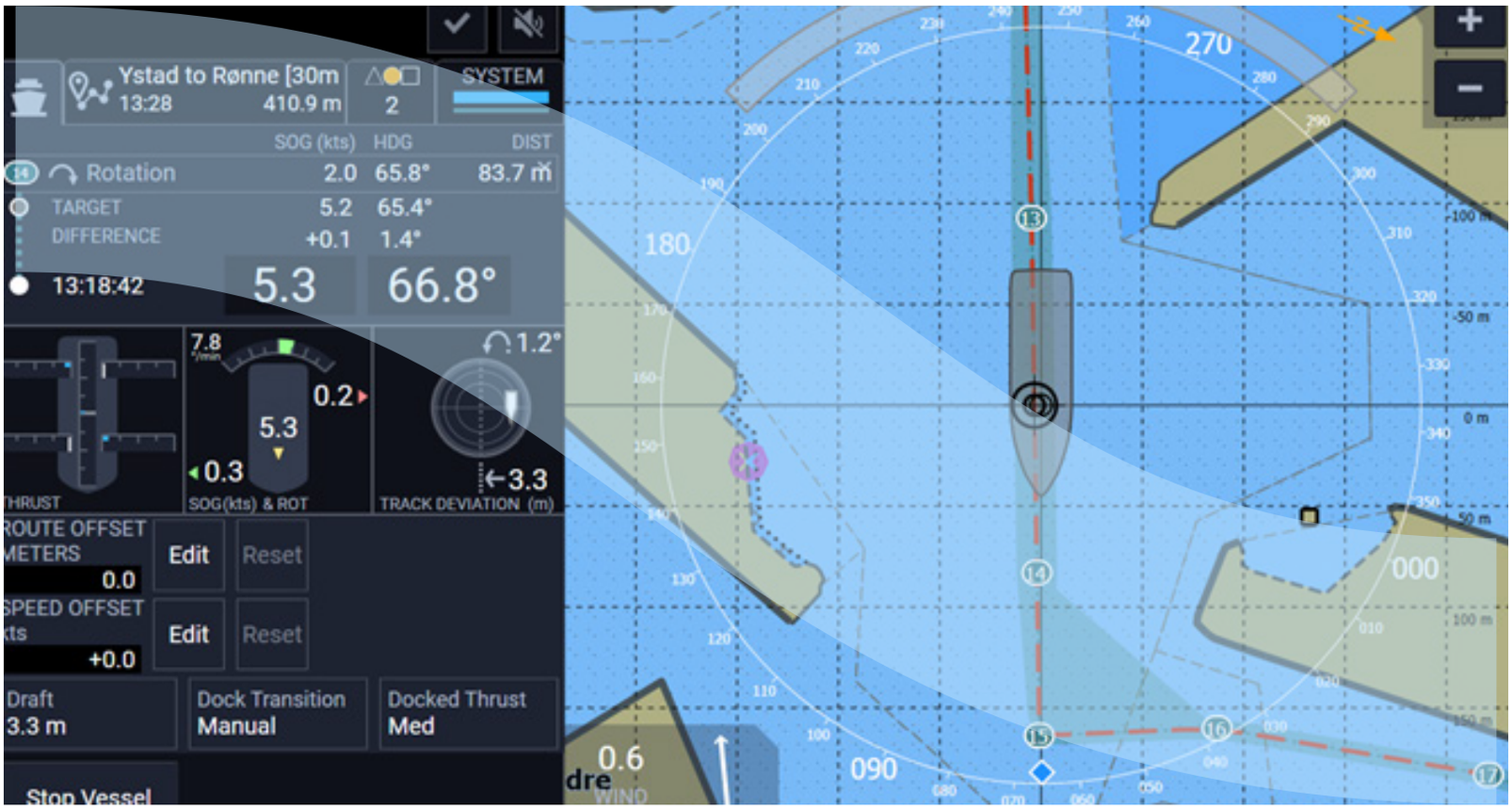

NACOS Marine SmartDock

Transforming Repetitive Routes into Autonomous Precision with NACOS Marine DP Technology with Autonomous transit and docking

SmartDock, a product developed from the Wärtsilä DP system, offers fully autonomous and seamless operation including undocking from a departure berth, transit, and docking at an arrival berth. Intended for use on vessels travelling a repetitive route, in some cases many times over the course of the day, the product provides for safe and consistent operation while the operator maintains responsibility for safe navigation.

The product operates on the basis of waypoints used to define track segments, with each waypoint containing detailed directives for maneuvring as the vessel travels along the next track segment. Complete tracks are stored in a library and can be recalled by the operator when needed. For ease of operation a simple and intuitive user interface is provided and includes the provision for electronic chart overlay.

In its simplest form the system comprises a Motion Reference Unit (MRU), wind, position and heading sensors, a 3-axis controller (computer), a 13inch display with touchscreen, and an IO rack to connect to thruster, propulsion and steering controllers. The architecture is fully scalable to provide for redundancy if required, as well as include multiple operator workstation locations supporting both forward and aft facing situations.

Benefits

- Simple to use
- Fully autonomous operation
  - Improved safety
  - Consistent operation
  - Reduces workload on the operator
- Includes chart overlay capability
- Supports multiple routes through the inclusion of a library feature
- Operator maintains responsibility for collision avoidance

Main Data

Hardware Specification for Operator Workstation	
Display	13 inch touch display (24inch display optional)
	1920 x 1080 resolution
	600 cd/m2
	W:35.5cm x H:24.8cm x D:6.9cm
Computer	Intel I3 processor
	Solid State Drive (SSD)
	Horizontal or vertical installation
	2 x Gb Ethernet ports
Joystick	3-axis non-spring loaded (optional)
Workstation power requirement	120V/240V ac, 50/60Hz

CP-SPU	
Computer (controller)	Intel i7 processor
	SSD
	8 x RS-422 serial ports supporting both sensor data input, and Modbus RTU
	2 x 100Mbps Ethernet ports
Network switch	8 x 100Mbps Ethernet ports
PLC Rack	2 x 100Mbps Ethernet ports
	Up to 64 IO (assorted analog and digital)
CP-SPU power requirement	120V/240V ac, 50/60Hz
CP-SPU dimensions	W:61.0cm x H:82.6cm x D:33.8cm

Certification and conformance	
EMC, Safety, Environmental	IEC 60945, IACS E10 Rev 8

At NACOS Marine, we are redefining control at sea.
Born from decades of maritime expertise, NACOS Marine delivers fully integrated automation, navigation, and dynamic positioning solutions, built on one intuitive platform. We empower vessel operators with precision, situational awareness, and confidence in the most demanding marine environments.

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