SX-PCEGN
802.11 b/g/n PCI Express Card Module

Robust & Highly integrated 2 stream 11n solution

silex embedded

Wireless Solutions from the Experts in Embedded Wireless

The SX-PCEGN is an IEEE 802.11 b/g/n compliant 2.4GHz single band PCI Express Half-Mini Card with a 2x2 MIMO configuration. Designed for the growing demand of PCIe compliant devices that require wireless connectivity in a small form factor combined with high data throughput.

Silex is one of the first companies to productize the AR9287 PCIe card solution in the industry. Unlike the other similar solutions, the design, manufacturing, and tuning processes are strictly controlled in-house at the Silex state-of-the-art ISO9001 facility in Japan.

Each card is individually tested and inspected to ensure the industry's highest quality resulting greater performance and reliability. The SX-PCEGN is designed to meet the demanding performance requirements of critical embedded applications.

Silex Advanced Services

As an Atheros Authorized Design Center (AADC), Silex Technology America has the experience and expertise to provide all of the services necessary to enable embedded wireless networking in virtually any type product.

We specialize in embedded wireless solutions and services.

Our products and services include:
- Wireless Cards such as Mini-PCI, PCI Express and SDIO cards
- Intelligent wireless modules with Linux OS, robust protocols, web interface and enterprise security
- Wireless System in Package (SiP) for highly integrated applications
- Custom wireless module design and manufacturing
- Driver development and porting
- Certification, Manufacturing, and Logistics

In addition, Silex Technology America can engage with customers to execute an Atheros Technology License Agreement (TLA) which allows access to Atheros documentation and source code.

Features:
- Atheros AR9287 highly integrated chip set
- IEEE 802.11b/g/n compliant 2.4GHz single band
- Full MIMO performance with data rate up to 300Mbps
- PCI Express Half-Mini Card compliant
- PCI Express Mini Card 1.1 compliant
- Driver offering includes Linux, Windows 7 and Embedded XP
- Linux supplicant available for WPA/WPA2-PSK & 802.1x EAP
- Customer Driver development available
- IEEE 802.11e QOS support

Benefits:
- Small form factor based by Industry's highest quality
- Robust proprietary Linux/Windows driver
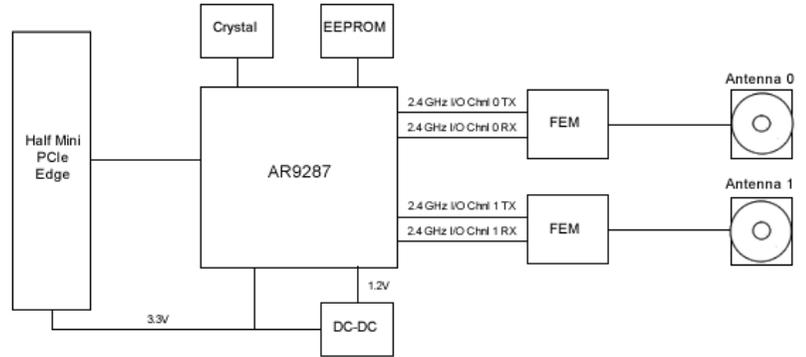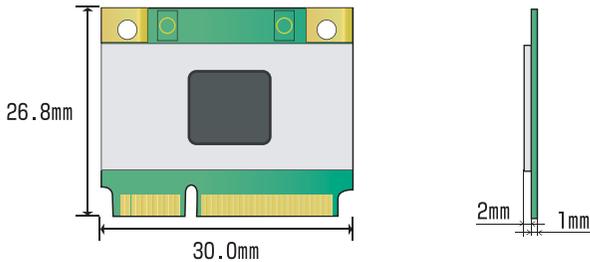- Wide range of wireless security options available

Target Applications:
Medical devices, Security Systems, Industrial, PoS, Digital Sign, Set-Top/Net-Top Box, Embedded / Industrial / Tablet PC, Handheld devices, Thin Client devices, virtually any device supporting PCI Express interface.

