SX-SDMGN
802.11b/g/n
SDIO Module

## High Quality Wireless LAN Implementation for Embedded Applications

The Silex SX-SDMGN is a single-band 802.11b/g/n SDIO module that is based on the SX-SDPGN (Qualcomm Atheros AR6103). The SX-SDMGN brings 802.11n throughput, range and power efficiency to portable devices including patient monitors, printers, handheld terminals and more.

The SX-SDMGN optimizes RF output performance from the SiP out through the antenna which significantly decreases any downstream RF related design integration. The radio module design approach also saves cost as the SX-SDMGN provides FCC/TELEC modular certification.

The SX-SDMGN provides superior product quality. Silex has validated that our design meets IEEE standards and each module is individually tested during the production process. This ensures that each of our products will perform to our published specification.

In order to expedite your product development process, Silex can provide both hardware and software engineering services including custom driver development, as well as turnkey product design and manufacturing.

Diagram
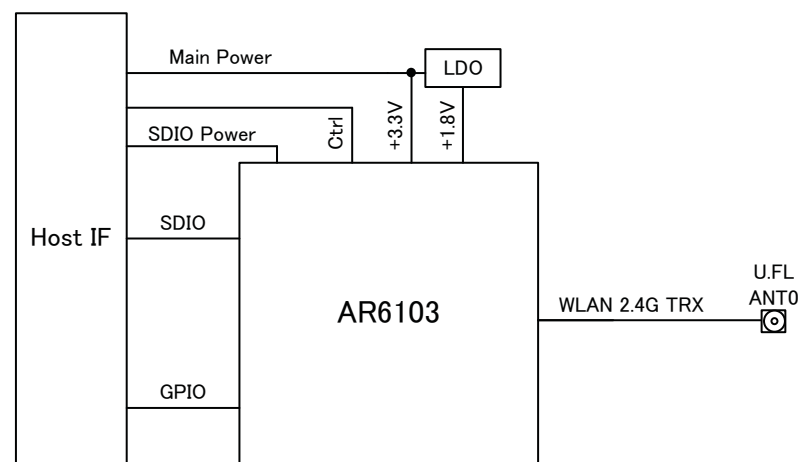
Key Features:

- IEEE 802.11b/g/n conformity (2.4GHz)

- Single stream 1 x 1 SISO technology and 20MHz bandwidth mode. (Throughput up to 72.2Mbps)

- Low Power Consumption / Small Form Factor

- Data rates of 1 - 54 Mbps for 802.11b/g, 7.2 - 72.2 Mbps for 802.11n

- Supports TDMA/FDMA Bluetooth Coexistence.

- Support SDIO 2.0 as host interface for wireless LAN

- 40 pin connector

- Upgrade Path to Dual-Band Solution

Specifications:

Product Name	SX-SDMGN-2830
Chipset	Qualcomm Atheros AR6103
Host Interface	SDIO V 2.0 (4-bit, 1-bit)
Operating Voltage	3.30 VDC +/- 5%
Radio Specifications	802.11b/g/n 2.412 - 2.484 GHz
Baseband Specifications	CSMA/CA media access; DSSS, OFDM
Operating Temperature	-20 to +85 degrees C °
Connector Mount Dimensions	24.0 x 24.0 x 3.4mm (W x H x D)

silex global sales & support locations

Dimensions and Architecture
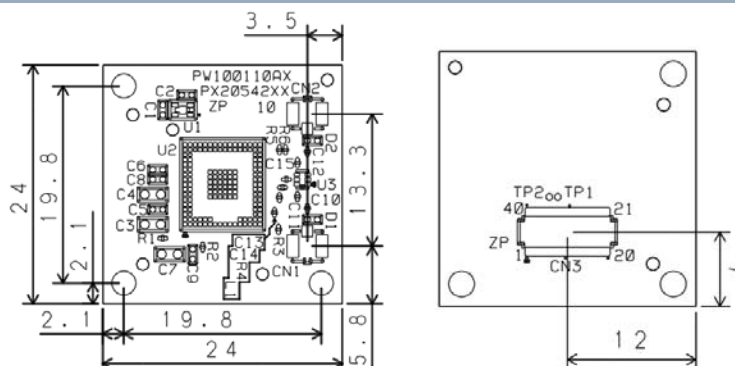
All dimension tolerances are ±0.15mm, unless otherwise specified.

General Specifications

On-Chip Functionality	Single-chip MAC/BB/RF/PA/LNA
Frequency Band:	2.4GHz
Network Standard	802.11b, 802.11g, 802.11n (1-stream)
Modulation Modes	DSSS (CCK, DQPSK, DBPSK), DSSS-OFDM (64QAM, 16QAM, QPSK, BPSK)
Hardware Encryption	WEP, WPA/WPA2, (AES and TKIP), WAPI
Quality of Service (QoS)	WMM, WMM-PS, 802.11e

Interfaces

Communications	SDIO 2.0

Supported Data Rates:

IEEE 802.11b	1 - 11 Mbps
IEEE 802.11g	6 - 54 Mbps
IEEE 802.11n	7.2 - 72.2 Mbps
Bluetooth	Supports 2-,3-, and 4-wire handshaking

Physical Specifications
Connector Mount:	24.0 x 24.0 x 3.4 mm(W x H x D)

Driver Support

Reference Driver:
- Linux
- Android
- WinCE

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

Ordering Information

SX-SDMGN-2830C:	**Connector Mount, Bulk Package**
SX-SDMGN-2830C-SP:	**Connector Mount, Sample Pack**
SX-6K3-EVK-SB:	**AR6003 WLAN Radio Evaluation Kit (Includes SX-SDMGN-2830C)**

silex global sales & support locations

US Office
silex technology america, Inc.
+1-801-748-1199
US toll free 866-765-8761
www.silexamerica.com
sales@silexamerica.com

Europe Office
silex technology europe, GmbH
+49-2159-65009-0
www.silexeurope.com
contact@silexeurope.com

Corporate Headquarters
silex technology, Inc.
+81-774-98-3781
www.silex.jp
support@silex.jp

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Silex Technology](#):
  [SX-SDMGN-2830C](#) [SX-SDMGN-2830C-SP](#)