

ECHO⁸¹

YOUR SUBSEA SOLUTIONS SPECIALIST



KONGSBERG

EM® 2042

MULTIBEAM ECHO SOUNDER

Introducing the EM 2042, the next generation of EM multibeam echo sounder that takes seabed mapping to new depths, by delivering unparalleled accuracy and resolution to your surveys. In the field of hydrography, offshore industry, dredging and marine science, the EM 2042 is the perfect tool for your underwater mapping needs. The ease of use and advanced features make it a must-have for professionals who demand the best data quality, reliability, and flexibility.

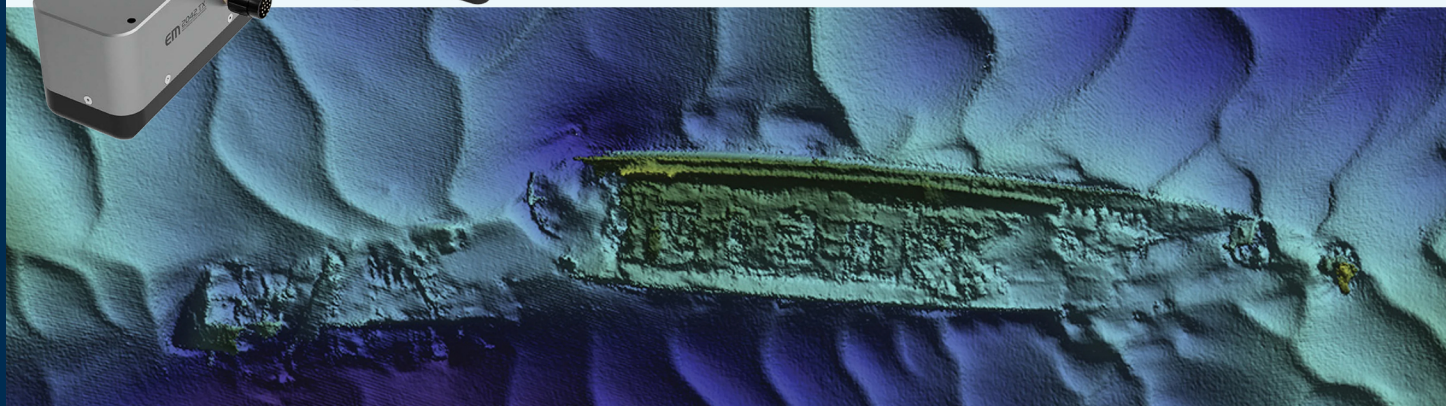
Components

The EM 2042 can be delivered with a 0.4 or 0.7 beam width (@400kHz) transmitter, with a single or dual 0.7 receiver optionally embedding a KONGSBERG miniMRU, and an AML sound velocity sensor.

The transmitter and receiver are connected to the topside processing unit through a single subsea cable, making it easy to set up and operate. Only EM® has the unrivaled dual RX variation, requiring only one TX array, generating up to 4096 soundings.

The unique EM 2042 transmitter combines three transmit sectors to enable dynamic focusing on both transmission and reception, as well as roll, pitch and real 3-sector yaw stabilization.

The EM 2042 transducers are 60% lighter than the previous generation and have reduced the total power consumption. A custom-made portable bracket for over-the-board installations can accommodate integration, in a fixed location with known offsets, for the most used INS sensors in hydrography, allowing a quick and easy setup.



TECHNICAL SPECIFICATIONS

Frequency range	150 - 700 kHz
Ping rate	Up to 50 Hz
Number of soundings	Single RX: Up to 2048 Dual RX: Up to 4096
Swath coverage	Up to 170° (single RX) / 220° (dual RX)
Depth range	0.5 m to max 600 m
Depth rating	50 m
Beam stabilization	Roll ($\pm 15^\circ$), pitch ($\pm 10^\circ$), yaw ($\pm 10^\circ$)
Pulse form	CW / FM (CHIRP modulation)
Bandwidth	> 120 kHz
Shortest pulse length	14 μ s
Depth accuracy	Up to 5.5 mm
Embedded KONGSBERG MRU angular accuracy (RMS)	Up to 0.01° Roll and Pitch. 0.04° Heading (Seapath 2.5m baseline)
Embedded SV	AML X2change™ SVT sensor
Power requirements	93 W
Software compatibility	Kongsberg SIS, QPS, CARIS, EIVA, Beamworx, PDS, SonarWiz

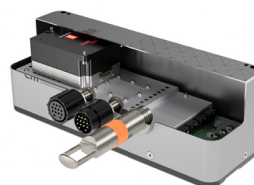
FEATURING

- Next generation of multi-transmitter MBES
- Full 4D motion compensation
- High resolution multi-frequency bathymetry and seabed backscatter
- Engineered to surpass IHO Exclusive Order / LINZ Special Standard
- Seamless integration with SIS- and 3rd party software

OPTIONS

- Water column data logging
- Embedded miniMRU in the receiver
- Embedded SV sensor in the receiver
- EM® HighFrequency mode
- Enhanced EM® MultiFrequency Backscatter mode
- Extra detections
- QuadSwath™
- PredictivePitch™
- Portable mount for over the board installations
- Easy upgrade for EM 2040 users

Beamwidth							Physical dimensions (excluding connectors, and extra hardware)		
	150 kHz	200 kHz	300 kHz	400 kHz	600 kHz	700 kHz	Dimensions (W x D x H)	Weight (in air)	Weight (in water)
TX 04	1°	0.7°	0.5°	0.4°	0.25°	0.225°	691.2 x 120 x 138.1 mm	20.0 kg	9.0 kg
TX 07	2°	1.5°	1°	0.7°	0.5°	0.45°	372 x 120 x 138.1 mm	10.9 kg	5.0 kg
RX 07	2°	1.5°	1°	0.7°	0.5°	0.45°	340 x 124 x 120 mm	6.1 kg	1.6 kg
Processing Unit (2U for 19" rack)							482.5 x 424 x 88.6 mm	10.5 kg	
Portable Processing Unit (IP67)							370 x 390 x 101 mm	10.5 kg	
OEM Processing Unit (USV)							329.4 x 220.2 x 71 mm	3.1 kg	



Visit our website for
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www.echo81.com



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