

XStream® OEM RF Modules

2.4 GHz Embedded RF Modules for OEMs

Embedded RF modules provide outstanding range (up to 10 miles) in a low-cost wireless solution.



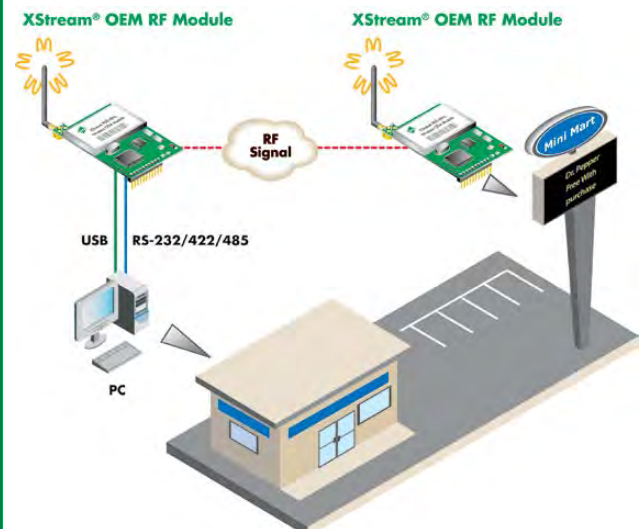
Overview

Digi's XStream embedded RF modules enable easy and reliable serial wireless connectivity between devices with minimal development out-of-the-box. XStream RF modules provide transmission ranges of up to 10 miles in a low-cost wireless solution.

Innovations stamped in their design enable XStream RF modules to yield two- to eight-times the range of competing RF devices. This allows OEMs and integrators to cover more ground with fewer devices, with increased reliability. Additionally, XStream RF modules are easy to use, thereby reducing the complexity of data system development and time to market.

Available in a variety of configurations, including Commercial or Industrial temperature ratings, and multiple antenna variants, XStream RF modules 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.

Application Highlight



Features/Benefits

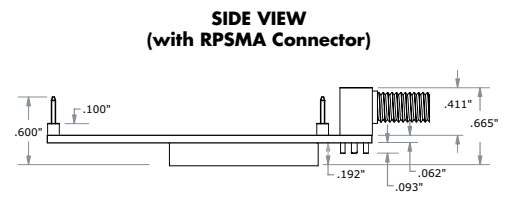
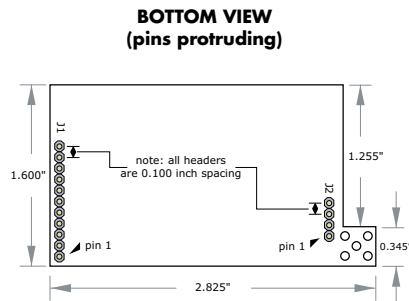
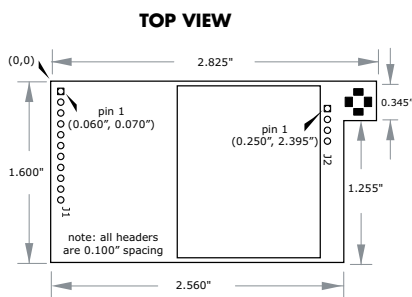
- Indoor/Urban range up to 600 feet (180 m)
- Outdoor line-of-sight range up to 10 miles (16 km) (with high gain antenna)
- 7 frequency hopping channels each with 65K available addresses
- Outstanding receiver sensitivity (-105 dBm @ 9600 bps)
- Low-power features for power-sensitive applications
 - Pin, serial port and cyclic sleep modes available
- Performs retries and acknowledgments for reliable packet delivery
- Multiple antenna options (Wire Whip, MMCX, RPSMA)
- Commercial (0° C to 70° C) and Industrial temperature ratings (-40° C to 85° C)



Specifications

24XStream® (2.4 GHz)

Performance		
Indoor/Urban Range (w/ 2.1 dB dipole antenna)	Up to 600 ft (180 m)	
Outdoor RF Line-of-Sight Range (w/ 2.1 dB dipole antenna)	Up to 3 miles (5 km)	
Outdoor RF Line-of-Sight Range (w/ high-gain antenna)	Up to 10 miles (16 km)	
Transmit Power Output	50 mW (17 dBm)	
Interface Data Rate (software selectable)	10 - 57600 bps (including non-standard baud rates)	
Throughput Data Rate	9,600 bps	19,200 bps
RF Data Rate	10,000 bps	20,000 bps
Receiver Sensitivity	-105 dBm	-102 dBm
Power Requirements		
Supply Voltage	5V (± 0.25V) regulated	
Receive Current	80 mA	
Transmit Current	150 mA	
Power-Down Current	< 26 µA	
General		
Dimensions (L x W x H)	1.600 in x 2.825 in x 0.350 in (4.06 cm x 7.18 cm x 0.89 cm)	
Weight	0.8 oz (24 g)	
Operating Temperature	0° C to 70° C (commercial) or -40° C to 85° C (industrial)	
Antenna Options	RPSMA, MMCX or Wire Antenna	
Networking & Security		
Operating Frequency	ISM 2.4000 - 2.4835 GHz	
Supported Network Topologies	Peer-to-Peer (no master/slave dependencies), Point-to-Point, Point-to-Multipoint, Multidrop	
Number of Channels (software selectable)	7 Frequency Hopping Channels	
Network Filtration Layers	VID, Channel, Destination Address	
Agency Approvals		
FCC Part 15.247	OUR-24XSTREAM	
Industry Canada (IC)	4214A 12008	



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