Specifications:

Product Name	SX-PCEGN		
Chipset	Atheros Communications AR9287		
Antenna Connector	U.FL Connector		
Operating Voltage	3.3V +/- 10%		
Transmitting Power Wireless Channels	802.11b	Ch 1-13	17.5 dbm (Max)
	802.11g	Ch 1-13	17.5 dbm (Max)
	802.11ng HT20	Ch 1-13	16.5 dbm (Max)
	802.11ng HT40	Ch 1-13	16.0 dbm (Max)
Power Consumption	TX: 630mA (Max), RX: 270mA (Max)		
Weight	3.5g		
Dimensions	30.0 x 26.8 x 3.0mm, PCB Thickness = 1.0mm		
Storage Conditions	Temperature: -20 - 85C, Humidity: 10 - 85%RH		
Operating Conditions	Temperature: 0 - 60C, Humidity: 20 - 80%RH		

Dimensions & Block Diagram

Radio Configuration & General Specifications

Center Frequency:

802.11b/g/ng HT20	2412 – 2472 MHz (Ch. 1- Ch.13)
802.11ng HT40	2422 - 2462 MHz (Ch. 3- Ch.11)

Channel Spacing:

802.11b/11g/ng HT20/HT40	5 MHz

Modulation Type:

802.11b	DSSS(CCK, DQPSK, DBPSK)
802.11g/11ng	DSSS-OFDM (64QAM,16QAM, QPSK,BPSK)

Driver Support

Silex Linux Reference Driver:
- 802.11a/b/g/n supported
- Ad hoc, Infrastructure, Access Point mode

Silex WPA Software:
- WPA Supplicant (Station) / WPA Authenticator (AP)
- Customized based on Open Source WPA supplicant / hostapd
- WPA - TKIP/AES - PSK/EAP(TLS/TTLS/PEAP/FAST)
- WPA2 - AES - PSK/EAP (TLS/TTLS/PEAP/FAST)
- IEEE 802.1X - WEP / None - EAP (TLS/TTLS/PEAP/FAST)

Windows Embedded (Windows XP/Windows 7)

Standard Compliance

Device Interfaces
- IEEE802.11b/g/n/e/h/i
- PCI Express Mini Card v1.2 (Single definitions: PCI Express v1.1)

Regulatory
- TELEC (Japan Radio Law Rule Article 2 Sect. 1 Number 19)
- Certifiable for FCC, IC, CE and other regulatory requirements*.

Recommended Antenna:
The following antenna part has been qualified for TELEC;

Part Number: TB18119A1S0 di-pole antenna (2.1dBi @ 2.4GHz)
Vendor: Sansel Electronic

*Contact Silex for further details.

Part Number Information

SX-PCEGN (P):
Individually Packaged, 2 Antennas & Cables, MAC & EMI Labels

SX-PCEGN (B)
Bulk Packaged, 2 Two Antenna, 2 Cables, MAC & EMI Labels

SX-PCEGN (BB):
Bulk Packaged, MAC Address Label, EMI Label

SX-PCEGN (BBNL):
Bulk Packaged, MAC Address Label Only

silex global sales & support locations

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for WiFi Modules - 802.11 *category:*

Click to view products by Silex *manufacturer:*

Other Similar products are found below :

KBPC10/15/2506WP WIFI-RT5392-SB-R10 SX-PCEAN2C-SP 849WM520100E WIFI-AT2350 7265.NGWG.SW HDG204-DN-3 FXX-3061-MIX EMIO-1533-00A2 7265.NGWWB.W PPC-WL-KIT02-R11 RC-CC2640-B HLK-7688A WH-NB73-BA NF-02-PA LSD4BT-E92ASTD001 EAR00364 3168.NGWG MY-WF003U AX210.NGWG.NV ESP-15F32Mbit ESP32-S32Mb TG-01M ESP-13 ESP-01F-2M ESP-01E-2M ESP-12S-8285-2M ESP-20 ESP32-SL ESP-12K-PSRAM ESP-12K-PSRAM-IPEX ESP-12H BW18 BW12-16Mb BW14 BW15 TG-12F SIM7600CE-L1S CB3S(tjrl) CB3S(hvk9) CB3S(qh6) WB2S(csyd) WB3S(ppty) WB3S(h238) WB3S(uvmz) 1005869 1012 QCA4004X-BL3B 32-2006-BU WT51822-S4AT