

# WLM54AG 6A MINI PCI

## Atheros AR5414 Chipset



Compex WLM54AG 6A MiniPCI is a high-performance, compact, lightweight and low power consumption network adapter. Built on Atheros AR5414 chipset, it can be used for all IEEE802.11 b/g compatible WLAN and is ideally suited for integration in a wide range of OEM devices.

WLM54AG 6A MiniPCI network adapter offers an output power of up to 20dBm on b/g band, and also supports a variety of security features such as WEP, AES, TKIP, receive and transmit filtering, error recovery, quality of service (QoS) as well as IEEE802.1x standard, thus providing security to the wireless network and increase WLAN performance.

### Features

- 2.4GHz IEEE 802.11b/g standard
- Output power of up to 20dBm @ b/g Band
- Wireless Encryption and Authentication Supported
- Extended Distances and High Speeds Due to Better Output Signal Power
- High Performance with Low Power Consumption
- Multi-Country Roaming Support (IEEE802.11d)
- Suitable for Embedded System or OEM Project
- 2 x U.FL(Main & Aux) Antenna Connector
- Affordable and Ideal for a Variety of Applications

Technical Specifications										
Chipset	Atheros AR5414									
Host Interface	PCI Interface v2.3 (Type III-B Mini PCI form factor)									
Operating Voltage	3.3 VDC									
Power Consumption	1.8W									
Antenna Connector	2 x U.FL Antenna Connector									
Standards	IEEE 802.11b:	11Mbps	5.5Mbps	2Mbps	1Mbps					
	IEEE 802.11g:	54Mbps	48Mbps	36Mbps	24Mbps	18Mbps	12Mbps	9Mbps	6Mbps	
Frequency Range	IEEE 802.11b/g:	Automatically fallback to 5.5Mbps, 2Mbps, 1Mbps								
		2.412GHz ~ 2.462GHz (US & Canada)								
		2.412GHz ~ 2.472GHz (Europe)								
Modulation Techniques	OFMD: BPSK, QPSK, 16 QAM, 64QAM									
	Security	64/128-bit WEP, TKIP, AES, IEEE802.1x authentication								
Certificate	FCC, CE									
ROHS Compliance	Yes									
Environment Specifications	Operating: -20°C to 70°C Storage: -65°C to 100°									
Humidity	5% to 95% (non-condensing)									
Dimension	59.6 x 46 x 3.8 (mm)									
Weight	15 grams									

WLM54AG 6A MINIPCI CARD RADIO						
TX SPECIFICATIONS				RX SPECIFICATIONS		
	DataRate	TX Power	Tolerance		DataRate	Sensitivity
802.11b	1Mbps	20dBm	+1.0/-1.5 dB	802.11b	1Mbps	<-90dBm
	2Mbps	20dBm	+1.0/-1.5 dB		11Mbps	<-70dBm
	5.5Mbps	20dBm	+1.0/-1.5 dB			
	11Mbps	20dBm	+1.0/-1.5 dB			
802.11g	6Mbps	20dBm	+1.0/-1.5 dB	802.11g	6Mbps	<-90dBm
	9Mbps	20dBm	+1.0/-1.5 dB			
	12Mbps	20dBm	+1.0/-1.5 dB			
	18Mbps	20dBm	+1.0/-1.5 dB			
	24Mbps	20dBm	+1.0/-1.5 dB		54Mbps	<-70dBm
	36Mbps	18dBm	+1.0/-1.5 dB			
	48Mbps	17dBm	+1.0/-1.5 dB			
	54Mbps	15dBm	+1.0/-1.5 dB			

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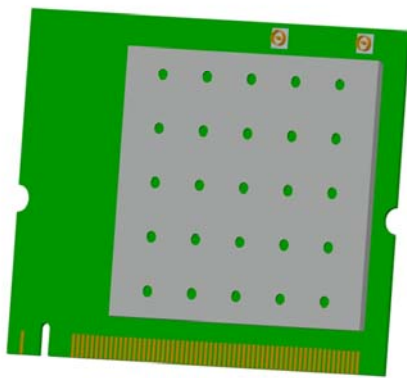
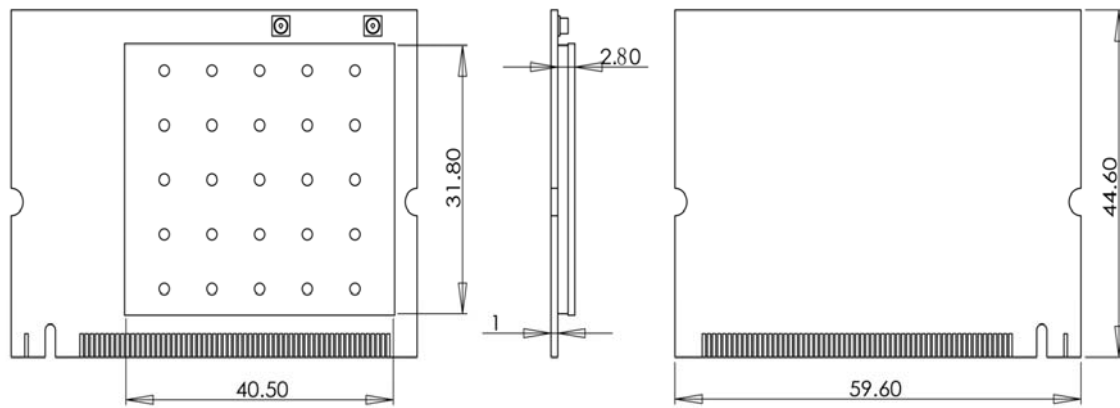
DRIVER INFORMATION	
Driver	Linux Madwifi, WindowsXP , Windows 2000

#### ORDERING CONFIGURATIONS<sup>①</sup>

CODES	SPEED	CARTON DIMENSION
WLM54AG 6AA1300P20	Up to 54 Mbps	For 50pcs (pcs/ctn), 0.40m * 0.22m * 0.085m / 0.006 = 1.5KG

① Configurations are subjected to change without notice

### DIMENSIONS DRAWING



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## **Compliance Information**

### **FCC Compliance Statement:**

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 must accept any interference received, including interference that may cause undesired operation. Product that is a radio transmitter is labeled with FCC ID.

### **FCC Caution:**

- (1) Exposure to Radio Frequency Radiation. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.
- (2) Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.
- (3) This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- (4) Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

### **RF exposure warning**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

The equipment must not be co-located or operating in conjunction with any other antenna or transmitter.

**IMPORTANT NOTE:** In the event that these conditions cannot 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 cannot 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.

### **OEM integration instructions:**

This device is intended only for OEM integrators under the following conditions:

The module is only limited to installation in mobile applications. The antenna must be installed such that 20 cm is maintained between the antenna and users, and the transmitter module may not be co-located with any other transmit or antenna. The module shall be only used with the integral antenna(s) that has been originally tested and certified with this module.

As long as 3 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirement with this module installed (for example, digital device emission, PC peripheral requirements, etc.)

### **End product labeling**

This transmitter module is authorization only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: “Contains Transmitter Module FCC ID: TK4-WLM54AG or Contains FCC ID: TK4-WLM54AG”

### **Information that must be placed in the end user manual:**

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user’s manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.