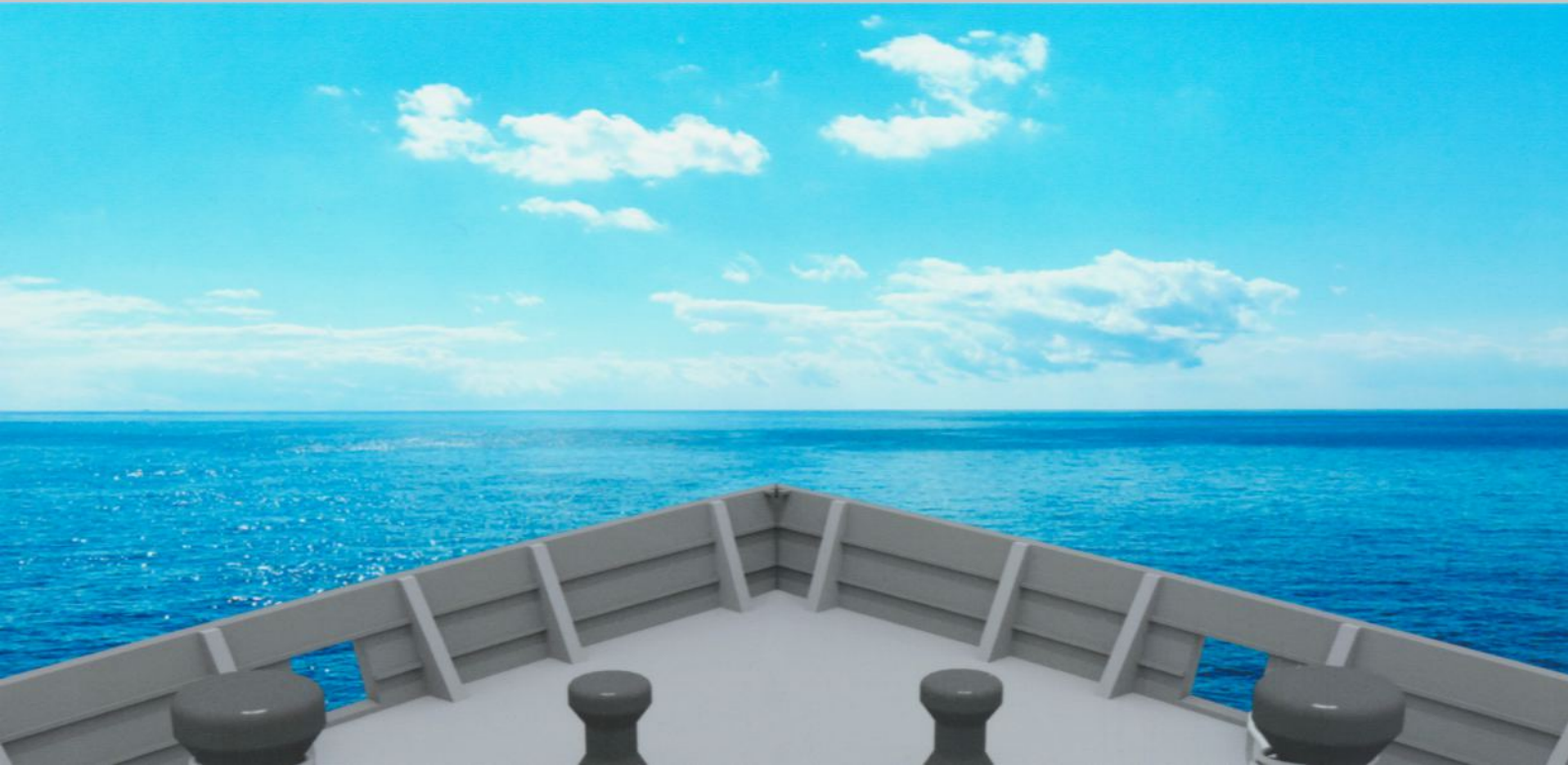


Integrated Bridge System



Mega-Guard IBS:

