Iceradar FICE-100

Find the best route through ice!

Observe ice conditions by radar

Hybrid ice radar

FURUNO FINLAND OY

Increase safety

Visualizes ice structures. Discovers the optimum route to go through ice.

Shows the track in bad visibility.

Usable ice detection up to 4 NM.

Improves stability of the ice picture compared to the radar.

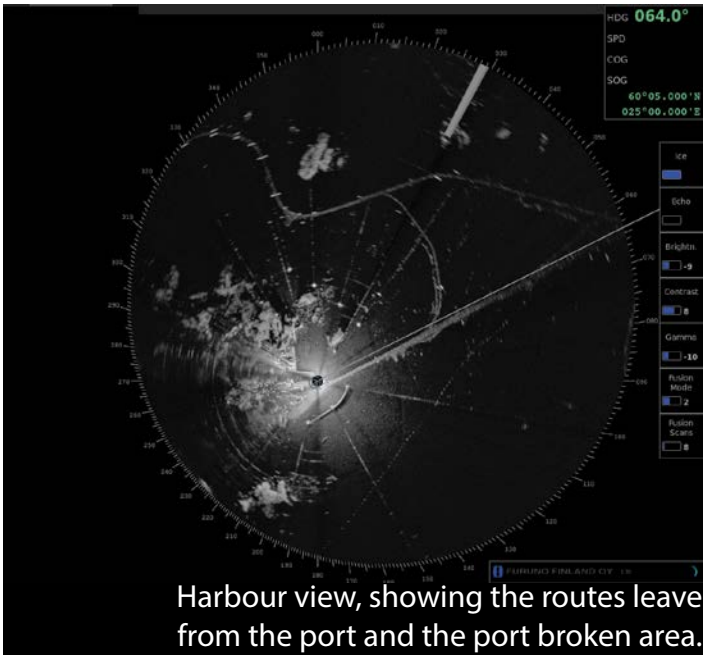
Ice radar displays the ice conditions

The FICE-100 removes the image noise and the fine structures of the ice will become more visible. Hybrid ice radar captures the raw radar signal from the ARPA processor.

The result is a stable image that includes the fine details found in the radar echos.

It is a supplementary system for the specific task of observing ice conditions by radar.

Difficult ice conditions showing the three old broken ice-channels. Zoomed.



Harbour view, showing the routes leave from the port and the port broken area.

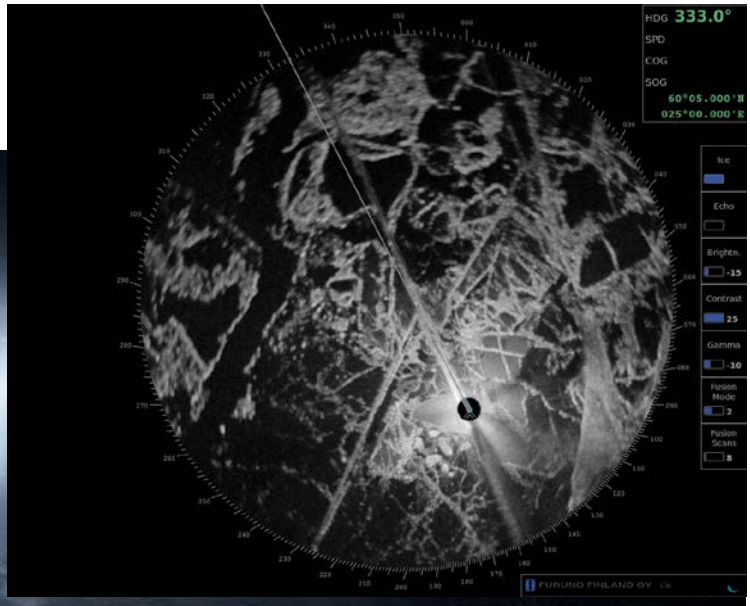
Use less power

Vessels can find the old rifts, clean ice and channels done by icebreakers and other vessels.

The vessel uses much less power and saves fuel and time!

