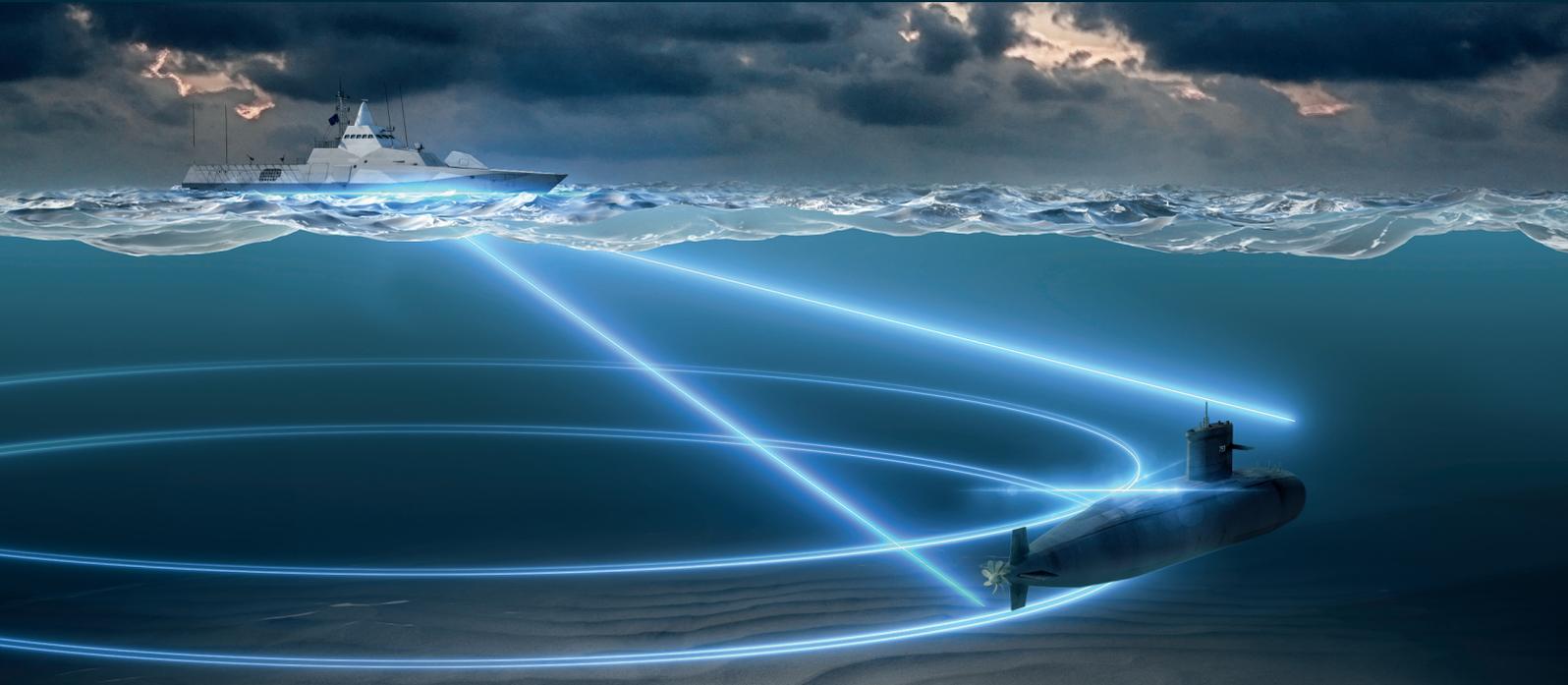


SS2030



KONGSBERG



ANTI SUBMARINE WARFARE SONAR WITH LITTORAL WATER CAPABILITIES

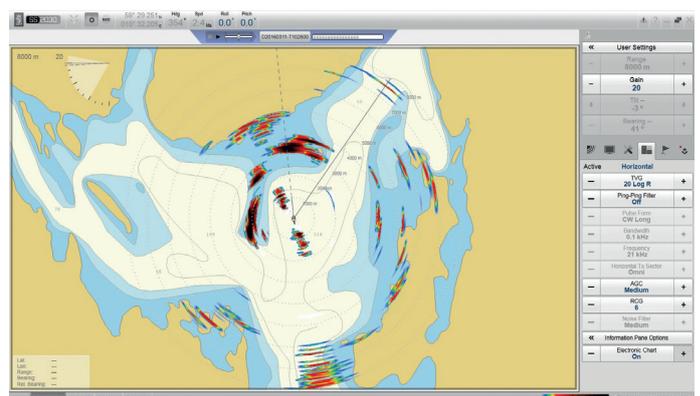
The SS2030 is an active hull mounted sonar primarily designed for Anti Submarine Warfare (ASW). It has special capabilities for operation in littoral waters and also has features that make it suitable for detection of torpedoes and small objects in the water column. The operating frequency ranges from 20 - 30 kHz. A passive mode is also available for the SS2030.

