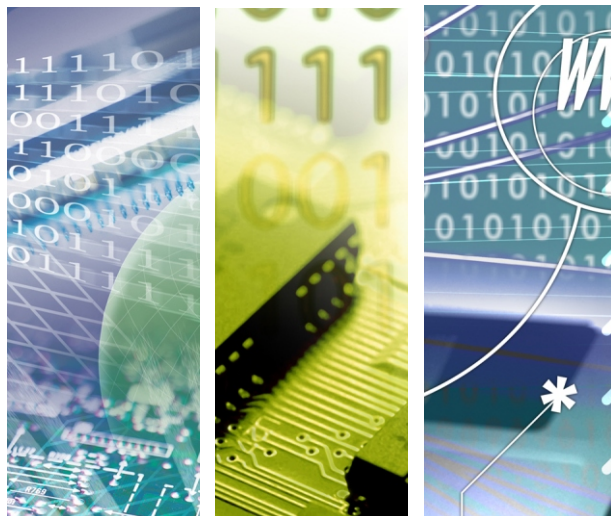# CPE803A
Cost-effective WiFi 802.11 b/g/n miniPCIe Card

CPE803A

Cost-effective WiFi Solution.

Introduction of Products

Bointec CPE803A is a WLAN module supporting IEEE 802.11 b/g/n standard based on the miniPCI Express interface. CPE803A is truly a cost-effective solution for the current wireless market with the reliable performance. Moreover, it can achieve the max throughput of 150Mbps based on its comprehensive modulation technique. Bointec CPE803A provides an easy design for various environment such as household appliances, industry, consumer and automobile applications. It reserve two RF U.FL connector for external antenna. It is convenient for all users to use two screw holes on the module in order to assemble on customer's host board or custom boards. Based on the compact size module and robust setup scheme, CPE803A provides those advantages to enhance the value of our customer's target product.
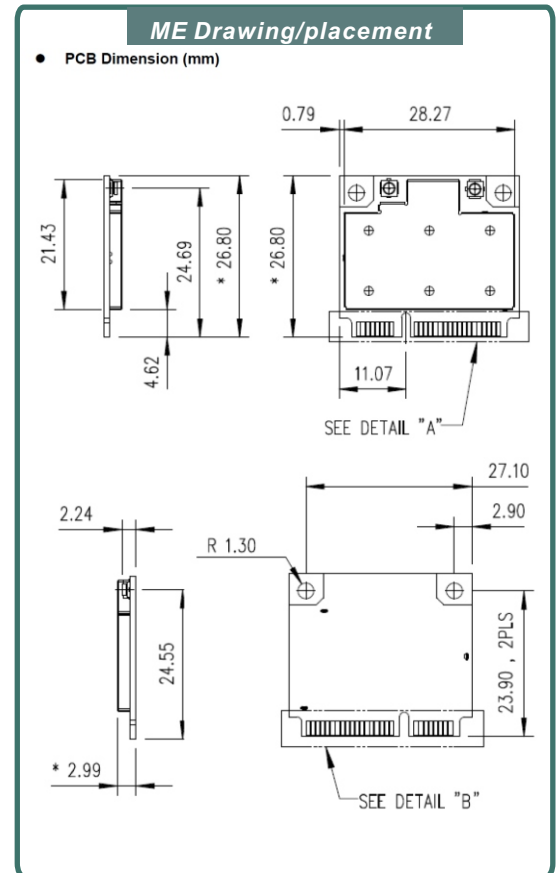
Product Highlight

- Atheros AR9485 PCI Express solution MAC/baseband processor and 2.4 GHz radio Supports up to 150 Mbps Data Rate

- IEEE802.11 b/g/n compliant 2.4GHz.

- Compliant with IEEE 802.11b, 802.11d, 802.11e, 802.11g standards and 802.11i specification.

- PCI Express Based Specification 1.1 compliant

- Singal-Sustain Technology (SST) rate over range enhancements: LDPC, MLD, TxBF

- Supports all mandatory IEEE 802.11n features, including several optional features such as HT40, half-guard interval in HT40 and Rx Space Time Block Coding (STBC)

- Low power sleep modes supported, Wake on Wireless LAN (WoW) supported.

- RoHS compliant

BOINTEC WIFI CPE803A ENG v0.1

Specification:

Item	Key specifications
TX/RX	1T1R, RX diversity
Frequency range	USA: 2.400~2.483GHz Europe: 2.400~2.483GHz Japan: 2.400~2.497GHz China: 2.400~2.483GHz
Host interface	PCI Express® Mini Card Electromechanical Specification Revision 1.2
Channels support	802.11 b/g/n US/Canada: 11(1~11) Major European country: 13(1~13) France: 4(10~13) Japan: 11b: 14(1~13 or 14th), 11g: 13(1~13) China: 13(1~13)
Operation voltage	3.3V +/- 9%
Operation distance	•802.11b Outdoor: 100 m @11Mbps, 200 m @1Mbps Indoor: 50 m @11Mbps, 100 m @1Mbps •802.11g Outdoor: 100 m @54Mbps, 200 m @6Mbps Indoor: 50 m @54Mbps, 100 m @6Mbps •802.11n Outdoor: 200 m @MCS0/ 20MHz BW 50 m @MCS7/ 20MHz BW 30m @ MCS7/40MHz BW Indoor: 80m @MCS0/ 20MHz BW 50m @MCS7/ 20MHz BW 30m @MCS7/ 40MHz BW **The operation distance would be impacted by radiation environment and the driver mechanism
Operation system supported	Windows XP, Vista, and Win 7.
PCB dimension	26.65+/-0.15mm x 29.85+/-0.15mmx1.0+/-0.1mm 2L FR4
Security	64-bit, 128-bit, 152-bit WEP Encryption 802.1x Authentication AES-CCM & TKIP Encryption
Operation mode	Infrastructure & Ad-hoc mode (TBD)
Operation temperature	0℃~60℃
Storage temperature	-20℃~80℃
Wi-Fi® alliance®	WECA Compliant
WHQL	Microsoft® 2K, XP, Vista Compliant
EMC certificate	FCC part 15 (USA) IC RSS210 (Canada) TELEC (Japan) ETSI, EN301893, EN60950 (Europe) VCCI CLASS B
Media access protocol	CSMA/CA with ACK architecture 32-bit MAC
Antenna	2 x SMT Ultra-miniature coaxial connectors (U.FL-R-SMT)

ME Drawing/placement

- PCB Dimension (mm)

0.79   28.27

21.43

24.69   *26.80   *26.80

4.62   11.07

SEE DETAIL "A"

27.10

2.24   2.90

R 1.30

24.55   23.90, 2PLS

*2.99

SEE DETAIL "B"

Applications

Bointec Authorized Distributer