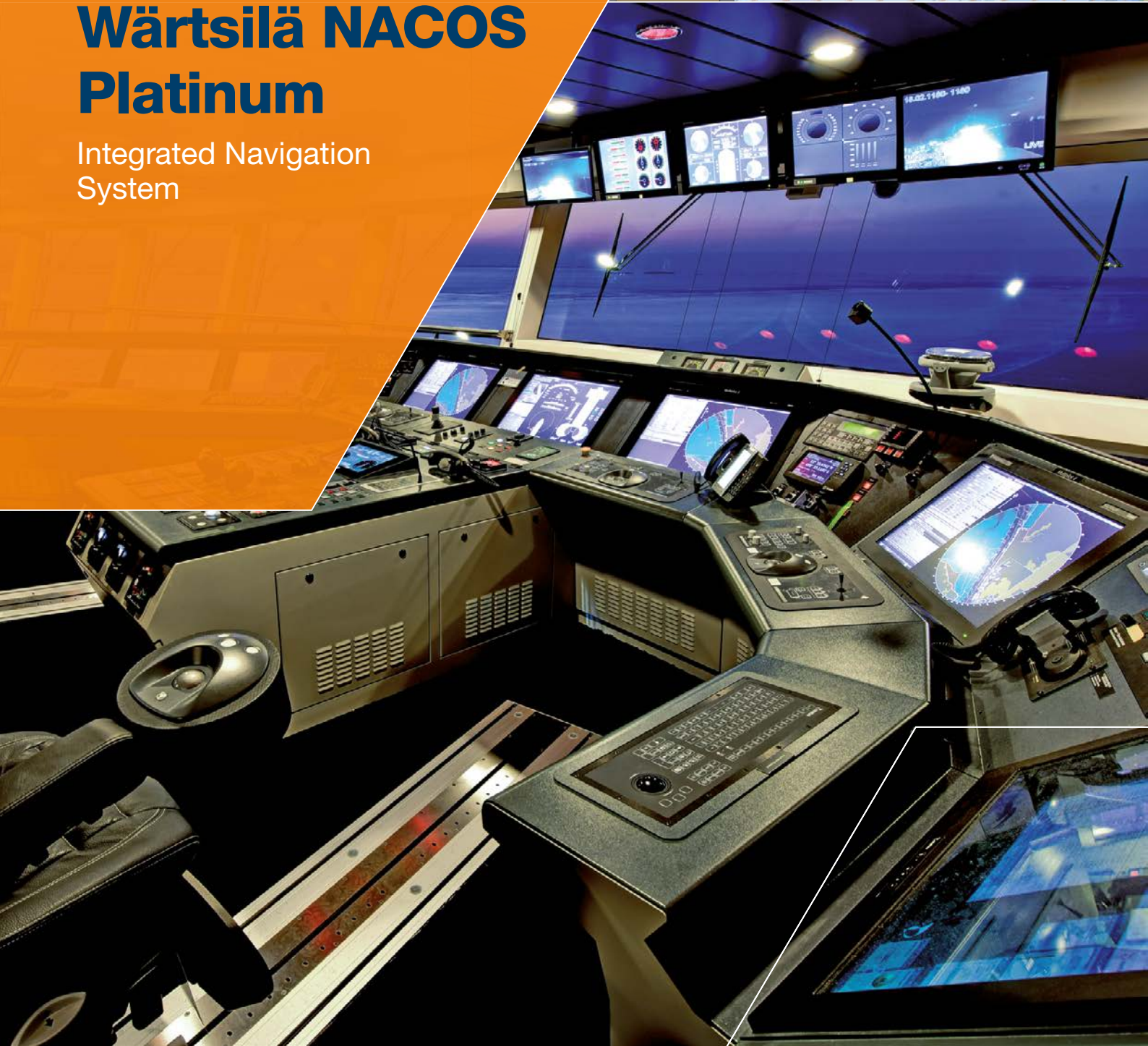
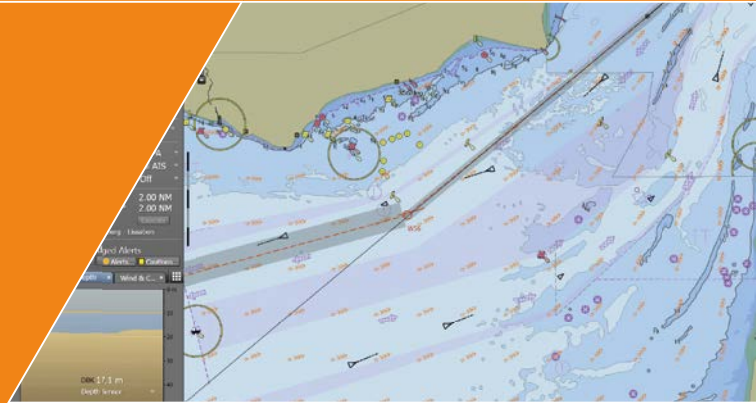


