1. GENERAL

1-1 Overview of IEEE 802.11

The IEEE 802.11 specification is a standard for wireless connectivity for fixed, portable, and moving stations within a local area.
The IEEE 802.11 standard describes the services required by a compliant device to operate within an "ad hoc" or "infrastructure" network, as well as dealing with the issues related to mobility within those networks. Spread spectrum techniques are used to tolerate mobility and multipath effects. They are also a requirement for compliance with FCC, ETSI and those of other regulatory authorities when operating within the Industrial, Scientific, and Medical (ISM) frequency band.
An ad hoc communications network is created quickly and informally for a temporary time period. An infrastructure network usually requires more planning so that wireless stations can communicate over longer distances through access points, and may also communicate with existing wired LANs using portals.
The IEEE 802.11 standard describes Media Access Control (MAC) procedures. The principal method of communication is the Carrier Sense Multiple Access with Collision Avoidance (CSMA-CA) protocol. Using this protocol, each station senses the communications medium (RF channel), and does not transmit until the channel is clear. This avoids collisions and minimizes the re-transmission of subsequent packets.
The standard also supports the operation of a station within a wireless LAN that may coexist with several overlapping wireless LANs. To accomplish this, a scheme of channelization and spread spectrum techniques is used. Direct Sequence (DSSS) and Frequency Hopping (FHSS) spread spectrum techniques are supported by the standard and both operate in the 2.4 to 2.4835GHz frequency band (the unlicensed ISM band). An infrared technique is also supported for indoor applications. The standard supports a 1 and 2Mbps data rate for both DSSS and FHSS and has recently introduced a high data rate standard supporting 5.5 and 11Mbps DSSS using Complementary Code Keying (CCK) modulation.
The standard has also specified the requirements and services that enable private and secure communications to occur.

1-2 CHARACTERISTIC

- **The GWL-2400P is wireless LAN adapter cards that provide wireless connection between computers.**
- **The GWL-2400P is designed to operate with IEEE 802.11 (wireless LAN International Standard) wireless compliant radio cards and uses a CSMA/CA (Collision Sense Multiple Access with Collision Avoidance) algorithm as the media access scheme, which makes high speed communication (with minimal collision probability) possible.**

- **The GWL-2400P supports DSSS (Direct Sequence Spread Spectrum) physical layer. This is a radio technique, which scrambles the data prior to transmission and uses a correlation technique on receiver to improve the signal to noise ratio and makes it possible to communicate in the office having a wall and a compartment.**
- **The GWL-2400P for Notebook PC is small and portable as a roaming function is provided for users who need network services while maintaining mobility.**
- **The GWL-2400P has an LED (Light Emitting Diode) on the part of the card.**
- **The yellow LED will illuminate when the power is supplied and the card is inserted properly.**
- **The GWL-2400P support various network software. The network driver is provided to support network software such as Windows 95(OSR2)/98, and Windows NT 4.0.**

1-3 COMPOSITION

- **Link-i LAN CARD (PC Card Type II, PCMCIA V 2.1, JEIDA 4.1)**
- **Installation CD**
- **Manual**