

Multibeam Echo Sounder (EM712)

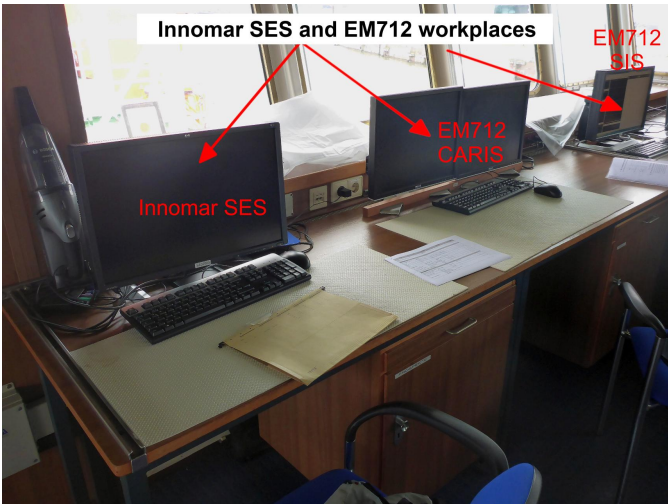
**Attention:**

Please note that operations of the Multibeam Echo Sounder EM712 requires experienced scientific staff on board and can be only operated upon request. The system is not operated by the ship's crew. Request operations with the Multibeam Echo Sounder EM712 to AWI-Logistics in sufficient time prior to the cruise and clarify the data transfer after the cruise.

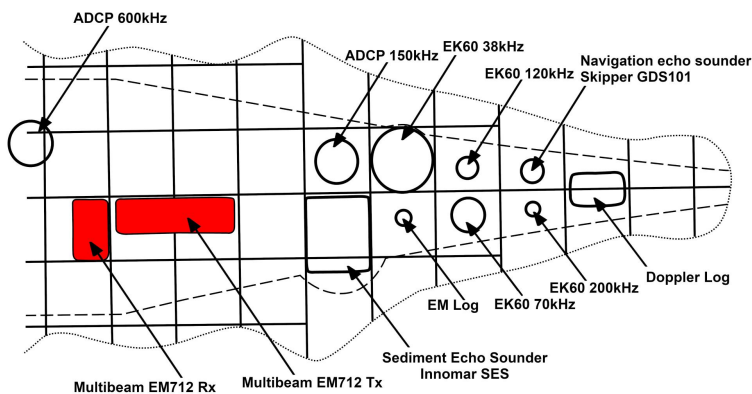
Summary

Multibeam EM712 is a high-resolution seafloor mapping system. It is suitable for water depths up to 2000m depending on the configuration of the transducers. Maximum ping rate is 30Hz and maximum fan width 140° and depth resolution 1cm. Data from the water column may also be stored.

