



50 MW/2.4 GHZ STAND-ALONE RADIO MODEMS

# XSTREAM<sup>®</sup> RF MODEMS

2.4 GHz stand-alone RF modems provide outstanding range (up to 10 miles) in a low-cost wireless solution



Digi's XStream RF modems can be configured in minutes to provide low-cost serial cable replacement between all types of electronic devices. XStream-PKG modems provide transmission ranges of up to 10 miles in a low-cost wireless solution. The modems are coupled with a DIP-switchable RS-232/422/485 interface board and regularly outperform more expensive RF modems.

Innovations stamped in their design enable XStream modems to yield two- to eight-times the range of competing modems. This allows OEMs and integrators to cover more ground with fewer devices.

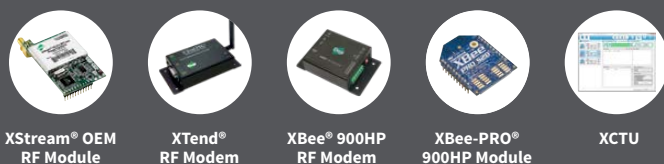
Additionally, XStream-PKG modems are easy to use, thereby reducing the complexity of data system development.

Available in a variety of data interface options, including RS-232/422/485 serial, USB and telephone, XStream-PKG modems can wirelessly connect a variety of devices across many applications including remote monitoring, building automation/security, industrial automation/SCADA, fleet management/asset tracking and sensor data capture in embedded systems.

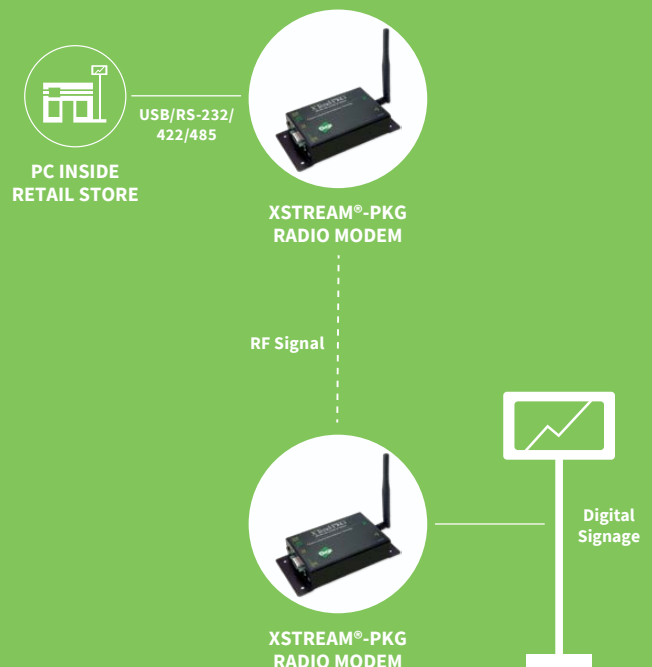
## BENEFITS

- Indoor/Urban range up to 600 feet (180 m)
- Outdoor line-of-sight range up to 10 miles (16 km) (with high gain antenna)
- 7 frequency hopping channels, each with 65K available addresses
- Outstanding receiver sensitivity (-105 dBm @ 9600 bps)
- Low power consumption for power-sensitive applications
  - Pin, serial port and cyclic sleep modes available
- Performs retries and acknowledgments for reliable packet delivery
- Easy out-of-the-box operation — no configuration necessary
- Durable industrial grade enclosure

## RELATED PRODUCTS



## APPLICATION EXAMPLE



# SPECIFICATIONS

## XStream®-PKG-R

## XStream®-PKG-U

### PERFORMANCE

<b>INDOOR/URBAN RANGE (W/ 2.1 DB DIPOLE ANTENNA)</b>	Up to 600 ft (180 m)
<b>OUTDOOR RF LINE-OF-SIGHT RANGE (W/ 2.1 DB DIPOLE ANTENNA)</b>	Up to 3 miles (5 km)
<b>OUTDOOR RF LINE-OF-SIGHT RANGE (W/ HIGH-GAIN ANTENNA)</b>	Up to 10 miles (16 km)
<b>TRANSMIT POWER OUTPUT</b>	50 mW (17 dBm)
<b>INTERFACE DATA RATE (SOFTWARE SELECTABLE)</b>	10 - 57600 bps (including non-standard baud rates)
<b>THROUGHPUT DATA RATE</b>	9,600 bps or 19,200 bps
<b>RF DATA RATE</b>	10,000 bps (@9,600 bps throughput data rate) or 20,000 bps (@19,200 bps)
<b>RECEIVER SENSITIVITY</b>	-105 dBm (@9,600 bps throughput data rate), -102 dBm (@19,200 bps)

