hoc network. These adapters are all available when forming a peer-to-peer network in Ad Hoc mode.

The number of adapters in the network is displayed at the bottom of the screen. The **Peers** property page is a view-only window with no configurable data fields.

Tap **Refresh** to update the **Peers** property page to the latest Ad Hoc network performance and membership data.

## Encryption Page

Use the **Encryption** property page to set the adapter security level. The absence of a physical connection makes wireless links vulnerable to information theft. Encryption is an efficient method of preventing data theft and improving data security. The firmware supports **Open System (no encryption)**, **40-bit Shared Key (40-bit)** and **128-bit Shared Key (128-bit)** encryption algorithms.

An access point and WLAN Card are required to use the same encryption algorithm to transmit and receive data. Otherwise, no association will take place, or no data transmission will be possible. See the chart below.

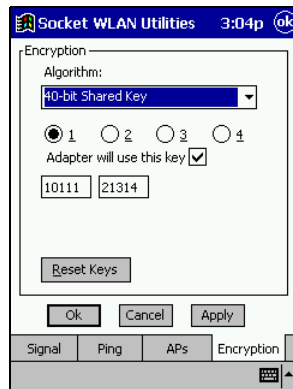
Access Point	WLAN Card	Association
Open	Open	OK
40	40	OK
128	40	Association, No data transmission
Open	40	No Association
Open	128	No Association
40	128	Association, No data transmission
40	Open	No Association
128	Open	No Association
128	128	OK

Use the **Algorithm** pull-down menu to select the Open System, 40-bit or 128-bit encryption algorithm to be used for the adapter.

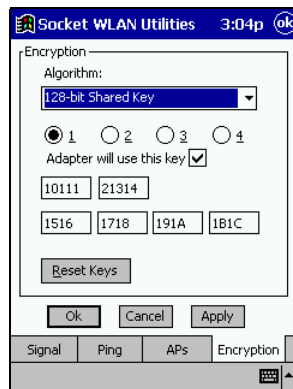
Use the default **Open System (no encryption)** setting when no data packet encryption is needed over the network. Selecting Open System provides no security for the data being transmitted over the network. Tap **Apply** to enable the Open System setting.



When **40-bit Shared Key** encryption is selected, the user is required to enter a 10 Hex digit encryption key. The key can be entered by spreading the 10 Hex digits between the two encryption key fields provided. Tap **Apply** to save and implement the encryption key data. Tap **Reset Keys** to reset the keys to their original default values.



When **128-bit Shared Key** encryption is selected, enter a 26 Hex digit encryption key by spreading the 26 Hex digits across the six encryption key fields provided. The 128-bit encryption option provides a higher level of security than 40-bit encryption while maintaining an 11 Mbps data rate. Tap **Apply** to save the encryption key data. Tap **Reset Keys** to reset the keys to their default values.



# Appendix A Specifications

## *Physical Characteristics:*

**CF Type I Size:** 2.18 x 1.69 x 0.13 in (55.4 x 42.8 x 3.3 mm)

**Total Weight:** 0.48 oz (13.6 g)

**Operating Temperature:** -4 to 158 °F (-20 to 70 °C)

**Storage Temperature:** -22 to 176 °F (-30 to 80 °C)

## *Power Consumption (3.3 V Supply):*

**Idle (listening):** <20 mA

**Transmission:** 170 to 280 mA

## *Interface Standards:*

**CompactFlash Interface:** CompactFlash I/O, Type I

**With CompactFlash-to-PC Card Adapter:** PCMCIA, Type II

## *Standards Conformance:*

IEEE 802.11b High Rate, Direct Sequence Spread Spectrum (DSSS)

## *Output Power:*

100 mW maximum

## *Data Rate:*

11 Mbps with Dynamic Rate Scaling to 5.5, 2, and 1 Mbps to optimize range and throughput

## *Frequency Range:*

U.S., Europe, and Japan product covering 2.4-2.5 GHz, programmable for different country regulations

## *Range:*

Approx. 300 feet (open environment)

## *Access Protocol:*

Carrier Sense Multiple Access with Collision Avoidance Protocol (CSMA/CA)

## *Security:*

Support for 40-bit and 128-bit WEP data encryption.

