

Teledyne RESON

HydroSweep MD/30

Medium Depth Multibeam Echosounder

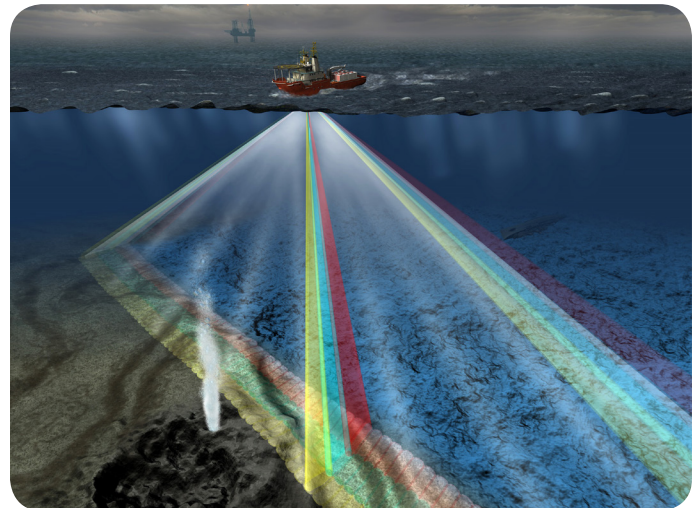
The **HydroSweep MD/30** is a deep water multibeam echosounder ideally suited for seabed mapping in medium and deep waters down to 7,000 m water depth. The HydroSweep MD/30 utilizes operating frequencies between 24 and 30 kHz to map the acquire bathymetric depth information as well as sidescan and backscatter data.

In view of beam resolution, the HydroSweep MD/30 is available as a combination of 1° or 1.5° along track and 1°, 1.5° or 3° across track. All transducers are planar arrays designed to be flush mounted, within a fairing or in a gondola construction. Effects of severe ship motion to survey data are compensated by active beam steering as well as additional multi-ping ensonification.

The HydroSweep MD/30 applies 3x multi-pings, which means that three swaths are transmitted simultaneously per ping slightly tilted along track. This results in gapless surveying at higher ship's speed.

Acoustic footprints can be arranged in either „equal-angle“ or „equal-distant“ pattern.

A High Order Beamforming bottom detection algorithm is used to achieve up to 960 soundings per ping with the best possible accuracy in order to meet IHO SP44 accuracy standards.



PRODUCT BENEFITS

- Depth range more than 7000 m
- 3x multi-ping operation
- 320 receive beams per ping
- 960 soundings per ping
- Backscatter and sidescan data recording
- Water column analysis

HydroSweep MD/30 SYSTEM SPECIFICATIONS

Products Variants	1 x 1	1 x 1.5	1.5 x 1.5	1.5 x 3
Transmission beam width TX	1°	1°	1.5°	1.5°
TX transducer array dimensions*	2364 x 170 x 127	2364 x 170 x 127	1596 x 170 x 127	1596 x 170 x 127
Reception beam width RX	1°	1.5°	1.5°	3°
RX transducer array dimensions*	190 x 2584 x 127	190 x 1726 x 127	190 x 1726 x 127	190 x 868 x 127
Max. depth range	>7000 m	>7000 m	>6000 m	>6000 m
Transmission power (TX)	12 kW	12 kW	8 kW	8 kW

* Along x across x height, relative to ship's direction, in mm

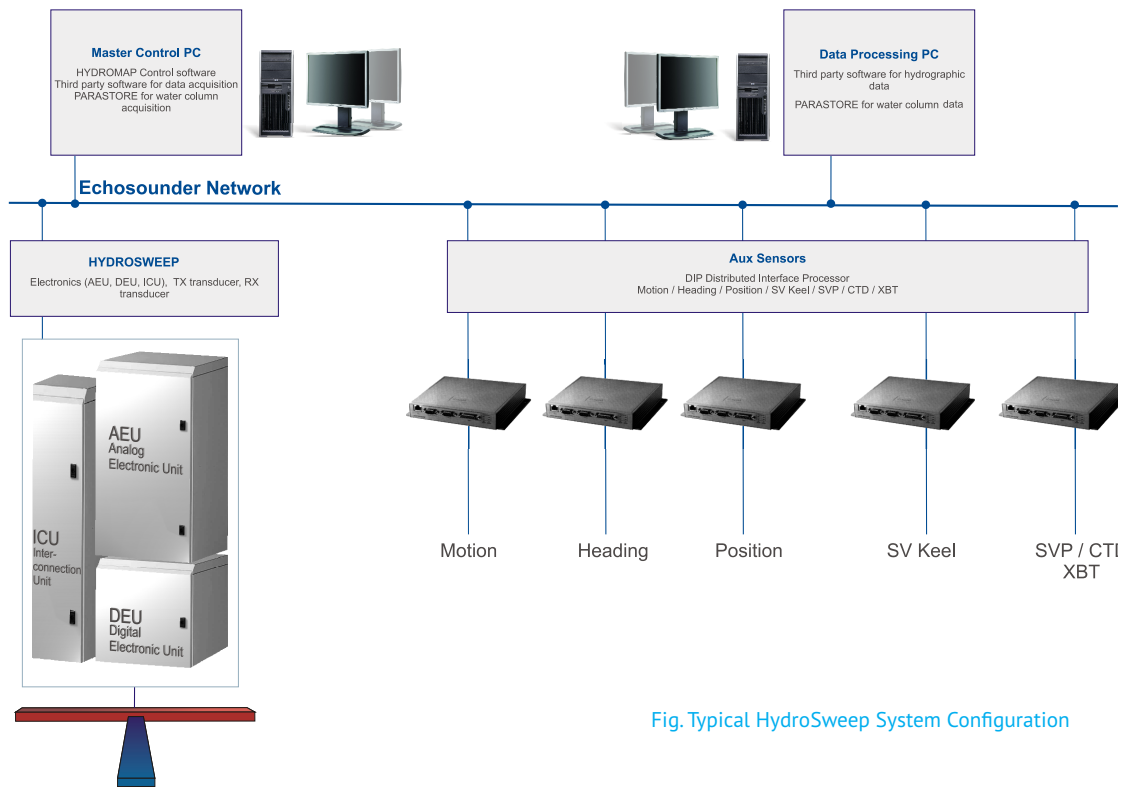


Fig. Typical HydroSweep System Configuration

Depth Range	5 – 7000 m, depending on product variant and local bottom and environmental conditions
Operating Frequency	24 to 30 kHz Frequency modulation (Chirp)
Multi-Ping and Ping Rate	3x multi-ping Max. 30 Hz ping rate (at 3x multi ping)
Bathymetric Resolution	1° or 1.5° along track 1°, 1.5° or 3° across track
Number of Beams	960 soundings per single ping via High Order Beamforming 320 receive beams per single ping

Motion Correction	Roll ±15° stabilised Pitch ±10° stabilised Yaw ±5° stabilised by active single-ping
Acquired Data: Bathymetry, sidescan and backscatter	10,000 values per single ping
Resolution and Accuracy	Max. range resolution 6 cm Max. output sample rate 12 kHz Bottom depth accuracy (RMS), average across the swath sector better than ±[0.5m, 0.2% of water depth]
Water Column Recording	Max. 6 cm vertical resolution For up to 320 beams

Specifications subject to change without notice.
© 2018 Teledyne RESON. All rights reserved.