

RM-232-xxx RADIO MODEM

HIGH SPEED, LOW POWER LICENCE EXEMPT RADIO LINK

The RM-232-xxx is a low cost high speed radio modem providing a reliable wireless data link capable of data throughput rates exceeding 14400 bps. Its ease of use and numerous features make it ideal for adding wireless communications to any application requiring wire free serial operation.

Features

- International license exempt ISM bands
- Point-to-point, point-to-multipoint, broadcast multi-drop, multimaster
- DTE speed 600-115200 bps.
- On-air data speed 600-14400 bps.
- Flow control - hardware/software/none.
- Serial format - 8n1, 8n2, 8o1, 8e1.
- Up to 300m outdoor & 50m indoor range.
- Up to 2Km outdoor using external antenna.
- Built-in command line configuration.
- Built-in RF link diagnostics.
- Remote over-air unit configuration.
- Repeater mode for extended range.
- Front panel modem status indicators.
- Low operating current. Auto standby mode.
- Low profile enclosure with integrated PP3 battery compartment.

Applications

- Remote data acquisition systems
- EPOS equipment, barcode scanners
- Wireless computer peripheral networks
- Remote monitoring and control systems
- PDA and laptop peripheral connectivity
- Portable logging equipment (body worn etc)

Easy and Reliable

Addressable data packets with error checking, packet acknowledgements and retransmissions are used to achieve a reliable wireless point-to-point/point-to-multipoint data link. Built for ease of use and rapid installation, the RS232 interface ensures direct connection to serial equipment while the built-in diagnostics aid with site evaluation and network configuration.

Extending Range

Use an external antenna to improve range where the helical or ¼ wave whip antennas are not ideal. Additionally the modems can be configured as a repeater to further increase the operational range. Note the use of a high gain external antenna may result in radiated power levels above the licensed levels permitted in the country of use.

Broadcast Multi-drop Networks

When configured for broadcast multidrop mode the modem can be combined with any any number of intelligent host computers/controllers to implement large scale multipoint radio networks.



TECHNICAL SPECIFICATIONS

General

- Operating Voltage 7 to 15VDC via 2.5mm DC Jack
- Operating Current 40mA (10mW modem)
70mA (100mW modem)
- Standby/Power-down 15mA/400uA
- Operating Temperature 0 to +55 degrees C
- Configuration Built-in command line configurator
- Supplied with 1.8 metre D9 RS232 cable
- Manual Available by email request.
- Data throughput *UHF*: to 14400 bps (acknowledged packets)
UHF: to 28000bps (broadcast mode)
VHF: to 2400 bps (acknowledged packets)
- Radio Narrow band, Single channel

Interface

- RS232 Interface DCE - 9 pin female
- RS232 protocol 8n1, 8n2, 8o1, 8e1
- RS232 Signals RXD, TXD, RTS, CTS, DTR, GND
- Powerdown control Via DTR (software controlled)
- RS232 Handshaking Selectable as hardware/software/none
- DTE Interface Speed 600/1200/2400/4800/9600/14400
19200/38400/57600/115200
- Air Interface Speed *UHF*: 600/1200/2400/4800/9600/14400
VHF: 600/1200/2400

Receiver

- Sensitivity *VHF*: -106 dBm for 1ppm BER
UHF: -100 dBm for 1ppm BER

Transmitter

- Output Power 1mW ERP, 10mW ERP, 100mW ERP
- Spurious Emissions -70 dB

Approvals

- Australian Standards AS 4268.2
- European Standards EN 300-220-1, ETS 300-683

Physical

- Dimensions 103mm (L) x 61.5mm (W) x 23mm (H) (Excludes antenna)
- Enclosure ABS Plastic with integrated PP3 battery compartment
- Mounting Adhesive Velcro. Optional TS35 DIN mounting bracket
- Antenna SMA interface connector.

RM-232-xxx Radio Options

- RM-232-151/S 151.300MHz @ 10mW with SMA
- RM-232-151P/S 151.300MHz @ 100mW with SMA
- RM-232-173/S 173.225MHz @ 10mW with SMA
- RM-232-433/S 433.920MHz @ 10mW with SMA
- RM-232-433P/S 433.920MHz @ 100mW with SMA
- RM-232-869/S 869.850MHz @ 1mW with SMA
- RM-232-914/S 914.500MHz @ 1mW with SMA

Optional Accessories

- Plug pack – 9V 300mA. Australia only
- SMA mounted helical antenna
- SMA mounted 1/4 wave whip antenna
- External end-fed 0dB gain dipole antenna. Ground independent
- Industrial end-fed 3dB gain dipole antenna. Ground independent
- TS35 DIN rail mounting bracket

Specifications are subject to change without notification.