The SS2030 transmits horizontally with full 360° coverage or in a specific sector pointing in the direction of interest. In addition, a vertical sector can be transmitted simultaneously to provide both vertical positioning of a target and good depth separation.

All beams are electronically stabilised against roll and pitch movements. The transmitting and receiving beams can be tilted vertically for optimising the detection range and adjusting to difficult Sound Velocity Profiles.

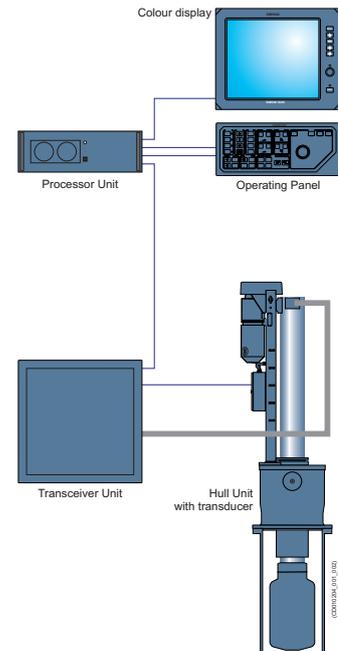
The SS2030 sonar has new and advanced tracking algorithms and a built-in sound propagation model available as a tool for the operator.

The SS2030 sonar includes the possibility for extensive information exchange with the Combat Management System (CMS) via Local Area Network (LAN). The SS2030 sonar can also be integrated with a Multi-Function Console (MFC), in which case the Human Machine Interface (HMI) will run using remote desktop functionality.



FEATURES

- Enhanced shallow water features (low side-lobe levels and narrow beams that reduce the reverberation problem in littoral waters)
- New and modern Human Machine Interface (HMI)
- Operating modes: Active Omni (360°), Active sectors, Passive
- Tiltable transmit and receive angles
- Electronic maps with sonar echo overlay (for recognition of underwater obstacles and visualisation of target hiding places)
- Built-in Sound Propagation Model for optimal tilt setting and Probability of Detection (PoD)
- Tracker with automatic and manual target initiation
- Audio channel
- Built-in simulator for training
- Vertical view (provides vertical target position and bottom profiles)
- Alarms for objects/torpedo close to own ship.
- Flexible integration and information exchange with Combat Management System (CMS)
- Display options: Single display (see figure), Standalone console, Multi Function Console (MFC) with Citrix Receiver interface



TECHNICAL SPECIFICATIONS

- Operating frequency: 20 - 30 kHz
- Pulse bandwidth: Up to 3 kHz
- Pulse types: CW, HFM, LFM
- Pulse length: 1 ms to 80 ms
- Tilt (OMNI/sector): +10° to -60°
- Range Scale: 10m to 16000m
- Transmission modes:
 - Horizontal Omni 360°
 - Horizontal Sector (11.5° / 30° / 60° / 120°)
 - Vertical Sector 60°
 - Simultaneous Horizontal and Vertical
- Transmission modes:
 - Hor Omni/Sector Vert beam width 5°/7.0° @30/20 kHz
 - Vertical sector Hor beam width 8.5°/13° @30/20 kHz
- Number of Rx beams:
 - Horizontal 64 beams covering 360°
 - Vertical sector 16 beams covering 60°
- Receiving Beam widths:
 - Hor Omni/Sector Hor beam width 8.5°/13° @30/20 kHz
 - Hor Omni/Sector Vert beam width 5°/7.0° @30/20 kHz
 - Vertical sector Hor beam width 8.5°/13° @30/20 kHz
 - Vertical sector Vert beam width 5°/7.0° @30/20 kHz
- Beam stabilisation: Yes
- Source level:
 - Omni 220 dB (re 1µPa at 1m)
 - Sector (11.5°) 224 dB (re 1µPa at 1m)
- Transducer geometry: Cylindrical
- Number of channels:
 - Transmitter 384 transmitting channels
 - Receiver 384 receiving channels
- Data I/O (RS-232 or LAN):
 - Input: Attitude data (roll/pitch), Speed Log, Gyro, GPS, Echo Sounder, Sound Velocity Profile, SVP, Tracks and Markers from CMS.
 - Output: To CMS (Sonar settings, track information, marker information, navigation data for each ping, PoD calculated by sonar)
- Presentation Views:
 - Omni view w/electronic map
 - Vertical view
 - Zoom view
 - B-Scan view
 - Radial velocity view
 - Echogram view
 - Probability of Detection (PoD) view w/Ray trace
 - Sound velocity profile view
 - Passive waterfall view
 - Demodulated Noise (DEMON) view
- Hull Unit options
 - Fixed transducer installation (w/GRP dome)
 - Hoistable hull unit (Stroke length 1.2 m / 1.6 m / 2.1m)
- Environmental Compliant to Marine Standard IEC60945

Specifications subject to change without any further notice.

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