

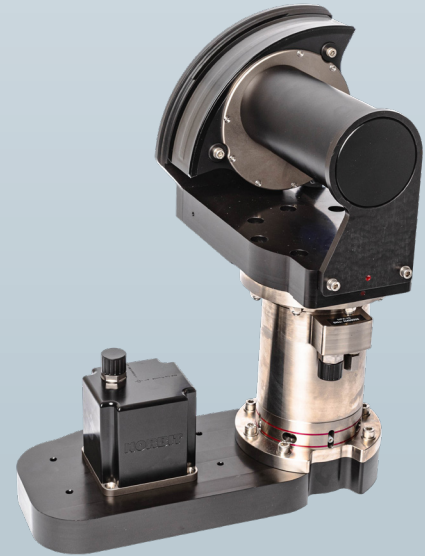
# NORBIT - iSTX360 -TURNKEY SOLUTION FOR DREDGING MONITORING

stationary surveys with 360 deg coverage

Compact and high-resolution curved array FM bathymetric mapping system for stationary 360 Survey.

This all-in-one tightly integrated broadband multibeam turnkey solution offers high resolution bathymetry over a wide swath for all dredging applications. The high-end sonar with Applanix WaveMaster II (globally leading GNSS/INS system) embedded into the unit ensures fast and reliable mobilization and highest quality sounding for surveys in all conditions. The system is tightly integrated to a titanium rotating system ensuring a full 360 deg stationary high-end survey capability.

The WBMS-series are based on a flexible sonar platform that utilizes the latest in analogue and digital signal processing. With broad R&D expertise NORBIT has developed, from the ground-up, exciting new technology that allows existing and new applications to benefit from the advantages offered by a compact wideband curved-array multibeam sonar.



## Features

- ✓ State-Of-The-Art Curved Array Multibeam Sonar Tightly Integrated with High-end GNSS-aided Inertial Navigation System (Applanix WaveMaster II)
- ✓ 80kHz Bandwidth
- ✓ Backscatter outputs (Intensity, Sidescan, Snippets Sidescan, Snippets, Water Column)
- ✓ Multidetect
- ✓ Simple Ethernet Interface
- ✓ Integrated NTRIP Client
- ✓ Integrated Sound Velocity Probe
- ✓ FM & CW Processing
- ✓ Tightly Coupled to NORBIT Rotator
- ✓ Exceeds IHO *Special Order*, CHS *Exclusive Order* & USACE *New Work*

## Applications

- ✓ Pipe Laying Survey
- ✓ Cable Laying Survey
- ✓ Construction Survey
- ✓ Rock Dumping Survey
- ✓ Dredge Monitoring/Survey
- ✓ Breakwater Construction
- ✓ ACCROPODE™ Placement

