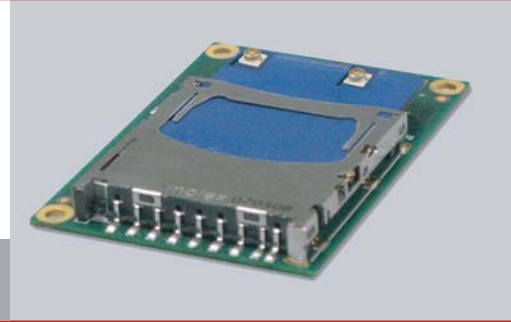


SX-560 Intelligent Programmable WLAN Module



802.11a/b/g Wireless Solution for OEM Embedded Applications

High performance, low power and very secure

The SILEX SX-560 embedded WLAN Module is a high-performance low-cost solution that supports all of the major wireless networking standards - 802.11a/b/g. Its low power consumption and a compact form factor make it ideal for battery powered portable devices, but its extensive capabilities make it suitable for almost any embedded WLAN application.

The SX-560 handles all of the TCP/IP and 802.11 network processing, so it provides a fast and easy way to add wireless networking capabilities to your device. Because it offloads the network processing, the processor on your device operates more efficiently and there is a little or no change required to your code. As a result, you increase your bottom line by reducing your time to market, making your products more competitive, and lessening the need for in-house wireless expertise.

Key Advantages

SX-560 key competitive advantages include:

- Very low power consumption (ideal for battery operated systems)
- Linux operating system with user programmability
- Enterprise level management and security

Features

- ❖ **Low Power Consumption.** The SX-560 uses a minimum amount of power during transmitting and receiving, and its power management reduces power usage during periods of inactivity.
- ❖ **Linux Operating System with User Programmability.** The SX-560 uses the Linux operating system and is designed to allow users to easily add new features. With a 200 MHz 32-bit processor, 16MB of RAM and 8MB of flash memory, the SX-560 has plenty of capacity to handle complex user applications.
- ❖ **Highly Secure.** The SX-560 includes enterprise-level security features including access control lists, complete protocol and application enable/disable control, read and write configuration passwords, and SNMP community name configuration. It features the most extensive wireless security in the industry, including 802.1x Extensible Authentication Protocol (EAP) with all major EAP

types (TLS, TTLS, LEAP, PEAP, and FAST) and WPA2, WPA2-PSK, WPA, WPA-PSK, and WEP wireless security.

- ❖ **Enterprise Management.** SILEX's ExtendView management software provides advanced features such as the ability to monitor, configure and update multiple SX-560 modules simultaneously over the network. Management capabilities are also available via TELNET, SNMP, web browser, and a dedicated serial console port. For added control, AT commands and console commands can also be sent via the two serial ports.
- ❖ **Two Serial Ports plus Dedicated Console Port.** The SX-560 provides two serial ports that can be used to connect to RS-232 or UART interfaces in your device. These ports operate at speeds up to 921Kbps with full modem controls. A third serial port is also included for use as a dedicated console port.
- ❖ **USB and SPI Ports.** The USBV1.1 host port supports speeds up to 12Mbps, while the SPI port operates at 25MHz.
- ❖ **Serial Port Emulation Software.** The SX-560 includes software that emulates a standard Windows COM port (for example, COM3). This allows you to use your existing Windows-based applications without any changes.
- ❖ **General Purpose I/Os (GPIOs).** The 9 GPIOs can be used for custom applications like driving LEDs and sensing switches, or for modem signals in conjunction with the serial ports.
- ❖ **SNMP Traps and E/mail Alerts.** Users can be notified immediately of any status changes on the GPIOs or serial ports via SNMP or E-mail.
- ❖ **Antenna Diversity.** The SX-560 has two U.FL antenna connectors for improved quality of transmission and reception.
- ❖ **Easy to Use.** The SX-560 features a compact form factor with through-holes for flexible mounting options. A 40-pin connector header for the serial and GPIO signals simplifies the hardware interface to your device.
- ❖ **An available developer's kit** provides the required hardware, software tools, and documentation for OEM customers to easily integrate the SX-560 module in their equipment.

