

TR-ORCA PRODUCT FAMILY

UNDERWATER ACOUSTIC RECORDING AND SIGNAL PROCESSING



RICH, BROADBAND, UNDERWATER ACOUSTIC RECORDING



The TR-ORCA is a broadband underwater acoustic recorder and processor that supports multiple hydrophone channels and extremely high sampling rates.

Now you can capture, record and process, in real time, extremely rich underwater acoustic data sets. The TR-ORCA is available in full size and mini versions, both supporting five synchronously sampled hydrophone inputs, configurable sampling rates and internal solid state storage.

The TR-ORCA is easy to use, deploy and configure, and is flexible enough for almost any underwater acoustic measurement scenario. Applications include underwater noise characterization, marine mammal studies, underwater detection and localizations.

Your data can be recorded & processed autonomously or streamed in real time via Ethernet, or wirelessly with our TR-FLOAT unit.



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Turbulent Research designs and develops marine electronics products for rich & robust real time data acquisition and signal processing. Our company was founded by engineers with a passion for design, signal processing and delivering world class products.



KEY FEATURES

- **MULTIPLE SYNCHRONOUSLY SAMPLED Input Channels**
- **FLEXIBLE SAMPLING RATES** from 24 KHz to 768 KHz
- **DEEP SOLID STATE RECORDING** for Reliability
- **LOW POWER CONSUMPTION** for Long Deployments
- **REAL TIME DATA STREAMING** or Messaging over Ethernet or Serial Interfaces

TECHNICAL SPECIFICATIONS

POWER	Internal Power: Alkaline D Cells (user replaceable)
	External Power: 10-30 VDC
ANALOG INPUT CHANNELS	Number of Channels: 5 - Standard (more available on request)
	ADC Number of Bits: 16 - Standard (24 bit version available on request)
	Sampling Rates Supported: 24 KHz, 48 KHz, 96 KHz, 192 KHz, 384 KHz, 768 KHz
HYDROPHONE OPTIONS	Universal micro circular connectors for most hydrophones
	Hydrophones mounted on end cap, or connected with custom cable lengths
	Customized sensitivities and bandwidths available on request
MEMORY	2x 512 GB SD Card and up to 2 TB SSD
	Configurable recording, schedule and duty cycling
COMMUNICATIONS	Ethernet - Programming & Live Streaming
	High Speed USB for Download
	RS422
ENVIRONMENTAL	200m or 1000m depth rated (deeper available on request)
	Operating Temperature: -10°C to +50°C

**Specifications subject to change without notice.*

PRODUCT APPLICATIONS

- Acoustics Detection, Localization and Classification
- Marine Mammal Studies and Real Time Monitoring
- Multi Sensor Ocean Observation
- Ambient Noise Monitoring
- Wind and Tidal Renewable Energy Monitoring

