

NORBIT

FLS for Terrain Navigation & Obstacle Avoidance

Typical FLS applications use horizontal imaging. This provides a wide field of view with high detail such that small targets and large structures or terrain can be identified. However, in the classic horizontal configuration, the FLS cannot derive a vertical height of the terrain ahead.

Using NORBIT's standard FLS in a vertical orientation allows for measurement of the height of the terrain and obstacles ahead of the vehicle instead of wide area imaging. This configuration generates a profile of the terrain and water column objects/structures ahead of the vehicles path.



NORBIT COMPACT FLS

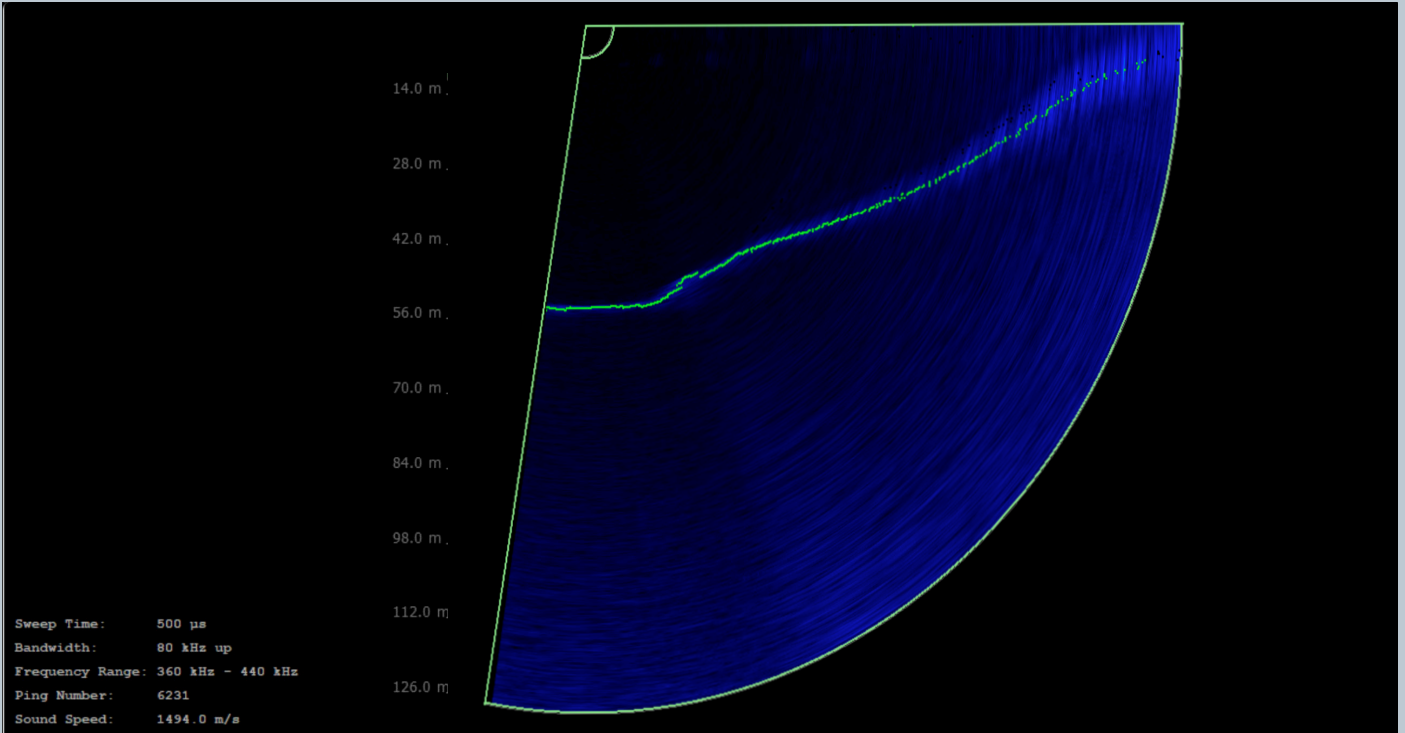
This is the most compact WBMS sonar available in NORBIT's product pool. All acoustics are built into the sonar housing yielding a very compact system. Typical application is vertical mode with 90-100 degrees of terrain and obstacle output.



