

# 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 3 NM
- Ice radar stabilizes the ice picture compared to the navigation radar using advanced algorithms

## Ice radar displays the ice conditions

The FICE-100 removes the image noise making the fine structures of the ice 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 echoes.

## Use less power

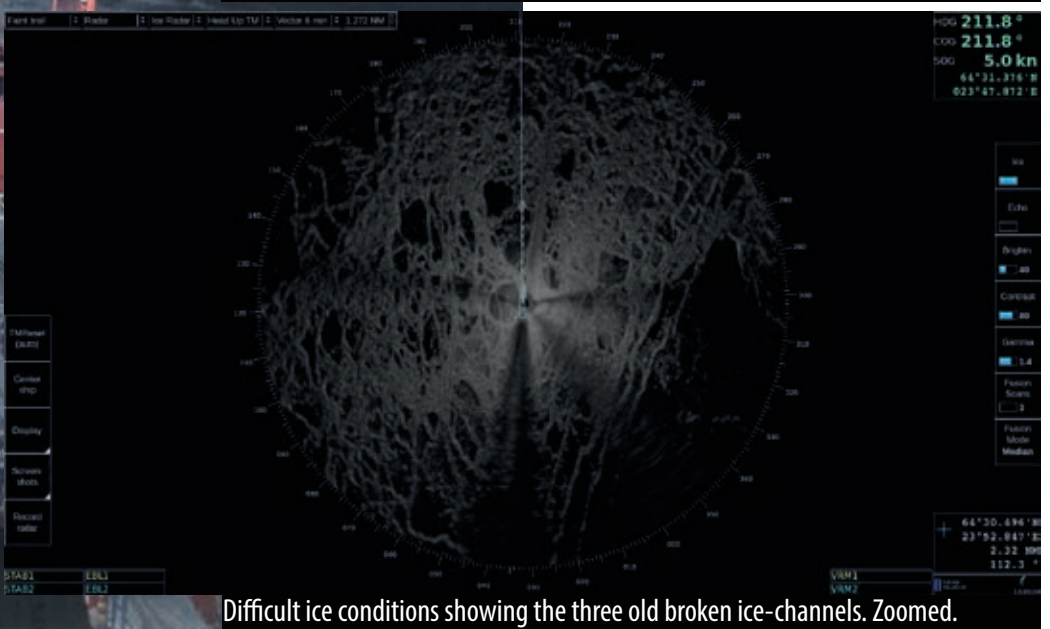
By using ice radar vessels can find the old rifts, clean ice and channels made by icebreakers and other vessels. Finding and using these, the vessel consumes much less power and saves fuel and time!

## FICE-100 is an alternative to an Infrared camera

Infrared cameras are challenging to maintain in icy conditions. Ice radar is a supplementary system for navigation radar to observe ice conditions using the same outdoor equipment.



