

Introducing the
CRESCENDO SERIES
PACCS LinkRFI-450 UHF Half Duplex Radio Modem

Crescendo is a new series of data-driven radio modems for VHF and UHF applications operating in 12.5kHz and 25kHz channels.

The RFI-450 UHF half duplex radio modem is the newest member of this family. Its maximum transmit power of 5 Watts (+37dBm) and air rate of 9.6kbit/s (12.5kHz channels) / 19.2kbit/s (25kHz channels) make it the ideal choice for long-range applications with even the most demanding real-time constraints.



Features

- Switching bandwidth 380 - 520MHz
- 6.25kHz frequency raster (and multiples)
- Up to 50 km line of sight*
- Integrated radio modem
- Forward Error Correction and data interleaving
- Low-latency data-driven transparent operation
- Dual RS232 serial ports
- Separate data and diagnostics ports
- In-built configuration menu
- Front panel diagnostics for ease of testing and installation
- Multi-mode front panel display includes RSSI meter



Applications

The RFI-450 UHF half duplex radio modem is suited for applications ranging from small point-to-point links through to large broadcast point-to-multipoint data communications networks.

For above-ground applications, the RFI-450 can be used with common UHF antennas. The RFI-450 UHF half duplex radio modem is equally suited for below ground operation in leaky feeder systems.

Potentially large wireless SCADA networks can be set using a combination of PACCS Link radio modems and I/O modules.

Please contact Wired & Wireless Solutions International for further information, or visit <http://www.wwsinternational.com.au>

*Maximum practical point-to-point with suitable antennas

SPECIFICATIONS

Narrow and Wide Band Builds

The RFI-450 is available in a narrow band build (12.5kHz) and wide band build (25kHz).

Switching Bandwidth

The user can select any 6.25kHz raster frequencies within the radio's switching bandwidth via the easy-to-use inbuilt menu.

Diagnostics at a Glance

The front panel LEDs display diagnostic information indication such as Receive Signal Strength (RSSI), transmit power, radio temperature and RS232 port status.

Data Mode Options

With data and packet-driven modes available, the RFI-150 supports connection-based and broadcast modes of communication.

Data Reliability

User selectable Automatic Repeat Request (ARQ) offers a high level of data reliability. The immediate re-transmission of data ensures that the user will not encounter end to end errors or data loss even in hostile environments.

Data Integrity

Over the air data is encapsulated with Forward Error Correction, data interleaving and Cyclic Redundancy Checksums (CRC) for high level data protection. This reduces the number of errors in each transmission.

Easy Network Configuration

The Cruise Control Software allows the user to configure, save and upload radio configuration settings. This allows for numerous radios to be configured more efficiently.

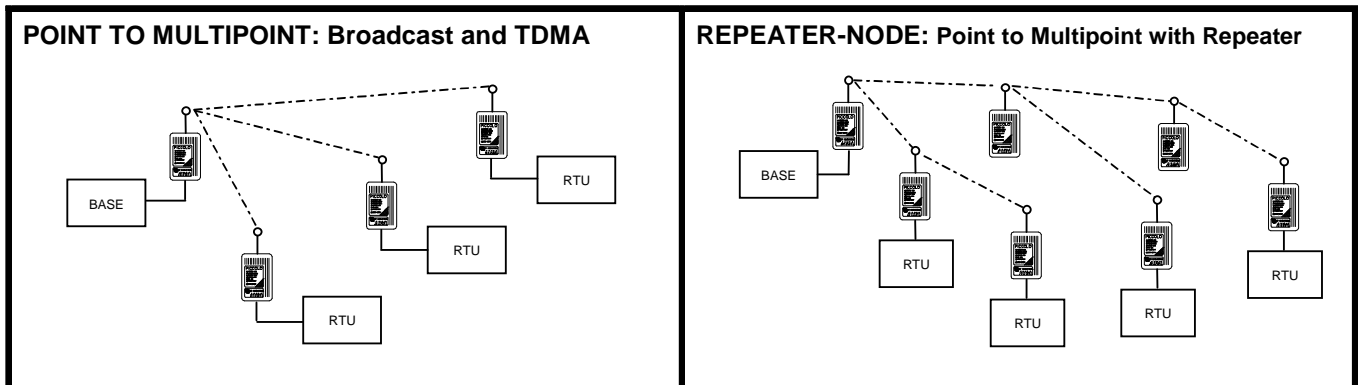
Easy Network Management

The user is able to view diagnostics and change the settings of other remote radios within a network from a single point.

PHYSICAL		CONNECTORS	
Dimensions	L: 156mm x W: 100mm x H: 41.5mm	Antenna	BNC Female (50 Ohm nominal)
Weight	800g	Serial	2 x DB9 RS-232 Female
Construction	Powder-coated aluminium chassis and cover	Power	Phoenix PH1776508 (mating connector supplied)
MODEM		RADIO	
Serial Data	RS-232 Asynchronous with handshaking	Frequency Range	380MHz to 520MHz software programmable
Interface Speed	110, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200bps software selectable	Air Data Rate	9.6kbit/s (12.5kHz channels), 19.2kbit/s (25kHz channels)
GENERAL		Duty Cycle	100%
Operating Voltage	10V to 16V DC (negative ground)	Mode of Operation	Single-Port Half Duplex Split-Port Half Duplex
Operating Current - Transmit (@ 12.5V) - Receive (@ 12.5V)	1.25A nominal @ 5W 78mA nominal	RF Data Latency (end to end)	Maximum 50ms (25kHz)
Operating temperature range	-10 to +60°C	Transmit Power	100mW (+20dBm) to 5W (+37dBm)
Operating humidity range	Up to 90% non-condensing relative humidity	Channel Bandwidth	12.5kHz or 25kHz (model-specific)
Approvals	AS-4295, ETSI (planned) and FCC (planned)	Modulation	Nyquist-shaped 4-Level FSK
		Receiver Sensitivity	-113dBm (reference sensitivity)

FREQUENCY BAND	RF MODE	CHANNEL BANDWIDTH	AIR RATE	OPERATING MODE	COMPLIANCE CLASSIFICATION
150 VHF	H Half Duplex	N 12.5 kHz	L 1200 / 2400	BD Bit-Driven	0 Unlicensed
290 VHF	S Half Duplex (Separate RF Port)	W 25 kHz	M 9600	DD Data-Driven	1 Licensed
450 UHF	D Full Duplex	C Custom	H 19200	PD Packet-Driven	2 Military
			C Custom	VF VF Only	
				CC Custom	

ACCESSORY	DESCRIPTION
RFI PROG CRES-D	2 x DCE to DTE DB9 data programming cables and 1m 12V DC leads



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