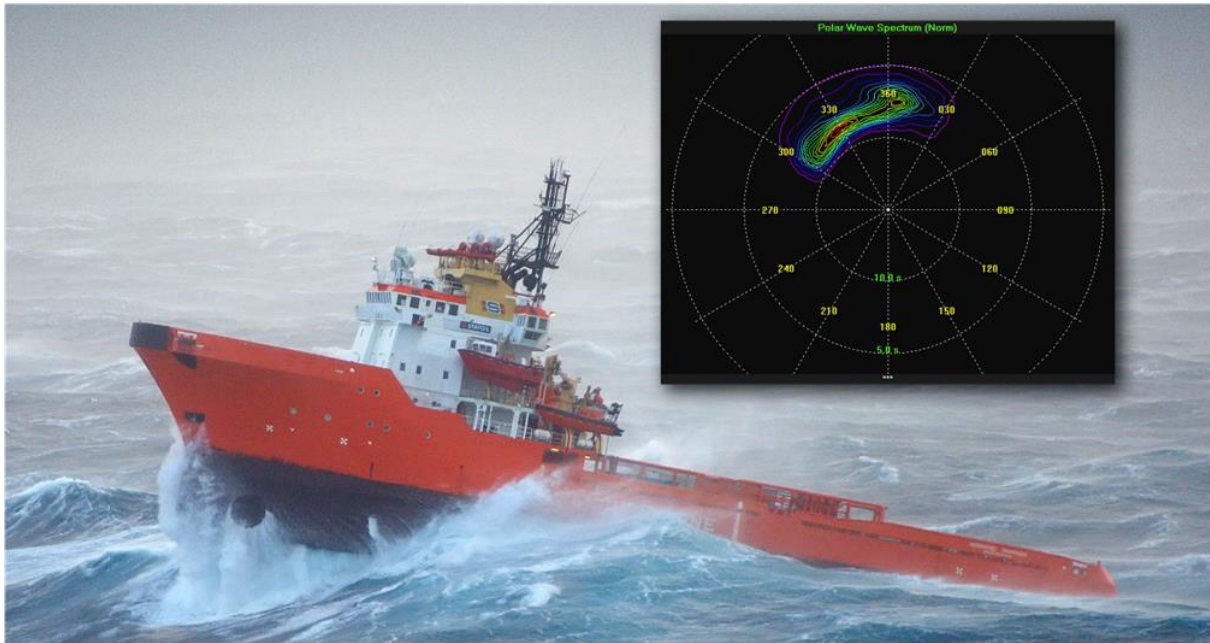


Wavex® v5.7



The X-band radar-based wave and current monitoring system.

Wavex® captures and processes sea surface backscatter data from a standard X-band marine navigation radar. Through state-of-the-art robust, accurate and adaptive algorithms it calculates and displays directional wave and surface current data. Wavex can use an already installed or dedicated X-band navigation radar.

Wavex v5.7 includes new algorithms adaptive to antenna height variations, and enables interfacing to frequently used IP radars.

Key Features:

- Real-time sea state monitoring
- Directional wave spectra and wave parameters
- Directional surface current data
- User defined parameter thresholds
- Data export to 3rd party systems
- Operates at any ship speed
- No parts submerged in water
- Low maintenance cost

Essential For:

- Wave and surface current data monitoring and recording
- Reduced damage to ship and cargo
- Increased passenger comfort
- Operation planning
- Input to ship monitoring systems
- Fuel optimization
- Structural verification
- Improved route planning

The Wavex® (WAVE EXtractor) system is compatible with X-band radars from most manufacturers, and is IP (Internet Protocol) radar ready, supporting a set of IP radar protocols.

The system GUI includes user displays for wave, current and system information. User defined GUI layouts are available.

Parameter value displays in the GUI can be configured with thresholds for visual indication of operational windows.

Third party data interface is provided using NMEA sentences on serial line or TCP/IP or by file transfer (FTP).

The Wavex® system will not interfere with, or affect, the navigation system radar signals.

