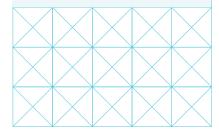


FEATURING

- Next generation of multitransmitter MBES
- Full 4D motion compensation
- High resolution multifrequency 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





MULTIBEAM ECHO SOUNDER FOR SHALLOW WATERS

EM® 2042

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.

Improved frequency range

EM 2042 features a wideband frequency range from 150 kHz to 700 kHz, offering different modes for various applications:

- 300 kHz: Ideal for most mapping tasks, balancing range and resolution
- 400 kHz: Optimized for inspection work
- 600 kHz and 700 kHz: Enhance small object detection and 3D mapping
- 200 kHz: Extends the range down to 600 meters
- A new 150 kHz band complements EM® MultiFrequency mode, improving seabed classification in a single pass

kongsberg.com 496233/B





EM 2042 0.7 TX / 0.7 RX



EM 2042 0.4 TX / 0.7 RX



Optional embedded KONGSBERG Seatex miniMRU and AML X2change™ SV sensor



Portable mount and external, fully integrated INS

New feature - Ready for PredictivePitch™

This new and cutting-edge feature uses KONGSBERG Seapath algorithm to accurately steer the beams along track to their future pitch angle. This provides more accurate and reliable detections even on fast-moving platforms like small USVs exposed to challenging sea conditions.

New Feature - Ready for QuadSwath™

The EM 2042 is ready to deliver up to 4 swaths per ping cycle, ensuring the most demanding sounding density requirements, and improving the definition of seafloor features in high-speed surveys.

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°), pitch (\pm 10°),

yaw (± 10°)

Pulse form CW / FM (CHIRP modulation)

Bandwidth > 120 kHzShortest pulse length 14 μs Depth accuracy Up to 5.5 mm

Depth accuracy op to 3.5 mm

Embedded KONGSBERG MRU Up to 0.01° Roll and Pitch. 0.04° angular accuracy (RMS) Heading (Seapath 2.5m baseline)

Embedded SV AML X2change™ SVT sensor

Power requirements 93 W

Software compatibility Kongsberg SIS, QPS, CARIS, EIVA,

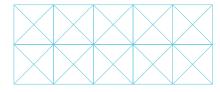
Beamworx, PDS, SonarWiz

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	Weight
								(in air)	(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	

Hydrographic Work Station (HWS) and monitor can be delivered on request.

Specifications subject to change without any further notice.

EM® is a registered trademark of Kongsberg Discovery AS in Norway and other countries.



Kongsberg Discovery Strandpromenaden 50 N-3183 Horten, Norway Switchboard: +47 815 73 700 Global support 24/7: +47 33 03 24 07 E-mail sales: sales@kd.kongsberg.com