WL11000

Wireless LAN PCMCIA Adapter

USER MANUAL

Version 0.9.2, February 16, 2000

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

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. If this equipment is not installed and used in accordance with the manufacturer's instructions, it 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 during 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 to 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.

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Manufacturer's Disclaimer Statement

The information in this document is subject to change without notice and does not represent a commitment on the part of the vendor. No warranty or representation, either expressed or implied, is made with respect to the quality, accuracy or fitness for any particular purpose of this document. The manufacturer reserves the right to make changes to the content of this document and/or the products associated with it at any time without obligation to notify any person or organization of such changes. In no event will the manufacturer be liable for direct, indirect, special, incidental or consequential damages arising out of the use or inability to use this product or documentation, even if advised of the possibility of such damages. This document contains materials protected by copyright. All rights are reserved. No part of this manual may be reproduced or transmitted in any form, by any means or for any purpose without expressed written consent of its authors. Product names appearing in this document are mentioned for identification purchases only. All trademarks, product names or brand names appearing in this document are registered property of their respective owners.

This device requires a radio license, unless it (including antenna) is installed totally inside a building. (User must obtain this license from Industry Canada).

Printed in Taiwan

Contents

Chapter 1 About the WL11000 PCMCIA Card

The WL11000 IEEE 802.11 PCMCIA PC Card is compatible with any standard, notebook computer Type II or Type III PCMCIA slot. As a Plug-and-Play device, Windows 95/98 will automatically recognize the WL11000 PCMCIA card and initiate the installation process. Upon successful installation, the WL11000 PCMCIA card will communicate seamlessly with other WL11000 wireless home and office networking products.

1-1 FEATURES

1. Supports up to 11 Mbps data rate: T-1 line alternative/replacement that dramatically cuts costs.
2. Working range up to 800 ft. in an open environment enhances mobility.
3. Supports point-to-point and point-to-multipoint access provides increased flexibility.
4. Seamless connectivity to wired Ethernet and PC network LAN's offers quick, trouble-free integration with existing networks.
5. Robust Direct Sequence Spread Spectrum (DSSS) technology provides secure, interference-resistant wireless connection.
6. Wireless connections eliminate the hassle and cost of cabling.
7. Supports a wide range of LAN (Local Area Network) Network Operating Systems (NOS) including Windows ® 98 and Windows NT™
8. Easy Plug and Play installation
9. Omni - directional antenna included
10. Greater flexibility to locate or move networked PC's

1-2 APPLICATIONS

WL11000 products offer a fast, reliable, cost-effective solution for wireless client access to the network the following applications and environments:

- Remote access to corporate network information
- E-mail, file transfer and terminal emulation
- Difficult-to-wire environments
- Historic or older buildings
- Buildings with asbestos insulation
- Open areas where wiring is difficult to employ
- Frequently changing environments
- Retailers, manufacturers or other organizations that frequently rearrange the workplace or relocate
- Temporary LANs for special projects or peak time usage

- Trade shows, exhibitions and construction sites that employ temporary networks. Retailers, airline and shipping companies that need additional workstations for a peak period and Auditors that require workgroups at customer sites.
- Access to database for mobile workers
- Medical, Technical and Retail specialists that require roaming access to a database or other network resources.
- SOHO (Small Office and Home Office) users
- Perfect for users that need a small, easy-to-install network that deploys rapidly.
- Inter-building connection
- Wireless building-to-building networks are quickly and easily installed, require no monthly lease fees, and provide the flexibility to reconfigure easily.

1-3 PRODUCT KIT

The WL11000 product kit includes the following items. Ensure that the items in the following list have been included. If any of the listed items are missing, please contact your local dealer.

- 1 X WL11000 PCMCIA Type II Adapter
- 1 X Driver
- 1 X User Manual & Utility CD pack

Chapter 2 Network Configuration and Planning

The WL11000 supports legacy Ethernet LAN network configuration options as defined by the IEEE 802 standards committee.

