

SX-SDPAN 802.11a/b/g/n SiP for Mobile Applications



Highly Integrated Dual Band 802.11n plus Advanced Bluetooth 4.0 Solution

The Silex SX-SDPAN (Qualcomm Atheros AR6233) is a third-generation Wireless LAN solution, featuring dual-band 802.11n plus Bluetooth. Based on the game-changing AR6003 Wireless LAN chip, the SX-SDPAN brings 802.11n throughput, range and power efficiency to portable devices including patient monitors, printers, handheld terminals and more.

The SX-SDPAN integrates all WLAN and Bluetooth functionality in a single package to support a low-cost PCB layout implementation. 5 GHz WLAN is supported with an external Front End Module (FEM). Shared and dual antenna configurations can be implemented with a minimum number of external RF components.

Benefits:

- High RBOM integration enables design flexibility and lowest cost
- Smallest foot print for space constrained devices
- Ultra low power consumption for extended battery life
- Supports 40 MHz channels at 5 GHz allowing for highest throughput for bandwidth intensive applications

Solution Highlights:

The SX-SDPAN 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
- Bluetooth 3.0+HS and 4.0 Low Energy
- High level of RF integration enables direct antenna connection through separate 2.4 GHz WLAN and Bluetooth antenna ports
- Flexible dual-band solution with 5 GHz front end module (FEM); shared and dual antenna configurations supported
- 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
- Qualcomm Atheros Universal Wireless Cooperation for enhanced Wi-Fi/Bluetooth Coexistence

Features:

- IEEE 802.11a/b/g/n 2.4/5 GHz
- Bluetooth 3.0+HS and 4.0 Low Energy
- 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)

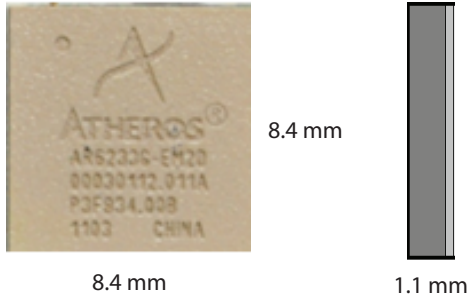
Target Applications:

The SX-SDPAN is ideal for any high volume portable device where there is a requirement to achieve the lowest BOM cost or smallest foot print. Implementation of a System-in-Package solution is recommended for companies that have RF hardware expertise. Software driver and supplicant development is also generally required.

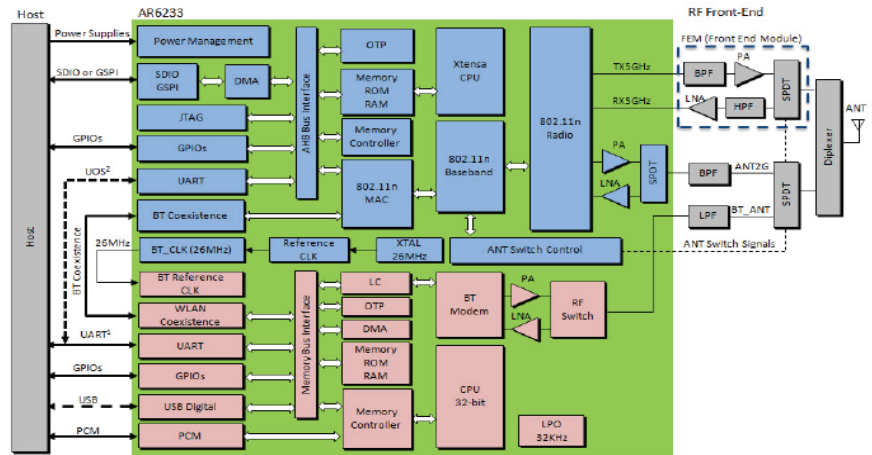
Specifications:

Product Name	SX-SDPAN-2830BT
Chipset	Qualcomm Atheros AR6233
Operating Voltage	VDD 3.3V, AVDD 1.8v
Dimensions	8.4 x 8.4 x 1.1 mm LGA package with 650um pitch pads
Bluetooth Specifications	BT3.0+HS, BT4.0, Class 1.5
Storage Temperature	-45 to +125 degrees C
Operating Temperature	-20 to +85 degrees C

Dimensions and Architecture



Physical Specifications 8.4 x 8.4 x 1.1 mm LGA Package



General Specifications

- On-Chip Functionality: Single-chip MAC/BB/RF/PA/LNA
- Frequency Band: 2.4 GHz / 5 GHz
- Network Standard: 802.11a, 802.11b, 802.11g, 802.11n
- 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

Interfaces

- Communications: SDIO 2.0, GSPI
- Physical Specifications: 8.4 mm x 8.4 mm LGA Package
- 802.11n (PHY Layer) Throughput at different Modulations

Mode	MCS	Modulation	Data Rate (Mbps)			
			20MHz (2.4GHz and 5MHz)		40MHz (5GHz only)	
			FGI	HGI	FGI	HGI
IEEE 802.11n	0	BPSK	6.5	7.2	13.5	15.0
	1	QPSK	13.0	14.4	27.0	30.0
	2	QPSK	19.5	21.7	40.5	45.0
	3	16-QAM	26.0	29.9	54.0	60.0
	4	16-QAM	39.0	43.3	81.0	90.0
	5	64-QAM	52.0	57.8	108.0	120.0
	6	64-QAM	58.5	65.0	121.5	135.0
	7	64-QAM	65.0	72.2	135.0	150.0

Driver Support

- Reference Drivers:**
- Linux
 - Android
 - Windows Embedded Compact 7
 - QNX Neutrino
 - Green Hills Intergrity
 - Mentor Graphics Nucleus

Ordering Information

- SX-SDPAN-2830BT: Bulk Packaged, Tape / Reel
- SX-SDPAN-2830BT-SP: 10 Unit Sample Pack
- SX-6K3-EVK-DB: AR6003 Dual Band Evaluation Kit

silex technology is a registered trademark of silex technology, Inc. Other product or brand names may be registered trademarks or trademarks of their respective owners. Technical information and specifications are subject to change without notice. © 2012 silex technology, Inc. All rights reserved.

silex global sales & support locations



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.