WPEA-251N(BT)

Feature

- Reference Design: AR5B22
- Chipset: Atheros AR9462
- Interface: Half Mini Card (PCIe: WLAN; USB: Bluetooth)
- Wireless connection up to 300Mbps
- Antenna: 2 x U.FL connectors, 2T2R
- Concurrent Wi-Fi (802.11n) and BT (4.0 LE/ 3.0 HS/ 2.1 EDR) antenna co-existence
- Enhanced wireless security: 64/128-bits WEP, WPA, WPA2
- Driver Support: Windows XP/ Vista/Win 7, Linux, Android by request

Application

- Industrial PC
- Networking Equipment
- Automation
- Medical Device
- POS (Point-of-Sale) System
- Gaming Machine



802.11a/b/g/n Bluetooth Half Mini Card

Superior Performance with Atheros AR9462 (AR5B22), 2T2R 2-Stream MIMO Solution

Superior Performance with Longer Range and Faster Speed

SparkLAN wireless Half Mini Card, WPEA-251N(BT), is based on Atheros AR9462 chipset. It is compliant with 802.11a/b/g/n standard that supports 2x2 MIMO technology and runs up to 300Mbps data rates.

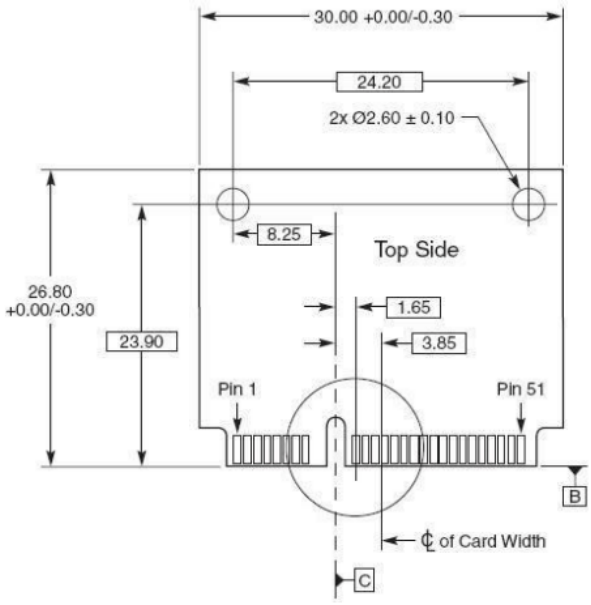
Bluetooth Transmission

WPEA-251N(BT) also integrates the Bluetooth transmission technology for voice and data transfers between devices in a short distance. WPEA-251N(BT) is designed properly for any wireless enabled devices with Half Mini Card slot.

Secure Wireless Connection

This Half Mini Card WPEA-251N(BT) with advanced security encryption, such as 64/128-bits WEP, WPA, and WPA2, helps prevent from malicious attacks.

Mechanical Dimension



WPEA-251N(BT)

Related Product

- WUBT-132GN(BT)
  802.11b/g/n Bluetooth Combo USB Module



Ordering Info

- WPEA-251N(BT)
  802.11a/b/g/n Bluetooth Half Mini Card

Specifications

Standard

802.11a/b/g/n, Bluetooth 4.0 LE/ 3.0 HS/ 2.1 EDR standard

Chipset

Mac/BB /RF	Atheros AR9462

Host Interface

Half Mini Card (PCIe: WLAN; USB: Bluetooth)

Radio

Antenna	2 x U.FL connectors (2T/2R) Support WLAN / BT co-existence
Operating Frequency	Wi-Fi: b/g/n ISM Band: 2.414GHz ~ 2.4835GHz; a: 5.15GHz ~ 5.85GHz Bluetooth: 2402GHz ~ 2480GHz
Modulation	Wi-Fi: 802.11a/g/n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11b: DSSS (DBPSK, DQPSK, CCK) Bluetooth: Header: GFSK / Payload 2M: 4-DQPSK / Payload 3M: 8-DPSK
Output Power	Wi-Fi: 802.11a: 11dBm ± 2dBm@54Mbps, 802.11b: 17dBm ± 2dBm@11Mbps 802.11g: 15dBm ± 2dBm@54Mbps 802.11gn HT20: 14dBm ± 2dBm@MCS7 802.11gn HT40: 14dBm ± 2dBm@MCS7 802.11an HT20: 10dBm ± 2dBm@MCS7 802.11an HT40: 10dBm ± 2dBm@MCS7 Bluetooth: -6 ≦ Output Power Avg. ≦ +4dBm (Class 2 Device)
Receive Sensitivity	Wi-Fi: 802.11a: ≤ -73dBm@54Mbps 802.11b: ≤ -85dBm@11Mbps 802.11g: ≤ -74dBm@54Mbps 802.11gn HT20: ≤ -72dBm@MCS7 802.11gn HT40: ≤ -69dBm@MCS7 802.11an HT20: ≤ -69dBm@MCS7 802.11an HT40: ≤ -68dBm@MCS7 Bluetooth: BER < 0.1% at -70dBm

Power consumption

Continue TX	Max 523mA
Continue RX	Max 202mA
Idle	16mA

Operating Voltage

DC 3.3V ± 9% I/O supply voltage

Environmental

Temperature Range	0 ~ 75°C (Operating) -40 ~ 85°C (Storing)
Humidity (Non-Condensing)	5 ~ 90% (Operating) 5 ~ 95% (Storing)

Physical Specification

Dimensions	30mm x 26.8mm (± 0.15mm)
Weight	7g

Software

Driver	Windows XP/Vista/Win 7, Linux, Android by request
Security	64/128-bits WEP, WPA, WPA2