The WL11000 can be configured as:

- Ad-Hoc for departmental or SOHO LANs
- Infrastructure for enterprise LANs
- LAN-Interconnection for point-to-point link as a campus backbone

2-1 NETWORK TOPOLOGY

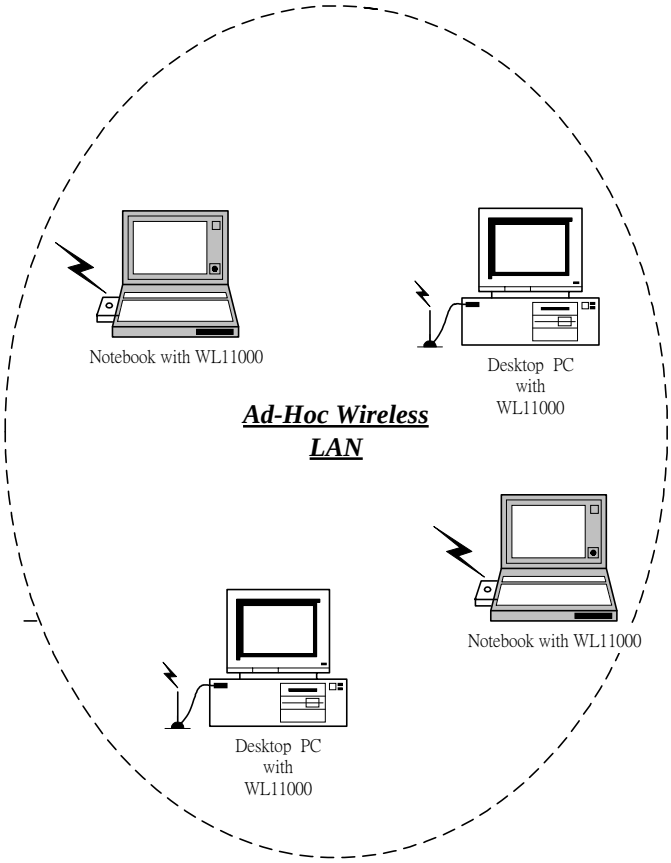

Fig. 1 - Ad-Hoc Wireless LAN

An Ad-Hoc wireless LAN is a group of computers, each equipped with one WL11000 adapter, connected as an independent wireless LAN. Computers in a specific Ad-Hoc wireless LAN must be configured to share the same radio channel.

Ad-Hoc wireless LAN configurations are appropriate for branch level departments or SOHO operations.

