Actiontec

802MBN

Single-Band Draft-802.11n 2x2 MIMO

MiniPCI Wireless Network Card

User Guide

1. Description:

Actiontec 802MBN provides ultra-high performance (up to 300 Mbps) transmission rate in 2.4GHz bands. Backward compatible with the current 802.11b/g network devices gives your laptop the freedom of wireless connectivity with the performance, security, and manageability that businesses desire. A firmware-based architecture is capable of supporting the latest industry standards in the security and quality of service (QoS), as the draft 802.11i and 802.11e standards, respectively. The 802MBN is complemented by drivers and networking tools for various versions of embedded operating system (e.g. Linux). Extensive technical documentation on integration issues such as antenna design, customizing drivers, and management software can be obtained by request.

2. Features:

- IEEE 802.11 b/g/n standard compliant
- 2x2 MIMO wireless system
- Ultra-high data rate up to 300 Mbps
- Auto fallback data rate under noisy environment
- Support both 2.4Ghz band operation
- Support WEP (64-bit/128-bit), 802.1x, and WPA/WPA2
- Conformable to industry-standard Mini-PCI Card Type III-A specification
- Easy integration into mobile and hand-held platforms
- Flexible for design and antenna placement
- Low power consumption & Automatic power management to reduce battery use
- Independent Tx Power Control on a per channel
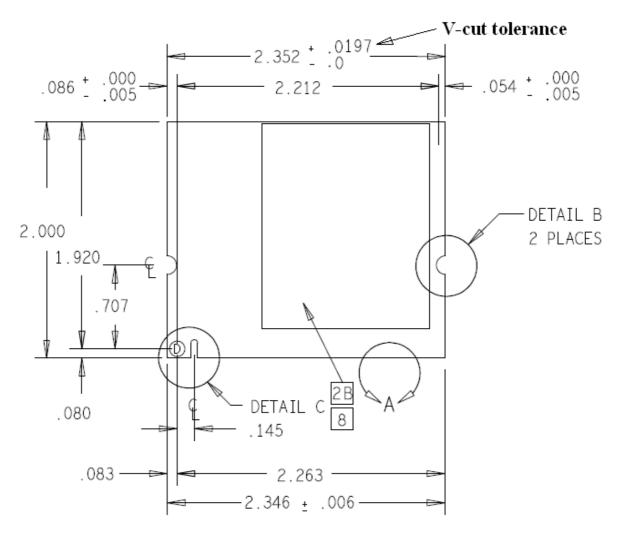- Automatic Tx Gain adjustment during temperature variations

3. Application:

- Home and/or office wireless networking
- Wireless multimedia
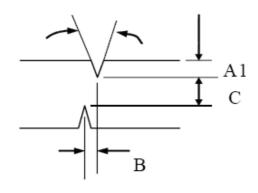- Wireless extension of existing wired network

4. Product Specifications:

WLAN Standards	IEEE 802.11 b/g/n
Antenna Connector	IPEX
Medium Access Protocol	CSMA/CA (Collision Avoidance) with ACK
Frequency Band	2.4~2.4835 GHz
Number of Channels	Up to 14 Channels depending on regions
Modulation	CCK, DQPSK, DBPSK, OFDM
Supported Rates	54, 48, 36, 24, 18, 12, 9, 6, 11, 5.5, 2, 1 Mbps 20 MHz BW: 130, 117, 104, 78, 52, 39, 26, 13 Mbps 40 MHz BW: 300, 270, 243, 216, 162, 108, 81, 54, 27 Mbps
Maximum Receive Level	-20dBm (with PER< 10%) for 802.11g
Antenna	External
Output Power	2x2: 13.5~16.5 dBm 11g: 13.5~16.5 dBm 11b: 15.5~18.5 dBm
802.11g Receive Sensitivity	**Data Rates** **Receive Sensitivity** 54 Mbps -68 dBm (typ) 11 Mbps -85dBm (typ.) 6 Mbps -86 dBm (typ.) 1 Mbps -93 dBm (typ.)
Voltage	3.3 VDC from host (+/-0.2V)
Power Consumption	Standby (average) < 20mW
Security	WEP (64-bit/128-bit), 802.1x WPA/WPA2 (TKIP, AES)
Operating System	Linux
Operation Environment	Temperature: 0 ~ 40 ℃ Humidity: 5~95% RH (non-condensing)
Storage Environment	Temperature: -10 ~ 70 ℃ Humidity: 95% RH (non-condensing)

5. PCB dimension

5.1 V-Cut Tolerance :

- PCB Thickness: 1.0+/-0.1mm
- C =0.33+/- 0.05 mm
- V-Cut Tolerance B<0.25mm (0.0098")

Regulatory Statements for 802MBN

USA-Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

Caution: Exposure to Radio Frequency Radiation.

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