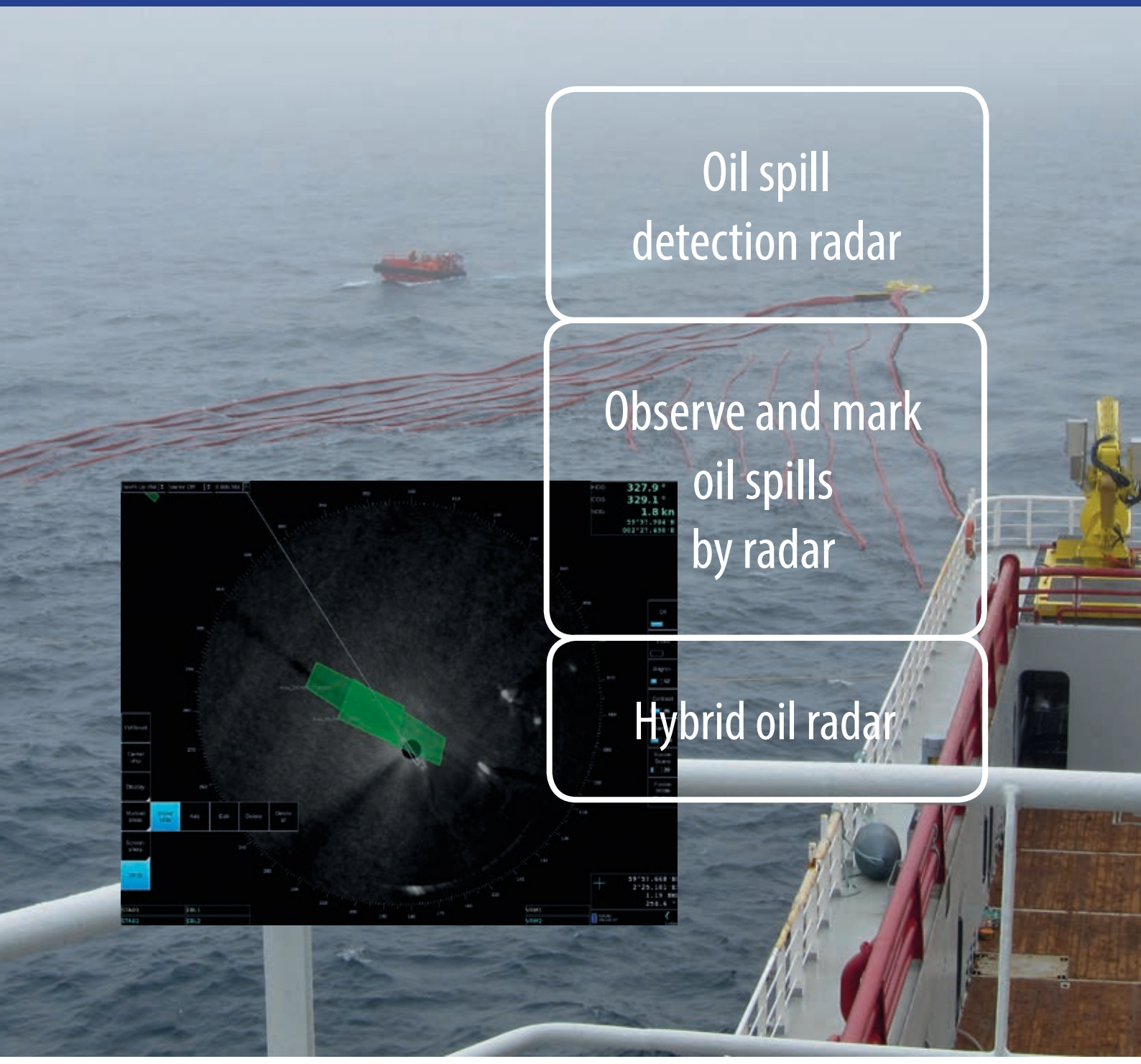
Enhanced functionalities: FICE-100 is an alternative to IR camera.

FICE-100 can also display official ENC chart material. Chart can be overlaid with ice radar picture.