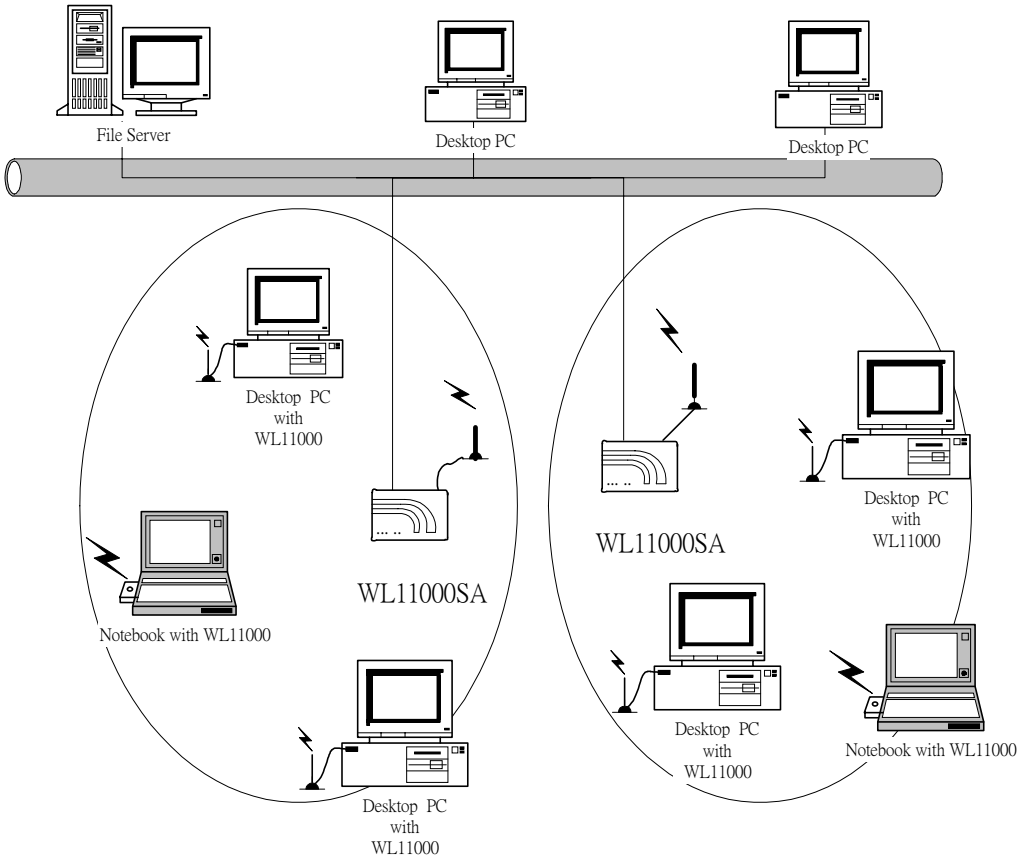

Fig. 2 - Infrastructure Wireless LAN Configuration

The WL11000 provides access to a wired LAN for wireless workstations. An integrated wireless and wired LAN is called an Infrastructure configuration. A group of WL11000 PC users and an Access Point compose a Basic Service Set (BSS). Each WL11000 PC in a BSS can talk to any computer in the wired LAN infrastructure via the Access Point.

An Infrastructure configuration extends the accessibility of a WL11000 equipped PC to a wired LAN, and doubles the effective wireless transmission range for 2 WL11000 PCs. Since the Access Point is able to forward data within its BSS, the effective transmission range in an infrastructure LAN is **doubled**.

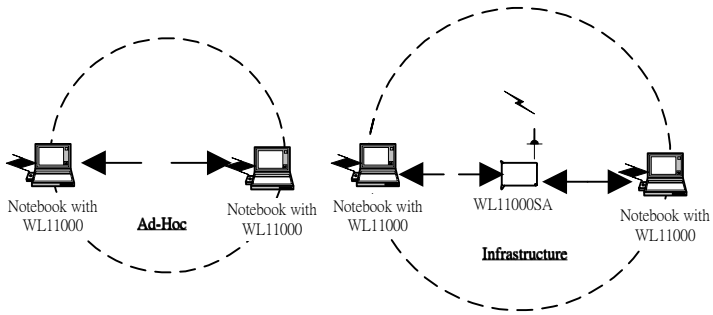

Fig. 3 - The effective Transmission Range

The use of a unique ID in a BSS is essential. All WL11000 equipped PCs configured without roaming options in an independent BSS must be configured with a BSS ID corresponding to the WL11000SA used in the BSS. Check your WL11000SA for its BSS ID or use the Access Point Browser Utility program to determine the BSS ID.

The Infrastructure Wireless LAN configuration is appropriate for enterprise-scale wireless access to a central database, or as a wireless application for mobile users.

A point-to-point LAN configuration is possible when two access points are linked with an optional directional antenna (the directional antenna is an optional accessory, please contact your dealer for information). The optional directional antenna makes LAN-Interconnection to a wireless backbone between buildings possible.

2-2 ROAMING

Infrastructure mode also supports roaming capabilities for mobile users. More than one BSS can be configured as an Extended Service Set (ESS). The continuous network allows users to roam freely within an ESS. All WL11000 PCs and WL11000SAs within one ESS must be configured with the same ESS ID and use the same radio channel.

