

EB-X

900MHz HIGH SPEED SERIAL/ETHERNET TRANSCEIVER



OVERVIEW

Intuicom's EB-X is a long-range, low-power and high-speed solution that features both IP and serial connectivity. The EB-X is made for reliable transmission and control of data in challenging industrial environments, ideal for making existing networks ready to face the evolving capabilities of future systems.

FUNCTIONALITY & FLEXIBILITY

Providing Ethernet and Serial port connectivity simultaneously, the EB-X offers a single solution to a broad range of applications. With up to 4 Mbps of available bandwidth, the EB-X is flexible enough to support legacy serials as well as the most current IoT devices. The EB-X is multi-functional and may be operated as the gateway, end point or repeater, in point-to-point, point-to-multipoint, and peer-to-peer communications.

Empowered with an ultra-sensitive and highly selective RF receiver, the EB-X provides real-time robust data transport. With top performance and security that includes 128-bit or 256-bit AES encryption, the EB-X provides superior "real world" throughput and performance over other wireless products.

Our robust design and ruggedized enclosure make certain your applications keep running in the most difficult environments.

Like all our radios, the EB-X is designed and built in Colorado, USA.

KEY FEATURES

- "Best-in-Class" 900 MHz Performance
- Dual Ethernet and Serial Port interfaces
- High-Speed Performance from 115 kbps up to 4 Mbps
- Performance Enhancements include compression, aggregation and spectrum learning
- Long range, +40 mile range (LOS)
- Secure: SSH, SNMP, 128-bit and 256-bit AES encryption
- Low power consumption

COMPLETE COMMUNICATION SOLUTIONS

A complete communication system lives inside every Intuicom Wireless Solution.

- Service and support
- Exclusive product and software features
- Field proven reliability
- Network design service

GENERAL SPECIFICATIONS

Enclosure Size	Cast aluminum 165mm x 107mm x 53mm
Weight	680 g
Operating Temp.	-40°C to +75°C
Humidity	0 to 95%, non-condensing
RoHS	Directive 2011/65/EU
Ethernet	RJ45 (two)
Serial	DB-9 (two)
USB	Micro USB
RF Connector	TNC (f)

POWER REQUIREMENTS

Operating Voltage	+10 to +36 VDC (+/- 10%)
Transmit Current	464 mA @ 12 VDC
Receive/Idle Current	180mA/148mA @ 12 VDC

DATA TRANSMISSION

Type	Frequency Hopping Spread Spectrum
Link Throughput	Up to 1.6 Mbps; 4 Mbps with Compression
User Interface Rates	Ethernet Rate: 10/100 Mbps Serial: up to 250 kbps
Modulation	2 level GFSK, 4 and 8-ary FSK
Error Detection	CRC & ARQ, retransmit on error, FEC
Data Encryption	128-bit and 256-bit AES CCM
Advanced Features	Packet compression and aggregation

NETWORK ACCELERATORS

Packet Compression

Packet Aggregation

Forward Error Correction

Adaptive Spectrum Learning

TRANSMITTER

Frequency Range	902-928 MHz
Output Power	Up to 1 Watt, user selectable
Range	+40 Miles (LOS)
Channel Spacing	230.4, 345.6, 691.2, 1382.4, 3225.6 kHz
RF Data Rates	115.2, 250, 500 kbps, 1 & 4 Mbps; user selectable
Hopping Rates	400, 200, 100, 50, 25 ms
Hopping Channels	Up to 16; RF data-rate dependent

RECEIVER

IF Selectivity	>40 dB		
System Gain	136 dB		
Sensitivity	RF Data Rate	Without FEC	With FEC
	115 kbps	-105 dBm	-108 dBm
	250 kbps	-102 dBm	-105 dBm
	500 kbps	-99 dBm	-102 dBm
	1 Mbps	-95 dBm	-98 dBm
4 Mbps	-83 dBm	-86 dBm	

NETWORKING

VLAN	VLAN tagging 802.1Q (ports and services)
Serial	Serial TCP server, Modbus/TCP, Modbus RTU, TCP client
Traffic Filtering	Netmask filter, ARP filter



ITS/Traffic



Precision
Agriculture



Survey and
Machine Control



Environmental and
Structural Monitoring



Industrial



Security

Note: Specifications subject to change without notice.