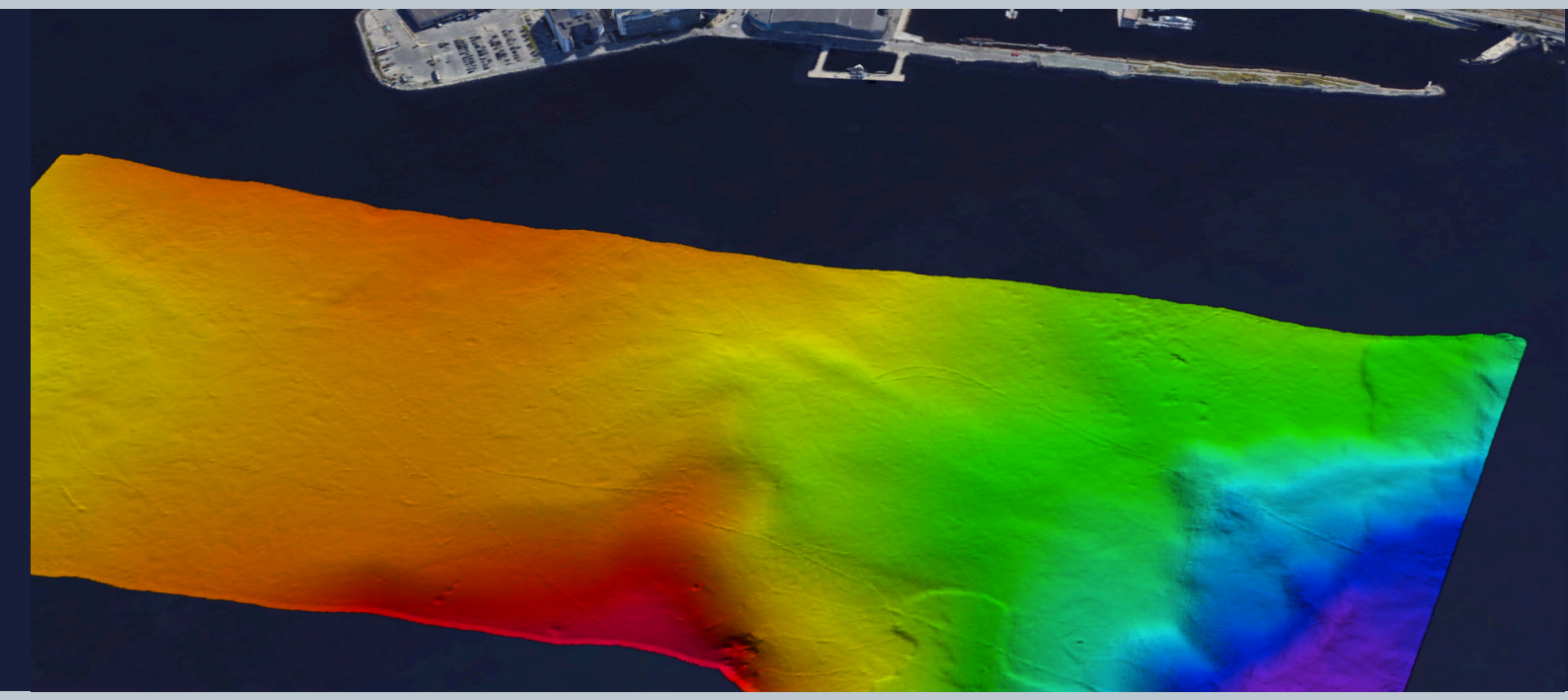
NORBIT WBMS X

Configurable Bathymetric Sonar System



Bathymetric Sonar System with Ultimate Flexibility.

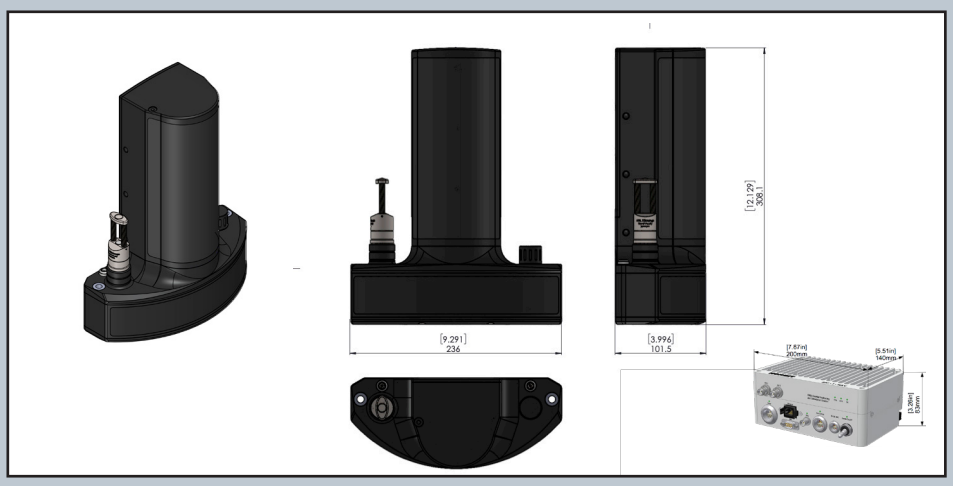
Introducing WBMS X, the latest addition to our innovative multibeam sonar family. This cutting-edge, curved array, ultra-compact system is designed to deliver high-resolution bathymetric data, and can be configured to match your unique survey needs.

Built with flexibility and adaptability in mind, the new modular platform can be customised to fit any operational environment. This multibeam sonar system provides outstanding performance, even in challenging conditions with high vessel motion.

