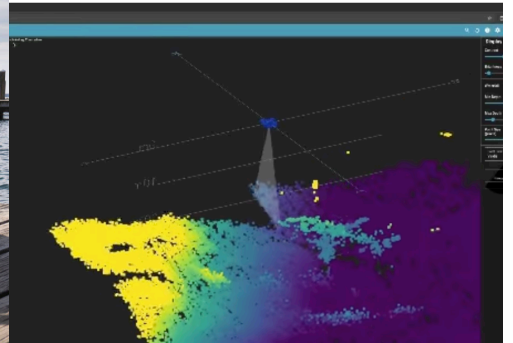
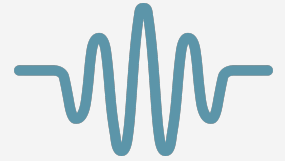


Surveyor240

Datasheet



From **\$4,990** - Compact multibeam ecosounder is the perfect fit for deployment on the new generation of USVs.

Surveyor 240-16 is a 240 kHz multibeam echo sounder (MBES). It has a transmit beam approximately 4 degrees along track, 80 degrees cross track, and a 16-element receive array. Surveyor 240-16 utilizes an angle-of-arrival estimation algorithm to measure cross track location of specific acoustic reflectors well in excess of the accuracy achievable with conventional beam-forming techniques. Thus, although the effective cross track beam width with conventional beam forming is about 7 degrees, Surveyor can resolve angle of arrival to less than one degree.

Depending on the range and acoustic properties of the bottom, Surveyor typically identifies 10-15 acoustic targets across track within a swath width of 80 degrees. The position and depth of these targets are then accurately calculated by range and angle of arrival.

Surveyor includes a built-in IMU. SonarView uses the Surveyor IMU for pitch and roll compensation and combines this with position and heading information from the vehicle to accurately place each depth measurement in its correct geographic location.

Product Strengths

- Compact & lightweight form factor
- Affordable multibeam technology
- MBES technology can be more than ten times faster than single-beam
- Survey depths to 50 meters and more
- Export point cloud data for post processing in most hydrographic

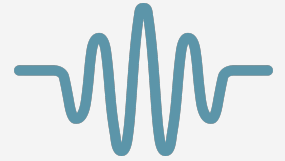


Cerulean Sonar

www.ceruleansonar.com

Surveyor240

Datasheet



Specifications

Acoustic frequency	240 kHz
Along track TX beam width	4°
Cross track TX beam width	80°
RX array # elements	16
Cross track beam width	7° (conventional beamforming)
Cross track angular resolution	1° (angle of arrival)
Range resolution	up to 1/800th of range setting
Maximum depth rating	300m
Maximum suggested range	100m
Power Supply	10-30V, 5W typical at idle, 15W typical max while pinging
Data Interface	100BaseT Ethernet (maximum of 500kbps bandwidth used when capturing full data stream)
Electrical Connection	JST GH (4 pos) for data (Blue Robotics connector standard.) Tinned wires for connecting to power. A JST GH to RJ45 adapter is included.
Weight in Air	790g
Weight in Water	145g
Maximum Ping Rate (pings / sec)	16 @ 200 range steps, 10 @ 400 range steps, 6 @ 800 range steps

Cerulean SonarView software supports live capture, real time preview, offline mission replay, and data export for post processing.

During data collection, SonarView logs Surveyor attitude (pitch and roll), receive channel data, vehicle GNSS position, and vehicle heading.

Point cloud data is calculated and displayed in SonarView's real time preview. A "fan view"

image of each ping is also displayed which can be useful for assessing signal quality.

Speed of sound can be specified at export, at which the time the logged attitude and position data is processed to geographically corrected positions and depths.

Cerulean Sonar

www.ceruleansonar.com