

## Scalable HMS (Hull Mounted Sonar) Architecture

### ABSTRACT:

This presentation shows the hardware design work conducted for HMS (Hull Mounted Sonar) in Meteksan Savunma Sanayi A.Ş.

Presentation describes a sample hardware design architecture solution for a ship platform. The hardware architecture shown in the presented solution is based on the Sonar Wet End configuration developed by Meteksan Savunma. This structure is composed of receiver/transmitter, controller and power supply groups placed in a rack tray to drive an array (column) of 8 transducers. The 8 channel rack trays are duplicated in the rack system, according to the required number of total channels. The presented architecture allows the implementation of basic signal processing/beamforming functions on the Ethernet based digital units inside the racks, in network based system in distributed manner.

The presented scalable hardware architecture consists of basic building blocks (analog receiver/transmitter unit, digital unit, power unit, etc) qualified in terms of EMI/EMC and environmental conditions. The presented solution using this approach can easily be adapted to different system requirements and configurations with less need to system level tests by duplicating the configuration units.