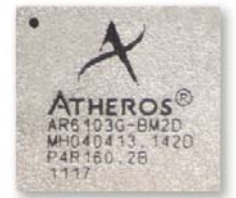


# SX-SDPGN 802.11b/g/n SiP for Mobile Applications



Lowest cost 802.11n Wireless LAN solution

The Silex SX-SDPGN (Qualcomm Atheros AR6103) is a third-generation Wireless LAN solution, featuring 802.11n for portable electronics devices. Based on the game-changing AR6003 Wireless LAN chip, the SX-SDPGN brings 802.11n throughput, range and power efficiency to portable devices including patient monitors, printers, handheld terminals and more.

The SX-SDPGN is ideal for high volume Wireless LAN applications. The SX-SDPGN is a System-in-Package (SiP) designed to be mounted directly on the device PCBA. This design approach minimizes cost by eliminating extra materials (i.e. PCB and connectors) and labor associated with a radio module or card.

### Solution Highlights

The SX-SDPGN incorporates all the features and performance of the award winning Qualcomm Atheros ROCm® AR6003 solution, including:

- Single-stream 802.11n for faster downloads, longer range, and lower power consumption
- The highest actual end-user throughput-over-range utilizing advanced 802.11n features including: full & half guard interval, hardware accelerated frame aggregation, space time block coding (STBC), and low density parity check (LDPC) encoding
- Highest level of on-chip integration using CMOS technology
  - Radio/MAC/Baseband
  - Patented Qualcomm Atheros Efficient Power Amplifier (EPA™) for high transmitter output power
  - Integrated power management unit
- Direct Connect™ AP Mode technology
- Qualcomm Atheros Universal Wireless Cooperation for enhanced Wireless/Bluetooth Cooperation

### Features:

- IEEE 802.11b/g/n 2.4 GHz
- Integrated CMOS Efficient Power Amplifier (EPA™), LNA
- Adaptive radio biasing for low-power or high-performance modes
- Industry-leading receive sensitivity
- No external EEPROM required for RF calibration
- Integrated RISC processor
- Support for industry standard QoS schemes (802.11e, WMM, WMM-PS)
- Hardware accelerated security, including WAPI (China)

### Benefits:

- High RBOM integration enables design flexibility and lowest cost
- Smallest foot print for space constrained devices
- Direct antenna connection eliminates the need for complicated RF tuning and calibration

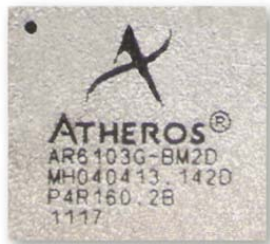
### Target Applications:

Medical devices, Handheld devices, Portable Printers, Industrial, PoS, Digital Sign, Embedded / Industrial / Tablet PC, Security Systems, virtually any portable device needing leading edge 802.11n performance in a compact cost-effective package.

### Specifications:

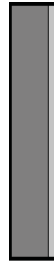
Product Name	SX-SDPGN		
Chipset	Qualcomm Atheros AR6103		
Operating Voltage	VDD 3.3V, AVDD 1.8v		
Transmit Output Power	802.11b mask comp	1 Mbps	18.5 dBm (Typ)
	802.11g mask comp	6 Mbps	19.0 dBm (Typ)
	802.11n HT20 mask comp	MCS0	18.5 dBm (Typ)
	802.11g EVM comp	54 Mbps	16.5 dBm (Typ)
	802.11n EVM comp	MCS7	13.0 dBm (Typ)
Dimensions	8.3 x 9.2 x 1.015 mm		
Storage Temp	-45 - +135C		
Operating Temp	-20 - +85C		

**Dimensions and Architecture**

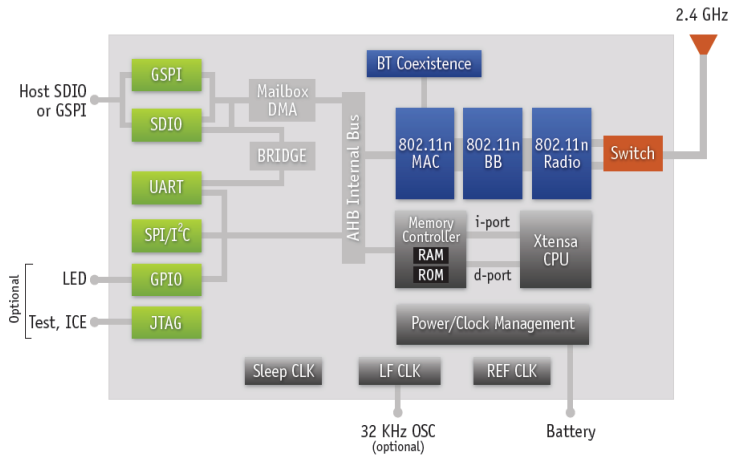


9.2 mm

8.3 mm



1.015 mm



**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	CCK and OFDM with BPSK, QPSK, 16 QAM, 64 QAM
Hardware Encryption	WEP, WPA/WPA2, (AES and TKIP), WAPI
Quality of Service (QoS)	WMM, WMM-PS, 802.11e

**General Specifications**

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 Coexistence	Supports 2-, 3-, and 4-wire handshaking
Physical Specifications	8.3 mm x 9.2 mm LGA Package

**Driver Support**

**Reference Drivers:**

- Linux
- Android
- Windows CE 6.0

**WPA/WPA2 Security Supplicant:**

- WPA Supplicant (Station)
- 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)

**Ordering Information**

**SX-SDPGN-2830: Bulk Packaged, Tape / Reel**

**SX-SDPGN-2830-SP: 10 Piece Sample Pack**

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