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

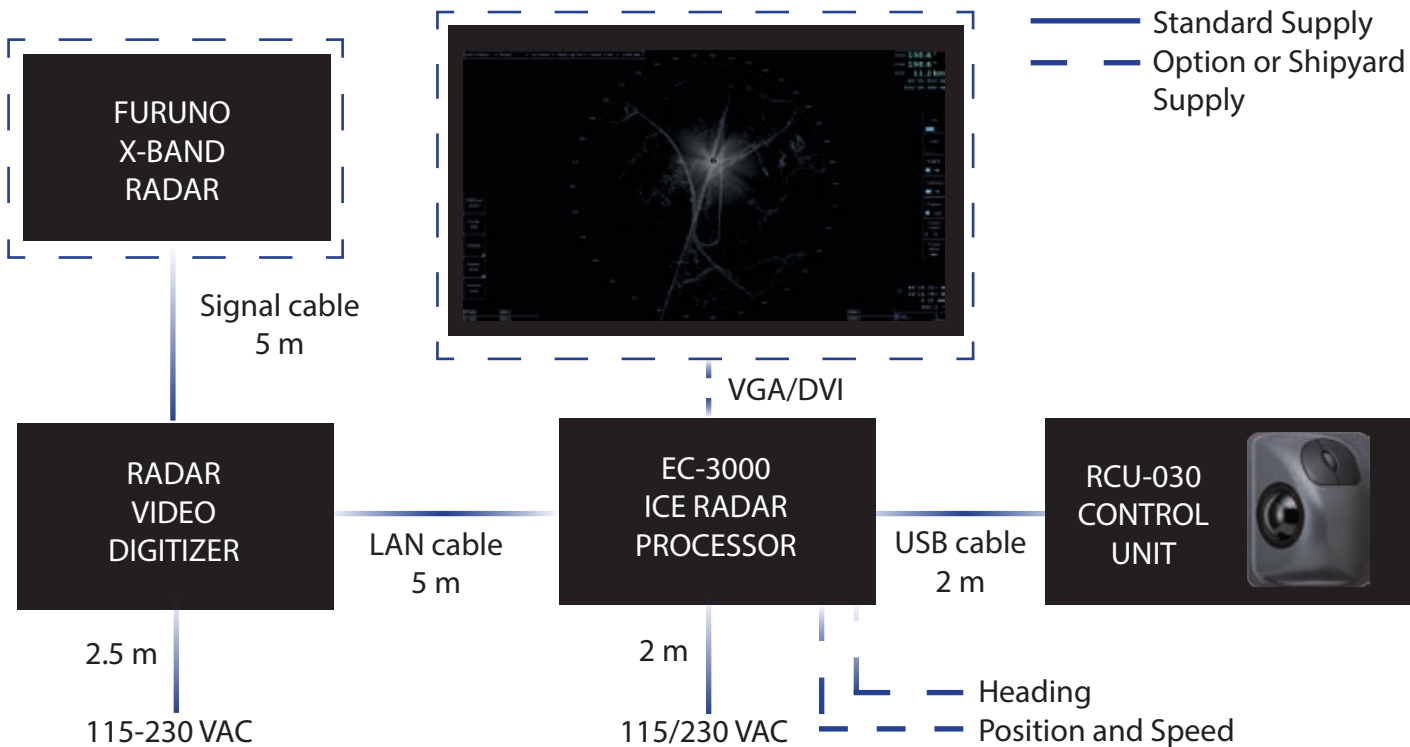


Difficult ice conditions showing the three old broken ice-channels. Zoomed.



A clear broken ice-channel in the direction of 228.8.

# Interconnection diagram



SPECIFICATIONS		EQUIPMENT LIST	
<b>General</b>	Ice radar processor with display output DVI or VGA	<b>Standard</b>	1. Furuno EC-3000 Ice radar processor
	Processor power supply 115/230 VAC, 50/60 Hz (jumper)		2. Signal cable 5 m for FAR-2xx7
	Trackball control unit		3. Furuno RCU-030 with 2 m cable
	High resolution high bandwidth digitizer 14 bit, 60 MHz sample rate		4. ScanStreamer DNP2012001 with 2.5 m power cable and 5 m LAN cable
	Digitizer power supply 115-230 VAC, 50/60 Hz		5. Standard spare parts and installation materials
	Products have been tested according to IEC60945(2002).		
<b>Input signals</b>	Radar signals FAR-2xx7 or FAR-3000 X-band *)	<b>Option</b>	1. Ice radar display with DVI cable (Specify display type when ordering)
	- radar video and trigger		2. Optional 10 and 30m signal cable for FAR-2xx7
	- azimuth and heading line signals		3. Optional 15, 30, 40 and 50 m signal cable for FAR-3000
	- standard cable length is 5 meters		
	Heading, position and speed		

\*) Minimum requirements for radar signals: Transceiver 12 kW, antenna radiator 4 ft, gear box 24 rpm.