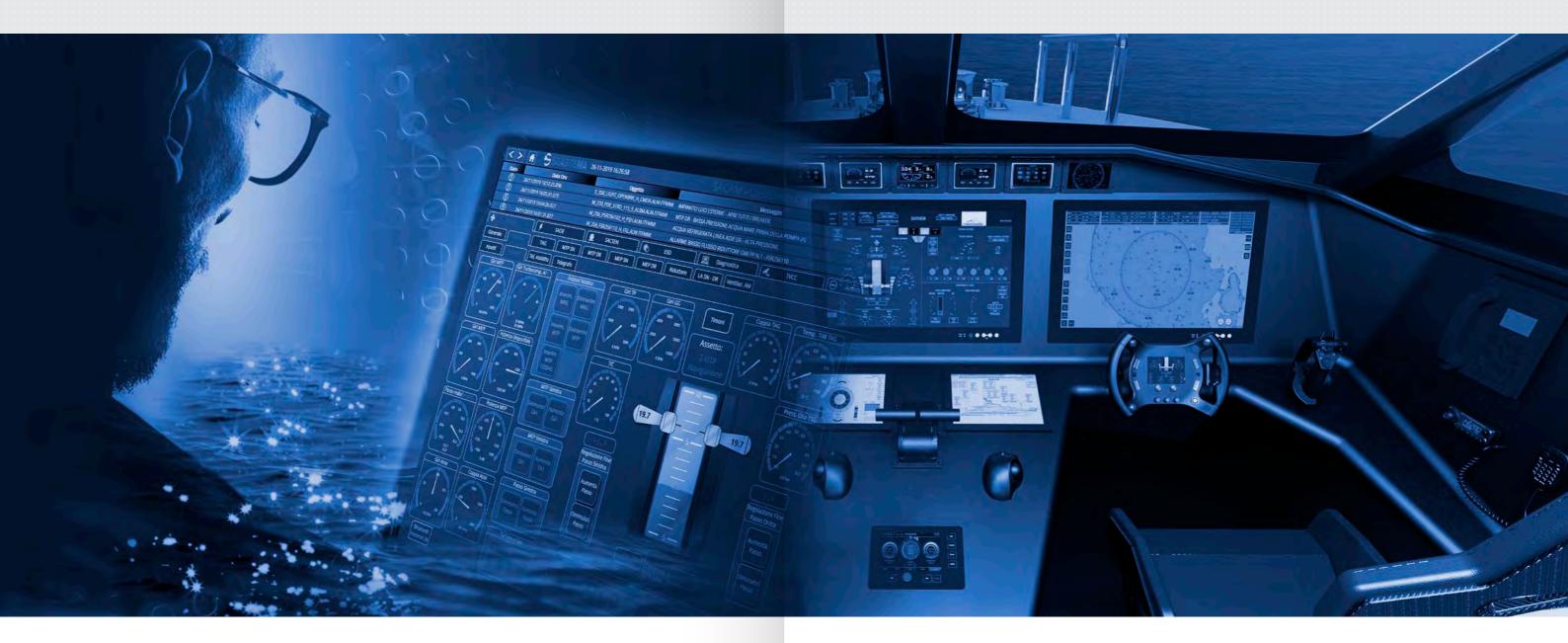
COMPANY PROFILE

MARINE INTEGRATED SOLUTIONS FOR AUTOMATION, NAVIGATION & CONTROL



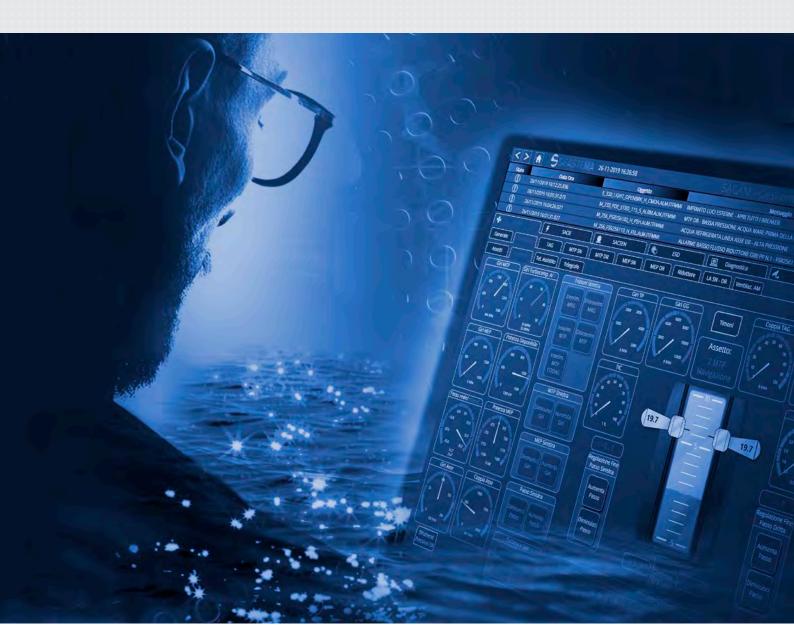




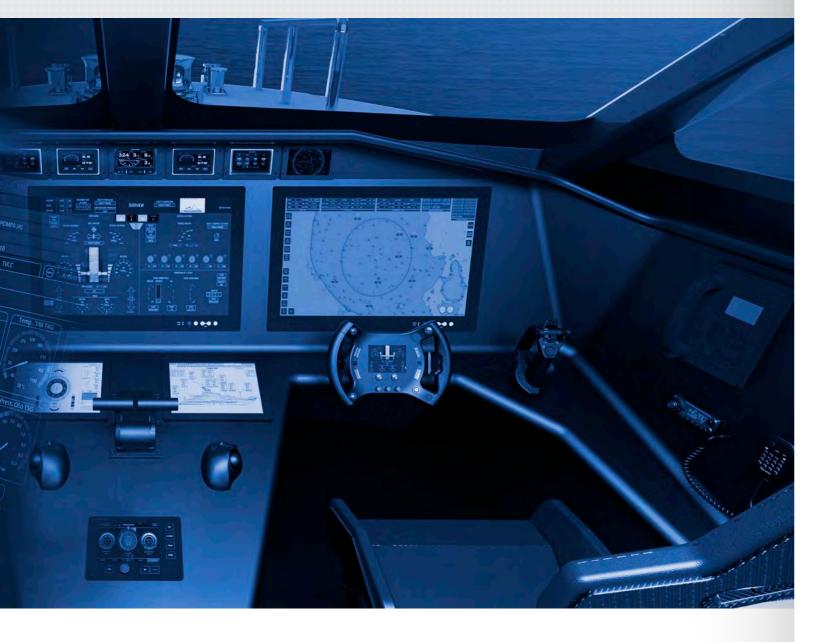


COMPANY PROFILE

MARINE INTEGRATED SOLUTIONS FOR AUTOMATION, NAVIGATION & CONTROL









A Key Player in Marine Control and Automation Technologies

A GLOBAL SUPPLIER
OF INTEGRATED MARINE
AUTOMATION & NAVIGATION
well proven and innovative
solutions for a full range
of vessels



CRUISE & FERRIES





SEASTEMA provides cutting edge integrated solutions for *Naval Vessels*, *Cruise & Ferries*, *Yachts and Critical Infrastructures*.

Our products include full scale ship automation, navigation systems, communications and Mission Management Systems and are complemented by a wide range of *Value-Add* functional packages, such as on-board decision support systems.

A wide experience in Ship Automation projects with customized solutions for power management, propulsion control, machinery automation, safety management and navigation systems integration help our customers in maximizing machinery and bridge operation efficiency, optimizing fuel consumption and improving readiness in operations and safety on board.

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LEADER IN INTEGRATED SOLUTIONS

SEASTEMA, a company wholly owned by **Fincantieri**, is headquartered in Genoa (Italy) with operational and **RESEARCH** units in Trieste, Lucca, Rome and Lecce and counts more than 120 skilled people.