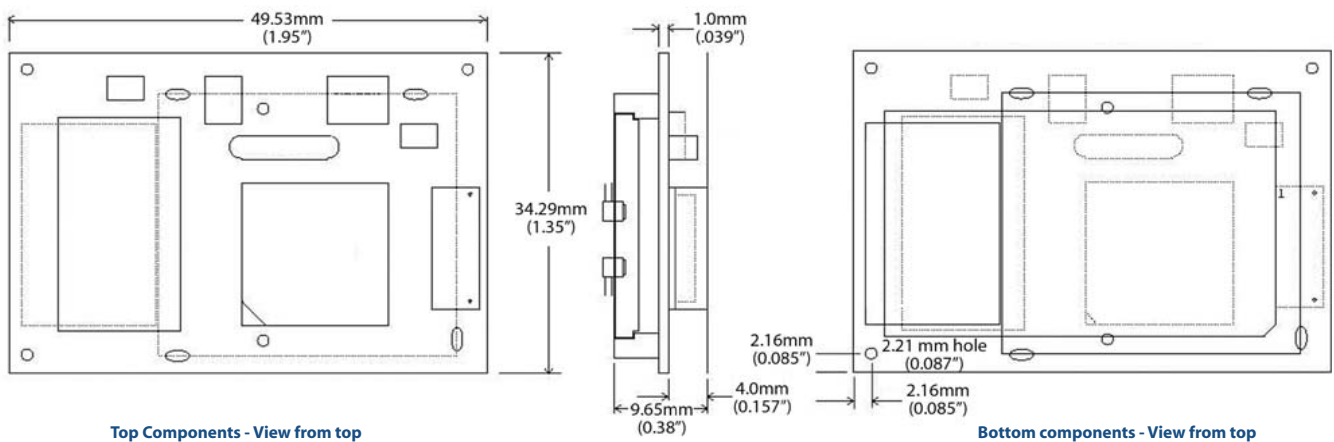
High performance, low power and very secure

Specifications

Wireless Interface	802.11a/b/g (54 Mbps/11 Mbps)
Serial Ports	2 x UART with TXD, RXD, RTS, CTS and up to 921.6 Kbps per port; 3 GPIOs are configurable for use for DTR, DSR, DCD on port 1
USB Port	USB V 1.1.host
SPI Port	25MHz; compatible with 2-ch Serial Peripheral Interface Protocol V2.11; Master-Slave, Slave-Master, and Master-Master modes of operation
Console Ports	A dedicated UART console port is available for configuration
General Purpose I/O Signals	9 general purpose signals are accessible via the OEM header (external pull-ups are required for customization)
Power	Power consumption (3.3V +/-5%; supplied through 40-pin OEM header) Maximum: 400mA; Average: 280mA; Minimum: 73mA (SX-560 can wake up via data received in UART or other interrupt)
Environmental Temperature	Operating Temperature: -20° to +80°C Storage Temperature: -40° to +85°C Maximum temperature change per hour: 20°C
Relative Humidity	Operating: 20 % to 80 % non-condensing Storage: 10 % to 90 % non-condensing
Altitude	Operating: 3.1 km Storage: 9 km
Shock	MIL-STD-202F (Method 213B) to 10 G's
Vibration	MIL-STD-202F (Method 204D) to 5 G's
Standards Compliance	RS-232, 802.11a/b/g, RFC 2217, RoHS; designed for compliance with FCC, CE, VCCI Class B, and EN60601 EMC standards, and FCC Part 15, CE, and TELEC wireless standards

Pin	Signal	Pin	Signal
1	RESETI-	2	GPIO_0
3	GPIO_1	4	GPIO_2
5	GROUND	6	+3.3VDC
7	GPIO_3	8	GPIO_4
9	GPIO_5	10	GPIO_6
11	GPIO_	12	GPIO_8
13	GPIO_9	14	TXD0
15	UGPIO_10	16	CTS0
17	GROUND	18	+3.3VDC
19	UBS+	20	RTS0
21	UBS-	22	RXD0
23	+3.3VDC	24	GROUND
25	SPI_CS-	26	TXD1
27	SPI_CLK	28	CTS1-
29	GROUND	30	+3.3VDC
31	SPI_MOSI	32	RTS1-
33	SPI_MISO	34	RXD1
35	+3.3VDC	36	GROUND
37	IIC_SDC	38	TXD2
39	IIC_SDA	40	RXD2

OEM Module Diagramm (all indicated in mm)



Top Components - View from top

Bottom components - View from top

Order No. Module: SX-560-1703
Order No. Developer's Kit: SX-560-6900

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