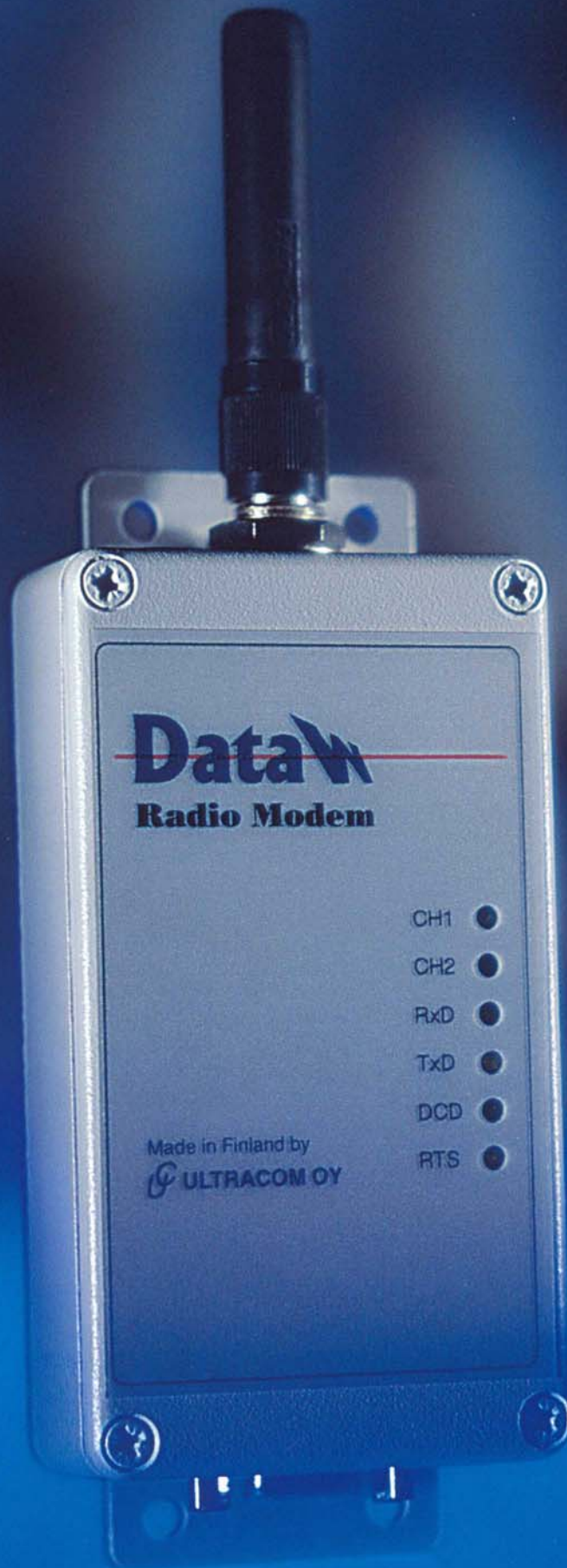


Dataw Radio Modem





OEM UHF -RADIO MODEM with RS 232 serial interface.

Dataw DW4 Radio Modems (0-9600 b/s) provide low- to medium speed data communications in a single-unit, easy to install package. The modem utilizes one or two simplex UHF -radio channels as separate transmit and receive periods. Operating speeds can be selected freely between 0-9600 b/s. The number of data and parity bits can be chosen freely. Since Dataw Radio Modems have no protocol of their own, the software protocol or raw data can utilize the entire throughput of the channel.

As the modem has no error correction (FEC or ARQ) capabilities, a suitable terminal transfer protocol is necessary. Due to simplex radio channel operation, transfer must be performed during separate transmit and receive periods. A simultaneous full duplex transfer is possible, using separate modems for transmitting and receiving operations with the required duplex filters. Dataw Radio Modems are housed in an aluminium casing. The mother board comprises the modem and, as separate assemblies, the radio transmitter and receiver units.

A suitable link hop distance is essentially dependent on environmental conditions and the antennas and their directivity. When using a helix "rubber duck" antenna, the coverage is up to 3 km and using directional antenna the coverage is up to 20 km in suitable conditions.

THE RS232 INTERFACE

No mechanical switches. All control operations are performed by RS 232 signals.

	<u>D9 PIN</u>	(connected from pin to pin according to the table below)
Transmit data	TxD 3	Output data from Terminal, input to Modem
Received data	RxD 2	Input data to Terminal, output from Modem
Request to send	RTS 7	Terminal wants to send data. This signal switches the Modem to transmit and receive. Output from Terminal, input to Modem. This operation can be performed optionally by TxD - data flow (DOX -data operated transmission).
Clear to send	CTS 8	Modem announces to terminal, that sending data is now possible. Output from Modem, input to Terminal. Delay between RTS high - CTS high is approximately 10 ms
Signal ground	GND 5	Also power supply and case ground
Data carrier	DCD 1	Data is available for receiving. Output from Modem, input to Terminal
Received signal strength	RSSI 6	This analog signal indicates the relative received signal strength. It can be used for accurate direction of the antennas. The level of RSSI is between 1 and 4 volts. This is not compatible with the standard RS232.
Channel select.	CH 4	This RS232 level signal is channel selecting. The low level of this signal represents channel 1, and high channel 2 respectively.
Power supply in	Vcc 9	Supply voltage 11-15. THIS IS NOT COMPATIBLE WITH THE STANDARD RS 232!

SPECIFICATIONS

Data speed	Meet or exceed ETS 300 -113 requirements 0-9600 b/s
Frequency range	400-470 MHz, one or two channels, preselected by crystals
Channel spacing	12.5 kHz or 25 kHz
RF-output power	400 mW
Data communications	Polling and CSMA networks
Suggested protocols	ANSI X3.28, CCITT X.25
Modulation	0-1200 b/s: AFSK FM CCITT V.23. 0-9600 b/s: direct FSK
Nominal deviation	±2.5 kHz on 25 kHz channel spacing ±1.5 kHz on 12.5 kHz channel spacing
Temperature range	-20-+55 °C operating
Stability	±2.0 kHz -20-+55 °C on 25 kHz channel spacing ±1.0 kHz -20-+55 °C on 12.5 kHz channel spacing
Sensitivity	better than 1E-2 at -110 dBm RF input level
Antenna connector	50 ohm TNC female
Data interface	RS 232, D9 female
Operating voltage	+11-+25 V at D-connector pin 9
Current consumption	<55 mA receiving, <350 mA transmitting
Dimensions	65x140x30 mm
Weight	0.23 kg

Specifications are subject to change



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