



iR1600 Modem Specifications

Product Characteristics	
Modem Data Interfaces	RS-232 port utilizing a DB9 pin serial connector
Diagnostics Data Interfaces	RS-232 port utilizing a DB9 pin serial connector
Optional GPS Data Interfaces	RS-232 port utilizing a DB9 pin serial connector
Input/Output Interfaces	7 external I/O signals: 2 analog inputs (0-10V or 4-20mA current input), 3 digital inputs (+12V/Open or Open/Grnd), 2 outputs (TBD)
External Input/Output Connector	18 Pin external I/O
Power Input Connector	4 Pin Molex power/ignition connector (combined)
Ignition Sense Connector	Combined with power connector
Antenna Connector	Mini UHF female and MCX female (for GPS) ports on modem
LED indicators	6 SIGNAL, 3 OPERATING MODE, and 1 bi-color STATUS indicators
Reset Button	YES
Master Reset Button	YES
Operational Characteristics	
Data Security	128-bit AES
Protocol Conversion	YES – BSAP
Over the Air (OTA) Configuration and Firmware Upgrades	YES
Processors	
Processors	8 bit RISC main and 8 bit RISC I/O co-processor
RAM	64k byte SRAM
Program Flash	Minimum of 128k bytes of program flash
Data Logging and Storage	256k bytes of data flash
Real Time Clock	YES
TCP/IP Stack	YES
Physical Characteristics	
Weight	625 grams
Dimension	5.04"W x 2.25"H x 7"D
Case	Dust and water resistant, black aluminum extrusion
Electrical Characteristics	
Power Input	10 – 16 VDC
Input Current	0.1 amps steady state to 1.5 amps transient peak
Tx Output	600 mW Typical
Power Fail Reset	YES
Communication	
Communication Networks	iDEN®
Operating Modes	3 Operating Mode options (NORMAL, AVL and GATEWAY).



Radio Frequency	Tx 806-825 MHz Rx 851-870 MHz
GPS Characteristics	
GPS Receiver	8 channel with 32 correlators
GPS Data Protocols	NMEA 0183 v3.0, optional TSIP and TAIP
GPS Engines	Trimble
GPS Messages	GGA, VTG, GLL, ZDA, GSA, GSV
Update Rates	1 Hz
Environmental Parameters	
Operating Temperature	-25°C to +60°C
Storage Temperature	-40°C to +85°C
Operating Humidity	0-95% non-condensing @ +50°C
Shock & Vibration Conformance	Per MIL-STD-810E
EMI/EMC	FCC Part 15, Part 90
Optional Features	
Solar Panel Interface	YES
External Diagnostics Software	YES