

1. Product General Information

1.1. Product Description



GL2422MP, the wireless Ethernet adapter for mini PCI type IIIB compliant notebook PCs, set-top box and integrated device, is fully compatible with IEEE 802.11b standard and supporting higher data rate to 22Mbps. Using Direct Sequence spread spectrum technology for immunity from interference, it will automatically fallback to lower data rate in the environment of interference.

22Mbps data rate is designed by the Packet Binary Convolution Code (PBCC) modulation technique. The software supports Windows OS such as Win98, Win2000, Win ME, and Win XP. The Mini PCI card for any integrated device is designed with U.FL or MMCX connector to conduce high performance for integrated product.

1.2. Product Feature

- IEEE 802.11b Direct Sequence high rate compatible.
- Based on DSSS Technology and support the modulation of PBCC mode
- High-Speed wireless connection up to 22Mbps data rate, and support 11/5.5/2/1 Mbps 802.11b standard
- Advanced Power Management supports power saving mode for battery device
- Auto fallback data rate in the environment of interference.
- 64/128/256 Bits WEP Encryption function
- High through-put supports multi-Media data bandwidth requirement
- Plug-and-play Installation
- Support Mini PCI type IIIB interface

1.3. Product Application

- Wireless Networking in Enterprise, SOHO and home environment
- Wireless Networking Access in Hot Spot area such as Airport, Hotel, School, Convention center, Coffee shop, etc...
- Mobile media through wireless LAN
- Mobile networking for notebook PC, and mobile devices
- Build system in Ad-Hoc for Host-Client appliance or Infrastructure mode for multi-access

2. PRODUCT GENERAL

2.1. General Specifications

Standards:	IEEE802.11b Compliant Mini PCI standard Type-III-B
Data Rate:	22Mbps / 11Mbps / 5.5 Mbps / 2Mbps / 1 Mbps auto fallback
Security:	64/128/256 bit Wired Equivalent Privacy (WEP)
Dimension	59.75 mm (L) X 44.6 mm (W) X 4.8 mm (H)

2.2. LED Signal Support

2 Pin (For Power/Status, Tx/Rx)--LED signal supporting

2.3. Interface

Mini PCI Type – III- B

3. PRODUCT HARDWARE SPECIFICATION

3.1. RF Specification

3.1.1 General

Emission Type	Direct Sequence Spread Spectrum (DSSS)
RF Frequency	2400MHz – 2497 MHz – Japan Band 2400MHz – 2483.5MHz – North America, Europe 2446.5MHz – 2483.5MHz – France
Operating Channel	11 Channels (US, Canada) 13 Channels (Europe) 14 Channels (Japan)
Radio Chipset:	RFMD
Media Access	CSMA/CA (Collision Avoidance) with ACK

3.1.2 Transmitter

RF Output Power	17 ± 1 dBm (Typ.)
Frequency Stability	Within ± 10 ppm
Data modulation type	PBCC/CCK/QPSK/BPSK
Data modulation speed	22/11/5.5/2/1 Mbps with auto fallback
EVM	Under 15%

3.1.3 Receiver

Sensitivity	22M PBCC	-80 dBm (Typically @25 ±5)
	11M PBCC	-84 dBm (Typically @25 ±5)
	11M CCK	-82 dBm (Typically @25 ±5)

5.5M PBCC	-85 dBm (Typically @25 ±5)
5.5M CCK	-85 dBm (Typically @25 ±5)
2M QPSK	-89 dBm (Typically @25 ±5)
1M BPSK	-89 dBm (Typically @25 ±5)

(Less than 8% of FER packet sizes is 1024 bytes)

3.1.4 Antenna Connector

Built-in one or two HRS U.FL or MMCX type connector

3.2. Hardware Specification

3.2.1. Bus Interface

PCI I/O port 32 Bit (or 16 bit slave mode)

3.2.2. MAC Controller

MAC ACX100

3.2.3. Memory

EEPROM 8 Kbytes

3.2.4. Power

Power Voltage 3.3v ± 5%

Power Consumption 650mA by TX (continuous TX / Max.)

 500mA by TX (Typ.)

 350mA by RX (Typ.)

4. PRODUCT SOFTWARE SPECIFICATION

4.1. Driver

NDIS5.0 LAN driver for Win98, Win2000, Win ME.

NDIS5.1 LAN driver for Win XP.

4.2. Configuration Utility

Configuration Utility software program for Win/98, Win2000, Win ME, Win XP

Configurable Parameters	Description
Networking Type	Infrastructure / Ad-Hoc
Channel	Channel number setting (14 channels available)
ESSID	ESSID setting
Rx Rate	Current Receiving data rate
TX Rate	Current Transmitting rate
WEP	Disable, 64 bit, 128 bit and 256 bit
Link Quality	Receiving AP link quality on infrastructure

Signal Strength	Receiving AP signal strength on infrastructure
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5. **REGULATION COMPLIANCE**

Compliant with

FCC Part 15 Class B and C

ETSI EN 300 328-2 and ETSI EN 301 489-1, -17, EN60950, CE-Mark

Telec (Japan, Customized)

WiFi Compliant

6. **ENVIRONMENTAL REQUIREMENT**

6.1. **Drop and Vibration Test**

6.1.1. **Anti-Static Voltage**

Static voltage tests by 4 kV in card frame should not cause system fail.

6.1.2. **Vibration Test**

The vibration test is under the frequency and amplitude 10-25 Hz 1mm in vertical and horizontal direction by 30 minutes that should not cause any damage on product.

6.1.3. **Package Drop Test**

Dropping the package from the height of 50cm for each of the six (6) faces onto the hardwood floor should not cause any damage on product.

6.2. **Operation Environment**

6.2.1. **Temperature Range**

Operating: -0 - +55 (Except RF output power and sensitivity)

Storage: -20 - +70

6.2.2. **Reliability Test**

One cycle of reliability test is keeping at -30 by 2 hours, switching temperature up to +60 within one hour , and testing at +60 by 2 hours, and switching temperature to -30 within one hour. Three cycle should be tested and without any product fail.

6.2.3. **Humidity**

Operating: 0% to 70%

Storage 0% to 95% Non-condensing

Notice: Global Sun Technology Inc. reserves the right to change specifications without notice.