Federal Communication Commission Interference 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 or more 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. FCC Caution: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

IMPORTANT NOTE:

This module is intended for OEM integrator. The OEM integrator is still responsible for the FCC compliance requirement of the end prouduct which integrates this module.

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

USERS MANUAL OF THE END PRODUCT:
In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of 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.

LABEL OF THE END PRODUCT:
The final end product must be labeled in a visible area with the following
" Contains TX FCC ID: M4Y-XG-623G ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also
be available on the label: This device complies with Part 15 of 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.
Antenna Requirement:

1. Introduction

108Mbps IEEE802.11g Wireless Network Mini PCI card with Super G is the perfect solution for your wireless network applications based on the IEEE 802.11g standard offering a data rate of 108Mbps in a wireless LAN environment**.**

XG-623G is designed for Access Point, Router, ATUR, Printer Server series, IP Camera series and Internet Video Server gives you wireless access the web and network resource without the wire.

XG-623G provides high-speed access to network resources and has built-in 40/64-bit, 128 bit and 256 bit of WEP (Wired Equivalent Privacy) data encryption. 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.

XG-623G 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 for 2.4GHz Wireless LAN with Super G.
. Works with All Existing Network Infrastructures.
. Compatible with Wi-Fi Wireless Products and Services
. Capable of up to 256-Bit WEP Encryption.
. Freedom to Roam While staying Connected
. 108 Mbps High-Speed Transfer Rate
. Two UF-L Connectors for External Antenna
. Support Antenna diversity for Better Sensitivity
. Lower Power Consumption.

3. Specification

Hardware Version: V1.1
Updated Date: 2005/10/06

Product Description			
IEEE 802.11g compliant 2.4 GHz WLAN miniPCI card with Super G			

Host Interface			
32-bit miniPCI, Type III B			

Operating Voltage			
DC3.3V ± 5%			

Chipset			
Atheros AR2414 (Single chip)			

Power Consumption			
11b	TX: 550 mA	RX:	450 mA
11g	TX: 550 mA	RX:	450 mA

Radio	
Antenna	two U.FL-R-SMT connectors

Output Power
(Average Power)
	IEEE 802.11b:
	    17dBm @ 1/2/5.5/11Mbps
	
	IEEE 802.11g:
	    16dBm @ 54Mbps
	    16dBm @108Mbps (Super G)

Sensitivity	IEEE 802.11g / Super G Sensitivity @ Packet Error Rate: 10%	IEEE 802.11b Sensitivity @ Packet Error Rate: 8%
	♦ 54 / 108 Mbps: -65dBm ♦ 48 / 96 Mbps: -66dBm ♦ 36 / 72 Mbps: -70dBm ♦ 24 / 48 Mbps: -74dBm ♦ 18 36 Mbps: -77dBm ♦ 12 / 24 Mbps: -79dBm ♦ 9 / 18 Mbps: -81dBm ♦ 6 / 12Mbps: -82dBm	♦ 11Mbps: -80dBm ♦ 5.5Mbps: -83dBm ♦ 2Mbps: -84dBm ♦ 1Mbps: -87dBm

Modulation	IEEE 802.11g (OFDM/DSSS) ♦ 48/54 Mbps (QAM-64) ♦ 24/36 Mbps (QAM-16) ♦ 12/18 Mbps (QPSK) ♦ 6/9 Mbps (BPSK)
	IEEE 802.11b (DSSS) ♦ 5.5/11 Mbps (CCK) ♦ 2 Mbps (DQPSK) ♦ 1 Mbps (DBPSK)

Range Coverage (Typical range in open environment with 0 dBi Antenna)	IEEE 802.11g	IEEE 802.11b
	♦ 54Mbps: 60 meter ♦ 48Mbps: 70 meter ♦ 36Mbps: 80 meter ♦ 24/18Mbps: 120 meter ♦ 12/9/6Mbps: 120 meter ♦ 11Mbps: 80 meter	♦ 11Mbps: 80 meter ♦ 5.5Mbps: 120 meter ♦ 2Mbps: 200 meter ♦ 1Mbps: 300 meter
Operating Frequency	IEEE 802.11b/g 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)	

Software Specification		
Supported OS	Identical to Atheros Latest Version	
Security	Identical to Atheros Latest Version	

Physical Specification		
Dimension	59.6mm(L) * 44.5mm(W) * 3.25mm(H)	
Weight	50 g	

Environment Specification		
	Temperature (Ambient)	Humidity (non-condensing)
Operating	0 ~ 55	
Storage	-20 ~ 80	5 ~ 90%

Warranty		
12 months		

4. Hardware Installation

The following sections in this chapter describe how to install XG-623G Module

4.1. Installation Overview

XG-623G wireless module is design for Access Point, Router, ATU-R, Printer Server series, IP Camera series and Internet Video Server only.

4.2. Safety Recommendations

The safety guidelines are as follows:

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

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

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

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

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

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:

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

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

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

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.

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4.4. Installing a XG-623G

Remove the XG-623G module from its protective packaging.

Avoiding Electrostatic Discharge

Before you install the XG-623G 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 XG-623G module:

Keep the XG-623G module in its antistatic-shielded bag until you are ready to install it.

Handle the XG-623G module by its edges.

Ensure the connector is connected to above Model's board tightly.