

Elpro 805 U High Speed Industrial Radio Modem

the wireless

highspeed

Industrial radio modem



The ELPRO 805U radio modem provides RS232 or RS485 connections by radio. It is a low cost wireless alternative for linking PLC 's, data loggers, sups,visory computers and intelligent transducers. The 805U has been designed to be easy to use and simple to install. It uses a low power 868MHz radio which does not require a radio licence in most European countries. The module is fully integrated with radio, power supply, serial ports and microprocessor controller housed in a strong industrial aluminium case.

features

- Radio data rate up to 76 800 bits//sec
- RS232 //RS485 up to 115 200 bits/sec
- Licence--free 868MHz radio band
- Single hop distance 5 km line--of-sight
- Repeater function for longer distances,,
- unlimited repeater hops
- Forward error correction,,
- CRC error checking with ARQ
- Turn-around time 5 msec
- Radio signal strength and BER indication
- Configurable on--line by Hayes AT commands
- or Windows configuration software
- Transparent broadcast mode, peer to peer
- Addressed mode, multipoint and point-to-point
- Low power mode with DTR control
- On-line "dial-up" control using AT commands
- Repeater functionality in all units
- Repeater routing via address selection
- Security against cross--talk between systems

Elpro 805U Specifications

Power Supply

- 10 --30 VDC or 10 -24 VAC supply
- Normal current drain 70mA/12VDC or 50mA/24VDC
- Current when transmitting 350mA/12V or 250mA/24V
- Low power mode current drain 20mA/12VDC or 15mA/24VDC

General

- Environmental --40 to 60 degC, 0 to 99 %RH
- EMC Compliant ETS 300 683
- Housing, extruded aluminium case 114 x 185 x 30 mm DIN rail mounting, removable terminal blocks for ease of replacement, terminals suitable for 2.5sqmm conductors.
- LED indication for unit OK, radio TX and RX, serial TX and RX,
- DCD (comms OK).

Serial Port

- Standard data rates 1200 to 115200 baud..
- RS232 and RS485 standard interface connections provided, each connected to the same serial port. Serial interfaces are asynchronous non-return-zero (NRZ) format.
- Characters supported 7 or 8 data bits, even/odd/no parity, 1 or 2 stop bits
- RS232 connection provides full duplex operation as a DCE device with RTS/CTS hardware handshaking-standard D9 connector.
- RS485 connection provides half duplex operation for twisted pair multidrop networks.
- Input and output buffers 2Kbyte

Radio Transceiver

- Single channel, synthesised transceiver
- Frequency 869.4 --869.65 MHz, 250KHz channel
- Transmit Power 500mW
- RSSI --60 to -120 dBm
- Expected line--of-sight range, 5 km at 19200 bits/sec
- RF Data Transmission Rate --19200 baud, 38400 baud, 76800 baud
- Range may be extended by:-
 - up to five intermediate repeaters for controlled mode
 - inlimited repeaters for transparent mode
- Conforms to EN 300 220
- Antenna connection is SMA coaxial

Data Transmission

- Transparent mode: Data is transmitted with a system and group address. Data transmission begins as serial data is received -- maximum packet size is 530 bytes. All modules, with correct system address, which receive the data packets, outputs the data -error checking is optional.
- Controlled mode: Data is transmitted in packets with a system address, source address, destination address, up to five intermediate repeater addresses, and a 16 bit CRC error check. If the packet is received with a correct error check, only the destination module will output the data and will also return an ACK transmission. If the source module does not receive the ACK, it will retry a further four times. DCD provides communications status.
- Auto--connect and dial-up-control modes are available.
- CTS//RTS flow control provided based on input buffer availability.

Configuration and Diagnostics

- Configuration by freeware software package or by Hayes AT commands. Radio noise, signal strength and bit error rate (BER) diagnostics included. Radio signal strength value available on-line to host device.

