

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 μ A
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 μ A
Operating Frequency:	2.4 GHz
RF Data Rate:	250,000 bps



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



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.



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 μ A.



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.



Worldwide Acceptance.

FCC (U.S.A.), IC (Canada), ETSI (Europe) pending



Systems that include XBee Modules inherit MaxStream's certifications. Contact MaxStream for a complete list of government agency approvals.

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



 **MaxStream®**

Specifications		XBee	XBee-PRO
Performance	Indoor/Urban Range	up to 1000 ft (305m)	up to 300 ft. (100m)
	Outdoor RF line-of-sight Range	up to 3000 ft (914m)	up to 1 mile (1.6km)
	Transmit Power Output	1 mW (0 dBm)	60 mW (18 dBm), 100 mW EIRP
Power Requirements	RF Data Rate	250,000 bps	250,000 bps
	Receiver Sensitivity	-92 dBm (1% PER)	-100 dBm (1% PER)
	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
General	Power-down Current	< 10 μ A	< 10 μ A
	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 85° C (industrial)	-40 to 85° C (industrial)
Networking and Security	Antenna Options	U.FL Connector, Chip Antenna or Whip Antenna	U.F.L Connector, Chip Antenna or Whip Antenna
	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)
Agency Approvals	Filtration Options	Channel, PAN ID & Source/Destination Addresses	Channel, PAN ID & Source/Destination Addresses
	FCC Part 15.247	pending	pending
	Industry Canada (IC) Europe	pending pending	pending pending
Specifications are subject to change without notice.			

Mechanical Drawings

XBee
(actual size, top view)

XBee-PRO
(actual size, top view)

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

