

SUBNERO M25M SERIES MODEMS

Versatile connectivity for a diverse set of applications



-  Up to 15 kbps data rate in challenging conditions
-  More than 4 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

Versatile, acoustic smart modem for offshore, marine, subsea and defense domains.

Subsea sensor networks for offshore monitoring

Marine robot integration for telemetry and control

Ideal for subsea research and testing

FEATURES

- ✓ **Best-In-Class Performance**
Up to 15 kbps or beyond 4 km, tuned to each mission.
- ✓ **Supervised Autonomy**
Robust links for supervised autonomy and remote control of AUVs.
- ✓ **Software-Defined Design**
Reconfigure waveforms, protocols, and roles in the field.
- ✓ **Multi-Domain Versatility**
One device for offshore, marine, subsea, and defense work.
- ✓ **Multi-Receiver Option**
Spatial diversity combining for added reliability and range.
- ✓ **Networked & Interoperable**
Built-in networking with NATO JANUS interoperability.

M25M SERIES MODEMS



The M25M series modem is the dependable workhorse of the Gen4X series, designed for versatility across a wide range of applications. Balancing data rate, range, and robustness, it provides a reliable foundation for marine robotics and sensor networks.

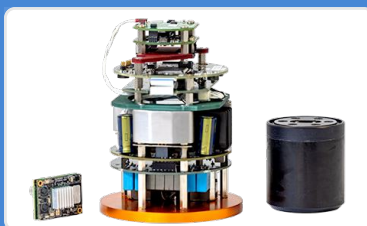
FLEXIBLE CONFIGURATIONS

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-M25MSS4X

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



OPEN CONFIGURATION WNC-M25MSO4X

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
12 kHz (20 – 32 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, Stainless steel,
Titanium

Depth rating
300 m, 2000 m, 4000 m

Dimensions (Gold Edition)
SC: ø 100 x 380 mm
OC: ø 100 x 210 mm

Dimensions (Silver Edition)
SC: ø 100 x 303 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, Platinum, Bronze

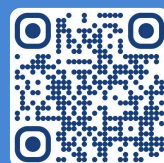
Available Configurations
Standalone Configuration (SC)
Open Configuration (OC)

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