

# XStream-PKG

## Stand-Alone Radio Modem

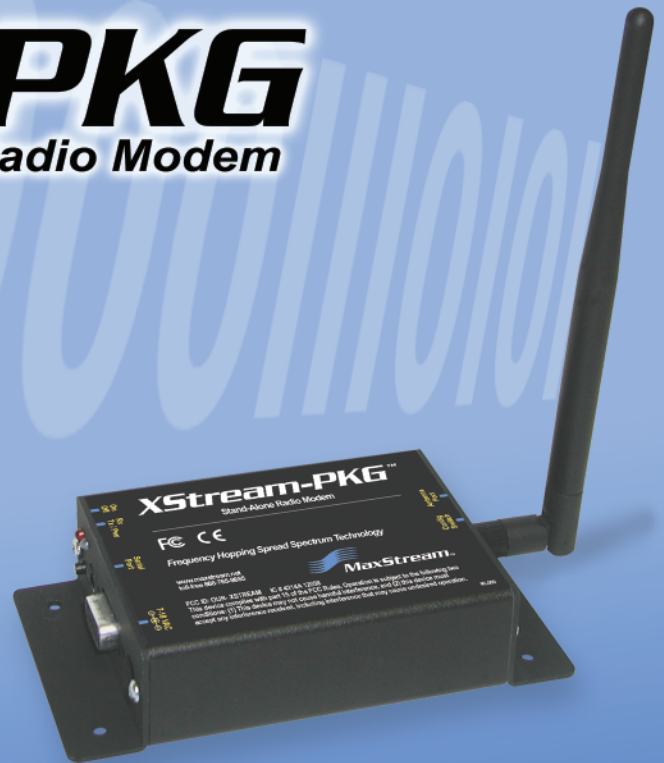
Long Range • Low Power • Low Cost

Wireless serial communications

Package includes:

- (1) XStream™ Stand-Alone Radio Modem
- (1) 1/2 wave dipole antenna
- (1) DB-9 male to DB-9 female serial cable
- (1) Null modem adapter
- (1) Power supply

[www.maxstream.net](http://www.maxstream.net)



## 900 MHz & 2.4 GHz Stand-Alone Radio Modems



Monitoring of remote systems



Production reporting of active systems



Automatic meter reading and home automation



Supervisory control and data acquisition



Vehicle management and asset tracking

### Features

- Plug-and-communicate (no configuration required)
- True peer-to-peer networking (no "Master" radio needed)
- Transparent operation supports existing software & systems
- Addressing for point-to-point & point-to-multipoint networks
- Simple configuration using standard AT or binary commands
- RS-485/422 (multi-drop bus) protocol support
- Retries & acknowledgements for guaranteed packet delivery □
- Networking features allow up to 7 independent pairs □ □ (networks) to operate in close proximity
- Low power modes include shutdown pin, cyclic sleep □ □ & serial port sleep for current consumption as low as 1 mA
- Host interface baud rates from 1200 bps to 57.6 kbps
- Flow control with hardware XON & XOFF
- Signal strength register for link quality monitoring & debugging
- Support for multiple data formats (7/8 bits, Even/Odd/No Parity)

### Options

- 900 MHz or 2.4 GHz license-free ISM bands
- 9600 bps or 19.2 kbps over-the-air data rates
- Commercial (0° to +70° C) or industrial (-40° to +85° C) grades

The XStream-PKG was designed to provide end users with an easy to install wireless serial communication link.

This radio comes equipped with the features of our 9XStream or 24XStream wireless OEM modules. Systems integrators love the functionality provided by the serial connection, power switch, indicator lights, high quality antenna, mounting plates and power source inputs.

The 9XStream-PKG has the best sensitivity in the industry, making it one of the longest range, low cost radio modems available to date.

The 24XStream-PKG can provide high performance and dependable operation for deployment throughout the world (visit the MaxStream website for more details).

These radios are perfect for applications in automatic meter reading (AMR), supervisory control and data acquisition (SCADA), home automation, security, instrument monitoring and point of sale (POS) systems among many others.

The XStream-PKG requires no configuration to operate, simply plug-and-communicate. Output serial data from any microcontroller or RS-232 port into the XStream-PKG to send FCC & ETSI approved, frequency hopping spread spectrum data and capture it on all receivers within range on the network.

The XStream-PKG can also be configured to integrate quickly and seamlessly into any new or existing design.



1215 South 1680 West  
Orem, Utah 84058  
801-765-9885 phone  
801-765-9895 fax  
www.maxstream.net

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<i>Specifications</i>	<i>9XStream-PKG</i>	<i>24XStream-PKG</i>	
<b>General</b>			
Frequency	902-928 MHz	2.4000-2.4835 GHz	
Spreading Spectrum Type	Frequency hopping, direct FM	Frequency hopping, direct FM	
Network Topology	Point-to-multipoint, point-to-point multi-drop transparent	Point-to-multipoint, point-to-point multi-drop transparent	
Channel Capacity	7 hop sequences share 25 frequencies	7 hop sequences share 25 frequencies	
Serial Data Interface	RS-232/422/485	RS-232/422/485	
I/O Data Rate	Software selectable 1200-57,600 bps	Software selectable 1200-57,600 bps	
<b>Power Requirements</b>			
Supply Voltage	7-18 VDC	7-18 VDC	
Transmit Current	200 mA	200 mA	
Receive Current	70 mA	70 mA	
Power Down Current	< 1 mA	< 1 mA	
<b>Physical Properties</b>			
Enclosure Type	Extruded aluminum, black anodized	Extruded aluminum, black anodized	
Enclosure size	2.75" x 5.50" x 1.124" (7.90 cm x 13.90 cm x 3.80 cm)	2.75" x 5.50" x 1.124" (7.90 cm x 13.90 cm x 3.80 cm)	
Weight	7.1 oz (200 g)	7.1 oz (200 g)	
Operating Temperature	0° to +70° C (commercial) -40° to +85° C (industrial)	0° to +70° C (commercial) -40° to +85° C (industrial)	
<b>Antenna</b>			
Type	1/2 wave dipole whip	1/2 wave dipole whip	
Gain	2.1 dBi	2.1 dBi	
Length	6.75" (17.1 cm)	5.25" (13.3 cm)	
Connector	Reverse-polarity SMA	Reverse-polarity SMA	
Impedance	50 ohms unbalanced	50 ohms unbalanced	
<b>Certifications</b>			
FCC Part 15.247	OUR9XSTREAM	OUR-24XSTREAM	
Industry Canada	4214A-9XSTREAM	4214A 12008	
Europe	N/A	ETSI	
<b>Performance</b>			
Indoor/Urban Range	Up to 1500' (457 m)	Up to 600' (183 m)	
Outdoor LOS Range	Up to 7 mi. (11 km) w/ dipole Up to 20 mi. (32 km) w/ high-gain	Up to 3 mi. (5 km) w/ dipole Up to 10 mi. (16 km) w/ high-gain	
Serial Data Throughput	<b>9600 bps</b>	<b>19.2 kbps</b>	<b>9600 bps</b> <b>19.2 kbps</b>
RF Baud Rate	10,000 bps	20,000 bps	10,000 bps      20,000 bps
Transmit Power Output	140 mW (21.5 dBm)	140 mW (21.5 dBm)	50 mW (17 dBm)      50 mW (17 dBm)
Receiver Sensitivity	-110 dBm	-107 dBm	-105 dBm      -102 dBm