XBee™ OEM RF Modules

ZigBee™/802.15.4 OEM RF Modules by MaxStream, Inc.

XBee™

Indoor/urban Range:	up to 100' (30 m)
Outdoor line-of-sight Range:	up to 300' (100 m)
Transmit Power Output:	1 mW (0 dBm)
Power-down Current:	< 10 µA
Operating Frequency:	2.4 GHz
RF Data Rate:	250,000 bps

XBee-PRO™

Indoor/urban Range:	up to 300' (100 m)
Outdoor line-of-sight Range:	up to 1 mile (1.6 km)
Transmit Power Output:	100 mW (20 dBm) EIRP
Power-down Current:	< 10 µA
Operating Frequency:	2.4 GHz
RF Data Rate:	250,000 bps

Interchangeable

***RS-232 & USB
interface packages available***

Easy-to-Use! No configuration is necessary for out-of-box RF operation. Simply feed data into one module, then the data is sent out the other end of the wireless link. If more advanced functionality is needed, the modules support an extensive set of AT commands.

Key Features

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Price-to-Performance Value.
Due to innovations stamped in its design, the XBee-PRO yields 2-3x the range of standard ZigBee modules. This allows OEMs & integrators to cover more ground with fewer devices.

Additionally, XBee Modules are easy-to-use and therefore greatly reduce the cost of data system development.

µA

Low Power Consumption.
XBee Modules require little power (45 mA TX current for the XBee, 270 mA for the XBee-PRO). Additionally, sleep modes are supported that enable power-down currents that reach below 10 µA.

RxS

Receiver Sensitivity.
MaxStream modules 'hear' what others cannot; therefore supplying greater range and reliability in wireless links.

For every 6 dB gained in TX power or RX sensitivity, OEMs and integrators can double the range of a wireless link. XBee Modules outperform higher costing modules due in large part to range gained through superior RX sensitivity.

FC

Worldwide Acceptance.
FCC (U.S.A.), IC (Canada) and ETSI (Europe)

CE

Systems that contain XBee/XBee-PRO Modules can operate under the certifications obtained by MaxStream. Further testing is not required. Contact MaxStream for more details.

Sample Applications

**Security systems
& lighting controls**

**Home automation
& building control**

**Home appliances
& fire/CO2 alarms**

**Monitoring of
remote systems**

**Sensor data capture
in embedded networks**

Call today!
- Free RF Consultation
- Volume Discounts
- Development Kit Pricing

MaxStream ®
(866) 765-9885 toll-free in U.S. & Canada
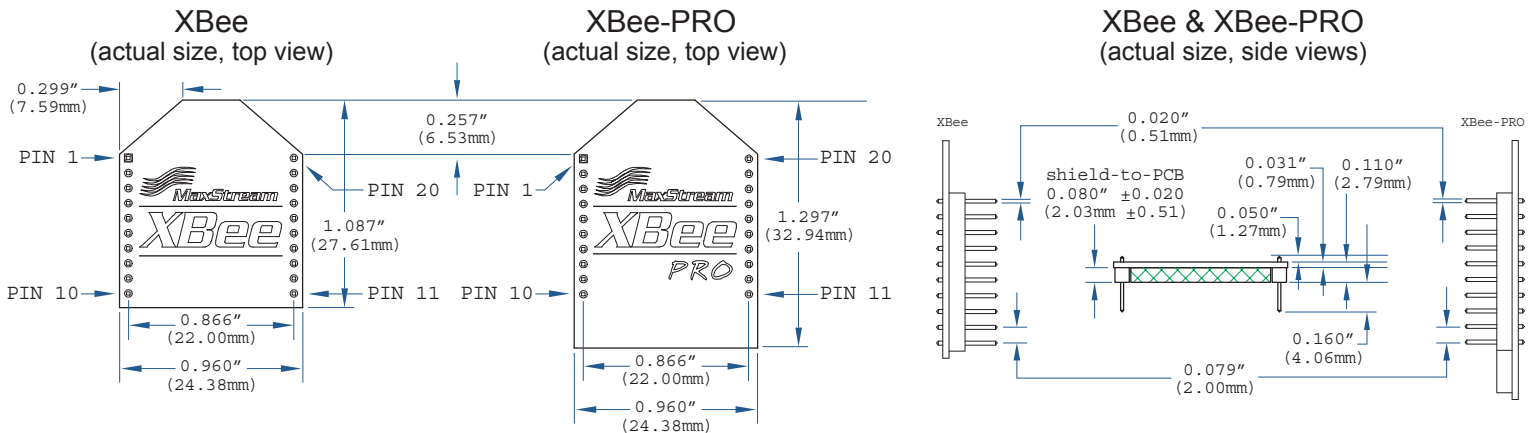(801) 765-9885 worldwide
www.maxstream.net

XBee™ & XBee-PRO™ 2.4 GHz OEM RF Modules

Specifications		XBee	XBee-PRO
Performance	Indoor/Urban Range	up to 100 ft. (30 m)	up to 300 ft. (100 m)
	Outdoor RF line-of-sight Range	up to 300 ft. (100 m)	up to 1 mile (1.6 km)
	Transmit Power Output	1 mW (0 dBm)	60 mW (18 dBm)*, 100 mW EIRP*
	RF Data Rate	250,000 bps	250,000 bps
	Receiver Sensitivity	-92 dBm (1% PER)	-100 dBm (1% PER)
Power Requirements	Supply Voltage	2.8 – 3.4 V	2.8 – 3.4 V
	Transmit Current (typical)	45 mA @ 3.3 V	270 mA @ 3.3 V
	Receive Current (typical)	50 mA @ 3.3 V	55 mA @3.3 V
	Power-down Current	< 10 µA	< 10 µA
General	Frequency	ISM 2.4 GHz	ISM 2.4 GHz
	Dimensions	0.960” x 1.087” (2.438cm x 2.761cm)	0.960” x 1.297” (2.438cm x 3.294cm)
	Operating Temperature	-40 to 85º C (industrial)	-40 to 85º C (industrial)
	Antenna Options	U.FL Connector, Chip Antenna or Whip Antenna	U.FL Connector, Chip Antenna or Whip Antenna
Networking and Security	Supported Network Topologies	Point-to-Point, Point-to-Multipoint, Peer-to-Peer and Mesh	Point-to-Point, Point-to-Multipoint, Peer-to-Peer and Mesh
	Number of Channels	16 Direct Sequence Channels (software selectable)	13 Direct Sequence Channels (software selectable)
	Filtration Options	Channel, PAN ID & Source/Destination Addresses	Channel, PAN ID & Source/Destination Addresses
Agency Approvals	FCC Part 15.247	OUR-XBEE	OUR-XBEE
	Industry Canada (IC)	4214A-XBEE	4214A-XBEEPRO
	Europe (CE)	ETSI	ETSI (10 mW max TX output)

Specifications are subject to change without notice.

* When operating in Europe: XBee-PRO Modules must be configured to operate at a maximum TX power output level of 10 dBm (power output level is set using the PL command). Additionally, European regulations stipulate an EIRP power maximum of 12.86 dBm (19 mW).

Mechanical Drawings

XBee (actual size, top view)

XBee-PRO (actual size, top view)

XBee & XBee-PRO (actual size, side views)