XStream-PKG-RA™

RS-232/485 RF Modems

900 MHz & 2.4 GHz

XStream-PKG-RA Includes:

- (1) XStream-PKG-R Stand-Alone Radio Modem
- (1) Quick Start Guide
- (1) CD (software & documentation)
- (1) 1/2 wave antenna
- (1) Serial loopback adapter
- (1) NULL modem adapter (male-to-male)
- (1) Male DB-9 to RJ-45 adapter
- (1) Female DB-9 to RJ-45 adapter
- (1) Power adapters
- (1) 9V battery adapter
- (1) RS-232 cable (6')

DIP Switchable RS-232/422/485

MaxStream
Smart, wireless connections™

Additional Features

- Plug-and-communicate (no configuration required)
- Transparent operation supports existing software & systems
- Simple configuration using software & standard AT commands
- Retries & acknowledgements for guaranteed packet delivery
- RS-232/422/485 protocol & multi-drop bus support
- Peer-to-peer, point-to-point & point-to-multipoint networks
- Up to 65,000 network addresses available
- Allows up to 7 Frequency Hopping Spread Spectrum independent pairs (networks) to operate in close proximity
- Low power modes for current consumption as low as 1 mA
- Host interface baud rates from 1200 bps to 57600 bps
- XON / XOFF or hardware flow control
- Signal strength reporting 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 19200 bps over-the-air data rates
- Commercial (0º to +70º C) or industrial (-40º to +85º C) grades
- Available without accessories as XStream-PKG-R

Applications

Monitoring of remote systems

Production reporting of active systems

Home automation & building control

Supervisory control & data acquisition

Vehicle management & asset tracking

XStream-PKG-RA RS-232/485 RF Modems were designed to provide end users with an easy to install wireless serial communication link.

These radio modems come equipped with the features of our XStream 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 900 MHz radio modem has the best sensitivity in the industry, making it one of the longest range, low cost radio modems available to date.

The 2.4 GHz radio modem can provide high performance and dependable operation for deployment throughout the world (visit the MaxStream website for more details).

These radio modems 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.

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

XStream stand-alone radio modems can also be configured to integrate quickly and seamlessly into any new or existing design.

MaxStream™

Specifications	900 MHz	2.4 GHz
General	* Radio modems are also available without accessories (XStream-PKG-R)	
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	Switch selectable RS-232/422/485	Switch selectable RS-232/422/485
I/O Data Rate	Software selectable 1200-57,600 bps	Software selectable 1200-57,600 bps
Power Requirements		
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
Physical Properties		
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	0º to +70º C (commercial) -40º to +85º C (industrial)	0º to +70º C (commercial) -40º to +85º C (industrial)
Antenna		
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
Certifications		
FCC Part 15.247	OUR9XSTREAM	OUR-24XSTREAM
Industry Canada	4214A-9XSTREAM	4214A 12008
Europe	N/A	ETSI
Performance		
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	**9600 bps** / **19.2 kbps**	**9600 bps** / **19.2 kbps**
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