

Navigator II_m

COMPACT WIRELESS DATALINK/GPS TRACKER



The Navigator II_m is a compact, high performance wireless serial datalink with automatic position reporting. Equipped with two serial ports, a dual discrete I/O and embedded GPS-WAAS, the Navigator II_m is available in license-free 900 MHz or military 1.3 GHz versions. Based upon Intuicom's Navigator II platform, the Navigator II_m is backwards compatible with legacy Intuicom network infrastructure.

APPLICATIONS

- Vehicle tracking
- Dismounted troop tracking
- Test, training & exercises
- Unmanned vehicles
- Target scoring

"BEST-IN-CLASS" RF PERFORMANCE

Employing secure, frequency hopping spread spectrum (FHSS) technology the Navigator II_m is inherently resistant to interference from other communications equipment.

Empowered with an ultra sensitive yet highly selective, digitally filtered RF receiver, the Navigator II_m provides real-time, robust communication links (up to 40 miles LOS) with high data transfer accuracy rates.

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.

EASE OF USE

The Navigator II_m offers a broad range of both locally and remotely configurable parameters and capabilities to satisfy a variety of serial and serial-to-IP communications requirements. Offering flexibility to the system architect, the Navigator II_m datalink can be configured as a master, slave, store and forward repeater or slave/repeater. With up to 115Kbps of available bandwidth, the network is scalable to accommodate the needs of dynamic systems and can be operated in point-to-point or point-to-multipoint mode.

FEATURES

- 900 MHz or 1.3 GHz
- 60 mile range (LOS)
- Embedded GPS-WAAS
- Two RS232 data ports
- Two Discrete I/O channels
- TCP/IP addressable
- 3.8"W x 6.5"L x 1.8"H
- 15 oz. (incl. enclosure)
- Rugged Aluminum enclosure
- Also available in OEM versions



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

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GENERAL SPECIFICATIONS

Enclosure	Ruggedized Extruded Aluminum	
Size	3.8"W x 6.5"L x 1.8"T	
Weight	15 oz. (425 g.)	
Operating Temperature	-30° C to +60° C	
Connectors/Signals	RF Antenna	SMA Female
	GPS Antenna	TNC female
	Data	DB9 female
	Power	Phoenix; locking
Input Voltage	6-30 VDC	
Operating Modes	System Configurations	Point-to-Point, Point-to-Multipoint
	Unit Operating Modes	Slave, Repeater, Slave/Repeater, Master

WIRELESS TRANSCEIVER

Frequency Range	902 - 928 MHz	1.350 – 1.390 GHz
Transmitter		
Output Power	1 Watt (User Adjustable)	1 Watt (User Adjustable)
Range (Line of Sight)	Up to 60 Miles	Up to 60 Miles
Modulation	Spread Spectrum, GFSK	Spread Spectrum, GFSK
Occupied Bandwidth	230 KHz	230 KHz
Spreading Method	Frequency Hopping (FHSS)	Frequency Hopping (FHSS)
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	6, user selectable
Receiver		
Sensitivity	-106 dBm at 10-6 BER	-110 dBm at 10-6 BER
Selectivity	20 dB at $f_c \pm 115$ KHz; 60 dB at $f_c \pm 145$ KHz	20 dB at $f_c \pm 115$ KHz; 60 dB at $f_c \pm 145$ KHz
System Gain	140 dB exclusive of antennas	135 db exclusive of antennas
Data Transmission		
Error Detection	32 Bit CRC, retransmit on error	32 Bit CRC, retransmit on error
Data Encryption	Substitution, dynamic key	Substitution, dynamic key
Data Rate*	115.2 Kbps (full duplex)	115.2 Kbps (full duplex)
Data Protocol (standard)	RS-232	RS-232
Power Consumption (max RF output power setting)		
Idle	122mA	131mA
Receive	136mA	150mA
Transmit (average)	572mA	795 mA

*Assumes 75% frequency availability, no repeater

GPS

Type	LI C/A Code, 16 channels, WAAS enabled
Reporting Rate	To 1Hz or dynamic distance vs. time
PPS Output	Yes
Position Accuracy	2.5m (Horiz. CEP); <2m (DGPS Horiz. CEP)
Speed & Altitude	51 m/s (1000 knots) 18,000m
Std. NEMA Outputs	GGA, GSV, GSA, RMC, VTG, GLL, ZDA
Acquisition Time	<3.5 sec (hot); <34 sec (cold)
Reacquisition Time	<1 sec.

NOTE: Specifications subject to change without notice

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