DIGI XBEE® SX DEVELOPMENT KIT

Provides a hands-on way to learn how to use Digi XBee SX high-power 900 MHz modules for device connectivity and sensor networking.

Digi's XBee SX Development Kit is a great way to learn how to use Digi XBee RF modules for device connectivity and true peer-to-peer mesh device networking with our DigiMesh® protocol. DigiMesh is a proprietary networking topology that supports advanced networking features including sleeping routers and dense mesh networks.

Digi XBee SX 900 MHz RF modules are the "muscle modules" of the Digi XBee Ecosystem, providing a combination of reliability and redundancy for OEMs building low-power, mission-critical wireless devices. With RF line-of-sight ranges up to 65 miles and strong interference blocking, these modules are ideal for applications requiring the combination of range, data redundancy and data reliability.

This kit is designed for anyone interested in getting started in the world of Digi XBee. Hardware and software engineers, corporate technologists, or educators and students can quickly learn more about DigiMesh technology through hands-on examples in the kit, utilizing Digi XBee SX modules.

Digi XBee SX Modules Included in the Kit

Digi XBee SX modules can be configured easily using Digi's free XCTU software or via Digi's simplified AT or API command sets. They are pre-certified for use in multiple countries and include integrated antennas, removing the burden of RF development/support costs and enabling fast time to market for OEM designs. The modules provide secure, reliable delivery of critical data between devices with 256-bit AES encryption, and the small Digi XBee surface-mount form factor saves valuable board space.

The Kit Includes:

- ✓ 2 Digi XBee-PRO SX (1W) U.FL Modules on Development Board
- ✓ 1 Digi XBee SX (20mW) U.FL Module
- ✓ 1 Digi XBee USB Interface Board - SMT Socket
- ✓ 3 Micro-USB Cables
- ✓ 3 Antennas

NUMBER	DESCRIPTION
XK9X-DMS-0	Digi XBee SX RF Module Dev Kit, US/CA
XK9X-DMS-1	Digi XBee SX RF Module Dev Kit, Brazil
XK9X-DMS-2	Digi XBee SX RF Module Dev Kit, Australia

SPECIFICATIONS		Digi XBee® SX Module	Digi XBee-PRO® SX Module
PERFORMANCE			
FREQUENCY RANGE		ISM 902 to 928 MHz	ISM 902 to 928 MHz
TRANSMIT POWER (SOFTWARE SELECTABLE)		Up to 13 dBm	Up to 30 dBm*
CHANNELS		10 hopping sequences share 50 frequencies	10 hopping sequences share 50 frequencies
RF DATA RATE		Low data rate: 10 kb/s; Middle data rate: 110 kb/s; High data rate: 250 kb/s	
MAXIMUM DATA THROUGHPUT		High data rate: 120 kb/s	High data rate: 120 kb/s
AVAILABLE CHANNEL FREQUENCIES		Low and middle data rate: 101**; High data rate: 50	Low and middle data rate: 101**; High data rate: 50
RECEIVER SENSITIVITY		Low data rate: -113 dBm; Middle data rate: -106 dBm; High data rate: -103 dBm	
RECEIVER IF SELECTIVITY		Low data rate, +/- 250 kHz: 40 dB; Low data rate, +/- 500 kHz: 50 dB Middle data rate, +/- 250 kHz: 30 dB; Middle data rate, +/- 500 kHz: 40 dB High data rate, +/- 500 kHz: 30 dB; High data rate, +/- 1000 kHz: 45 dB	
RECEIVER RF SELECTIVITY		Below 900 MHz and above 930 MHz; > 50 dB	Below 900 MHz and above 930 MHz; > 50 dB
RURAL RANGE LINE OF SIGHT***		Low data rate: Up to 14.5 km (9 mi)	Low data rate: Up to 105 km (65 mi)
URBAN RANGE LINE OF SIGHT****		Low data rate: Up to 2.5 km (1.5 mi)	Low data rate: Up to 18 km (11 mi)
INDOOR RANGE		Low data rate: Up to 100 m (330 feet)	Low data rate: Up to 300 m (1,000 feet)
NETWORKING AND SECURITY			
MODULATION		Gaussian Frequency Shift Keying	Gaussian Frequency Shift Keying
SPREADING TECHNOLOGY		Frequency Hopping Spread Spectrum (FHSS)	Frequency Hopping Spread Spectrum (FHSS)
SUPPORTED NETWORK TOPOLOGIES (SOFTWARE SELECTABLE)		Peer-to-peer (master/slave relationship not required), point-to-point/point-to-multipoint, mesh	
ENCRYPTION		Optional 256-bit AES CBC encryption. Encryption is enabled with the ATKY command.	
GENERAL			
DIMENSIONS		3.38 x 2.21 x 1.29 cm (1.33 x 0.87 x 0.12 in)	3.38 x 2.21 x 1.29 cm (1.33 x 0.87 x 0.12 in)
WEIGHT		3 g	3 g
ROHS		Compliant	Compliant
MANUFACTURING		ISO 9001:2000 registered standards	ISO 9001:2000 registered standards
HOST INTERFACE CONNECTOR		37 castellated SMT pads	37 castellated SMT pads
ANTENNA CONNECTOR OPTIONS		U.FL or RF pad	U.FL or RF pad
ANTENNA IMPEDANCE		50 ohms unbalanced	50 ohms unbalanced
MAXIMUM INPUT RF LEVEL AT ANTENNA PORT		6 dBm	6 dBm
OPERATING TEMPERATURE		-40° C to 85° C	-40° C to 85° C
POWER REQUIREMENTS			
SUPPLY VOLTAGE		2.4 to 3.6 VDC, 3.3 V typical	2.6 to 3.6 VDC, 3.3 V typical
RECEIVE CURRENT	VCC = 3.3 V	40 mA	40 mA
TRANSMIT CURRENT	VCC = 3.3 V	55 mA @ 13 dBm; 45 mA @ 10 dBm; 35 mA @ 0 dBm	900 mA @ 30 dBm; 640 mA @ 27 dBm; 330 mA @ 20 dBm
SLEEP CURRENT	VCC = 3.3 V	2.5 uA	2.5 uA
REGULATORY APPROVALS			
UNITED STATES		FCC ID: MCQ-XBSX	FCC ID: MCQ-XBPSX
CANADA		IC: 1846A-XBSX	IC: 1846A-XBPSX
AUSTRALIA		RCM	RCM
NEW ZEALAND		RSM	–

* 30 dBm guaranteed at 3.3 V and above. Maximum power will decrease at lower voltages.
** The device hops on 50 channels selected, using the CM command, from 101 available frequencies.
*** We estimate rural ranges based on a 14.5 km (9 mi) range test with dipole antennas.
**** Range estimated assuming that the urban noise floor is approximately 15 dB higher than rural. The actual range depends on the setup and level of interference in your location.

It's the easy and fast way to build a wireless mesh network using Digi XBee modules. To learn more visit docs.digi.com.

DIGI

877-912-3444 | 952-912-3444

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Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9