NORBIT FLS Wide

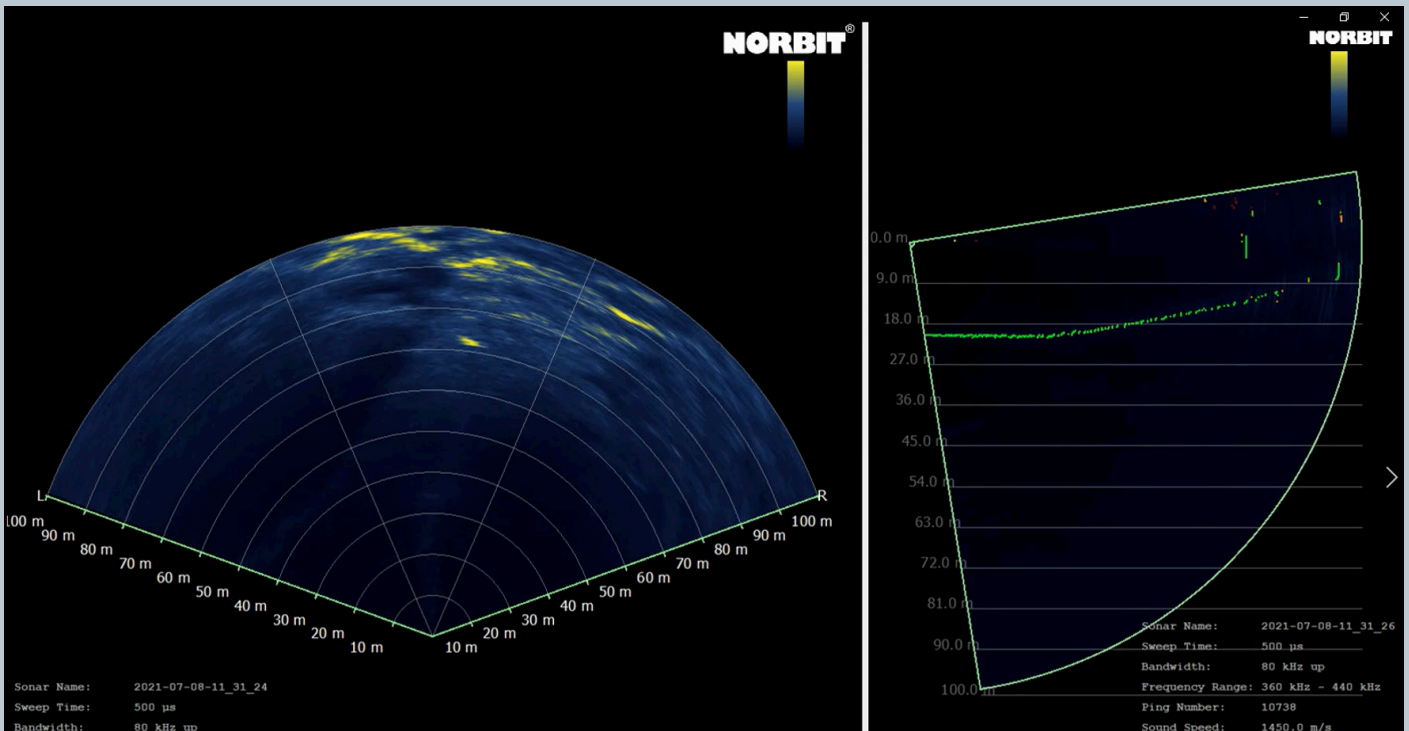
This system provides the widest field of view possible. It can be used as a high-definition imaging system in horizontal configuration, and it can be used for terrain navigation and obstacle avoidance when mounted vertically. This unit can produce up to 180 degrees field of view.

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Vertical FLS Long Range Capability

Image shows vessel approaching rapidly changing underwater terrain at 50-60m altitude. 150m terrain detection shown including terrain aft of the vehicle.



Combining Vertical FLS and Standard Imaging FLS

Image shows a dual head configuration of 2 FLS units. Left image shows typical horizontal mode with target close to zero bearing. Right side shows the nature of the same target using vertical FLS. This allows for 3D localization of objects detected.

