WPEA-121N

Feature

- Chipset: Atheros AR9382
- Interface: Half Mini PCI Express
- Wireless connection up to 300Mbps, 2T2R
- Enhanced wireless security: 64/128-bits WEP, WPA, WPA2
- Support Windows 2000/ XP/ Vista/ Win 7, Linux

Application

- Notebook
- Ultra Mobile PC
- Networking Equipment
- Digital Multimedia Device (Gaming Machine, HDTV)

Wireless-N Dual-Band Half Mini Card

Highest Performance with Atheros AR9382 Solution, 2T2R

Superior Performance with Longer Range

SparkLAN WPEA-121N, embedded with Atheros AR9382 chipset, incorporated with Atheros XSPAN with Signal Sustain Technology (SST). It supports 2T2R (2 transmit 2 receive) MIMO technology, which delivers superior throughput up to 300Mbps and improves the overall Wi-Fi coverage area.

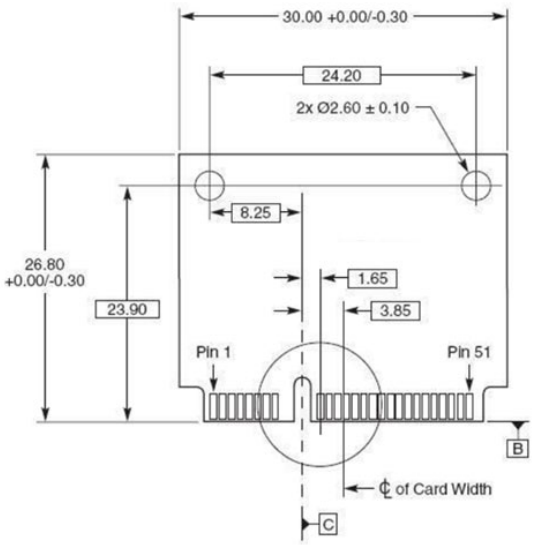
Ideal for High-End Notebook

The module adopts the latest 802.11n Dual-Band technology (2.4GHz and 5GHz). It targets enterprise and high-end consumer notebooks. The solution enables up to 6 times the throughput of 802.11a/g solutions.

Industry-Leading Power Efficiency

WPEA-121N, featuring Atheros' highest level of 802.11n WLAN throughput, enables a high performance, cost effective, low power, and compact solution for developers to easily integrate with embedded computing platforms.

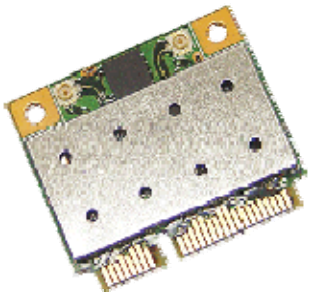
Mechanical Dimension



WPEA-121N

Related Product

- WPEA-111N
  802.11a/b/g/n Half Mini Card



Ordering Info

- WPEA-121N
  Wireless-N Dual-Band Half Mini Card

Specifications

Standard

802.11a/b/g/n

Chipset

Mac/BB /RF	Atheros AR9382

Host Interface

Half Mini PCI Express

Radio

Antenna	2 x U.FL connectors, 2T2R
Operating Frequency	802.11b/g/n ISM Band: 2.412 ~ 2.4835 GHz 802.11a ISM Band: 5.15 ~ 5.85 GHz
Modulation	802.11a: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g: OFDM (BPSK, QPSK, 16-QAM, 64-QAM) 802.11n: OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
Output Power (2T)	802.11a: 24.66dBm ± 1.5dBm 802.11b: 22.49dBm ± 1.5dBm 802.11g: 21.92dBm ± 1.5dBm 802.11gn HT20: 22.06dBm ± 1.5dBm@MCS15 802.11gn HT40: 20.77dBm ± 1.5dBm@MCS15 802.11an HT20: 24.86dBm ± 1.5dBm@MCS15 802.11an HT40: 24.63dBm ± 1.5dBm@MCS15
Receive Sensitivity (2R)	802.11a: -76dBm ±2dBm@54Mbps 802.11b: -85dBm ±2dBm@11Mbps 802.11g: -76dBm ±2dBm@54Mbps 802.11gn HT20: -75dBm ±2dBm@MCS7 802.11gn HT40: -71dBm ±2dBm@MCS7 802.11an HT20: -71dBm ±2dBm@MCS7 802.11an HT40: -71dBm ±2dBm@MCS7

Power consumption

Continue TX	Max 600mA
Continue RX	Max 240mA

Operating Voltage

DC 3.3 V ±10% 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	26.8 mm x 30 mm x 3.8mm
Weight	≦9g

Software

Driver	Windows 2000/ XP/ Vista/ Win 7, Linux
Security	64/128-bits WEP, WPA, WPA2

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the 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 and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

This device complies with Part 15 of the FCC Rules/ Industry Canada licence-exempt RSS standard(s). 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 is restricted to indoor use when operated in the 5.15 to 5.25 GHz frequency range.

FCC/IC Radiation Exposure Statement:

This equipment complies with FCC/ IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

FCC LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: RYK-WPEA121N ". The FCC part 15.19 statement below has to also be available on the label: This device complies with Part 15 of 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.

IC LABEL OF THE END PRODUCT:

This transmitter module is authorized 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 IC: 6158A-WPEA121N”.

This radio transmitter(IC ID: 6158A-WPEA121N) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This Class [B] digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.