



gM1-2300

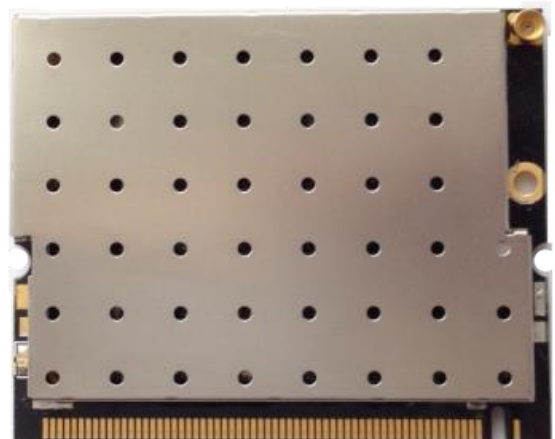
1x1 IEEE 802.11 g High Power Mini PCI Radio Module

gM1-2300 is an IEEE 802.11a 2300 MHz to 2525 MHz Radio Module built over Vizmonet's innovative Built-to-Customize™ platform engineered for carrier class long range high data capacity applications.

With superior TX power efficient RF design, the product supports high TX Power, offering best-in class EVM performance at higher modulation schemes. This facilitates to achieve long range without compromising data throughput.

With well-engineered RX Design, gM1-2300 offers ultra-low receive sensitivity to achieve long range.

Backed by military grade technology, the product is ideal for deployment in harsh outdoor environment and available with plenty of options for customization to enable easy integration into OEM systems.



FEATURES

- IEEE 802.11b/g standards compliant operating in the Band 2300 MHz to 2525 MHz
- 1xMMCX Antenna connector
- High TX Power of up to +30 dBm for lower data rates
- Atheros AR5414A-001 Chipset
- Mini PCI Type IIIA form factor – 59.6mm(W)x48mm(L)
- Support for Customization for OEM integration
- Operating Temperature range (-20 deg C to +70 deg C)

TECHNICAL SPECIFICATION**RADIO MODULE – GENERAL INFO**

Chipset Info	Atheros AR5414A-001
Operating Frequency	2300 MHz to 2525 MHz
Security	WPA,WPA2, 802.11i with AES-CCM & TKIP Encryption, 802.1x, 64/128/152bit WEP
Data Rates	1Mbps to 11Mbps - 11b, 6Mbps to 54Mbps - 11g
Channel Bandwidth	5 MHz/10 MHz/20 MHz/40 MHz
RoHS Compliance	Compliant
Operating System Support	Linux Open WRT and Ath5K driver

INTERFACE SPECIFICATIONS

Interface	PCI 32 bit,33 MHz, mini PCI Form Factor
Operating Voltage	3.3V
RF Antenna connector	SINGLE MMCX, VERTICAL

PHYSICAL SPECIFICATIONS

Mechanical Dimension (Assembled condition)	(L) 59.6 mm x (W) 48 mm x (H) 5.5 mm
Weight of the module without ESD Bag	16 g
Weight of the Module with ESD Bag	18 g

CUSTOM FEATURES

MAC ID	74-E2-77-00 series
PCI SUB VENDOR ID	168C
PCI SUB DEVICE ID	1201
TX POWER OFFSET	10 dB
LABELS	MAC LABEL – 1 PC ON THE RADIO MODEL LABEL – DUAL BARCODE – 1 PC ON THE ESD BAG

REGULATORY INFORMATION

REGULATORY APPROVALS	TBD
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PACKAGING INFORMATION

100 UNITS PER CARTON	520 mm (L) x 240 mm (W) x 133 mm (H)
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ORDERING INFORMATION

gM1-2300	Mini PCI Radio Module, 1x1 IEEE 802.11 b/g, 2.3 GHz, 30 dBm
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RADIO SPECIFICATION - RX

Receiver Maximum input level (10% PER)	> -10 dBm
Receive Chain Noise Figure	5.5 dB
Frequency Accuracy	Within \pm 15 PPM
Receiver Adjacent Channel Rejection (ACR) 10 to 20 MHz, 10% PER	1 Mbps > 35 dB 6 Mbps > 20 dB
Receiver Alternate Channel Rejection (ALCR) 20 to 30 MHz, 10% PER	1 Mbps > 45 dB 6 Mbps > 30 dB

RADIO SPECIFICATION - TX

Transmit Spectral mask	At 11 MHz Offset > -20 dBr At 20 MHz Offset > -28 dBr At 30 MHz Offset > -40 dBr
RF Power control Step	0.5 dBm
Transmitter Spurious Emission	Complying FCC 47 CFR Part 15.247 Sub Part C Requirements

