

# INTEGRA-H<sup>™</sup>

## 900 MHZ LICENSE FREE WIRELESS MODEM

902-928 MHz



The license free Integra-H wireless modem provides reliable data communications over an extended range at the economical cost of a narrowband product. It is simple to operate - no flow control or timing hassles. No complicated set up. Best of all, there's no license required.

**A programmable, transparent modem** The Integra-H uses a frequency hopping technique operating in the 902-928 MHz band under FCC Part 15 rules. Designed for speed, the Integra-H runs at 25600 bps over the air. The Windows<sup>®</sup> based software offers customers PC programmability to maximize system performance.

**No dribble bits** The Integra-H prevents transmission of any extraneous data bits to the terminal device. It simply won't dribble. This makes the Integra-H a perfect choice when working with various protocols that cannot tolerate any extra data bytes.

**DOX**, the data-operated transmit mode, automatically activates the transmitter in the presence of data, without needing an RTS handshake from the terminal equipment.

**Online monitoring** The diagnostic feature of the Integra provides all the information required to monitor and maintain your communications link. Information such as power, temperature, voltage, signal strength, antenna/feedline condition, and data decode performance is transmitted online with no application interruption.

**Low power consumption modes** The Integra-H offers two ways to reduce power consumption for solar or battery power remote sites. Variable Output Power is programmable from 0.1 to 1 watt. Sleep Mode, on average, draws less than 25mA until activated by RTS.

**User friendly** The Integra provides LEDs on the front panel to give the user a visual indication of the wireless modem activity. The two ports on the Integra provide easy access to set up and test without having to unplug the application terminal device.

**Rugged design** The Integra-H is optimized specifically for data transmission and is backed by a two-year warranty.

## INTEGRA-H SPECIFICATIONS

### MODEM

Network Rate	25.6 kbps
Modulation	DRCMSK
CTS Delay	4 msec (fixed)

### COM PORT

Interface	EIA RS-232C
Data Rate	1200-19200 bps
Protocol	Transparent; 7 or 8 data bits; 1 or 2 stop bits; even, odd, or no parity
Tx Control	RTS or DOX (data operated transmit)

### INTERFACE INFORMATION

Com and Setup Port Connectors: DE-9F			
Pin Description		Pin Description	
1 DCD (Data Carrier Detect)	6 DSR (DCE Ready)	7 RTS (Request to Send)	8 CTS (Clear to Send)
2 RXD* (Receive Data)	7 RTS (Request to Send)	8 CTS (Clear to Send)	9 Reserved
3 TXD* (Transmit Data)	8 CTS (Clear to Send)	9 Reserved	
4 DTR (DTE Ready)	9 Reserved		
5 Ground*			

\*Note: These pins are required in DOX mode. Use of CTS is optional.

Power/Analog Connector: Snap and lock 4-pin

Pin Description	Pin Description
1 +13.3 VDC (red)	3 Analog In (green)
2 Ground (black)	4 Analog In (white)

### GENERAL

Frequency Range	902-928 MHz
Mode of Operation	Switched simplex
FCC Type Acceptance	NP42424099-002
IC Type Acceptance	7731032179A
Connectors	RF: SMA; Com and setup: DE-9F; Power/analog: 4-pin snap-lock
Dimensions (W x H x D)	4.6" x 2.2" x 4.75" (11.4 cm x 5.6 cm x 12.1 cm)
Current Drain	
Receive	<220 mA
Transmit	<650 mA into 50 ohm load, 1A maximum
Sleep Mode	25 mA average
Front Panel Indicators	RUN/PWR, CS/SYN, RX/TX, RD/TD
Diagnostics Online	ID, temp, B+ voltage, local/remote RSSI, fwd/rev power, RX quality
Diagnostics Offline	Same as online plus analog input levels

### RECEIVER

Frequency Stability	1.5 ppm
Packet Error Rate	1% degradation @ -107 dBm
Selectivity	75 dB
Intermodulation	75 dB
Primary Image Rejection	80 dB
Conducted Spurious	<-57 dBm

### TRANSMITTER

Bandwidth	26 MHz
RF Output Power	0.1 - 1 Watt adjustable
Duty Cycle	100%
Frequency Stability	1.5 ppm
Spurious and Harmonic Emission	Complies with FCC Part 15 requirements

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