SONIC 2026

Wideband Multibeam Echo Sounder

Features:

- Focused Beams to 0.5° x 0.5°
- Wideband 200-400kHz & 100kHz
- Selectable swath sector 10° to 160°
- Swath sector rotation
- Max Range Setting 1200m
- Embedded processor/controller
- Low Weight, Volume and Power

System Description:

The Sonic 2026 is the most advanced broadband – wideband multibeam sonar of its kind.

With wide selectable operating frequencies from 200-400kHz and optional 100kHz with max range setting to 1200m, the user has unparalleled flexibility to trade off resolution and range and controlling interference from other active acoustic systems. In addition to selectable frequencies, the Sonic 2026 provides variable swath coverage selections from 10° to 160° and ability to rotate the swath sector, which may be changed 'on the fly' in real-time and a pitched stabilized projector for optional beam modes.

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 data is tagged with GPS time.

The sonar operation is controlled from a graphical user interface on a PC or laptop which is 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 SIM. The SIM 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 elimination of separate processors and interface bottles makes this sonar *well suited for AUV installation*. Apart from the projector and receiver, the only hardware to be housed on the AUV is an interface board the size of a PC/104 board, Ethernet ports for interface, and the provision of isolated 48V DC power.

100kHz	200kHz	400kHz
2° x 2°	1° x 1°	0.5° x 0.5°

Beam widths at selected frequencies (nadir)

Sonic 2026 Multibeam Echo Sounder

Systems Specification:

Frequency	200kHz-400kHz & 100kHz (optional)
Beamwidth, Across Track	0.5°
Beamwidth, Along Track	0.5°
No. of Beams	256
Selectable Swath Sector	10° to 160°
Max Range Setting	1200m
Pulse Length	15µs-5ms
Pulse Type	Shaped CW
Ping Rate	Up to 60 Hz
Depth Rating	100m
Operating Temperature	-10°C to 50°C
Storage Temperature	-30°C to 55°C

Electrical Interface

Mains	90-260 VAC, 45-65Hz
Power Consumption	75W
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	15m

Mechanical:

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Receiver Dim (LWD)	480 x 109 x 190 mm
Receiver Mass	12 kg
Projector Dim (LWD)	480 x 109 x 190 mm
Projector Mass	11 kg
Sonar Interface Module Dim (LWH)	280 x 170 x 60 mm
Sonar Interface Module Mass	2.4 kg

Sonar Options:

100kHz Operation
Snippets/TruePix Imagery Output
Switchable Forward Looking Sonar Output
Raw Water Column Data Output
Integrated Inertial Navigation System
Integrated Sediment Profiler
Mounting Hardware & Assemblies
3000m Immersion Depth Rating
Antifouling Coating Protection

Sonar Interface Module
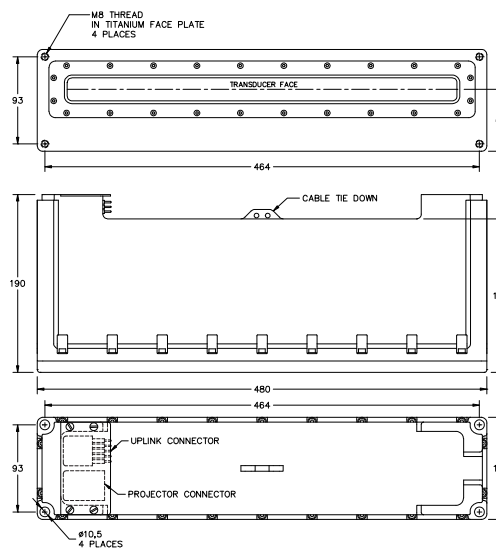
Sonic 2026 Receiver
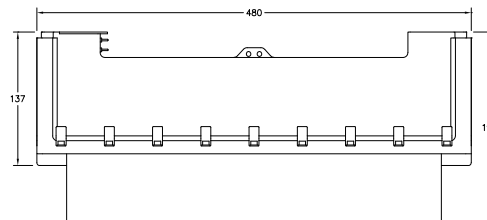
Sonic 2026 Projector

Pioneers of Wideband High Resolution Multibeam Systems