The company delivered hundreds of systems in more than 15 Countries all over the world.

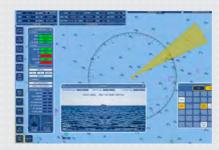
Dedicated teams follow the Clients enabling development of customized solutions providing whole life-cycle **SUPPORT**.

Our services span from the initial concept design to system implementation and after-sales support. We can rely on specialized **EXPERIENCE** as well as the **EXCELLENCE** from the technological ecosystem of the "Fincantieri Group" to implement an ever-improving **INNOVATION** process.



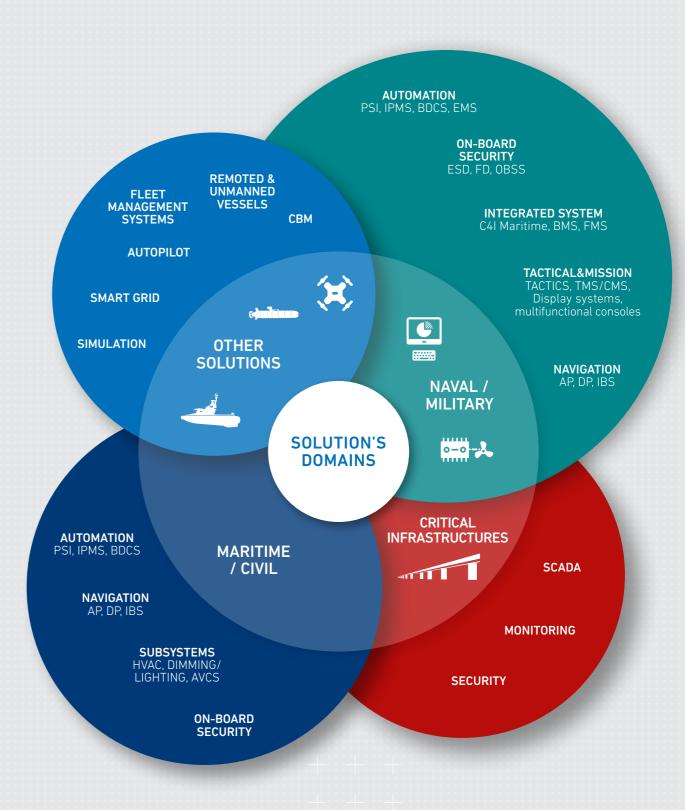












3

NETWORK

MISSION

Naval Vessels

SEASNAVYTM

INTEGRATED AUTOMATION & NAVIGATION

AUTOMATION:

- Integrated Platform Management System (IPMS);
- Propulsion Control System (PCS);
- Power Management System (APMS);
- Auxiliary | Hull Services Control System (ASCS);
- Battle Damage Control System (BDCS);
- Integrated Condition Assessment System (ICAS);
- Energy Management System (EMS);
- On-Board Training System (OBTS).

NAVIGATION:

- Integrated Bridge System (IBS);
- Enhanced Autopilot System (EAS);
- Dynamic Positioning (DP);
- Data Distribution Unit (DDU);
- Navigation radars and devices.

A STEP FORWARD IN MILITARY

Integrated platform of automation and

— **SEASNAVY™** is the state of the art of marine automation technology; a reliable system that grants continuous on-board safety control, operability and equipment efficiency. The high level of integration and the increased number of automated features are the best answer to the new operational requirements of added flexibility in the different missions and reduction of the manning coming from the Navies.







Cruise | Ferries | Merchant

SEASTACTICS™

MISSION SYSTEM

A fully integrated and costeffective solution specifically

Modular Architecture and

Mission/Capability Packages

interface providing benefits

procurement management;

Operation & Control.

such us cost optimization, risk

allow optimization to all classes

— **SEASTEMA** is the only customer

reduction, simplified program and

- **SEASTACTICS** has the capability to be used for Vessel's remote

designed for PV, OPV, FAC, MCMV

and auxiliary Vessels (new ships

INTEGRATED

or modernizations)

of vessels:

SEASMASTTM

FULLY INTEGRATED **SOLUTION FOR SHIP'S AUTOMATION**

— An enhanced and reliable Integrated Automation System (IAS) that grants continuous on-board safety control, operability and equipment efficiency;

NAVIGATION

COMMUNICATIONS

— The high level of integration and the increased number of automated features of the **SEASMAST** package are the best answer to the new requirements of operational efficiency of end user companies.