- Integrated Navigation System
- ARPA Radar, ECDIS and Conning
- Integrated Manoeuvring System
- Propulsion Control System
- Heading Control System
- Manual steering (FFU and NFU)
- Centralized alarm system
- Bridge watch alarm system
- Miscellaneous bridge controls
- One man integrated bridge design
- World wide service network
- Wheelmark approved



▶ YOUR GUIDE TO SHIP AUTOMATION AND NAVIGATION ◀

► Integrated Bridge System

Crystal Bridge



► Features

The Mega-Guard Integrated Bridge System provides the following functions:

- Integrated Navigation system
- Integrated Manoeuvring System
- Miscellaneous Bridge Controls

The Mega-Guard IBS integrates all bridge equipment and complies with the one man integrated bridge philosophy and has a full redundant lay-out according class rules LRS (IBS NAV1), DNV (NAUT-AW) and BV (SYS). The complete bridge is built-up with identical hardware and software components from the Mega-Guard product line.

► Integrated Navigation System

The Mega-Guard Integrated Navigation System is based upon a minimum of three and a maximum of ten Operator Workstations. On each Operator Workstation the following functions are available:

- ARPA X and S Band radar with chart overlay.
- Conning including centralized alarm system and bridge watch alarm system.
- ECDIS with radar overlay.
- Alarm, monitoring and control.

Each Mega-Guard Operator Workstation is equipped with a Marine Personal Computer, a 22"-26" TFT colour display and a Trackball for easy operation. The Operator Workstations are inter-connected via a redundant Ethernet link. The Mega-Guard X and S Band antenna-transceivers are directly connected to the redundant Ethernet link as well. All navigation sensors are wired to the Operator Workstations in a redundant way.

The Mega-Guard ARPA X and S band radar are designed to comply with the applicable IMO and Solas rules for seagoing vessels. Two different sizes TFT colour widescreen displays are available a 26" (350mm radar image) and a 22" (300mm radar image). All Mega-Guard radars have as a standard ARPA function including ATA/EPA and AIS display functionality. The ARPA radar supports the chart overlay function (full chart, simple chart or no chart).

Navigation, manoeuvring and miscellaneous bridge controls ◀



Crystal Bridge

The Conning display has the following features:

- Navigation mode mimic and docking mode mimic. Display of: GPS, depth, wind/current, next way-point, heading, ROT, speed, engine RPM and rudder angle.
- Centralized alarm system. Including prioritization into emergency alarms, distress alarms, primary alarms and secondary alarms.
- Bridge watch alarm system for monitoring the well-being and awareness of the watchkeeper.

The ECDIS display has the following features:

- In conformance with IMO A817 (19) resolution.
- Chart information and chart information update.
- Route monitoring and navigation planning.
- Radar target overlay.
- Grounding avoidance aid function.
- Navigation log.
- Chart data bases: S57 & ARCS.
- Automatic navigation tracking/course changing/drift correction.
- Navigation display function.

