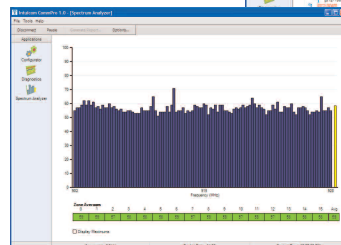# EB-1 Ethernet Bridge

IP/ETHERNET DATALINK

Intuicom's EB-1 Ethernet Bridge is a high performance Ethernet data transceiver designed for long range communications in commercial, industrial, and military applications. Providing wireless bridging of remote Ethernet devices, the EB-1 is ideally suited for a variety of applications ranging from basic wireless bridging to monitoring and controlling unattended systems such as those linked to SCADA terminals, automated security systems, and CBRN detection networks.

FUNCTIONALITY AND FLEXIBILITY

The EB-1 Ethernet Bridge offers a broad range of end-user configurable parameters and capabilities to satisfy a variety of Ethernet requirements. Providing up to 100 Kbps of available bandwidth, the network is fully scalable to facilitate multiple integration solutions. Designed for flexibility, the rugged EB-1 can be operated in point-to-point or point-to-multipoint mode and can be configured as a base, remote, or repeater.

"BEST-IN-CLASS" RF PERFORMANCE

Employing Intuicom's robust and secure frequency hopping spread spectrum technology, the EB-1 is inherently resistant to interference from other RF equipment including other spread spectrum radios. Empowered with an ultra sensitive and highly selective RF transceiver, the EB-1 provides real-time, robust communication links with 32-bit CRC with error correction. The Intuicom EB-1 is capable of delivering the maximum output power allowable by the FCC for unlicensed operation—the benefit of which is realized in exceptional performance, with up to 60+ miles range (LOS).

EASE OF USE

The EB-1 is compatible with Intuicom's CommPro™ software, which provides a complete toolset to assist in designing, configuring, monitoring and optimizing your wireless solutions. Going from the box to the field has never been easier.

With proven performance in dense RF environments, Intuicom's wireless networks power through the congestion to provide reliable data transport where other technologies fall short.

To learn more about enabling wireless networking for your applications, please contact us at: info@intuicom.com or call (303) 449-4330

EB-1 Ethernet Bridge comes bundled with Intuicom's New CommPro™ Software

KEY FEATURES

- 60+ mile range
- License-free operation
- Secure frequency hopping spread spectrum technology
- Point-to-point or point-to-multipoint networks
- Any one unit may serve as a base, remote, or repeater
- 900 MHz or 2.4 GHz license-free operation
- 120-170 Kbps over the air data rates
- Separate diagnostics port
- Low power consumption
- Built-in crossover switch
- Extended temperature range
- Ruggedized aluminum case
- Made in the USA
- Supported by Intuicom CommPro™ Software

Intuicom™

EB-1 Ethernet Bridge

IP/ETHERNET DATALINK

GENERAL SPECIFICATIONS

Enclosure	Ruggedized extruded aluminum	
Size	H: 56.6 mm x W: 74.4 mm x L: 165.1 mm	
Weight	441 g	
Operating Temperature	-40° C to +75° C	
Connectors/Signals		
External Antenna	N Type Female	
Data	RJ-45	
Diagnostic	3-pin proprietary	
Power	2.1 mm x 5.5 mm jack	
Power Consumption (typical @ 12 VDC)	900 MHz	2.4 GHz
Sleep	24 mA	
Idle	70 mA	30 mA
Receive	125 mA	100 mA
Transmit (average)	550 mA	325 mA
Operating Modes		
System Configurations	Point-to-Point, Point-to-Multipoint	
Unit Operating Modes	Base, Repeater, Remote	

WIRELESS TRANSCEIVER

SPECIFICATIONS	900 MHZ	2.4 GHZ
Frequency Range	902 – 928 MHz	2.4 – 2.4835 GHz
Transmitter		
Output Power	100 mW to 1 W (+30 dBm); Programmable	20 mW to 500 mW (+27 dBm); Programmable
Range, Line of Sight	60 Miles	20 Miles
Modulation	Spread Spectrum, GFSK	Spread Spectrum, GFSK
Occupied Bandwidth	230 KHz	230 KHz
Spreading Method	Frequency Hopping	Frequency Hopping
Hopping Patterns	15 per band, 105 total, user selectable	15 per band, 105 total, user selectable
Hopping Channels	50 to 112, user selectable	50 to 112, user selectable
Hopping Bands	7, user selectable	7, user selectable
Receiver	@ 12 VDC	@ 12 VDC
Sensitivity	-108 dBm at 10^{-6} BER	-105 dBm at 10^{-6} raw BER
Selectivity	20 dB at fc ± 115 KHz; 60 dB at fc ± 145 KHz	40 dB at fc ± 230 KHz; 60 dB at fc ± 960 KHz
System Gain	140 dB	
Data Transmission		
Error Detection	32 Bit CRC, retransmit on error	
Data Encryption	Substitution, dynamic key	
Data Rate*	100 Kbps	
Data Interface	10BaseT	

* Assumes 75% frequency availability, no repeater.
Note: Specifications subject to change without notice.

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