A clear broken ice-channel in the direction of 333.0

Oilradar FOIL-200



Oil spill
detection radar

Observe and mark
oil spills
by radar

Hybrid oil radar

FURUNO FINLAND OY

Oil radar for offshore and onshore installations

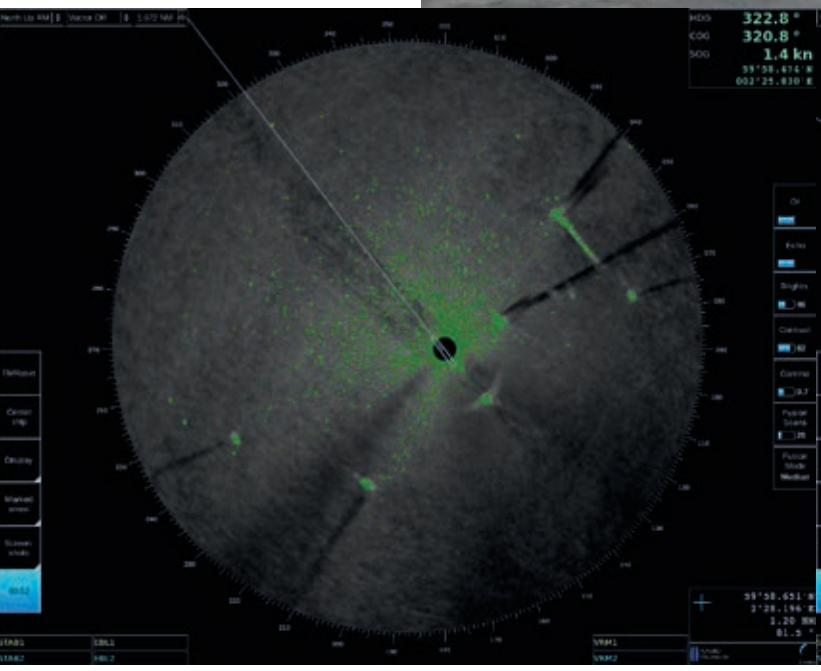
Oil spill detection radar can be used in offshore and onshore installations together with standard navigation radar.

The installation can be done onboard the vessels, oil rigs or any other platform where the radar is needed to detect oil spills.

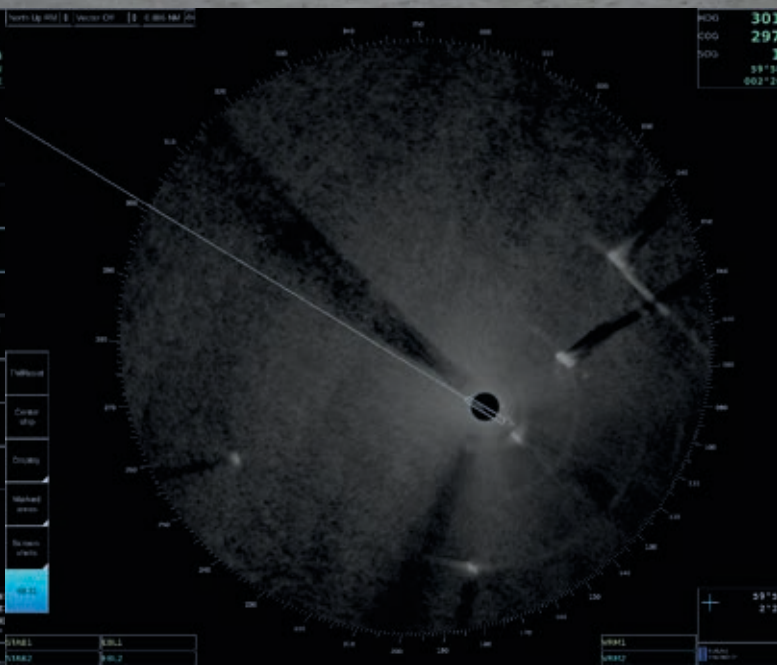
Mark the oil spills

The Oil Radar detects oil spills automatically and creates a polygon to mark the spill. You can also mark the oil spills manually with polygons and update them whenever it is required.

You can also take screenshots from the screen and record the raw radar video to the external hard disc or memory stick for future evaluation or training purpose.



