dataTaker®

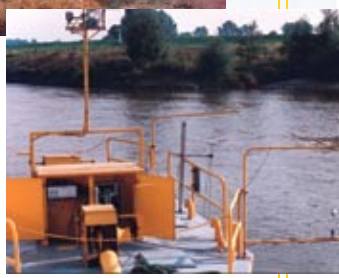
Data Acquisition and Data Logging Systems

www.datataker.com

High Speed Industrial Radio Modem

Specifications

- Radio data rate up to 115 200 bits/sec
- RS232 and RS485
- License-free frequency
- Single hop distance to 20+ miles US model (5Km European model)
- Repeater function for longer distance, 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
- Fast point-to-point mode
- Low power mode with DTR control
- On-line "dial-up" control using AT commands
- Repeater funtionality in all units
- Repeater routing via address selection
- Security against cross-talk between systems



905U-D by Elpro
Configured for *dataTaker* Data Loggers

The 905U-D radio modem module provides RS232 or RS485 connections by radio. It is a low cost wireless alternative for linking data loggers and supervisory computers.

The 905U-D has been designed to be easy to use and simple to install. It uses a part of the radio spectrum which does not require a radio license in most countries.

The module is fully integrated with radio, power supply, serial ports and microprocessor controller housed in a strong industrial aluminium case.

For your unique application, contact your local Datataker office or your local dealer.

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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 +140 degF (-40 to 70 degC)
- EMC Compliant FCC Part 15 Class A
- Housing, extruded aluminum case 4.5"x 7.3"x 1.2"(114 x 185 x 30mm) DIN rail mounting, removable terminal blocks for ease of module replacement, terminals suitable for 12 gauge (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

Models
Master unit for PC to Modem connection.
Configured for either DT800 or DT500 Range of dataTakers

Slave unit for modem to dataTaker connection.
Configured for either DT800 or DT500 Range of dataTakers

Please Note: Antenna not included with modem. Please order separately.

Check price list for order codes of the above models.

Radio Transceiver - USA / AUS / NZ
- Frequency Hopping Spread Spectrum Transceiver
- Frequency - USA/Canada 902 - 928 MHz
  - Australia 915 - 928 MHz
  - NZ 921 - 928MHz
- Hop Sequence - 16 x 50
- Transmit Power 1W
- RSSI –120 to -60 dBm
- Expected line-of-sight range, depending on local conditions
  - USA/Canada 20+ miles
  - Australia/NZ 20+ km
- RF Data Transmission Rate - 19200 baud, 57600 baud, 115200 baud (selectable)
- Range may be extended by: - up to five intermediate repeaters in controlled mode - unlimited repeaters in transparent mode
- Conforms to FCC Part 15 Class A and FCC Part 15.247
- Antenna connection is SMA coaxial

Radio Transceiver - Europe
- 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.

Options
Direct Connect Antenna, P/N WH900
DiPole External Antenna, P/N CFD890EL
[0dB gain, 460mm long, 4.5M cable and mounting bracket]
Colinear External Antenna, P/N SG900EL
[5dB gain, 790mm long, N type connector, no cable included]
Coliner Mounting Bracket, P/N BR-COL-KIT
Yagi External Antenna, P/N YU6/900
[10dB gain, 6 Element, N type connector, no cable included]
Yagi Mounting Bracket, P/N BR-YAGI-KIT
Cable Kit - 10 metre, P/N CC10/900
[3dB loss with N type connector]
Cable Kit - 20 meter, P/N CC20/900
[6dB loss with N type connector]
Surge Diverter, P/N CSD/900
[SMA surge diverter, for use with Cable Kits]

dataTaker®

Certified to ISO9001
TOTAL QUALITY COMMITMENT
Australia Only

Your local dealer