



SUBNERO

S40H

SUBNERO S40H SERIES MODEMS

High-speed connectivity for data-intensive underwater applications



Up to 33 kbps data rate in challenging conditions



Up to 1 km communication range



Deep sleep state with <5 mW power consumption



Localization & ranging with 0.1 m precision



Arbitrary waveform transmission and recordings



Enhanced performance with additional receiving channels

APPLICATIONS

AUV command & control, telemetry, payloads

On-demand wireless image transfer

ADCP data retrieval (SWIS - ADCP Edition)

Diver communication and localization

Underwater networks

FEATURES

- ✓ **High Throughput**
Up to 33 kbps for data-intensive subsea applications.
- ✓ **Hybrid AUVs & Sensors**
High-speed data offload for hybrid vehicles and payloads.
- ✓ **Software-Defined Design**
Configure high-rate waveforms and protocols in the field using UnetStack.
- ✓ **Wireless Image Transfer**
On-demand camera image transfer over high-throughput links.
- ✓ **Research Platform**
Ideal R&D platform for novel high-speed subsea algorithms.
- ✓ **Networked & Interoperable**
Built-in networking for short-range, high-rate links.

S40H SERIES MODEMS



Designed for high-throughput data transfer, the S40H series modem enables applications that were once impractical in the subsea domain, such as wireless camera image transmission, rapid sensor data exchange, and real-time connectivity for marine robotics.

FLEXIBLE CONFIGURATIONS

Available in standalone and open configurations to suit a range of deployment needs, from self-contained setups to integrated and high-performance systems.



STANDALONE CONFIGURATION WNC-S40HSS4X

Self-contained modem powered by an external battery or power supply.



OPEN CONFIGURATION WNC-S40HSO4X

Integration-ready electronics for AUVs, ROVs, and sensor platforms.

TECHNICAL SPECIFICATION

COMMUNICATION

Modulation (software defined)
PSK-OFDM, FH-BFSK

FEC (Forward Error Correction)
LDPC, BCH, Convolution code

JANUS support
Yes

Bandwidth
25 kHz (25 – 50 kHz)

Ranging Precision
0.1 m

Doppler Resilience
±4 knots or better

SOFTWARE

Framework
UnetStack

User Interface
Interactive web UI

Software Interfaces
Java, Groovy, Python, C,
JavaScript, Julia, JSON/TCP

Waveform Player

Transmission and reception,
passband and baseband

ELECTRICAL

Power source

18 – 30 VDC (24 VDC recommended)

Power consumption

< 4 W (receive mode, nominal)

< 45 W (transmit mode, avg.)

< 200 mW (sleep mode)

< 5 mW (deep sleep mode)

Wake up modes

Acoustic wake up

External electrical interrupt

Scheduled wake up

External interface

Ethernet (10/100 Mbps), RS232

On-board storage

32 GB, 256 GB, 1 TB

Receive channels

1, 2, 4 (configurable at the time of
purchase)

MECHANICAL

Hull material
Aluminum

Depth rating
300m

Dimensions (Gold Edition)

SC: ø 100 x 371 mm

OC: ø 100 x 210 mm

Dimensions (Silver Edition)

SC: ø 100 x 294 mm

OC: ø 90 x 134 mm

Operating Temperature

SC: 0 to 40 °C

OC: 0 to 70 °C (electronics)

0 to 40 °C (transducer)

Available Editions

Gold, Silver

Available Configurations

Standalone Configuration (SC)

Open Configuration (OC)

Specifications are for base models only and are subject to change without notice. Please consult your sales representative for the latest information.

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The future of underwater wireless