FCC Statement

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 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.

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.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

CAUTION:
To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter
This device is intended only for OEM integrators under the following conditions:
The antenna must be installed such that 20 cm is maintained between the antenna and users. For laptop installations, the antenna must be installed to ensure that the proper spacing is maintained in the event the users places the device in their lap during use (i.e. positioning of antennas must be placed in the upper portion of the LCD panel only to ensure 20 cm will be maintained if the user places the device in their lap for use) and
The transmitter module may not be co-located with any other transmitter or antenna.
As long as the 2 conditions above are met, further transmitter testing will not be required.
However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).
IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC

authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in devices where the antenna may be installed such that 20 cm may be maintained between the antenna and users (for example access points, routers, wireless ASDL modems, certain laptop configurations, and similar equipment). The final end product must be labeled in a visible area with the following: "Contains TX FCC ID:M4Y-XN620V04 ".

RF Exposure Manual Information That Must be Included

The users manual for end users must include the following information in a prominent location "IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antenna 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 antenna or transmitter."

Additional Information That Must be Provided to OEM Integrators

The end user should NOT be provided any instructions on how to remove or install the device.

Service Center in U.S.A

Company Name : Zcomax.
Company Address:14545 Valley View Ave., Suite S Santa Fe Springs, CA 90670
Tel:562-926-4588

1. Introduction

300Mbps IEEE802.11n D.2.0 Wireless Network Mini PCI Adapter is the perfect solution for your wireless network applications based on the IEEE 802.11n 2.0 draft offering a data rate of 54Mbps in a wireless LAN environment**.**

XN-620 is designed for networking device gives you wireless access the web and network resource without the wire.

XN-620 provides high-speed access to network resources and has built-in 40/64-bit, and 128 bit. With Direct Spread Spectrum Signaling (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM), domain access control, WEP encryption and group security, the modules will safeguard all your wireless data transmissions from your nosy neighbors.

XN-620 allows you to take full advantage of your devices mobility with access to real-time information and online services anytime and anywhere.

2. Feature

. Complies with IEEE 802.11b/g Standard and IEEE802.11n 2.0 for 2.4GHz Wireless LAN.

. Works with All Existing Network Infrastructures.

. Compatible with Wi-Fi Wireless Products and Services

. Capable of up to 128-Bit WEP Encryption.

. Freedom to Roam While staying Connected

. 300 Mbps High-Speed Transfer Rate

. Three UF-L Connectors for External Antenna

. Support Antenna diversity for Better Sensitivity

. Lower Power Consumption.

3. Specification

XN-620

Product Specification Sheet

Date: 07/12/2006
Writer/Owner: Queen Lin

XN-620 Product Specification

Product Description	
Draft IEEE 802.11n EWC compliant 2.4 GHz WLAN miniPCI card	
Host Interface	
32-bit miniPCI, Type III A	
Operating Voltage	
DC3.3V ± 5%	
Chipset	
Atheros AR5416/AR2133 3 TX , 3 RX Architecture	

Power Consumption			
11b	TX: ≦ 900 mA	RX: ≦ 700 mA	
11g	TX: ≦ 900 mA	RX: ≦ 700 mA	
11n	TX: ≦ 900 mA	RX: ≦ 700 mA	

Radio	
Antenna	Three U.FL-R-SMT connectors
Output Power	IEEE 802.11b: 17dBm Maximum @ 11Mbps
	IEEE 802.11g: 16dBm Maximum @ 54Mbps
	IEEE 802.11n: 11dBm Maximum @ 300Mbps
Sensitivity	♦ 11b:11Mbps:≦-80dBm ♦ 11g:54Mbps:≦-65dBm ♦ 11n:270Mbps:≦-59dBm
Operating Frequency	IEEE 802.11b/g /n ISM Band ♦ USA(FCC): 2.412GHz ~ 2.462 GHz (CH1 ~ CH11) ♦ Europe(ETSI): 2.412 GHz ~ 2.472 GHz (CH1 ~ CH13) ♦ Japan(TELEC) : 2.412 GHz ~ 2..472 GHz (CH1 ~ CH13) IEEE 802.11n 40MHz Band ♦ USA(FCC): 2.422GHz ~ 2.452 GHz (CH3 ~ CH9) ♦ Europe(ETSI): 2.422 GHz ~ 2.462 GHz (CH3 ~ CH11) ♦ Japan(TELEC) : 2.422 GHz ~ 2.462 GHz (CH3 ~ CH11)
Modulation	♦ 802.11b: CCK, QPSK, BPSK ♦ 802.11g: OFDM ♦ Draft 11n: BPSK, QPSK, 16-QAM, 64-QAM
Data Rate	♦ 802.11b: 1, 2, 5, 11Mbps ♦ 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps ♦ EWC/ 802.11n Draft: 6, 6.5, 13, 13.5, 19.5, 26, 27, 39, 40.5, 53, 54, 58.5, 65, 78, 81, 104, 108, 117, 121.5, 130, 135, 162, 216, 243, 270, 300Mbps

Software Specification	
Supported OS	Win 2K SP4/ Win XP SP1 (or later)

Security	♦ WEP 64,128-bit	
	♦ WPA,WPA2	
Physical Specification		
Dimension	59.6mm(L) * 50.9mm(W) * 3.25mm(H)	
Weight	≦ 50 g	
Environment Specification		
	Temperature (Ambient)	Humidity (non-condensing)
Operating	0 ~50℃	80%
Storage	-20 ~80℃	5 ~90%
Warranty		
12 months		

4. Hardware Installation

The following sections in this chapter describe how to install XN-620 Module

4.1. Installation Overview

XN-620 wireless module is design for PC, Access Point, Router, ATU-R, Printer Server series, IP Camera series and Internet Video Server..

4.2. Safety Recommendations

The safety guidelines are as follows:

λ Keep the board area clear and dust-free before, during, and after installation.

λ Keep tools away from walk areas where you and others could fall over them.

λ Do not wear loose clothing or jewelry, such as earrings, bracelets, or chains, that could get caught in the board.

λ Wear safety glasses if you are working under any conditions that might be hazardous to your eyes.

λ Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.

λ Never attempt to lift an object that is too heavy for one person to handle.

4.3. Maintaining Safety with Electricity

Warning: Before working on a board or working near power supplies, unplug the power cord on AC units; on DC units, disconnect the power at the circuit breaker.

Follow these guidelines when working on equipment powered by electricity:

λ Do not work alone if potentially hazardous conditions exist anywhere in your work space.

λ Never assume that power is disconnected from a circuit; always check the circuit.

extension cables, frayed power cords, and missing safety grounds.

λ If an electrical accident occurs, proceed as follows:

– Use caution; do not become a victim yourself.

– Disconnect power from the system.

– If possible, send another person to get medical aid. Otherwise, assess the condition of the victim and then call for help.

– Determine if the person needs rescue breathing or external cardiac compressions; then take appropriate action.

4.4. Installing a XN-620

- λ Remove the XN-620 module from its protective packaging.
- λ Avoiding Electrostatic Discharge

Before you install the XN-620 module, ground yourself by touching a piece of metal to avoid electrostatic discharge (ESD). You should also take the following precautions to prevent damage to the XN-620 module:

- λ Keep the XN-620 module in its antistatic-shielded bag until you are ready to install it.
- λ Handle the XN-620 module by its edges.
- λ Ensure the connector is connected to above Model's board tightly.