



**GeoSpectrum Technologies Inc**  
Customizing Detection

# HMS

## Hull-Mounted Sonar

### CUTTING-EDGE FLEXIBILITY

#### OVERVIEW

The M660 HMS is a high-powered, active/passive, long range ASW sonar for in-service and future naval vessels. Completely custom built to meet your requirements, our system maintains the ability to be customized for multi roles after installation with simple software updates. This flexibility keeps this sonar on the cutting edge as compared to other options currently available.

Our M660 HMS has a customizable transmission frequency range and the ability to electronically conduct both vertical

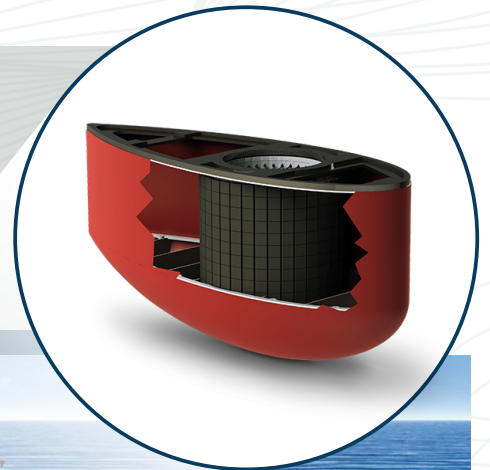
and horizontal beam steering. Not only does this provide the capability to detect submarines, but the sonar's high frequency and beam steering ability also provides the capability and fidelity to detect moored mines.

The M660 HMS comes operator selectable Low/High power transmission and Continuous Wave [CW] and Frequency Modulated [FM] pulses. Also, the system can be customized to incorporate user defined complex wave forms to meet target and environment challenges.

#### CONCEPT OF OPERATIONS

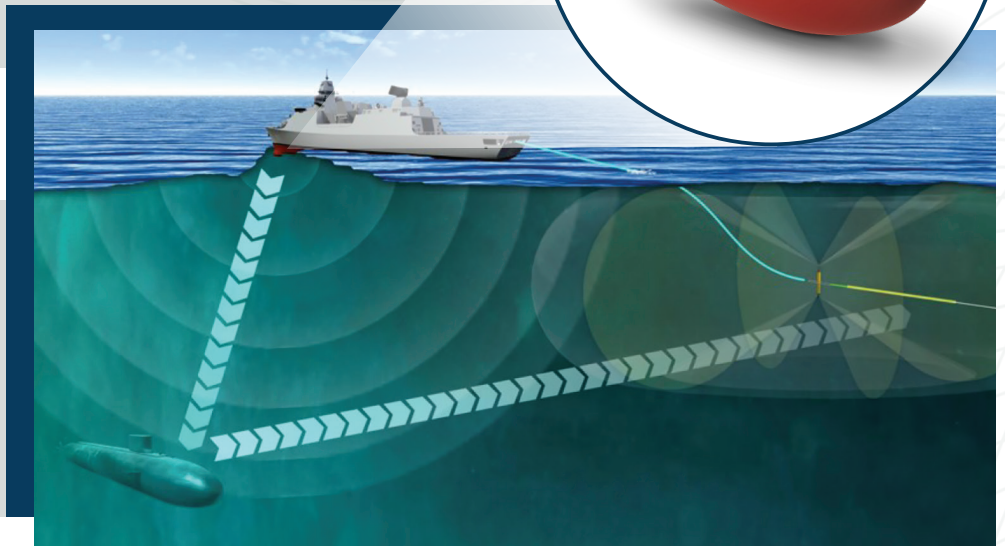
The M660 can be used as a standalone system, be interfaced to a CMS, or act as part of a full multi-agent underwater suite that includes towed sound sources and arrays, sonobuoys, torpedo defence and multistatic.

The M660 is also capable of being completely interoperable with other sonar systems such as GeoSpectrum's Towed Reelable Active Passive Sonar [TRAPS] to conduct bi- and multi-static operations.



#### COMPONENTS

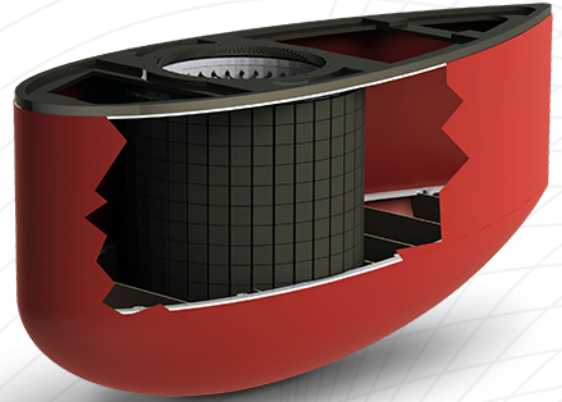
- Sonar Processing Software
- Amplifiers
- Transducers



# HMS Hull-Mounted Sonar

## SUMMARY

The unique combination of hardware, processing power/flexibility, and incorporation of industry leading amplifiers puts our Hull Mounted Sonar at the head of the pack. Completely custom built for every customer, our system maintains the ability to be customized for multi roles after installation with simple software updates. This flexibility keeps this sonar on the cutting edge.



## FEATURES

- Advanced user-friendly sonar processing and display with built-in analysis tools
- Very long range detection for submarines and surface ships in any environment
- Real-time detection, classification and localization
- Multi-target tracking; multi-static capability
- Active and passive torpedo detection
- Adaptable form factor can be retrofit into existing HMS facilities
- Hardware and software interfaces to underwater telephone systems
- The HMS can be upgraded to include a Torpedo Sonar Intercept and Classification (TORSIC) system (frequently referred to as Active Intercept)

## OPTIONS

- Customizable frequency range
- Customizable transducer size
- Sonar Processing Software

## SPECIFICATIONS

Array	36 vertical staves x 10 transducers, or customizable
Source Level	Customizable
Active Frequency	Customizable, centre frequencies 4–15 kHz
Passive Frequency	Broadband capability
Pulse Types	CW, FM, HFM, CUSTOM
Active Range Accuracy	± 2% rms
Active Doppler Accuracy	± 2 kts rms
Operating Temperature	-10 to 40°C
Storage Temperature	-40 to 70°C
Vibration	MIL-STD-167-1A
Shock	MIL-S-901D

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