## *Operating System Support:*

Windows CE v2.11 or greater

## *Software Compatibility:*

Windows COM port

***Hardware Compatibility:***

***Standard CF Card:***

Pocket PC, Pocket PC 2002, HPC 2000 or Handheld PC Pro with Windows CE v2.11 or greater

***Software Included:***

Socket Low Power WLAN Installation CD

***Warranty:***

**CompactFlash Card:** Three years

***Certification:***

FCC: Part 15, Class B

C-TICK s.182

ETS 300 328

ETS 300 826

***TX Maximum Radiated EIRP:***

FCC Part 15.247 in U.S.; ETS 300 328 in Europe; RCR STD-33 in Japan

***TX Out-of-Band Emissions:***

FCC Part 15.247, 15.205, 15.209 in U.S.; ETS 300 328 in Europe; RCR STD-33 in Japan

# Appendix B Safety and Usage Tips

## Product Care

- Do not expose this product to liquid, moisture or extreme humidity.
- Do not expose this product to extreme high or low temperatures.
- Do not drop, throw or try to bend this product, as rough treatment could damage it.
- Do not attempt to disassemble this product - a broken seal will void the warranty. The product does not contain consumer serviceable components. Should your Low Power Wireless LAN Card need service, please contact Socket technical support at: [techsupport@socketcom.com](mailto:techsupport@socketcom.com).
- Treat this product with care. Keep in a clean, dry and dust-free place.
- Changes or modifications of this product, not expressly approved by Socket, may void the user's authority to operate the equipment.

## Antenna Care

Do not place a metallic shield around your Low Power Wireless LAN Card since it will reduce the radio transmission efficiency.

## Efficient Use

For optimum performance, please make sure that there is no metallic surrounding your Low Power Wireless LAN Card.

## Driving

RF energy may affect some electronic systems in motor vehicles, such as car stereo, safety equipment, etc. Check with your vehicle manufacturer's representative to be sure that your Low Power Wireless LAN Card will not affect the electronic system in your vehicle.

## Aircraft

- Turn off your Low Power Wireless LAN Card before boarding any aircraft.
- To prevent interference with communications systems, you must not use your Low Power Wireless LAN Card while the plane is in the air.
- Do not use it on the ground without permission from the crew.



## **Radio Frequency Exposure**

Your Low Power Wireless LAN Card is a radio transmitter and receiver. When in operation, it communicates with 802.11b-equipped devices by receiving and transmitting radio frequency (RF) magnetic fields in the frequency range 2.4 to 2.5 GHz. The maximum output power of the radio transmitter is 100 mW.

The Low Power Wireless LAN Card unit is designed to be in compliance with the RF exposure limits set by national authorities and international health agencies when installed or used separately from other antennas or radio transmitters.

Operation of this device excludes body-worn holsters, belt clips, or similar operating configurations, as described in the FCC filing.

# Appendix C Troubleshooting

## SYMPTOM:

- My mobile computer does not recognize the Low Power Wireless LAN Card.

POSSIBLE REASONS	SOLUTION
The software was not installed or installed incorrectly.	Install the software properly.

## SYMPTOM:

- The Socket Utilities icon doesn't appear on the task tray when I insert the WLAN Card.

POSSIBLE REASONS	SOLUTION
Your Pocket PC may be frozen.	Remove the WLAN Card and soft reset your mobile device.
The Low Power WLAN Card may not be properly aligned in the CF card slot.	Remove and carefully re-insert the card in the slot.
There may be foreign material in the CF card pin holes.	Carefully remove any foreign material from the pin holes using a small vacuum or brush. Denatured alcohol may be used sparingly.

## SYMPTOM:

- My mobile computer does not recognize an IP address.

POSSIBLE REASONS	SOLUTION
The IP address has not taken effect yet.	Remove and reinsert the card or soft reset the mobile computer.
The ESSID may be incorrect.	Check and re-enter the ESSID. Try using an ESSID of "any".
In Infrastructure operating mode, WEP encryption may not match access point settings.	Check with your company IT department to confirm access point security settings.

## SYMPTOM:

- My mobile computer does not associate with an access point known to be within range.

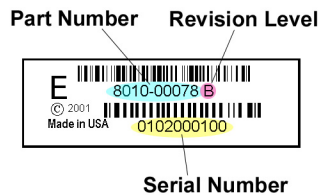
POSSIBLE REASONS	SOLUTION
The IP address may be incorrect.	Correct IP address or use DHCP
The ESSID may be incorrect.	Check and re-enter the ESSID. Try using an ESSID of "any".
In Infrastructure operating mode, WEP encryption may not match access point settings.	Check with your company IT department to confirm access point security settings.

## Appendix D Technical Support

If you have trouble installing or using the Low Power Wireless LAN Card, please refer to the “Troubleshooting” section. You can also visit Socket’s online forum for users to discuss technical support issues with each other at [www.socketforum.com](http://www.socketforum.com)

If problems persist, feel free contact Socket’s technical support department prepared with the following information:

- The part number (including revision level) and serial number of your Low Power Wireless LAN Card. See the diagram below.
- The manufacturer, model number, and Windows CE version of your mobile computer.
- What you did to try to correct the problem.



