



NORBIT WINGHEAD® i79h Apogee



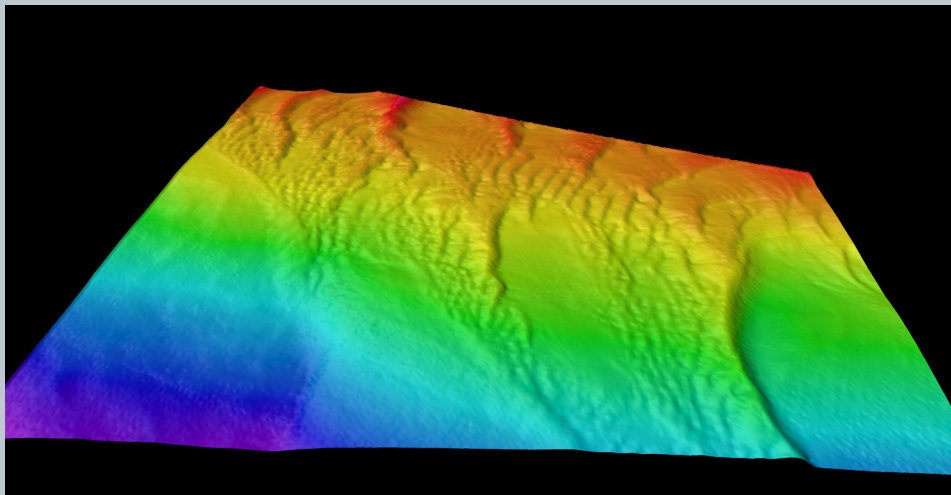
Superior Performance Ultra High-Resolution Curved Array Bathymetric System.

NORBIT introduces the first cylindrical ultra-high resolution curved array bathymetric system, designed for rapid anywhere, anytime mobilisation featuring the highest standard industry-leading integrated GNSS/INS positioning system.

NORBIT WINGHEAD sonars are based on a state-of-the-art analogue and digital platform featuring powerful signal processing capabilities, offering roll-stabilised bathymetry and several imagery and backscatter outputs, ensuring the highest quality survey data performance. 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.

The NORBIT WINGHEAD i79h Apogee is a compact ultra-high resolution curved array broadband multibeam sonar offering tight integration with GNSS/INS (SBG) that is designed for use in the most demanding operational environments such as under bridges or in rough sea conditions. Characterised further by a small form factor, low power draw and tight integration, WINGHEAD i79h Apogee installation can occur on surface survey platforms ranging from small USVs to large vessel permanent hull mounts.

Supported by DCT (NORBIT Integrated Data Acquisition Software) for efficient survey data acquisition.



WINGHEAD i79h Apogee
shown with fairing



WINGHEAD i79h Apogee

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Features

- ✓ Multibeam Sonar with Integrated Inertial Navigation System & Integrated NTRIP Client
- ✓ 80kHz Bandwidth
- ✓ Roll-stabilisation
- ✓ Backscatter outputs (Intensity, Sidescan, Snippets, Water Column)
- ✓ Multidetect
- ✓ Pipeline Mode
- ✓ Optimized for Hull Mount and Corrosion Resistance
- ✓ Integrated Sound Velocity Probe
- ✓ 1024 Dynamically Focused Beams
- ✓ FM & CW Processing
- ✓ Exceeds IHO Exclusive Order & USACE New Work

Applications

- ✓ Shallow Water Bathymetry
- ✓ Pipeline & Cable Inspection Surveys
- ✓ Quay wall, bridge and structure inspection surveys
- ✓ Pond, River and Estuary Surveys
- ✓ Harbour and Lake Surveys
- ✓ USV & UUV
- ✓ Coastal Surveys
- ✓ Hull Mount

Options

- ✓ NORBIT Integrated Data Acquisition Software - DCT
- ✓ Permanent Hull Mount Option
- ✓ Pole Mount
- ✓ Sound Velocity Profiler
- ✓ Supports NORBIT iLiDAR
- ✓ Detached INS Version
- ✓ Senior Hydrographer for Support and Training
- ✓ Acquisition, Navigation and Post Processing Software e.g. DCT, HYPACK, Qinsy, EIVA, CARIS beamworX and Others
- ✓ Fairing
- ✓ MarineStar

TECHNICAL SPECIFICATION

SWATH COVERAGE	5-210° FLEXIBLE SECTOR (SHALLOW WATER IHO SPECIAL ORDER >155°)
RANGE RESOLUTION	<10mm ACOUSTIC w. 80kHz BANDWIDTH
NUMBER OF BEAMS	256, 512, 1024 EA & ED
OPERATING FREQUENCY	NOMINAL FREQUENCY 400kHz (FREQUENCY AGILITY 200-700kHz)
DEPTH RANGE	0.2m to up to 500m
PING RATE	UP TO 60Hz, ADAPTIVE
RESOLUTION (ACROSS X ALONG)	STANDARD: 0.5° X 0.9° @400kHz, 0.3° x 0.5° @700kHz
POSITION	HOR: $\pm(10\text{mm} + 0.5\text{ppm} \times \text{DISTANCE FROM RTK STATION})$, (INDEPENDENT OF ANTENNA SEPARATION) VER: $\pm(15\text{mm} + 1\text{ppm} \times \text{DISTANCE FROM RTK STATION})$, (INDEPENDENT OF ANTENNA SEPARATION)
HEADING ACCURACY	0.02° (0.01 PPK) WITH 2m ANTENNA SEPARATION, RTK INDEPENDENT
PITCH/ROLL ACCURACY	0.008 RTK (0.005 PPK), INDEPENDENT OF ANTENNA SEPARATION
HEAVE ACCURACY	2cm OR 2% (DELAYED HEAVE), 5cm OR 5% (REAL TIME)
INTERFACE	ETHERNET
POWER CONSUMPTION	<90W (10-28VDC, 110-240VAC) TOTAL
DIMENSIONS	DIMENSIONS WITHOUT BRACKET H: 447mm/17.605", L: 296mm/11.657", W: 101.9mm/4.010"
WEIGHT	10.3kg (AIR) 7.5kg (WATER) EXCL. BRACKET 10.7kg (AIR) 7.9kg (WATER) INCL. BRACKET
CABLE LENGTH	STD 8m, OPTIONAL: 2m, 25m, 50m
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 (SONAR): 100m (Titanium housing)

OUTLINE DRAWING