Navigation + oil radar picture. Green echoes from navigation radar, the rest is oil radar picture.

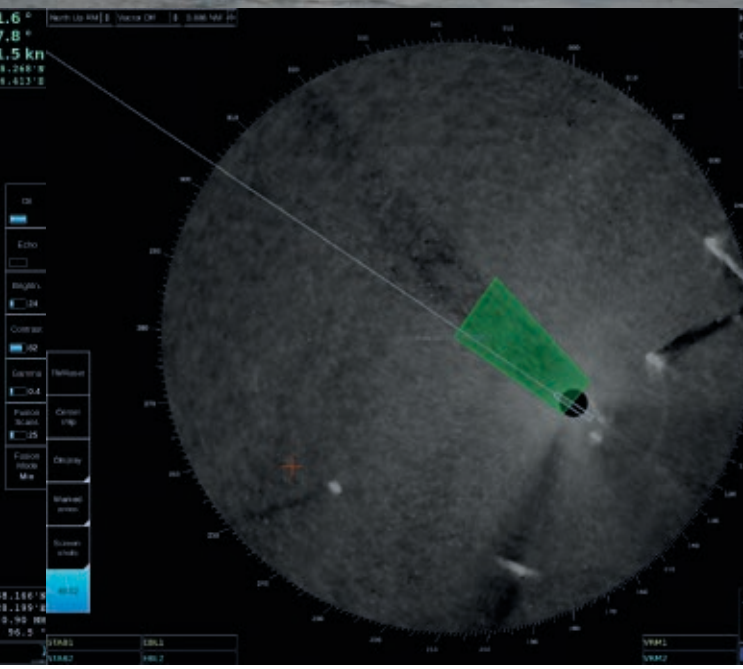


Bright echoes are other ships with black shadow areas behind them. Dark area shown on the right side of the heading line is oil spill.

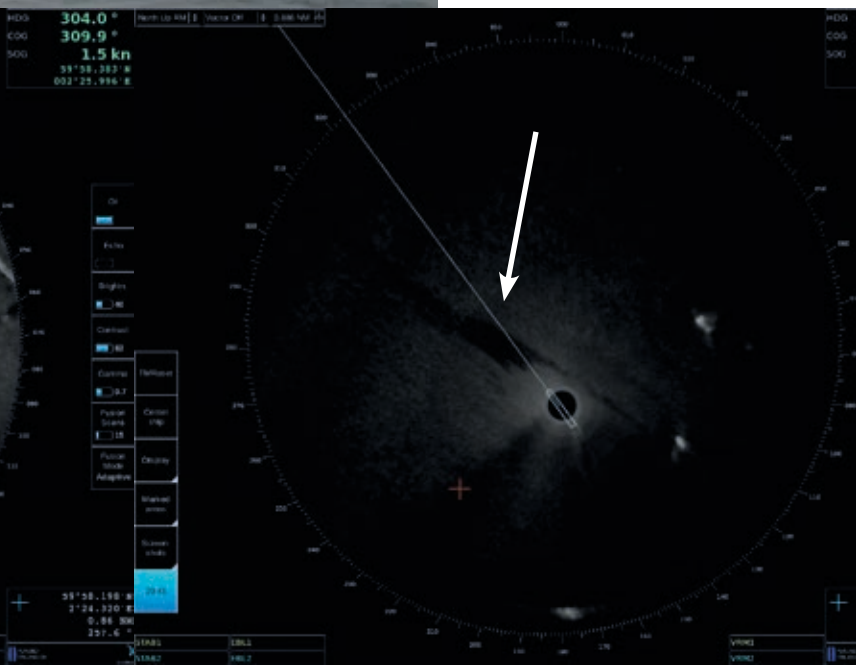
Process and analyze the raw radar video

FOIL-200 oil spill detection radar is connected to standard Furuno FAR-2xx7 or FAR-3000 X-band navigation radar. It uses the raw radar video from the navigation radar. The special high performance algorithm is used to process and analyze the raw video to detect oil spills.