To reach Socket’s technical support department:

- Visit [www.socketcom.com](http://www.socketcom.com)
- Email [techsupport@socketcom.com](mailto:techsupport@socketcom.com)
- Phone 510-744-2720
- Fax 510-744-2727

Please do not disassemble the CompactFlash card. Disassembly of this device will void the product warranty.

## Limited Warranty

Socket Communications Incorporated (Socket) warrants this product against defects in material and workmanship, under normal use and service, for the following period from the date of purchase:

Plug-in card: Three years

Incompatibility is not a defect covered by Socket's warranty. During the warranty period, Socket will, at its option, repair or replace the defective product at no charge when furnished with proof of retail purchase, provided that you deliver the product to Socket or to an authorized Socket Service Center.

The returned product must be accompanied by a return material authorization (RMA) number issued by Socket or by Socket's Authorized Service Center. If you ship the product, you must use the original container or equivalent and you must pay the shipping charges to Socket. Socket will pay shipping charges back to any location in the contiguous United States. This warranty applies only to the original retail purchaser and is not transferable.

Socket may, at its option, replace or repair the product with new or reconditioned parts and the returned product becomes Socket's property. Socket warrants the repaired or replaced products to be free from defects in material or workmanship for ninety (90) days after the return shipping date, or for the duration of the original warranty period, whichever is greater.

This warranty does not cover the replacement of products damaged by abuse, accident, misuse or misapplication, nor as a result of service or modification other than by Socket.

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This product may contain fully tested, recycled parts, warranted as if new.

For warranty information, phone (510) 744-2700.

## Limited Software Warranty

**LIMITED WARRANTY.** SOCKET warrants that the original disk or CD ROM is free from defects for 90 days from the date of delivery of the SOFTWARE.

**CUSTOMER REMEDIES.** SOCKET'S entire liability and your exclusive remedy shall be, at SOCKET'S option, either (a) return of the price paid or (b) replacement of the SOFTWARE which does not meet SOCKET'S Limited Warranty and which is returned to SOCKET with a copy of your receipt. Any replacement SOFTWARE will be warranted for the remainder of the original warranty period or 30 days, whichever is longer. THESE REMEDIES ARE NOT AVAILABLE OUTSIDE OF THE UNITED STATES OF AMERICA.

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January 2002

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The Low Power Wireless LAN Card includes technology licensed under United States Patent Nos. 4,543,450, 4,603,320, 4,686,506, and 4,972,470.

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This manual has been prepared with the greatest care regarding its contents. However, in the event that it contains omissions, errors or any other misinformation, please contact SOCKET COMMUNICATIONS at:

**Socket Communications, Inc.**  
37400 Central Court  
Newark, CA 94560

Phone: (510) 744-2700  
Fax: (510) 744-2727.

Other than the above, Socket Communications can assume no responsibility for anything resulting from the application of information contained in this manual.

Socket Communications requests that you refrain from any applications of the Socket Bluetooth Card that are not described in this manual. Socket Communications also requests that you refrain from disassembling the Bluetooth Card. Disassembly of this device will void the product warranty.

You can track new product releases, software updates and technical bulletins by visiting Socket's web page at: [www.socketcom.com](http://www.socketcom.com).

## Regulatory Compliance

The Socket Low Power Wireless LAN Card is designed to be compliant with the rules and regulations in locations where they are sold and will be labeled as required. This product is type approved users are not required to obtain license or authorization before using.

### Radio Frequency Interference Requirements

This device complies with part 15 of the FCC rules. Operation is subject to the following 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.

This equipment is also ETS 300 328, ETS 300 826 and C-TICK compliant. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense.

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 may try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the radio or television.
- Increase the distance separating the equipment and the receiver.
- Connect the equipment to an outlet on a different branch circuit than that of the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet helpful:

*How to Identify and Resolve Radio-TV Interference Problems*

This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402.

## **Radio Frequency Interference Requirements – Canada**

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le Matériel Brouilleur du Canada.

NOTE: To comply with FCC and Industry Canada exposure requirements, this device is approved for operations in a user's hand when there is a distance of 20cm or more between the device antenna and the user's body.

## **CE Marking & European Union Compliance**

Products intended for sale within the European Union are marked with a CEMark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or ENs are included: Normes (EN), as follows:

### **Applicable Directives:**

- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC

### **Applicable Standards:**

- EN 55 022 – Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.
- EN 50 082-1 – Electromagnetic Compatibility – General Immunity Standard, Part 1: Residential, Commercial, Light Industry.
- IEC 801.2 – Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 2: Electrostatic Discharge Requirements.
- IEC 801.3 – Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 3: Radiated Electromagnetic Field Requirements.
- IEC 801.4 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment, Part 4: Electrical Fast Transients Requirements.
- EN 60 950 + Amd 1 + Amd 2 – Safety of Information Technology Equipment Including Business Equipment.





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