### POWER REQUIREMENTS

<b>SUPPLY VOLTAGE</b>	7 - 18V	5 - 12V
<b>RECEIVE CURRENT</b>	90 mA @ 2.4 GHz	115 mA @ 2.4 GHz
<b>TRANSMIT CURRENT</b>	180 mA @ 2.4 GHz	200 mA @ 2.4 GHz
<b>POWER-DOWN CURRENT</b>	< 1 mA	50 mA

### GENERAL

<b>CONNECTION OPTIONS</b>	RS-232/485 DB-9	USB
<b>DIMENSIONS (L X W X H)</b>	2.75 in x 5.50 in x 1.12 in (4.06 cm x 7.18 cm x 0.89 cm)	
<b>WEIGHT</b>	7.10 oz (200.00 g)	
<b>OPERATING TEMPERATURE</b>	0° C to 70° C (commercial) or -40° C to 85° C (industrial)	
<b>ANTENNA OPTIONS</b>	RPSMA (Reverse Polarity SMA)	
<b>IMPEDANCE</b>	50 ohms unbalanced	

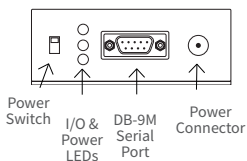
### NETWORKING & SECURITY

<b>OPERATING FREQUENCY</b>	ISM 2.4000 - 2.4835 GHz
<b>SPREAD SPECTRUM</b>	FHSS (Frequency Hopping Spread Spectrum)
<b>MODULATION</b>	FSK (Frequency Shift Keying)
<b>SUPPORTED NETWORK TOPOLOGIES</b>	Peer-to-Peer (no master/slave dependencies), Point-to-Point, Point-to-Multipoint, Multidrop
<b>NUMBER OF CHANNELS (SOFTWARE SELECTABLE)</b>	7 Frequency Hopping Channels
<b>NETWORK FILTRATION LAYERS</b>	VID, Hopping Channel, Destination Address

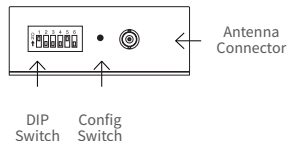
### AGENCY APPROVALS

<b>FCC PART 15.247</b>	OUR-24XSTREAM
<b>INDUSTRY CANADA (IC)</b>	4214A 12008

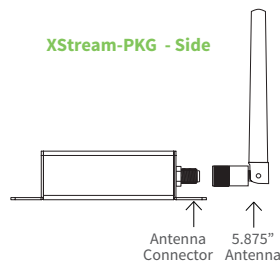
**XStream-PKG-R - Front**



**XStream-PKG-R - Back**



**XStream-PKG - Side**



PART NUMBERS	DESCRIPTION
X24-009PKC-U	XStream-PKG 2.4 GHz, 9600 baud, commercial, USB, no accessories
X24-009PKC-UA	XStream-PKG 2.4 GHz, 9600 baud, commercial, USB
X24-009PKI-R	XStream-PKG 2.4 GHz, 9600 baud, industrial, RS-232, no accessories
X24-009PKI-RA	XStream-PKG 2.4 GHz, 9600 baud, industrial, RS-232
X24-019PKC-U	XStream-PKG 2.4 GHz, 19200 baud, commercial, USB, no accessories
X24-019PKC-UA	XStream-PKG 2.4 GHz, 19200 baud, commercial, USB
X24-019PKI-R	XStream-PKG 2.4 GHz, 19200 baud, industrial, RS-232, no accessories
X24-019PKI-RA	XStream-PKG 2.4 GHz, 19200 baud, industrial, RS-232

FOR MORE INFORMATION  
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