To achieve the most efficient image to detect oil, you can change between different Fusion modes and see the result in real time on the screen. Oil spill image is created with an integration of up to 100 radar antenna scans. Generated image is based on motion compensated Fusion scans. Adjust the Fusion Scan number together with Fusion Mode.

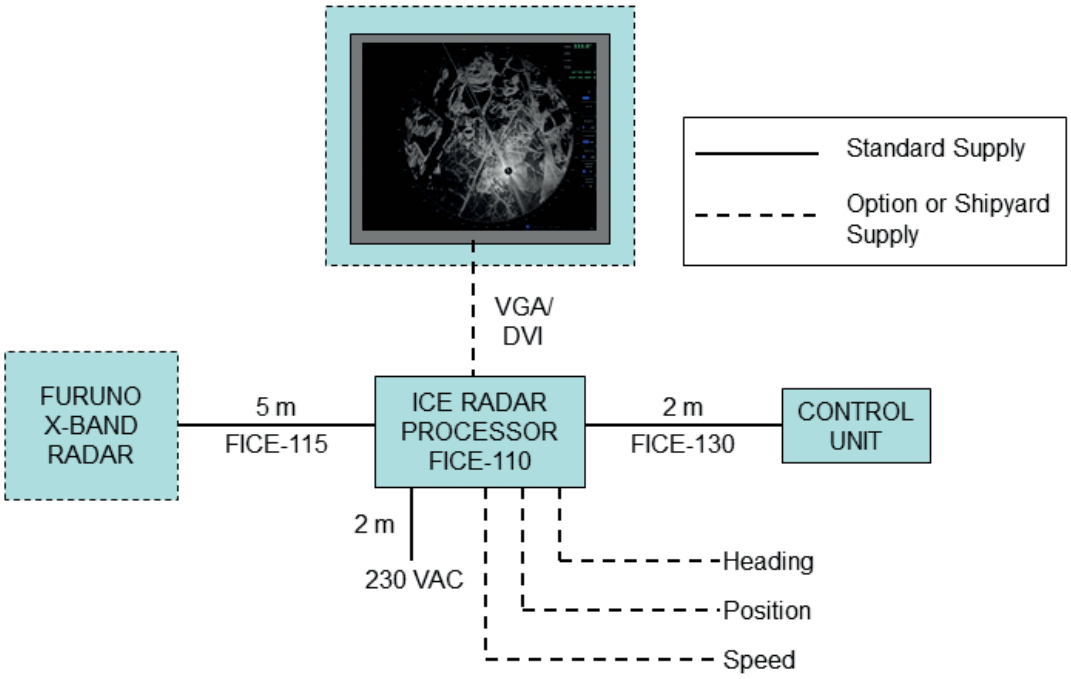


Green polygon is marked by user.