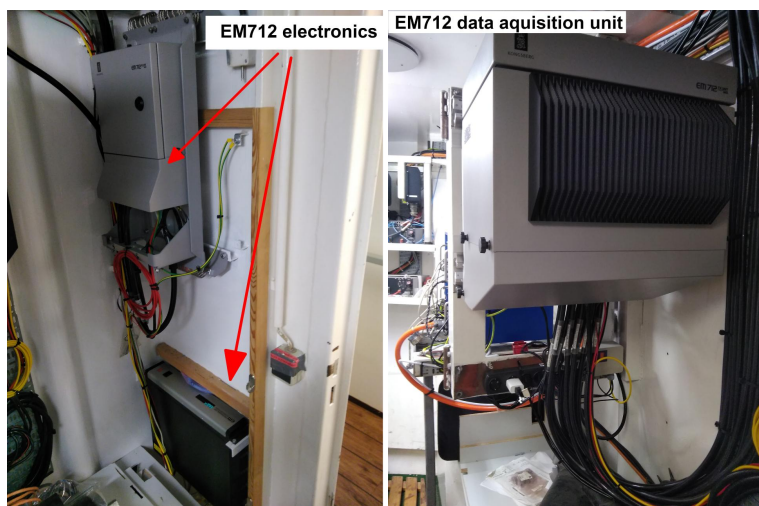
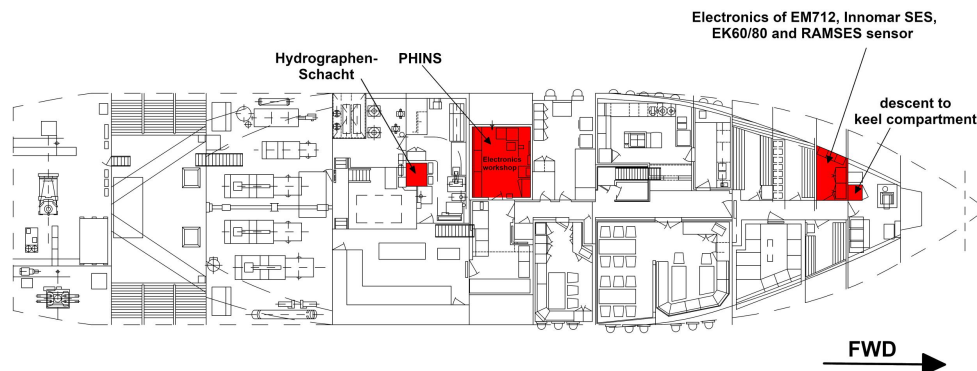
Manufacturer	Kongsberg Maritime AS
Model	405125
Serial No.	10071
Type	multi-beam echosounder
REGISTRY-Link	REGISTRY (8547)



Position of devices in RV Heinckes keel



Locations on RV Heinckes tween deck



Transducer Frequency

Contacts

Name	Institution	Role
FIELAX GmbH	FIELAX Gesellschaft für wissenschaftliche Datenverarbeitung mbH	Engineer In Charge

Components

The EM712 consists of a transducer array for transmitting (Tx) and an array for receiving (Rx), the transceiver unit, the data acquisition PC with the acquisition software SIS and two processing PCs (bridge and Messraum) with the software Caris HIPS/SIPS.

The software "Seafloor Information System" (SIS) contains several graphic displays for quality checks and for system calibration as well as other tools. SIS supports an online/realtime data cleansing. Both SIS and the processing software Caris HIPS/SIPS are protected via a dongle. Please contact the bridge staff for support.

Sound velocity can alternatively be received from two sensors: from [Sound Velocity Probe \(Valeport Mini SVS\)](#) or calculated velocities from sensor [Thermosalinograph](#).

Ships position is received from [GPS Receiver Trimble Marine SPS461](#). Ships orientation is received from [Motion Sensor \(PHINS\)](#).

Subdevices

Name	Model	Serial Number	REGISTRY-Link
Simrad EM712 Rx array		104	REGISTRY (8550)
Simrad EM712 Tx array		171	REGISTRY (8551)

Position

Info	The system consists of several units. Transducer arrays are installed in the keel of RV Heincke. Electronics are found in the Lotgeraeteraum. Work places are situated on the bridge and in the Messraum.
X	0.0 (no unit given) (no description given)
Y	0.0 (no unit given) (no description given)
Z	0.0 (no unit given) (no description given)

Data logging, storage and archiving

Logged parameters

Parameter	O2ARegistry Output Type	Unit
depth	depth	m

Central geographical ship's position and time standard

Rawdata storage on board

Dship

Data archiving on land

Documentation

- [CARIS HIPS and SIPS reference guide \(User Manual, 2 MB\)](#)
- [CARIS HIPS and SIPS User Guide \(User Manual, 7 MB\)](#)
- [EM712 Multibeam Echo Sounder datasheet \(Factsheet, 649 kB\)](#)
- [SIS 5.9 reference manual \(User Manual, 7 MB\)](#)
- [RV Heincke Multibeam Support Manual \(User Manual, 1 MB\)](#)