



NORBIT Winghead i77h

Superior performance ultra high-resolution curved array bathymetric system

The NORBIT WINGHEAD i77h is a compact ultra-high resolution curved array broadband multibeam sonar offering tight integration with GNSS/INS (Applanix OceanMaster) 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 i77h installation can occur on surface survey platforms ranging from small USVs to large vessel permanent hull mounts.

Applications

- Shallow water bathymetry
- Pipeline & cable inspection surveys
- Quay wall, bridge and structure inspection surveys
- Pond, river and estuary surveys
- Harbor and lake surveys
- USV & UUV
- Coastal surveys

Features

- Multibeam Sonar with integrated inertial navigation system & integrated NTRIP client
- 80kHz bandwidth
- Roll-stabilisation
- Backscatter outputs
- Multidetect
- Pipeline mode
- Simple ethernet interface
- Integrated sound velocity probe
- 1024 dynamically focused beams
- Mounting bracket included
- FM & CW processing



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Specifications



Swath coverage	5-210° flexible sector (shallow water IHO special order > 155°)
Range resolution	<10mm acoustic w. 80kHz
Number of beams	256, 512, 1024 EA & ED
Operating frequency	Normal frequency 400kHz (frequency agility 200-700kHz)
Depth range	0.2m to >400m
Ping rate	Up to 60Hz, adaptive
Resolution (across x along)	Standard: 0.5° x 0.9° @400kHz, 0.3° x 0.5° @700Hz
Position	HOR: $\pm(8\text{mm} + 1\text{ppm} \times \text{distance from RTK station})$ VER: $\pm(15\text{mm} + 1\text{ppm} \times \text{distance from RTK station})$ (Assumes 1m GNSS separation)
Heading accuracy	0.02° (RTK) with 2m antenna separation
Pitch/roll accuracy	0.01° independent of antenna separation
Heave accuracy	2cm or 2% (trueheaveTM), 5cm or 5% (real time)
Interface	Ethernet
Power consumption	<90W (10-28VDC, 110-240VAC) total
Dimensions (without bracket)	H 447mm, L 296mm, W 101.9mm
Weight (without bracket)	6.9kg (air) 3.8kg (water)
Weight (including bracket)	7.4kg (air) 4.0kg (water)
Cable length	STD 8m, optional: 2m, 25m
Operating temp	-4°C to +40°C (topside -20° to +55°)
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