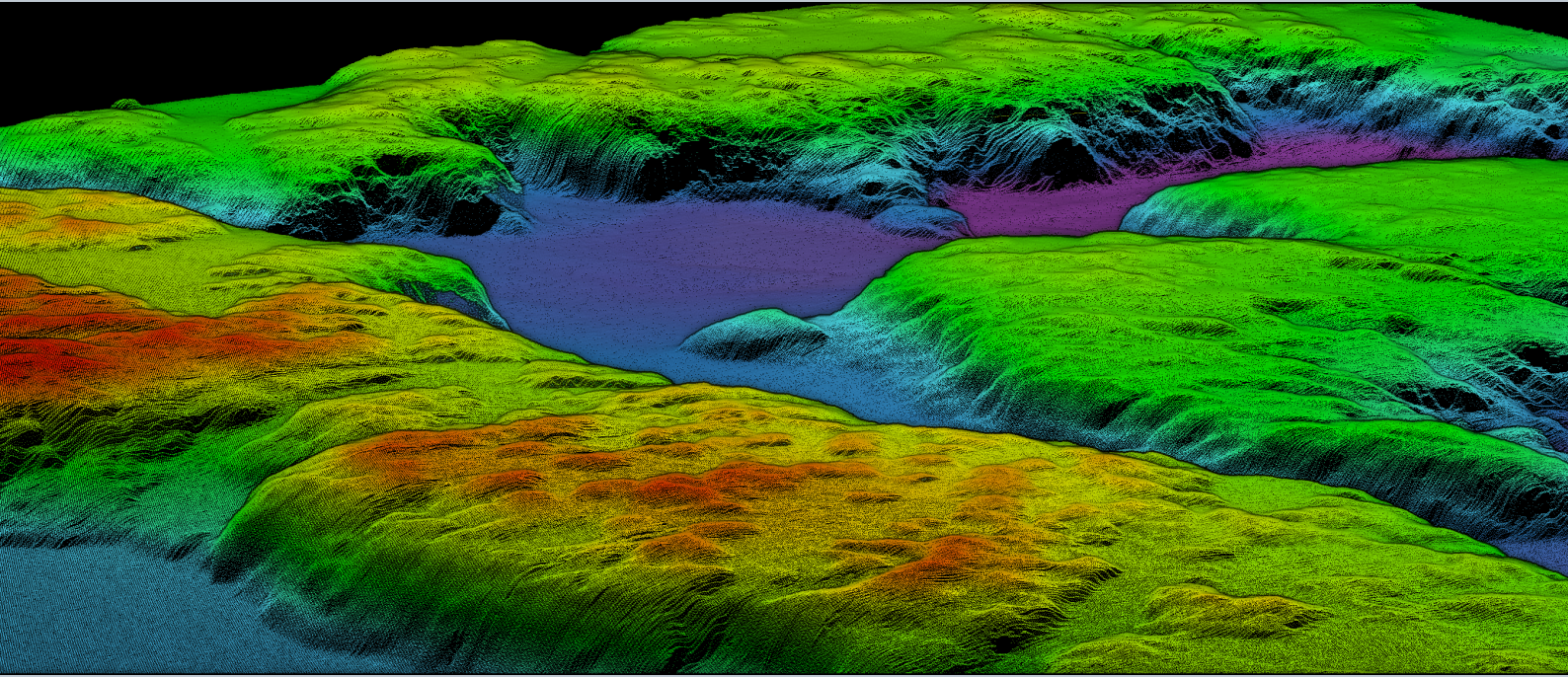




NORBIT WINGHEAD® X

Configurable Bathymetric Sonar System



Customisable Bathymetric Sonar for Any Mission

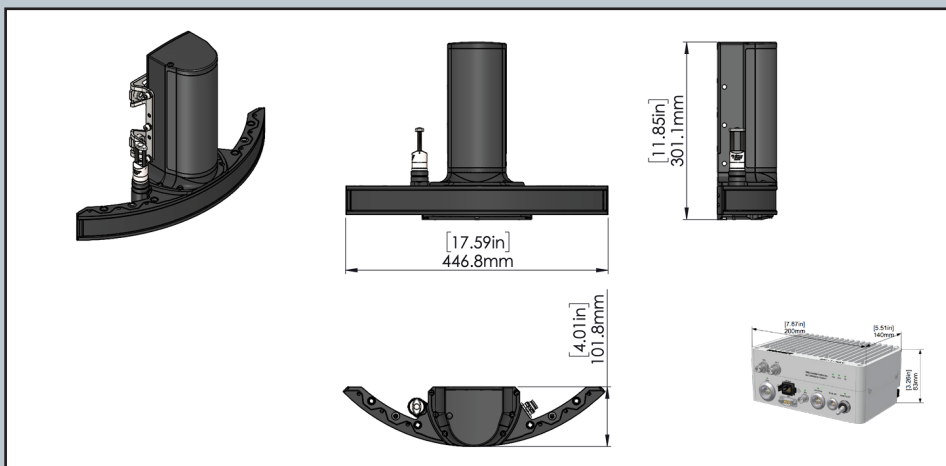
Introducing the WINGHEAD X, the newest adaptable member of our cutting-edge multibeam sonar family. At the heart of this ultra-compact, curved array system is a highly configurable platform, purpose-built to be tailored to your specific survey requirements.

WINGHEAD X is designed to fit your mission—not the other way around. Its modular architecture ensures seamless integration into any operational environment, while maintaining exceptional high-resolution performance, even in conditions with significant vessel motion.

KEY FEATURES

- High resolution 0.5°x 0.9°
- Ultra Compact
- Customisable
- Active Roll, Pitch and Yaw Stabilisation
- Backscatter Outputs
- <10mm Resolution
- Integrated Field Replaceable Sound Velocity Probe
- Multidetector
- Exceeds IHO Exclusive Order & USACE New Work

OUTLINE



WINGHEAD X



Specifications: Integrated and non-integrated

Sonar Specifications - Choose your base model			
Standard		Long Range	
Depth Range	0.2-400m	Depth Range	0.2-600m
Weight	6.9kg (air) 3.7kg (water) Excl. bracket 7.4kg (air) 3.8kg (water) Incl. bracket	Weight	8.0kg (air) 4.2kg (water) excl. bracket 8.5kg (air) 4.7kg (water) incl. bracket
Operating Frequency	Nominal frequency 400kHz (frequency agility 200-700kHz)	Operating Frequency	Nominal frequency 200kHz and 400kHz (frequency agility 200-700kHz)
Resolution (Across x Along)	0.5° x 0.9° @400kHz 0.3° x 0.5° @700kHz	Resolution (Across x Along)	0.5° x 0.9° @400kHz 1.0° 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	Depth Resolution	<10mm acoustic w. 80kHz Bandwidth