Oil spill is indicated as dark no-echo area on the screen

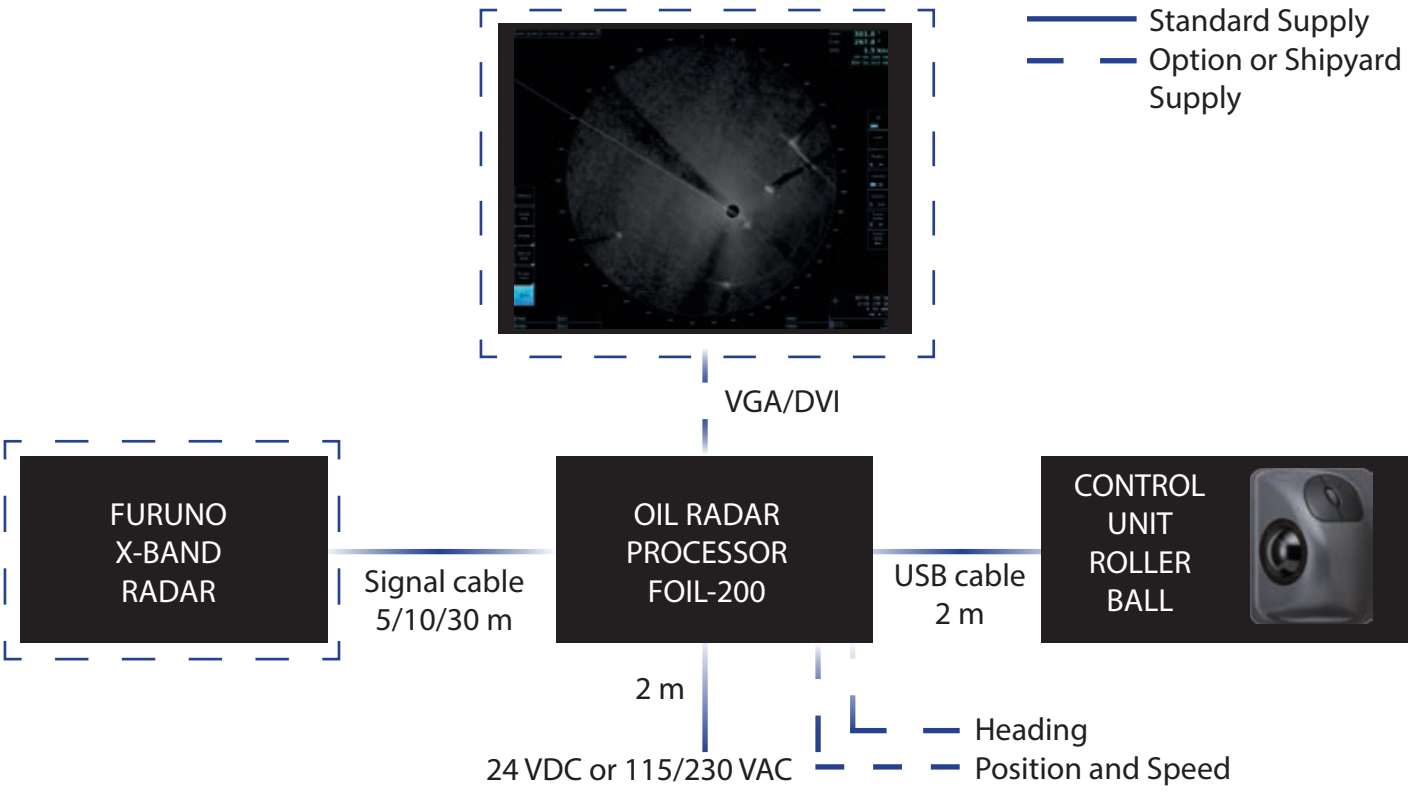
Interconnection diagram



SPECIFICATIONS		EQUIPMENT LIST	
General	Ice radar processor - marine rack computer	**Standard**	1. FICE-110 Ice radar processor
	Power supply 100 - 230 VAC		2. FICE-115 5 m Ice radar cable
	Trackball control unit		3. FICE-130 2 m Control unit cable
	High resolution high bandwidth digitizer		4. Standard spare parts and installation materials
	Ice radar display outputs DVI and VGA		
Input signals	Radar signals	**Option**	1. Ice radar display w. cable (Specify when ordering)
	- radar video and trigger		
	- azimuth and heading line signals		
	- standard cable length is 5 meters		
	Heading, position and speed		

Your Furuno contact:

Interconnection diagram



SPECIFICATIONS		EQUIPMENT LIST	
General	Oil radar processor - marine rack computer	**Standard**	1. Oil radar processor
	Power supply 115/230 VAC, 50/60 Hz or 24 VDC		2. Signal cable for FAR-2xx7
	Trackball control unit		3. Control unit with 2 m cable
	High resolution high bandwidth digitizer 14 bit, 60 MHz sample rate		4. Standard spare parts and installation materials
	Oil radar display outputs DVI and VGA		
Input signals	Radar signals FAR-2xx7 or FAR-3000 X-band *)	**Option**	1. Oil radar display w. cable (Specify when ordering)
	- radar video and trigger		2. Optional 10 and 30m signal cable for FAR-2xx7
	- azimuth and heading line signals		
	- standard cable length is 5 meters		3. Optional 15, 30, 40 and 50 m signal cable for FAR-3000
	Heading, position and speed		

*) Minimum requirements for radar signals:

Transceiver	12 kW
Antenna radiator	4 ft
Gear box	24 rpm

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