

High Resolution
Multibeam
Systems
for:

Hydrography

Offshore

Dredging

Defense

Research

SONIC 2024

Wideband Multibeam Echo Sounder

Features:

- Wideband 170 kHz – 450 kHz
- Optional UHR™ 700 kHz
- Beam Widths to 0.3° x 0.6°*
- Selectable swath 10° to 160°
- Sounding Depth to 400m+
- Embedded Processor/Controller
- Low Weight, Volume and Power

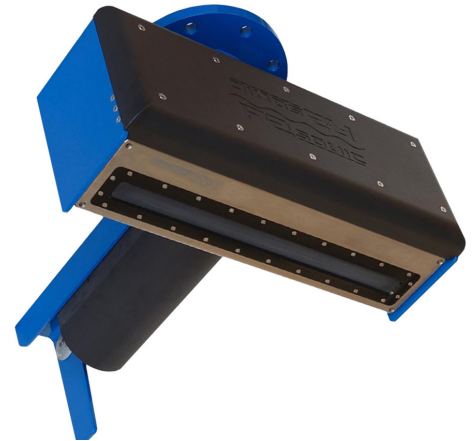
System Description:

The Sonic 2024 is the world's first broadband - wideband high resolution shallow water multibeam echo sounder. With proven results and unmatched performance, the Sonic 2024 has become an industry standard, setting the bar in innovation and compelling customer value.

The Sonic 2024 provides user selectable operating frequencies between 170 kHz and 450 kHz to 1 Hz resolution, and optional 700 kHz, with unparalleled flexibility to trade off resolution and range and controlling interference from other active acoustic systems.

In addition to selectable operating frequencies, the Sonic 2024 provides variable swath coverage selections from 10° to 160°, the ability to rotate the swath sector, as well as roll stabilization. Both the frequency and swath coverage may be selected 'on-the-fly', in real-time during survey operations.

The Sonar consists of the three major components: a compact and lightweight projector, a receiver and a small dry-side Sonar Interface Module (SIM). Third party auxiliary sensors are connected to the SIM.



The sonar operation is controlled from a graphical user interface on a PC or laptop typically equipped with navigation, data collection and storage applications software.

The operator sets the sonar parameters in the sonar control window, while depth, imagery and other sensor data are captured and displayed by the applications software.

Commands are transmitted through an Ethernet interface to the Sonar Interface Module. The Sonar Interface Module supplies power to the sonar heads, synchronizes multiple heads, time tags sensor data, and relays data to the applications workstation and commands to the sonar head. The receiver head decodes the sonar commands, triggers the transmit pulse, receives, amplifies, beamforms, bottom detects, packages and transmits the data through the Sonar Interface Module via Ethernet to the control PC.

The compact size, low weight, low power consumption 50W and elimination of separate topside processors make Sonic 2024 *very well suited* for small survey vessel, ROV or AUV operations.

200 kHz	450 kHz	700 kHz
1° x 2°	0.45° x 0.9°	0.3° x 0.6°

Beam widths at selected frequencies (nadir)

SONIC 2024 Multibeam Echo Sounder

Systems Specification:

Frequency	170 kHz - 450 kHz to 1 Hz resolution Optional 700 kHz
Beamwidth, Across Track	0.3°*
Beamwidth, Along Track	0.6°*
Number of Soundings	Up to 1024 per swath, per head
Selectable Swath Sector	10° to 160°
Sounding Depth	400 m+**
Pulse Length	15 µs – 1115 µs
Pulse Type	Shaped CW
Ping Rate	Up to 60 Hz
Depth Rating	100 m
Operating Temperature	-10° C to 50° C
Storage Temperature	-30° C to 55° C

Electrical Interface

Mains	90-260 VAC, 45-65 Hz
Power Consumption	50 W (Sonar Head)
Uplink/Downlink:	10/100/1000Base-T Ethernet
Data Interface	10/100/1000Base-T Ethernet
Sync In, Sync out	TTL
GPS	1PPS, RS-232
Auxiliary Sensors	RS-232
Deck Cable Length	15 m

Mechanical

Receiver Dim (LWD)	480 x 109 x 190 mm
Receiver Mass	12.9 kg
Projector Dim (LWD)	273 x 108 x 86 mm
Projector Mass	3.3 kg
Sonar Interface	280 x 170 x 60 mm
Module Dim (LWH)	
Sonar Interface	2.4 kg
Module Mass	

Sonar Options

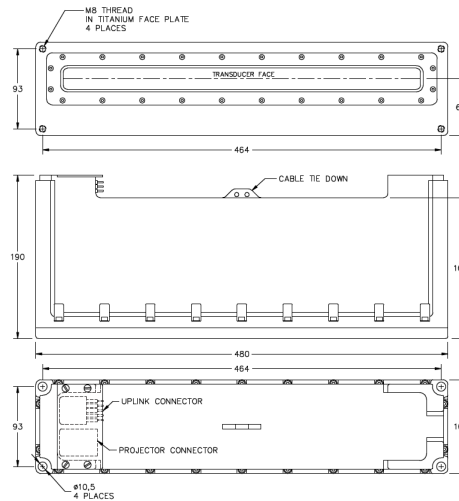
TruePix™ Imagery Output
 Ultra-High Resolution UHR™ 700 kHz
 Switchable Forward Looking Sonar Output
 Raw Water Column Data Output
 I2NS™ Integrated Inertial Nav. System
 Mounting Hardware & Assemblies
 4000/6000m Immersion Depth Ratings
 Antifouling Coating Protection

*Beam width to 0.3° x 0.6° with UHR 700 kHz option

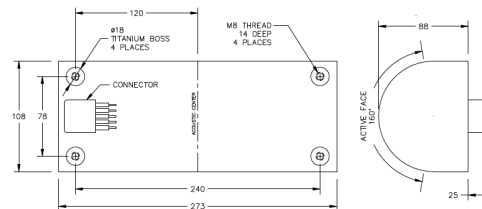
**Max sounding depths depend on environmental conditions



Sonar Interface Module



Sonic 2024 Receiver



Sonic 2024 Projector

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