

# SX-SDWAG

## 802.11a/b/g SDIO Radio/Baseband



### Ultracompact Wireless Solution for Embedded Applications

The SX-SDWAG is the first world's first wireless module that provides 802.11a/b/g capabilities in an SDIO card form factor. With a minimum sleep mode power consumption of just 3mA, the SX-SDWAG is ideal for battery-operated portable devices in wireless local area network (WLAN) applications in the medical, weights and measures, transportation and other industries.

Unlike WLAN SDIO cards that are intended for use in PDAs, the SX-SDWAG is specifically aimed at OEM applications. It includes diversity antenna connectors for improved radio reception and flexibility in antenna selection, and it supports an extended temperature range of -20 to +80 degrees C. The SX-SDWAG's 802.11a 5GHz capabilities allow it to be used in enterprise environments such as hospitals, where interference from 2.4GHz devices like microwave ovens must be minimized. Silex also offers driver porting and consulting services for Linux, Windows CE, and other operating systems, as well as custom hardware design capabilities.

Measuring just 0.94 x 1.68 x 0.08 inches (24 x 42.7 x 2.1mm), the SX-SDWAG is slightly longer than a standard SD memory card. Because it has a standard SDIO form factor, OEMs can use off-the-shelf SDIO mounting hardware and test equipment to expedite the development process.

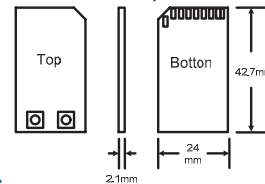
#### Key Features:

- Highly integrated system for 802.11a/b/g WLAN
- U.FL antenna connectors with diversity support
- Wide operating temperature range
- Integrated Atheros AR6001XL single chip
- Integrated high performance dual-band Front End Module (FEM), Band Pass Filter, 40MHz Crystal
- 4Kbit EEPROM
- Advanced power management to minimize standby and active power (3mA minimum power consumption)
- WEP 64/128, WPA (TKIP), WPA2 (802.11i) security

- Linux, Windows CE, and Windows Mobile drivers available from Silex (porting costs will be required in most cases)
- Compatible with Green Hills INTEGRITY RTOS and with Sourceforge (Linux) and Codeplex (WinCE 6.0) Open Source Drivers
- Ordering information:

SX-SDWAG  
SX-SDWAG-CE  
SX-SDWAG-OPEN

For Silex Linux and Green Hills drivers\*  
For Silex Windows CE drivers  
For Open Source Linux/WinCE drivers



\*Contact Silex regarding operating systems not listed

#### Specifications:

Chipset	Atheros Communications AR6001XL	
Antenna Connector	U.FL connector x Diversity antenna	
Operating Voltage	3.3V ± 0.3V	
Radio Specifications	802.11b/g : 2.412GHz~2.472GHz, 2.484GHz 802.11a : 5.180GHz-5.240GHz, 5.745-5.825GHz; 5.260-5.320GHz are also supported if DFS is enabled	
Radio Transmit Power	15 dB max (802.11g); 15dB max (802.11a)	
Power Consumption	Full power: 349mA max continuous transmit; 171mA active transmit/receive (continuous pings from Windows host); 140mA idle Sleep mode: 3mA minimum, 17mA average (access point beacon every 70 seconds)	
Baseband Specifications	CSMA/CA media access; DSSS (b), OFDM w/BPSK, QPSK, 16QAM, 64QAM. CCK (g) modulation	
Weight	5g	
Dimensions	24 x 42.7 x 2.1mm (0.94 x 1.68 x 0.08 inches)	
Storage Conditions	Storage Temperature -40° to 85°C	Storage Humidity 5 to 90%RH
Operating Conditions	Operating Temperature -20° to +80°C	Operating Humidity 20 to 90%RH
Regulatory Certifications	FCC and IC Limited Modular Certification	
Package contents	Module, certification label, E/A label	

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