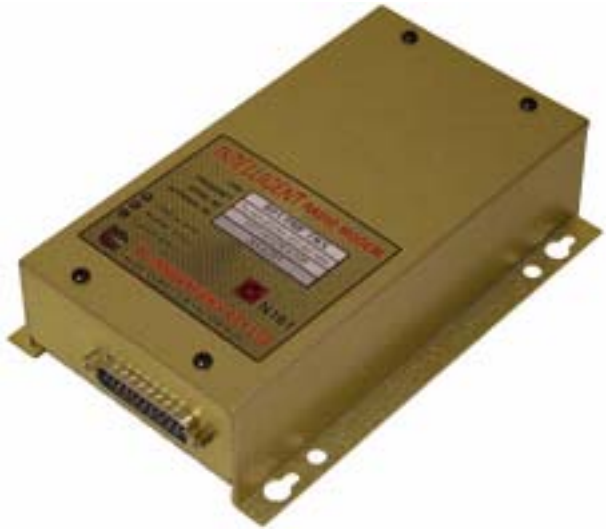
RF INNOVATIONS

RFI 590
UHF radio transceiver

The RFI 590 is a half-duplex radio transceiver aimed at applications operating in common 12.5 or 25kHz UHF channels and using external modems, with data rates up to 2400 bit/s. Radio configuration is assisted by a Windows™ based configuration tool.



Features

- Rugged and economical
- Software configurable
- Easily installed and commissioned
- RF power 100mW to 2.5W
- Radio range up to 50km
- RF channel selection, with up to 16 configurable channels
- Low power mode
- Analogue RSSI output
- Serial configuration port

Applications

Control and data acquisition

Typical RFI 590 applications include SCADA and telemetry over point-to-multipoint wireless links.

External modems, connected to data loggers, PLCs or computer, establish the end-to-end link over the wireless connection provided by the RFI 590.

Internal software configuration allows tailoring of audio and RF parameters to suit modem interface requirements.

Linking of data systems

Depending upon geography, terrain and antenna setup, reliable radio communications may be achieved for distances in excess of 40km. Radio repeaters offer range extension where required.

SPECIFICATIONS

PHYSICAL

Dimensions	170mm L x 110mm W x 50mm H
Weight	260 grams
Construction	Alodined aluminium chassis and cover

GENERAL

Voltage	10.8 to 17.0Vd.c. (negative ground).
Current	
Sleep mode	25 mA (average value).
Standby mode	80 mA
Transmit mode (2.5Watts)	850mA.
Temperature	-10 to +60 Deg C.
Humidity	95% (non-condensing).
Configuration	Windows™ based configuration tool (UDP).
Channel selection	Hardware and software selectable
Channel spacing	25 kHz or 12.5 kHz.
Antenna port	BNC
Data port	DB-25 connector. Custom pin-out, including power.
Approvals	AS/NZS 4295 - 1995

TRANSMITTER

Output power	100mW to 2.5 Watts, software selectable.
Modulation bandwidth	100Hz to 4kHz.
Deviation	±4 kHz (25 kHz channels), ±2.0 kHz (12.5kHz channels).
Spurious emissions	<-30 dBm
Duty cycle	100% @ 60 Deg C
Output protection	Protected for all loads and output power.

RECEIVER

Sensitivity	<-118dBm for 12 dB SINAD
Frequency range	390.0 to 399.9MHz (military). 400 to 520MHz (generic use).
RSSI output	-130 to –60 dBm accurate to ±2 dB

INTERFACE

Configuration port	RS-232, using external level converter.
Serial communications	1200 to 9600 bps, 8 data bits plus, no parity, 1 stop bit.
Audio input	770mV input for FM 1kHz tone / 3.8kHz deviation
Audio output	1Vpp (typical value, software configurable)
PTT	negative edge to ground

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(Specifications may be subject to change without notice)