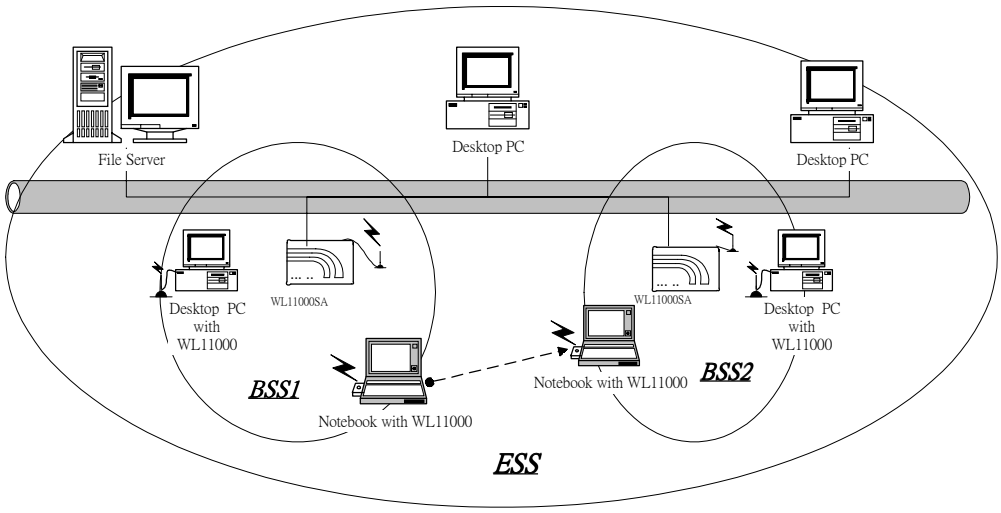

Fig. 4 - Roaming in an Extended Service Set (ESS)

Before enabling an ESS with roaming capability, choosing a feasible radio channel and optimum Access Point position is recommended. Proper Access Point positioning combined with a clear radio signal will greatly enhance performance.

Chapter 3 Adapter Installation and Configuration – Windows® 98

3-1 SYSTEM REQUIREMENTS

In order to install and use the GL-241101 PCMCIA card your PC system must meet the following requirements:

- A PCMCIA Type II or Type III slot
- PCMCIA revision 2.10 compliant card and socket services
- Windows® 98 (with the Windows® CD, for use during installation)
- 500 Kbytes free disk space for utility and driver installation

3-2 INSERTING THE ADAPTER

To insert the GL-241101 Network Adapter into a notebook computer, do the following:

1. Locate an available Type II or Type III PCMCIA slot.
2. With the PCMCIA adapter's 68-pin connector facing the PCMCIA slot and the "GL-241101PCMCIA" label facing up slide the PCMCIA adapter completely into the PCMCIA slot.

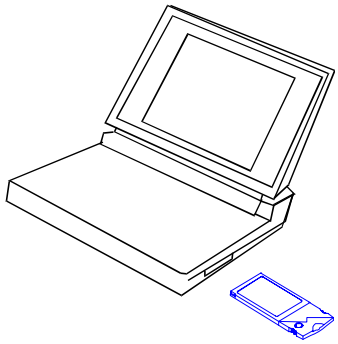

Fig. 5 Insert the GL-241101 into Notebook

After properly inserting the Network Adapter into your notebook, continue with the GL-241101 driver and PRISM Configuration Utility installation.

NOTE: *The PCMCIA slot allows "hot swap" of PCMCIA adapter. You may insert or remove the GL-241101 / PCMCIA adapter from the slot anytime, even when the power of your computer is on.*

NOTE*: Windows® 98 requires that the Network card and socket services must be compliant with the PCMCIA revision 2.10 specification. Please check the documentation of the PCMCIA driver before installing the GL-241101 PCMCIA adapter.*

NOTE: To comply with FCC RF exposure requirements, this device should be operated in lap-top computer configurations with a separation distance of 20 cm or more between the antenna and persons. The antenna should not be operated next to a person's body.