

# XStream-PKG™ RF Modems

900 MHz - 2.4 GHz - Stand-alone Radio Modems 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

Retries & Acknowledgements for reliable packet delivery  
7 Frequency Hopping Channels - each with 65K available addresses  
Peer-to-peer (no master/slave dependencies), point-to-point,  
point-to-multipoint & multidrop network topologies supported

## Easy-to-Use

No configuration is necessary for out-of-box RF operation. Simply feed data into one modem, then the data is sent out the other end of the wireless link.

If more advanced functionality is needed, the modems support an extensive set of AT and binary commands.

## Data Interface Options



**XStream-PKG-R™**  
RS-232/485



**XStream-PKG-E™**  
Ethernet



**XStream-PKG-U™**  
USB



**XStream-PKG-T™**  
Telephone

## Key Features



### Price-to-Performance Value.

Due to innovations stamped in its design, the XStream Modem yields 2-8x the range of competing modems. This allows OEMs and integrators to cover more ground with fewer devices. Additionally, XStream Modems are easy-to-use and therefore greatly reduce the cost of data system development.



### Receiver Sensitivity.

MaxStream modems '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. XStream Modems outperform higher costing modems due in large part to range gained through superior RX sensitivity.



### Low Power Consumption.

For power-sensitive applications; Pin, Serial Port and Cyclic Sleep Modes are available. Power-down currents reach below 1 mA.



### Worldwide Acceptance.

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



Systems that contain XStream Modems 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**



### Call today!

- Free RF Consultation
- Volume Discounts
- Development Kit Pricing



**MaxStream®**

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# XStream-PKG™ 900 MHz & 2.4 GHz RF Modems

Specifications			XStream-PKG-R™ (RS-232/485)	XStream-PKG-U™ (USB)	XStream-PKG-E™ (Ethernet)	XStream-PKG-T™ (Telephone)
Performance	Indoor/Urban Range (w/ 2.1 dB dipole antenna)	900 MHz	up to 1500' (450 m)			
		2.4 GHz	up to 600' (180 m)			
	Outdoor RF line-of-sight Range (w/ 2.1 dB dipole antenna)	900 MHz	up to 7 miles (11 km)			
		2.4 GHz	up to 3 miles (5 km)			
	Outdoor RF line-of-sight Range (w/ high gain antenna)	900 MHz	up to 20 miles (32 km)			
		2.4 GHz	up to 10 miles (16 km)			
	Transmit Power Output	900 MHz	100 mW (20 dBm)			
		2.4 GHz	50 mW (17 dBm)			
	Receiver Sensitivity	900 MHz	-110 dBm (@9,600 bps Throughput Data Rate), -107 dBm (@19,200 bps)			
		2.4 GHz	-105 dBm (@9,600 bps Throughput Data Rate), -102 dBm (@19,200 bps)			
Interface Data Rate (software selectable)		10 - 57600 bps (including non-standard baud rates)				
Throughput Data Rate		9,600 or 19,200 bps				
RF Data Rate		10,000 bps (@9,600 bps Throughput Data Rate) or 20,000 bps (@19,200 bps)				
Networking & Security	Frequency Range		ISM 902 - 928 MHz or 2.4000 - 2.4835 GHz			
	Spread Spectrum		FHSS (Frequency Hopping Spread Spectrum)			
	Modulation		FSK (Frequency Shift Keying)			
	Supported Network Topologies		Peer-to-peer (no master/slave dependencies), Point-to-point, Point-to-multipoint & Multidrop			
	Channel Capacity (software selectable)		7 hopping sequences			
	Network Filtration Layers		VID, Hopping Channel & Destination Address			
Antenna	Connector Options		RPSMA (reverse polarity SMA)			
	Impedance		50 ohms unbalanced			
Certifications (partial list)	FCC Part 15.247		OUR9XSTREAM (900 MHz), OUR-24XSTREAM (2.4 GHz)			
	Industry Canada (IC)		4214A-9XSTREAM (900 MHz), 4214A 12008 (2.4 GHz)			
	Europe		ETSI, CE (2.4 GHz only)			
			XStream-PKG-R™	XStream-PKG-U™	XStream-PKG-E™	XStream-PKG-T™
Power Requirements	Power Supply Voltage		7 - 18 V	5 - 12 V	7 - 28 V	7 - 28 V
	Receive Current	900 MHz	70 mA	90 mA	240 mA	140 mA
		2.4 GHz	90 mA	115 mA	260 mA	160 mA
	Transmit Current	900 MHz	170 mA	185 mA	320 mA	220 mA
		2.4 GHz	180 mA	200 mA	340 mA	230 mA
Power Down Current			< 1 mA	50 mA	230 mA	n/a
Physical Properties	Size		2.750" x 5.500" x 1.125" (6.99cm x 13.97cm x 2.86cm)			2.75" x 6.50" x 1.50" (6.99cm x 16.51cm x 3.80cm)
	Weight		7.1 oz (200 g)			8.1 oz (228 g)
	Data Connection		DB-9	USB	RJ-45	RJ-11
	Operating Temperature		0 to 70° C (commercial) or -40 to 85° C (industrial)			

Specifications are subject to change without notice.



**For the best in wireless data solutions and support, contact MaxStream, Inc.**

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