On a moving installation, Wavex® requires data input from a gyro compass and a GPS. Wind and draft data input is optional.

Wavex® requires at least 1-3 m/s wind. Heavy precipitation will affect data capture rate.

SPECIFICATION

Wave data:

	Range	Resolution	Std. dev
Height	0 – 5 m	0.1 m	0.5 m ¹
	5 – 10 m	0.1 m	10 % ¹
	10 – 15 m	0.1 m	20 % ¹
Period	3.2 – 5.0 s ³	0.1 s	0.5 s ²
	5.0 – 13.0 s ³	0.1 s	10 % ¹
	13.0 – 25.3 s ³	0.1 s	20 % ²
Direction	0 – 360°	1°	20° ¹ , 2° ²

Surface current data:

	Range	Resolution	Std. dev
Speed	0 – 5 m/s	0.01 m/s	0.05 m/s ⁵
Direction	0 – 360°	1°	10° ⁵

EM-129 Integrated video digitizer:

Size (W x D x H):	420 x 275 x 63 mm
Weight:	4 kg
Power requirements:	100 – 250 VAC, 50/60 Hz
Power consumption:	< 15 W

SM-156 Marine Certified Computer:

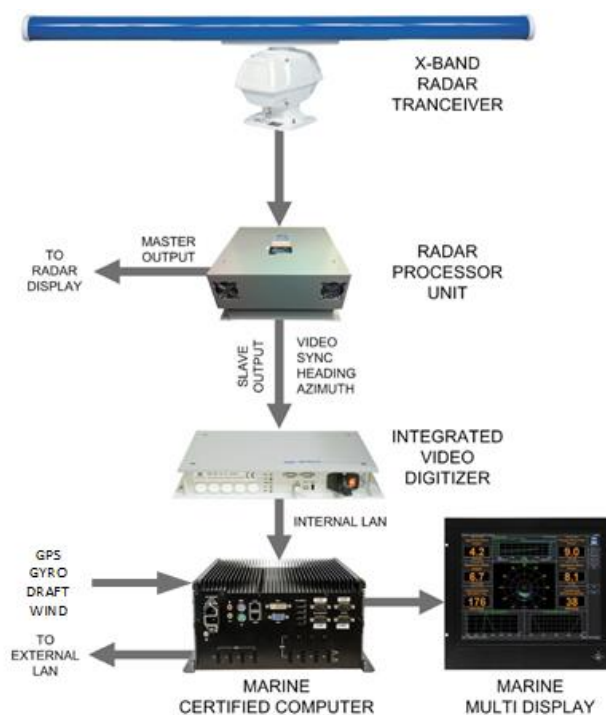
Size (W x D x H):	320 x 240 x 160 mm
Weight:	8 kg
Power requirements:	115/230VAC, 50/60 Hz
Power consumption:	< 100 W

JH-19T14 Marine Multi Display⁷:

Size (W x D x H):	483 x 82 x 444 mm
Weight:	11.5 kg
Power requirements:	100 – 240 VAC, 50/60 Hz
Power consumption:	< 100 W

X-Band radar interface:

Ant. Beam Width:	2° or less (4 feet or more)
Ant. Rot. Speed	15 – 48 RPM
Ant. Mount. Height:	15 – 100 m above sea level ⁴
Pulse Mode:	Short pulse (50 – 80 ns)
Pulse Rep. Freq	1000 Hz or higher
Output Power	10 kW or more
Radar Signals	Raw video, sync, heading marker and azimuth.
Antenna Polarization:	Horizontal ⁶



1. Wavex DNV GL Type Approval Certificate.
2. Theoretical measures.
3. Wave period range can be extended depending on site and configuration.
4. Lower antenna heights are possible depending on site and desired wave height range.
5. Using a Terma solid state radar on a fixed installation
6. Other polarizations should have similar or better performance, but needs verification.
7. Several DNV GL approved display alternatives are available.

Specifications are subject to change without prior notice.