THE OFFERING | SOLUTIONS

AUTOMATION

- Machinery Control;
- Power Management;
- Bilge and Ballast;
- Cargo Control & Monitoring;
- Emergency Shutdown;
- Information Management;
- Energy Management; — Vibration Monitoring;
- Remote Connection;
- Turbine Control:
- Asset Management (Smart Sensors);
- Safety Management (ESD, SMS, OBSS);
- Navigation System (DP, AP, Speed Control);
- HVAC Control & Monitoring;
- Lighting: dimming and RGB;
- Local Entertainment System (LES);
- LNG Process Control;
- Scrubber integration;
- Fleet Management Systems.



MARINE TECHNOLOGY

navigation products for military vessels of any size and complexity







WE HAVE WORKED FOR MAJOR NAVIES

















Yachts

SEASYACHTS™

ENHANCED COMFORT, EFFICIENCY AND RELIABILITY

- A state-of-the-art Integrated Automation, Navigation & Communication System for Yachts that combines cuttingedge technologies in ship management with leading expertise in shipbuilding;
- All electronic devices and systems are connected on the same network exchanging information; the operator can operate from the same multifunctional workplace having control of all systems (Radar, ECDIS, Conning, Safety & Security systems, Ship Automation, etc);
- A typical scope of supply of **SEASYACHT**™ includes the Integrated Bridge System (IBS), the Integrated Automation System (IAS), Safety and Security Systems;
- All systems are designed to guarantee the highest level of redundancy to reach the maximum level of availability and ship operability in case of damage or emergency conditions.





INTEGRATED AUTOMATION SYSTEM (IAS)

- Power Management System;
- Propulsion Control System;
- Hull & Auxiliaries monitoring and control;
- Damage Control System;
- Security System;
- Dynamic Positioning (DP).



INTEGRATED BRIDGE SYSTEM (IBS)

- Radar, Chart Radar;
- ECDIS, Conning display;
- Navigation sensors;
- Autopilot (AP);
- External Communication Systems;
- Thermal cameras;
- Tender Tracking.



Special Products

SMARTGRID PMS

Seastema has developed an advanced power management system for enhanced DC smart grids for marine applications.

This system is capable to manage power sources, active, passive and transient loads including fuel cell, battery applications and special electric loads of weapon systems.

The integrated control of these smart grids and the optimization of their management reduces the environmental impact, increases energy efficiency and for naval solutions allows the management of heavy peak loads avoiding disturbances and overloads on the on-board network.



SEASUN

UNMANNED OVER THE SEAS



A cutting-edge solution to enable unmanned and remoted operations:

- A low foot-print package of advanced sensors, communication and control technologies that can be installed on-board of New or Existing|Legacy Vessels to enable remote and unmanned operations;
- Systems and subsystems are tailored for specific tasks that typically operates in low intensity asymmetric warfare scenarios.

SEASPILOT

TRACK KEEPING WITH SPEED PILOT

A high-performance certified Auto Pilot, combining traditional functions with DP-type operations:

- Tactical Evasive Maneuvers;
- Follow Targets;
- Low Speed Track Keeping;
- Speed Mode.



ADVANCED COMPACT BRIDGE

Airborne derived Cockpit where only two operators can perform all the tasks Ship Conduction performed through:

- Steering control;
- Speed control throttle;
- Interacting devices.

SIMULATION

- On Board Training Systems (OBTS);
- Tactical Trainer;
- Bridge Simulator;
- Advanced Learning Management Systems;
- Interoperability with exhisting simulators.





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