RADIO SPECIFICATION -TX/RX

RADIO PERFORMANCE @ BW=20 MHz						
	DATA RATE	MODULATION	TX POWER \pm 1 dBm	TX CURRENT (A) AT 3.3V \pm 0.1A	RX SENSITIVITY \pm 2 dBm	RX CURRENT (A) AT 3.3V \pm 0.1A
11 g	6 Mbps	BPSK	30	1.15	-93	0.3
	9 Mbps	BPSK	30	1.15	-92	0.3
	12 Mbps	QPSK	30	1.15	-91	0.3
	18 Mbps	QPSK	30	1.15	-90	0.3
	24 Mbps	16QAM	30	1.15	-85	0.3
	36 Mbps	16QAM	28	0.90	-83	0.3
	48 Mbps	64QAM	25	0.80	-77	0.3
	54 Mbps	64QAM	24	0.75	-74	0.3
11 b	1 Mbps	BPSK	30	1.15	-97	0.3
	2 Mbps	QPSK	30	1.15	-94	0.3
	5.5 Mbps	CCK	30	1.15	-93	0.3
	11 Mbps	CCK	30	1.15	-90	0.3

For RX Sensitivity for 40 MHz Channel BW, Add +3 dB to 20 MHz BW

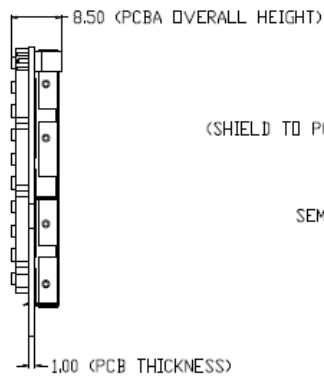
For RX Sensitivity for 10 MHz Channel BW, Add -3 dB to 20 MHz BW

For RX Sensitivity for 5 MHz Channel BW, Add -6 dB to 20 MHz BW

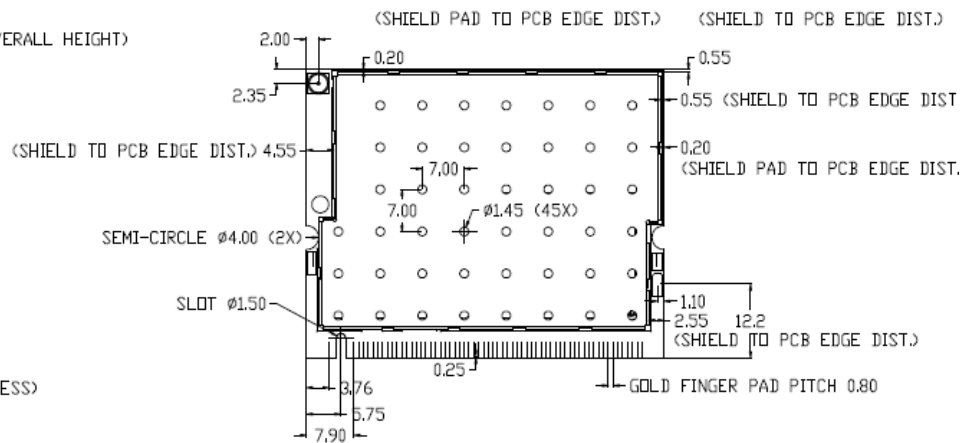
MECHANICAL DIMENSIONS

Note: Standard version is supplied without heatsink. However the below picture is shown as a reference with optional Heat sink

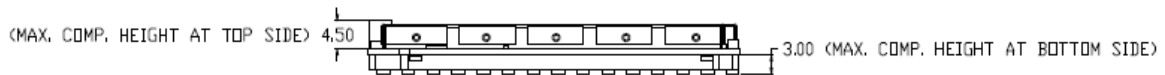
SIDE VIEW - LEFT



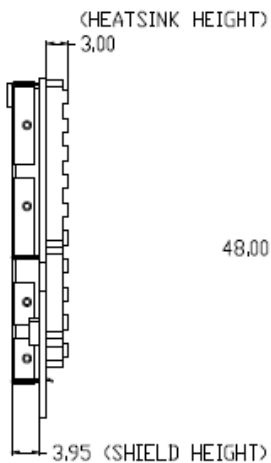
TOP VIEW



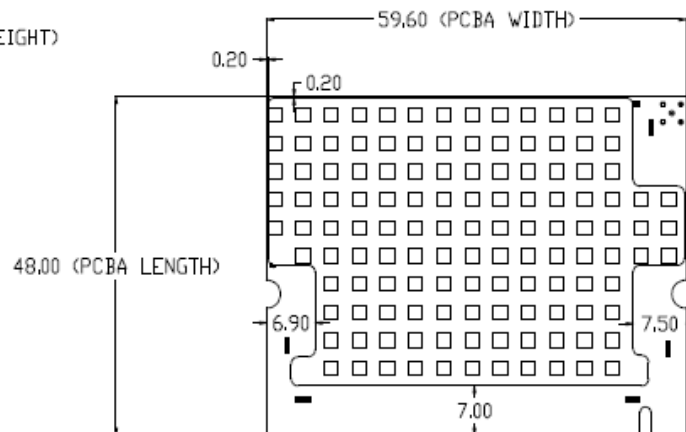
FRONT VIEW



SIDE VIEW - RIGHT



BOTTOM VIEW



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