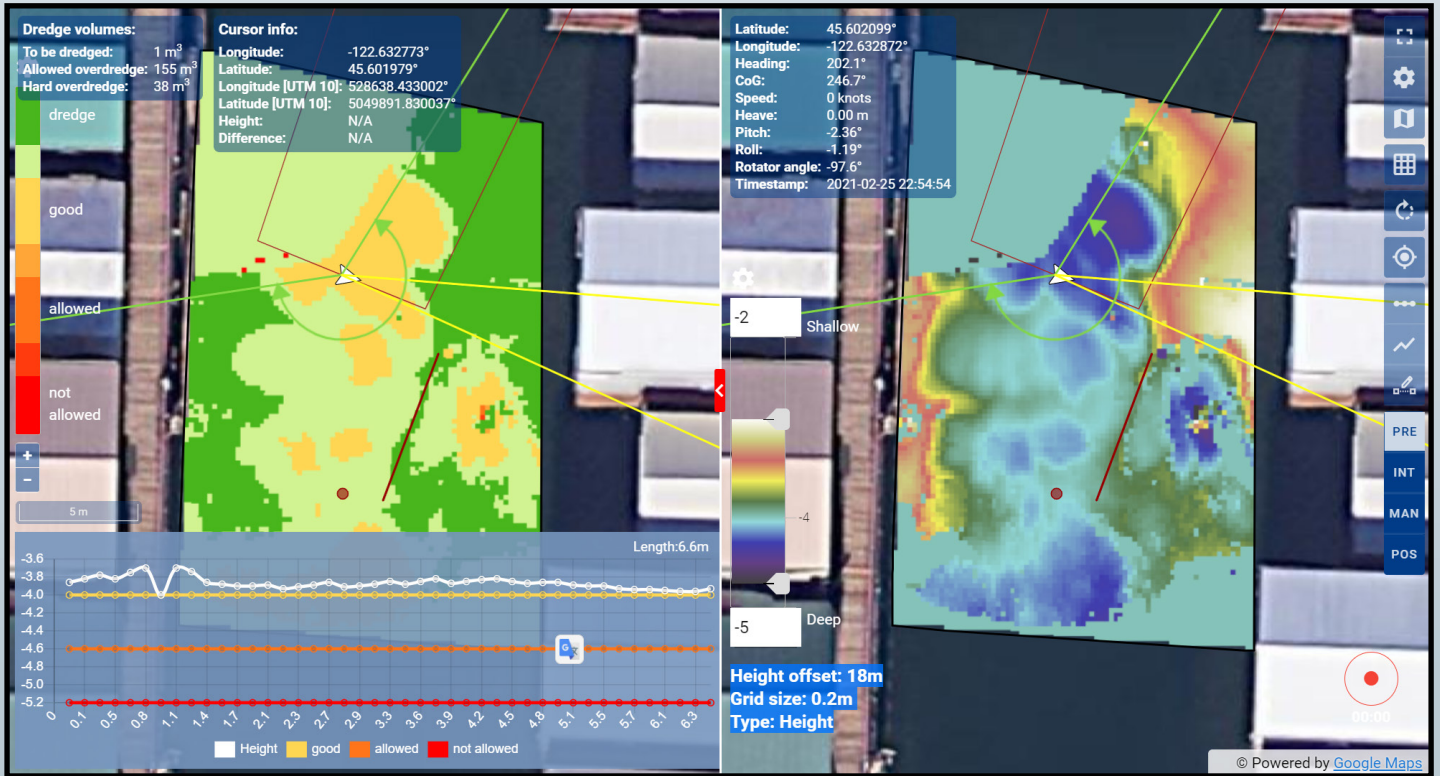
## Options

- ✓ NORBIT Consolidated Dredging Monitoring Software (NORDredge)
- ✓ Turnkey Survey Solutions
- ✓ Pole Mount
- ✓ Top-end INS (Roll, Pitch & Heading 0.01 deg)
- ✓ Acquisition, Navigation and Post Processing Software
- ✓ Senior Hydrographer for Support and Training
- ✓ Sound Velocity Profiler
- ✓ Pre- and Pos- survey Support for Final Product Delivery
- ✓ Can be Delivered with Software Packages e.g. HYPACK, Qinsy, EIVA, CARIS and Others

EXPERTS in sensor equipment providing telemetry and communication solutions for harsh environments.  
NORBIT develops and delivers innovative products - allowing you to explore more.

# NORBIT iSTX360 Solution

## High Resolution 4D Bathymetry



### TECHNICAL SPECIFICATION

SWATH COVERAGE	5-210° FLEXIBLE SECTOR (SHALLOW WATER IHO SPECIAL ORDER >155°) FULL 360° HORIZONTAL COVERAGE WITH ROTATOR
RANGE RESOLUTION	<10mm ACOUSTIC w. 80kHz BANDWIDTH
NUMBER OF BEAMS	256-512 EA & ED
OPERATING FREQUENCY	NOMINAL FREQUENCY 400kHz (FREQUENCY AGILITY 200-700kHz)
DEPTH RANGE	0.2-275m
PING RATE	UP TO 60Hz, ADAPTIVE
RESOLUTION (ACROSS X ALONG)	0.9° X 0.9° @400kHz and 0.5° X 0.5° @700kHz
POSITION	HOR: ±(8mm +1ppm X DISTANCE FROM RTK STATION) VER: ±(15mm +1ppm X DISTANCE FROM RTK STATION) (ASSUMES 1m GNSS SEPARATION)
HEADING ACCURACY	0.03° (RTK) WITH 2m ANTENNA SEPARATION ROTATOR 16 BIT ACCURACY ABSOLUTE, +/- 0.005°
PITCH/ROLL ACCURACY	0.02° INDEPENDENT OF ANTENNA SEPARATION
HEAVE ACCURACY	2 cm OR 2% (TRUEHEAVE™), 5 cm OR 5% (REAL TIME)
WEIGHT	TOTAL WEIGHT IN AIR (SONAR & ROTATOR): 15.4kg
INTERFACE	ETHERNET
CABLE LENGTH	STD 25m OPT: 50m
POWER CONSUMPTION	80W (10-28VDC, 110-240VAC)
OPERATING TEMP.	-4°C to +40°C (TOPSIDE -20°C to +55°C)
STORAGE TEMP.	-20°C to +60°C
ENVIRONMENTAL	TOPSIDE: IP67: DUST TIGHT, PROTECTED AGAINST THE EFFECT OF IMMERSION UP TO 1m/WET-END: 100m

