DIGI™ Connect with Confidence

THE POWER OF 1 WATT

The XBee® SX “muscle-module” is ideal for mission-critical OEM designs

Embed the power

of 1-Watt wireless technology into your design with the new XBee SX 900 MHz module. This is the most powerful XBee module available, with 1-Watt output power, 256-bit AES encryption, and DigiMesh® networking technology all packed into a small surface mount footprint. This "muscle module" of the XBee family is ideal for mission-critical OEM designs where reliability, security and range are critical to the success of the end product. Pre-certified for use in multiple countries with integrated antennas, this removes the burden of RF development and support costs and enables faster time to market for OEMs.

The XBee SX is a small-footprint, maximum output power RF module optimized for secure and reliable wireless communication in critical applications & harsh environments.

Actual Size

Maximum Power, Minimum Footprint

The ISM 900 MHz spectrum permits the free use of radios with maximum transmitter output power of up to 1 Watt (30 dBm) to the antenna. The maximum Effective Isotropic Radiated Power (EIRP) is 4 Watts (36 dBm) allowing for antenna gain of up to 6 dBi. The XBee SX "muscle module" packs the maximum output power of 1 Watt into the small, lightweight XBee surface mount footprint, making it the premier high-performance 900 MHz module on the market.

Transmit Power: Up to 1 Watt (30 dBm)

Line-of-Sight Range:
Up to 65 miles

Dimensions: 3.38 x 2.21 x 1.29 cm (1.33 x 0.87 x 0.12 in)

Weight: 3g

Security

Security is a critical requirement for many industries and applications. Particularly in wireless communications, data and controls must be transmitted securely to prevent dangerous breaches of sensitive information or access to control systems. 256-bit AES encryption is a symmetrical encryption algorithm that has become ubiquitous, due to the acceptance of the algorithm by the U.S. and Canadian governments as standards for encrypting transmitted data. Strong encryption protects everything from banking transactions, to the critical systems of many governments, to personal health data. The 256-bit AES encryption on the XBee SX provides the peace-of-mind that data being transmitted wirelessly will remain secure from malicious threats.

Encryption: 256-bit Advanced Encryption Standard (AES) cipher block chaining (CBC) encryption.

Use the EE command to enable encryption. Use the KY command to set the encryption key.

Reliability and Longevity

RF modules are often used in very specialized and environmentally challenging embedded applications. OEM products in these environments must adhere to industry standards, like industrial temperature specifications and other specs which may be required for the end-product to operate securely and reliably, 24/7. The XBee SX module is designed specifically for these types of environments. With temperature tolerance of -40° C to 85° C and a standard product life cycle of more than 10 years, these modules are well-suited for applications in industries like precision agriculture, oil & gas, and industrial controls.

Operating Temperature:
-40° C to 85° C

Product Life Cycle:
Typically 10+ years

UAV Systems

With 256-bit AES encryption and reliable DigiMesh networking, XBee SX is ideal for telemetry and control of commercial and civilian UAVs.

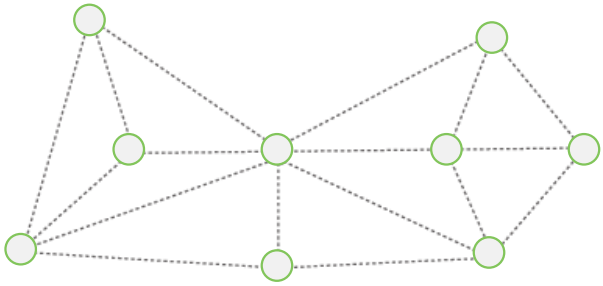
Digital Signage

For variable message signs, retail and other signage, secure and reliable wireless communications are critical and the XBee SX delivers.

Precision Ag

With RF line-of-sight ranges up to 65 miles and strong interference blocking, XBee SX is ideal for Ag applications.

XBee DigiMesh – True, Peer-to-Peer Mesh Protocol



Every DigiMesh device is the same, and is capable of routing, sleeping for power optimization, and communicating via a mesh network.

While the XBee SX supports simple point-to-multipoint network architecture, it can also be configured for mesh networking with DigiMesh. DigiMesh is a proprietary wireless mesh networking topology developed by Digi's RF engineering experts which allows for time synchronized sleeping nodes and low-power operation. One unique aspect of DigiMesh, compared to other protocols like ZigBee® or Z-Wave, is that all devices on a DigiMesh network are the same device type. No complex architecture is required to define different nodes on a network as end-nodes, routers, coordinators, border routers, etc. Every device is the same, and capable of routing, sleeping for power optimization, and communicating via a mesh network. This innovative technology allows OEMs to create large, reliable self-healing mesh networks for industrial applications, whether they are sensors, industrial controllers or monitoring systems.

Digi XCTU – Graphical Tools to Configure XBee

XCTU is a free multi-platform, configuration and test utility application designed to enable developers to interact with Digi RF modules through a simple-to-use graphical interface. It includes new tools that make it easy to set-up, configure and test XBee RF modules.

XCTU includes all of the tools a developer needs to quickly get up and running with XBee. Unique features like graphical network view, which visually represents the XBee network along with the signal strength of each connection, and the XBee API frame builder, which intuitively helps to build and interpret API frames for XBees being used in API mode, combine to make development on the XBee platform easier than ever.

Optimized for secure and reliable wireless performance, the XBee SX is ideal for OEMs of mission-critical devices and sensors that need to get their wireless design to market quickly.

FOR MORE ON DIGI XBEE SX PLEASE VISIT WWW.DIGI.COM/XBEESX

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