



SILEX TECHNOLOGY

WIRELESS SOLUTIONS 2010

Wireless Modules

Ultracompact Wireless Solutions for Embedded Applications



The advantages of trouble-free wireless communication between different devices – such as sensors, mobile computers or host computers – gain in importance in almost any industry. The great benefit of data transfer via WLAN is the high flexibility.

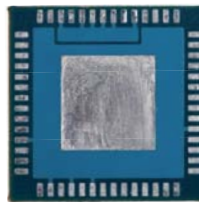
Customer-specific OEM solutions based on silex modules help manufacturers saving time and development efforts. Especially the ultracompact and extremely low power consuming silex modules with AR6002 chipset cover these needs.

SX-SDCAG

SDIO Card Module for 802.11a/b/g

SX-SDPAG & SX-SDPBG

SDIO SMT Modules for 802.11a/b/g resp. b/g



The **SX-SDCAG** is an 802.11a/b/g Radio/Baseband SDIO Card especially for OEM embedded applications. The module is an ultracompact wireless solution for 802.11a/b/g and it is ideal for low power, battery-operated devices. Diversity antenna compatible.

The **SX-SDPAG** is an 802.11a/b/g Radio/Baseband SDIO SMT Card for OEM embedded applications, like the **SX-SDPBG**, which only uses the WLAN standards 802.11b/g. Both modules have the same features as SX-SDCAG to support a high quality, easy and fast implementation.

Electrical Interface:	SDIO V 1.1 (4 bit, 1 bit)
Chipset:	Atheros Communications AR6002
Baseband Specifications:	CSMA/CA media access; DSSS, OFDM
Operating Voltage:	3,30VDC +/- 5%
Radio Specifications:	2,4-2,4897GHz (FCC, ETSI, TELEC) 5,15-5,85GHz (FCC, ETSI, TELEC)
Radio Transmit Power (Typical):	18 dBm (802.11b/g); 16 dBm (802.11a)
Temperature:	-20 to +70 °C*
Packaging:	24 x 46 x 4,1 mm


Electrical Interface:	SDIO V 1.1 (4 bit, 1 bit)
Chipset:	Atheros Communications AR6002
Baseband Specifications:	CSMA/CA media access; DSSS, OFDM
Operating Voltage:	SX-SDPAG: 3,30 VDC +/-5% SX-SDPBG: 3,30V, 1,8V, 1,2V
Radio Specifications:	SX-SDPAG: 2,4-2,4897GHz (FCC, ETSI, TELEC) 5,15-5,85GHz (FCC, ETSI, TELEC) SX-SDPBG: 2,4-2,4897GHz (FCC, ETSI, TELEC)
Radio Transmit Power (Typical):	SX-SDPAG: 18 dBm (802.11b/g); 16 dBm (802.11a) SX-SDPBG: 15 dBm (802.11b/g)
Temperature:	SX-SDPAG: -20 to +70° C* SX-SDPBG: -20 to +85° C*
Packaging:	SX-SDPAG: 56 PINs, 15 x 15 x 2,55 mm SX-SDPBG: 7,4 x 8 x 1,1 mm

*) Performance may vary across the temperature range and frequency depending on the implementation.



Overview

Serial Device Servers and Wireless Modules

Overview Serial Device Servers

SERIAL DEVICE SERVER	TYPE		DEVICE INTERFACE				NETWORK INTERFACE				SECURITY				SOFTWARE			
	External	Internal	RS-232	USB 1.1	General I/O	Ethernet Bridge	10Base-T/100-Base-TX	802.11a WLAN	802.11b WLAN	802.11g WLAN	802.1x	WPA2-(PSK)	WPA-(PSK)	WEP	Access Control	Serial Port Emulator	ExtendView	Update IP
																		
SX-500-0033	●		●				●				●				●	●	●	●
SX-500-1033	●		●				●		●	●	●	●	●	●	●	●	●	●
SX-550-0700		●	●		8		●				●				●	●	●	●
SX-550-1701		●	●		8	●	●	●	●	●	●	●	●	●	●	●	●	●
SX-560-2701		●	2	●	9		●	●	●	●	●	●	●	●	●	●	●	●

Overview Wireless Modules

WIRELESS MODULE	TYPE			NETWORK INTERFACE (WLAN)			
	Mini PCI	SDIO	SDIO SMT	802.11a	802.11b	802.11g	802.11n
					●	●	
SX-10WG	●				●	●	
SX-10WAG	●			●	●	●	
SX-10WAN	●			●	●	●	●
SX-SDCAG*		●		●	●	●	
SX-SDPAG*			●	●	●	●	
SX-SDPBG*			●	●	●		
WIRELESS MODULE	NETWORK SECURITY HARDWARE			ADDITIONAL FUNCTIONS			
	AES	TKIP	WEP	Preauthentication existent	Antenna optional	Antenna diversity	
SX-10WG	●	●	●	●	●	●	
SX-10WAG	●	●	●	●	●	●	
SX-10WAN	●	●	●	●	●	●	MIMO 3x3
SX-SDCAG*	●	●	●	**	●	●	●
SX-SDPAG*	●	●	●	**	●	●	●
SX-SDPBG*	●	●	●	**	●	●	●

***) Evaluation of the new SDIO and SDIO SMT Modules:**

The Evaluation Kit SX-6K2-EVK was especially designed to test silex's SDIO modules. It runs BusyBox and is pre-loaded with the AR6002 driver with the most common utilities needed for evaluation and regulatory testing.

To test SX-SDCAG and SX-SDPAG additionally you need the Sample Pack SX-SDCAG-2831-SP.

To test SX-SDPBG additionally you need the AR5BSD-00025G.

SX-560-2701

Intelligent programmable WLAN Module



Intelligent, compact and low-cost WLAN module (IEEE 802.11a/b/g) which consumes very low power. Therefore it is ideal for battery-operated devices. Because of its broad range of services and its extensive security functions, it is suitable for almost any WLAN application.

- Device Interface:**
- 2x Serial Port (UART with TXD, RXD, RTS and up to 921.6 Kbps on each Port; GPIO are configurable as DTR, DSR and DCD on Port 1)
 - UART Console Port is available for configuration
 - 1x USB-1.1 Host Port (12Mbps)

Network Interface: IEEE 802.11a/b/g (54/11Mbps)

WLAN Security: WPA2-(PSK), WPA-(PSK) and WEP; 802.1x Authentication with EAP and all major EAP types

Additional Features:

- Linux programmable
- 9 General Purpose I/Os (GPIO)
- 200 MHz 32 bit processor, 16 MB RAM and 8 MB flash memory
- Very low power consumption (3,3 V +/- 5 %, max. 460mA plus Wake-up function)

**) Available on request.

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