SUBNERO MULTI-CHANNEL MODEMS

Software-defined acoustic modems with multiple receiving channels

USE CASES

- Rapid environmental assessment
- Spatial diversity receiver
- Underwater positioning and tracking
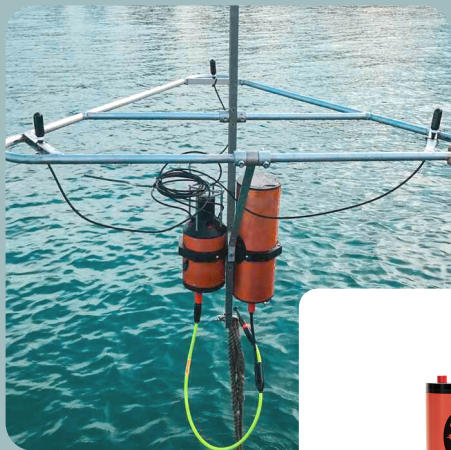

MULTI-CHANNEL RECORDING

Configurable with up to four additional synchronous receiving channels, each channel with a sampling rate of 128 or 256 kSa/s, the multi-channel modems combine Subnero's M25M series modems, with a multi-channel acoustic recorder.

SPATIAL DIVERSITY RECEIVER

Since the receiving channels are synchronized, the multi-channel modems use spatial diversity combining techniques to decode frames received from remote modem, in real-time. This increases the effective communication range by acting as a spatial diversity receiver.

3D POSITIONING & TRACKING

Equipped with sensors such as GPS, compass and a depth sensor, the multi-channel modems combine techniques such as time or phase difference of arrival with the data from these sensors, to provide three dimensional positioning and tracking underwater.

SILVER EDITION
MULTI-CHANNEL CONFIGURATION
WNC-M25MSS3+XCH

Subnero's multi-channel modems, provide the capability to record synchronized signals from multiple hydrophones, in addition to the regular communication channel thereby enabling a plethora of new applications. Users can get direct access to raw data from all the channels in real-time, through UnetStack APIs.

KEY FEATURES

- Integrated Subnero silver edition modems.
- Up to 4 synchronized receiving channels.
- Scheduled and acoustic trigger based recordings.
- Access to raw signals from all receiving channels.
- Ability to develop and deploy user defined applications using UnetStack. Examples are:
  - Rapid environmental assessment.
  - Diversity combining techniques to enhance communication performance.
  - Positioning applications (e.g. USBL).

TECHNICAL SPECIFICATIONS

FEATURE	DETAILS
Modem	Subnero M25M Silver Edition Modem
Additional receiving channels	Up to 4
Sampling rate	128 or 256 kSa/s
Fixed gain	10 dB
Programmable gain	36 dB
Power consumption	< 7 W (receive mode, nominal) < 60 W (transmit mode, average)
Dimensions	ø 127 ✕ 324 mm
Additional sensors*	GPS, Compass

* Optional