

DATUM



DATUM is an acronym for Digital Acoustic Transponder & Underwater Modem. The CDL DATUM system uses state of the art spread spectrum and digital signal processing technology to offer a long range high speed device for use in ranging and data applications in deep water.

Purpose designed algorithms provide high reliability data communications with a bit error rate of 10^{-6} or better with very high immunity to noise, Doppler fading and multi-path effects.

Each unit is uniquely addressable and the system is networkable. Data can be sent or received from any DATUM in the network.

By using direct sequence spread spectrum/OFDM the power requirements for the system are kept far lower than most competitive systems and the DATUM provides class leading battery life.

The DATUM is available in ship/ROV mount version or with integrated battery pack.



Features:

- High accuracy ranging
- High speed modem
- High reliability
- Vessel/ROV/Seabed mount
- Networkable
- Spread spectrum technology
- Low power
- Small size

DATUM



Product Specification:

Depth:

3,000m

Range:

3km approx (Line of Sight)

Communications Specifications:

Date Rates	100 or 480 bits per second
Bit Error Rate	10 bit error rate or better
Acoustic Doppler Tolerance	High immunity to noise and to multi-path and Doppler fading Tolerance of +/- 5ms-1
Bandwith	Broadband operation 16Khz to 30Khz
Modulation	Direct sequence spread spectrum/ OFDM
Error Detection	CRC16 error detection

Telemetry Interface:

Digital Interface	RS232
Output Rate	1200, 2400, 4800, 9600 baud
Electrical Connection	Burton 8 pin Connector

Power Requirements:

Operating Voltage	18-30VDC
Power Rating:	
Listen Mode	1 watts approx @18VDC
Transmit Mode	3.5 watts approx @18VDC

Weights and Dimensions:

Physical Sizes:	
Housing Diameter	120mm
Transducer Head Diameter	80mm
Total Height	193mm
Weight in Air	3kg
Weight in Water	1kg

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