# PACCS Link 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
- RS-232 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

## 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. |
| Dimensions | 170mm L x 110mm W x 50mm H |
| Weight | 260 grams |

## 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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