KEY FEATURES

- High resolution 0.9°x 0.9°
- Ultra Compact
- Customisable
- Active Roll, Pitch and Yaw Stabilisation
- Backscatter Outputs
- <10mm Resolution
- Integrated Field Replaceable Sound Velocity Probe
- Multidetect
- Exceeds IHO Exclusive Order & USACE New Work

OUTLINE



Entire sonar system is delivered in a single pelican case

MFE OFFSHORE
+1 (832) 446-2061 | wpost@mfe-is.com

WBMS X

Specifications: Integrated and non-integrated

NORBIT - explore more -

Sonar Specifications - Choose your base model

Standard		Long Range	
Depth Range	0.2-275m	**Depth Range**	0.2-600m
Weight	6.6kg (air), 3.2kg (water) excl. bracket 7.4 kg (air), 3.8 kg (water) incl. bracket	**Weight**	7.4kg (air) 3.8kg (water) excl. bracket 7.9kg (air) 4.2kg (water) incl. bracket
Operating Frequency	Nominal 400 kHz (agility 200–700 kHz)	**Operating Frequency**	200 kHz & 400 kHz (agility 200–700 kHz)
Resolution (Across x Along)	0.9° x 0.9° @400kHz 0.5° x 0.5° @700kHz	**Resolution (Across x Along)**	0.9° x 0.9° @400kHz 1.8° x 1.8° @200kHz

Common Sonar Specifications

Number of Beams	EA & ED: 256, 512, 1024 (option), 2x1024/Dual Swath(option)	**Swath Coverage**	5-210° flexible sector (Shallow water IHO special order >155°)
Ping Rate	Up to 60Hz, adaptive	**Backscatter Outputs**	Intensity, Sidescan, Snippets, Water Column
Interface	Ethernet	**Depth Resolution**	<10mm acoustic w. 80kHz Bandwidth
Environmental	Topside: IP67 compliant	**Power Consumption**	40W-85W (depending on GNSS system) 10-28VDC, 100-240VAC
Depth Rating	100m	**Operating Temperature Storage Temperature**	-4°C to +40°C (topside -20°C to +55°C) -20°C to +60°C

OEM GNSS/INS Integration Options

Applanix	OceanMaster	WaveMaster II	SurfMaster
Position	HOR: ±(8mm +1ppm x Distance from RTK station) VER: ±(15mm +1ppm x Distance from RTK station) (Assumes 1m GNSS separation)	HOR: ±(8mm +1ppm x Distance from RTK station) VER: ±(15mm +1ppm x Distance from RTK station) (Assumes 1m GNSS separation)	HOR: ±(8mm +1ppm x Distance from RTK station) VER: ±(15mm +1ppm x Distance from RTK station) (Assumes 1m GNSS separation)
Heading Accuracy	0.01° with 4m antenna separation	0.015° with 4m antenna separation	0.06° with 4m antenna separation
Pitch/Roll Accuracy	0.01° (RTK) / 0.008° (IAPPK)	0.02° (RTK) / 0.015° (IAPPK)	0.03° (RTK) / 0.025° (IAPPK)
Heave Accuracy	2cm or 2% (TrueHeave™), 5cm or 5% (Real Time)	2cm or 2% (TrueHeave™), 5cm or 5% (Real Time)	2cm or 2% (TrueHeave™), 5cm or 5% (Real Time)
SBG	**Ekinox**		
Position	HOR: ±(10mm +0.5ppm x Distance from RTK station) VER: ±(15mm +1ppm x Distance from RTK station) (Assumes 1m GNSS separation)		
Heading Accuracy	0.02° with 4m antenna separation		
Pitch/Roll Accuracy	0.015° (RTK) / 0.01° (PPK)		
Heave Accuracy	2cm or 2% (Delayed Heave), 5cm or 5% (Real Time)		

Software Options

Pitch Stabilisation	Real-time compensation for vessel pitch to ensure even sounding density in dynamic conditions	**1024 Beams**	Increase sounding density across track
Yaw Stabilisation	Real-time compensation for vessel yaw to ensure even sounding density in dynamic conditions	**1.9 deg Version**	Opening angles: 0.9° x 1.9° @400kHz
Dual Swath	Doubles survey sounding density along track by transmitting two swaths per ping cycle	**STX - Scanning**	Rapid electronic transmit beam scanning to combine proven 2D bathymetry into 3D georeferenced bathymetry.
NORBIT Data Acquisition and visualisation	Data Collection Tool (DCT) and real time 3D Point Cloud visualisation available for INS-integrated systems	**Backscattering Strength Output**	BSO provides fully repeatable backscatter results, as well as compatibility with physical models for seafloor and habitat classification
3rd Party Data Acquisition & Post Processing	HYPACK, QPS, BeamworX, EIVA, and others		

Hardware Options

Pole Mount	NORBIT Carbon fibre mounting pole (PORTUS)	**Housing**	Titanium housing
Cable Length	2m, 8m or 25m (For longer cables, please contact Subsea sales for information)	**Fairing**	For extra protection and improved flow dynamics
Dual Head	Dual Head option available. Please contact NORBIT Subsea sales for information	**Subsea version**	Subsea version 1500m depth rated option available for Standard version, without IMU and vehicle speed limited to max 7.2kn.

COPYRIGHT©2025 NORBIT, ALL RIGHTS RESERVED. WHILE EVERY EFFORT IS MADE TO ENSURE THE INFORMATION GIVEN IS ACCURATE, NORBIT DOES NOT ACCEPT LIABILITY FOR ANY ERRORS OR OMISSIONS, ALL WEIGHTS AND MEASURES ARE APPROXIMATE AND OTHER INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE