

XStream™ OEM RF Modules

900 MHz - 2.4 GHz - Long Range OEM RF Modules by MaxStream, Inc.

Long Range Performance

Indoor/urban Range:	up to 1500' (450 m)
Outdoor line-of-sight Range:	up to 7 miles (11 km) w/ 2.1 dB dipole antenna
Outdoor line-of-sight Range:	up to 20 miles (32 km) w/ high-gain antenna
Receiver Sensitivity:	-110 dBm (@9600 bps)



Advanced Networking & Security

7 Frequency Hopping Channels - each with 65K available
Retries & Acknowledgements for reliable packet delivery
Several advanced networking modes supported

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 and binary commands.

**RS-232/485, USB, Ethernet & Telephone
interface packages available**

*"Instant Gratification...
The radios worked perfectly together right out of the box."
- Fred Eady
Circuit Cellar "Radio Roundup"
In describing the out-of-box experience
he gathered from the MaxStream Development Kit.*

Key Features

\$ Price-to-Performance Value.
Due to innovations stamped in its design, the XStream Module yields 2-8x the range of competing modules. This allows OEMs and integrators to cover more ground with fewer devices. Additionally, XStream Modules are easy-to-use and therefore greatly reduce the cost of data system development.

RxS Receiver Sensitivity.
MaxStream modules 'hear' what others cannot; therefore supplying greater range and reliability in wireless links. For every 6 dBm gained in TX power or RX sensitivity, OEMs and integrators can double the range of a wireless link. XStream Modules outperform higher costing modules due in large part to range gained through superior RX sensitivity.

μA Low Power Consumption.
For power-sensitive applications; Pin, Serial Port and Cyclic Sleep Modes are available. Power-down currents can reach below 26 μA.

FC CE Worldwide Acceptance.
FCC (U.S.A.), IC (Canada), ETSI (Europe)
Systems that include XStream Modules inherit MaxStream's certifications. Contact MaxStream for a complete list of government agency approvals.

Sample Applications

**Monitoring of
remote systems**



**Sensor data capture
in embedded systems**



**Home automation &
building control**



**SCADA (Supervisory control
& data acquisition)**



**Fleet management
& asset tracking**



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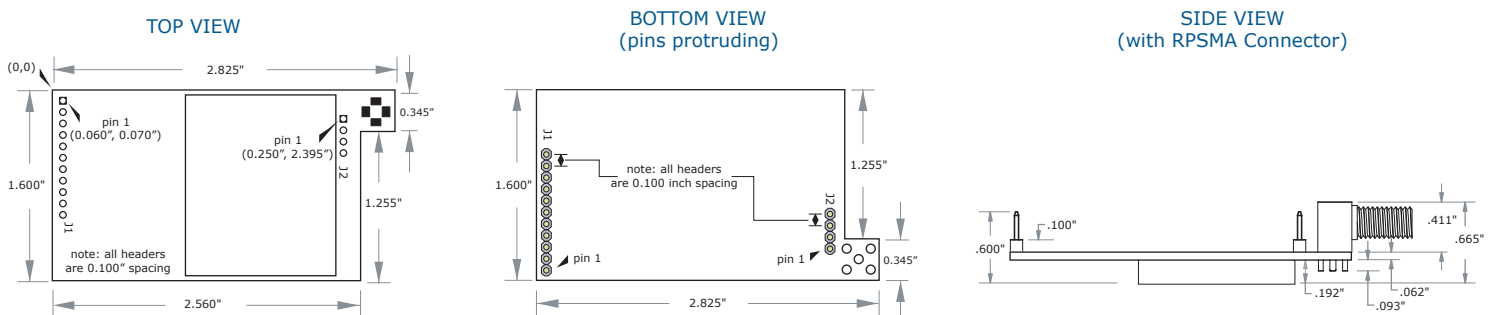
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XStream™ 900 MHz & 2.4 GHz OEM RF Modules

Specifications		9XStream™ (900 MHz)		24XStream™ (2.4 GHz)	
Performance	Indoor/Urban Range (w/ 2.1 dB dipole antenna)	up to 1500 ft. (450 m)		up to 600 ft. (180 m)	
	Outdoor RF line-of-sight Range (w/ 2.1 dB dipole antenna)	up to 7 miles (11 km)		up to 3 miles (5 km)	
	Outdoor RF line-of-sight Range (w/ high-gain antenna)	up to 20 miles (32 km)		up to 10 miles (16 km)	
	Transmit Power Output	100 mW (20 dBm)		50 mW (17 dBm)	
	Interface Data Rate (software selectable)	10 - 57600 bps (including non-standard baud rates)		10 - 57600 bps (including non-standard baud rates)	
	Throughput Data Rate	9,600 bps	19,200 bps	9,600 bps	19,200 bps
	RF Data Rate	10,000 bps	20,000 bps	10,000 bps	20,000 bps
	Receiver Sensitivity	-110 dBm	-107 dBm	-105 dBm	-102 dBm
Power Requirements	Supply Voltage	5V (± 0.25V) regulated		5V (± 0.25V) regulated	
	Receive Current	50 mA		80 mA	
	Transmit Current	140 mA		150 mA	
	Power-down Current	< 26 µA		< 26 µA	
General	Dimensions	1.600" x 2.825" x 0.350" (4.06 cm x 7.18 cm x 0.89 cm)		1.600" x 2.825" x 0.350" (4.06 cm x 7.18 cm x 0.89 cm)	
	Weight	0.8 oz. (24 g)		0.8 oz. (24 g)	
	Operating Temperature	0 - 70 C° (commercial) or -40 to 85° C (industrial)		0 - 70 C° (commercial) or -40 to 85° C (industrial)	
	Antenna Options	RPSMA, MMCX, or Wire Antenna		RPSMA, MMCX, or Wire Antenna	
Networking and Security	Operating Frequency	ISM 902 - 928 MHz		ISM 2.4000 - 2.4835 GHz	
	Supported Network Topologies	Peer-to-Peer (no master/slave dependencies), Point-to-Point, Point-to-Multipoint, Multidrop		Peer-to-Peer (no master/slave dependencies), Point-to-Point, Point-to-Multipoint, Multidrop	
	Number of Channels (software selectable)	7 Frequency Hopping Channels		7 Frequency Hopping Channels	
	Network Filtration Layers	VID, Channel, Destination Address		VID, Channel, Destination Address	
Agency Approvals	FCC Part 15.247	OUR9XSTREAM		OUR-24XSTREAM	
	Industry Canada (IC)	4214A-9XSTREAM		4214A 12008	
	Europe	n/a		ETSI	

Specifications are subject to change without notice.

Mechanical Drawings



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