

# Sonic 2022 and Integrated Sonic 2022-V

## Wideband Multibeam Echosounder Range



Sonic 2022 with optional mount

Small form factor Multibeam Echosounder used extensively in Dredging, Construction, Ports and Harbor surveys worldwide.

Ideally suited for small survey vessels as well as ROV, ASV and AUV.

### Additional features & benefits of the technologically advanced, user-friendly **Sonic 2022 Series:**

- ▶ Technical modes that can be upgraded remotely, anytime:
  - Ultra-high Resolution (UHR)
  - Pipeline mode
  - TruePix™ Compressed water column
  - Multispectral backscatter
  - Forward looking sonar (FLS)\*
- ▶ Ultra-High Density (UHD), 1024 soundings per ping, resulting in greater resolution, particularly on the outer beams
- ▶ Selectable operating frequencies ‘on-the-fly’ in steps of 1Hz so you can choose the best frequency for the application or environment
- ▶ Dynamic focusing, essential to ensure high resolution in very shallow waters
- ▶ ROBO™ mode for simpler operation
- ▶ Runs on the Sonic Control Graphic User Interface
- ▶ The Integrated Sonic Series exceeds IHO-S44 Special Order when installed following R2Sonic manual instructions
- ▶ Value priced

### Introducing the new **Sonic 2022-V Series**, with embedded IMU – first on the market!

The V-Series is an innovative, integrated solution. An enhanced version of the standard 2022 product that offers additional unique user benefits:

- ▶ New embedded Inertial Measurement Unit (IMU)
  - Single cable, less space and less risk of exposure than with a separate IMU
  - Improved performance with roll/pitch accuracy to 0.015°
  - Highly immune to GNSS outages
- ▶ New compact VOX-IM
  - Integrated connectors for additional motion/GPS equipment
  - RTK/RTCM input
  - Wide range of voltage input – AC and DC
- ▶ New VOX-App user interface
  - Easier system set up and interfacing with new embedded IMU / GNSS
  - Enhanced visual package and user interface

### Easy to Integrate on any platform



### Extra Light & Compact!



Highly Portable



SV probe



SIM Box



New Compact VOX-IM



New VOX-App User Interface

# Sonic 2022 and Integrated Sonic 2022-V

## Technical Specifications Comparison Chart



	Sonic 2022	Sonic 2022-V
Selectable Frequencies	170kHz – 450kHz (optional 700kHz)	
Minimum frequency increase	1Hz	
Beamwidth, across track and along track	0.6° x 0.6° at 700kHz (optional) 0.9° x 0.9° at 450kHz 2° x 2° at 200kHz	
Number of soundings	Up to 1024 soundings per ping	
Max speed (vessel)	11.1 knots for full coverage (The speed of the survey is primarily limited by the installation of the multibeam echosounder)	
Near-field focusing	Yes	
Roll stabilized beams	Yes	
Pitch stabilized beams	No	
ROBO™ Automated Operation	Auto power, gain and pulse width	
RangeTrac™, GateTrac™	Yes	
Saturation Monitor	Yes	
Selectable Swath Sector (Max Coverage)	10° to 160° User selectable in real-time	
Sounding Patterns	Equiangular Equidistant single / double / quad modes Ultra High Density (UHD)	
Sounding Depth	up to 400m+	
Pulse Length	15µs - 1ms	
Pulse Type	Shaped CW	
Ping Rate	up to 60Hz	
Bandwidth	up to 60kHz	
Immersion Depth	100m Optional 4000m FLS projectors are rated 3000m	100m
Bottom Detect Resolution	3mm	

### Mechanical Specifications

	Sonic 2022	Sonic 2022-V
Receiver Dim (LWD)	276 x 109 x 190mm	
Receiver Mass	7.7kg	
Projector Dim (LWD)	273 x 108 x 86mm	
Projector Mass	3.3kg	
Sonar Interface Module (LWD)	280 x 170 x 60mm	212 x 160 x 70.5mm
Sonar Interface Module Mass	2.4kg	2.9kg

### Graphical User Interface (GUI)

	Sonic Control 2022	VOX-App
Mains	90-260V AC 45-65Hz	90-260V AC or 10-55V DC
Power Consumption	35W avg	
Uplink / Downlink	10/100/1000Base-T Ethernet	
Sync in, Sync out	TTL	
Deck cable length	15m, optional 25m and 50m	

### Sonic 2022-V INS Accuracies (with RTK)

Roll & Pitch	0.015°
Heading	0.015° with baseline >4m, 0.03° with baseline >2m
Heave	5cm or 5% real-time, 2cm or 2% delayed-heave
Position	Horizontal: 1cm + 0.5 ppm, Vertical: 1.5cm + 1 ppm

## R2Sonic Service & Support

- ▶ Technical support 24/7/365, globally
- ▶ Firmware of all MBES can be upgraded remotely at no charge
- ▶ Fast, quality repairs performed by our team that engineered the multibeam sonar and the IMU
- ▶ 3-year standard warranty, upgradable to 6-years to further minimize your risk on investment
- ▶ Theoretical and hands-on personalized training delivered by our experts



Please contact us or visit [r2sonic.com/products](https://r2sonic.com/products) for more info.

US Patents: 10,132,924 • 10,605,914 • 11,079,490 EU Patent: EP3362817