Environmental	Topside: IP67 compliant	Power Consumption	Typical 50W-80W, 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
Interface	Ethernet		

OEM GNSS/INS Integration Options			
	Applanix OceanMaster	SBG Apogee*	
Position	HOR: ±(8mm +1ppm x Distance from RTK station) VER: ±(15mm +1ppm x Distance from RTK station) (Assumes 1m GNSS separation)	HOR:±(10mm+0.5ppm x distance from RTK station, independent of antenna separation) VER: ±(15mm+1ppm x distance from RTK station, independent of antenna separation)	
Heading Accuracy	0.02° with 2m antenna separation	0.02° (0.01° PPK) with 2m antenna separation	
Pitch/Roll Accuracy	0.01° independent of antenna separation	0.008° RTK (0.005° PPK) independent of antenna separation	
Heave Accuracy	2cm or 2% (TrueHeave™), 5cm or 5% (Real Time)	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	STX Scanning	Rapid electronic transmit beam scanning to combine proven 2D bathymetry into 3D georeferenced bathymetry.
Dual Swath	Doubles survey sounding density along track by transmitting two swaths per ping cycle	Backscattering Strength Output	BSO provides fully repeatable backscatter results, as well as compatibility with physical models, for seafloor and habitat classification
NORBIT Data Acquisition and visualisation	Data Collection Tool (DCT) and real time 3D Point Cloud visualisation available for INS-integrated systems	3 rd Party Data Acquisition & Post Processing	HYPACK, QPS, BeamworX, EIVA, and others

Hardware Options			
Pole Mount	NORBIT Carbon fibre mounting pole (PORTUS).	Housing Material	Optional Titanium housing
Cable Length	2m, 8m, 25m or 50m (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 Subsea sales for information	Subsea version	1500m depth rated option available on the standard model without IMU and vehicle speed limited to max 7.2kn.

*Note dimensions will change: Length 354.9mm