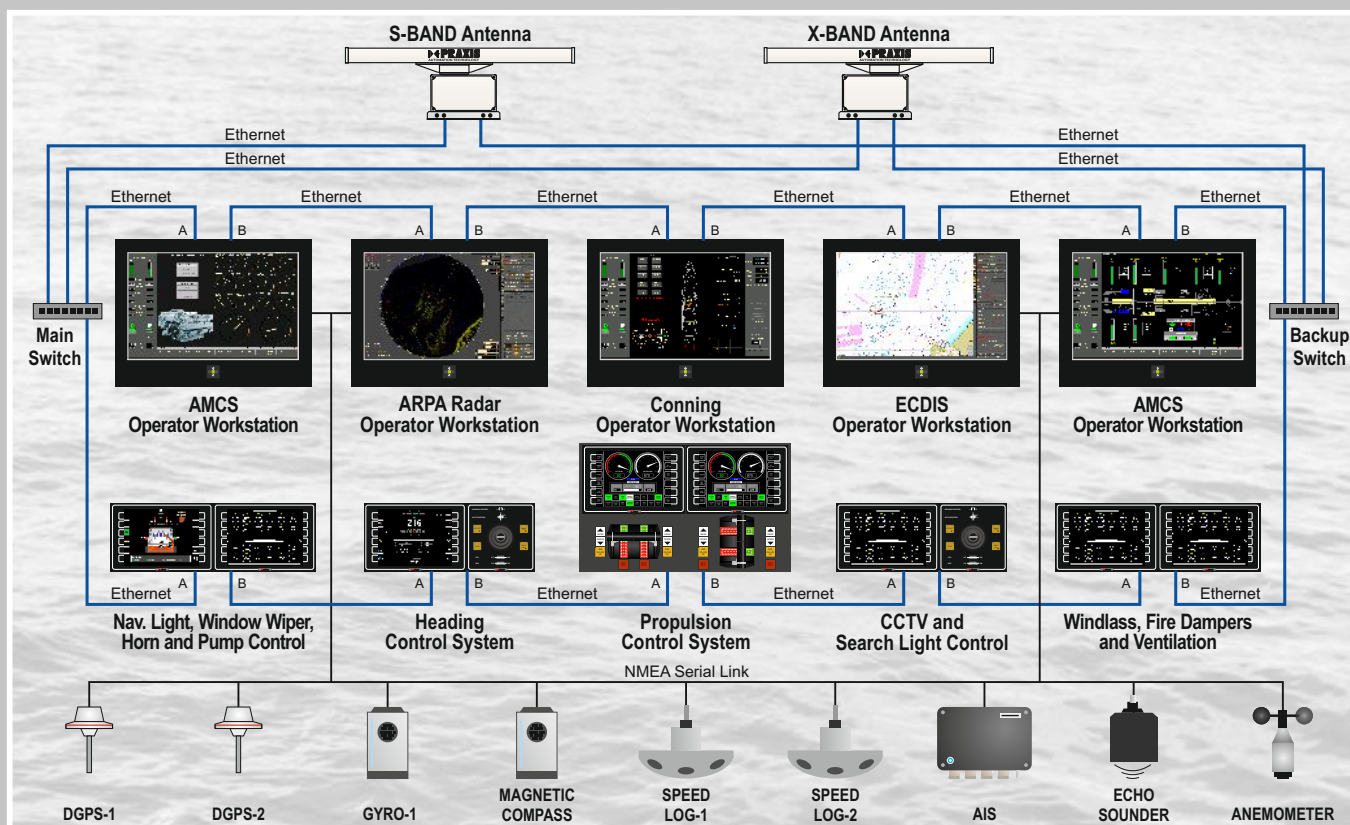
▶ Integrated Manoeuvring System

The Mega-Guard Integrated Manoeuvring System provides propulsion- and steering control functions. The Propulsion Control System fully automates the remote control on the bridge from the main propulsion engines, gearboxes and propellers. The Heading Control System automatically controls vessel's heading by controlling the rudders or azimuth thrusters. Steering controllers with manual steering (FFU) and emergency steering (NFU) are integrated. The manoeuvring system can be extended with a Dynamic Positioning System with class DP3, DP2 or DP1. The PCS, HCS and DP Operator Panels are built-up with a 8.4" TFT colour display with 12 control pushbuttons. Operator mode selection and indicators (RPM, pitch, steering, heading, etc) are implemented on the 8.4" TFT. All components are linked together via a redundant Ethernet network.

▶ Miscellaneous Bridge Controls

The Mega-Guard IBS also integrates common functions such as navigation lights, window wiper, horn control, pump control, windlass control, fire dampers, ventilation control, emergency control etc. These functions are implemented on 8.4" TFT's with colour display and 12 control pushbuttons. All components are linked together via a redundant Ethernet network.

Mega-Guard Integrated Bridge System



Mega-Guard Ship Automation and Navigation System



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