

INTEGRA-H™

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® 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.

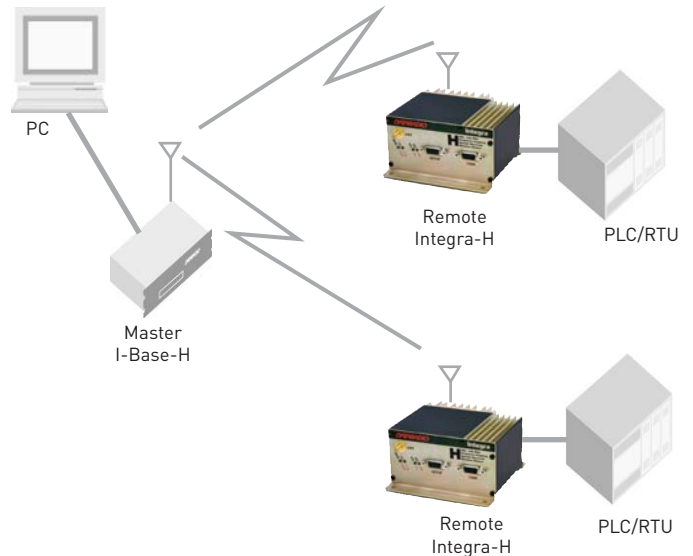
Online monitoring The diagnostic feature of the Integra provides all the information required to monitor and maintain your communications link. Information such as power, temperature, voltage, signal strength, antenna/feedline condition, and data decode performance is transmitted online with no application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

System Diagram



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)
2 RXD* (Receive Data)	7 RTS (Request to Send)
3 TXD* (Transmit Data)	8 CTS (Clear to Send)
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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