# Wärtsilä NACOS Platinum

Integrated Navigation  
System





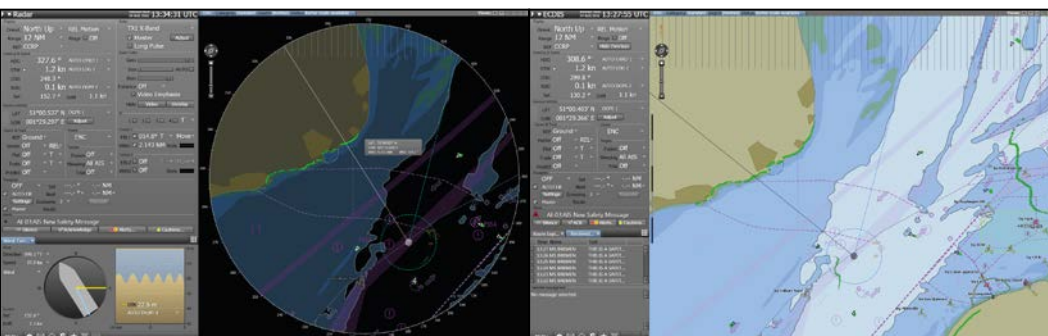
# Wärtsilä NACOS Platinum

## A Captain's Choice Navigation System

For more than 30 years, Wärtsilä Navigation Systems have been at the forefront of integrated onboard solutions. This success has been built on the unique concept of emphasising the tight integration of all navigation tasks into a single system. With more than 1500 NACOS Navigation Systems successfully installed with lifetime support, the concept is well proven.

Wärtsilä NACOS Platinum, our sixth generation of integrated navigation control systems, represents a complete series of navigation products based on the latest hardware and software technologies. The series of products offers unprecedented features in terms of usability, scalability and networking, made possible by a single hardware and software platform.

Wärtsilä's navigation product range comprises a broad portfolio of systems applicable to all types and sizes of vessels. This ranges from highly sophisticated integrated systems, to standard navigation systems of any size, or individual products for retrofit applications.



MULTIPILOT in Chart Radar mode

MULTIPILOT display



CONNINGPILOT display

DP display

### Advantages/Features for Different Ship Types

#### Work Boats/Anchor Handling/OSV

- Compact system designs
- Multifunction use of the displays (MULTIPILOT)
- Class approvals for special requirements
- Conning display - flexible/customizable
- DP system integration (operation HMI)

#### Cruise Line/Yachts/Special Purpose

- Customizable navigation packages
- Extensible control stations, secondary bridge, safety room
- Online diagnostics/remote maintenance
- Integration of HVAC, emergency shut down, propulsion
- Flexible configurations and adaptations

#### Tanker/Container/General Cargo

- Standardized navigation packages
- Wing control including conning and propulsion control
- Chart updates for ECDIS
- Online diagnostics/remote maintenance

The unique array of value adding features and benefits offered by Wärtsilä NACOS Platinum, provides both reliability and safety to vessel operations.

#### Features

- A single common software platform for all navigation applications including Dynamic Positioning
- User-centered design for easy and safe operation across systems and applications according to standards
- Scalability and flexibility from stand-alone system to integrated system for all types of vessels
- Type approved according to new IMO Performance Standard for Integrated Navigation Systems MSC 252(83) and IEC 61924-2

#### Benefits

- Easy to install and to maintain
- Cost-efficient solution focused on increasing user value
- Extremely user friendly = less training
- Common hardware platform = fewer spare parts.

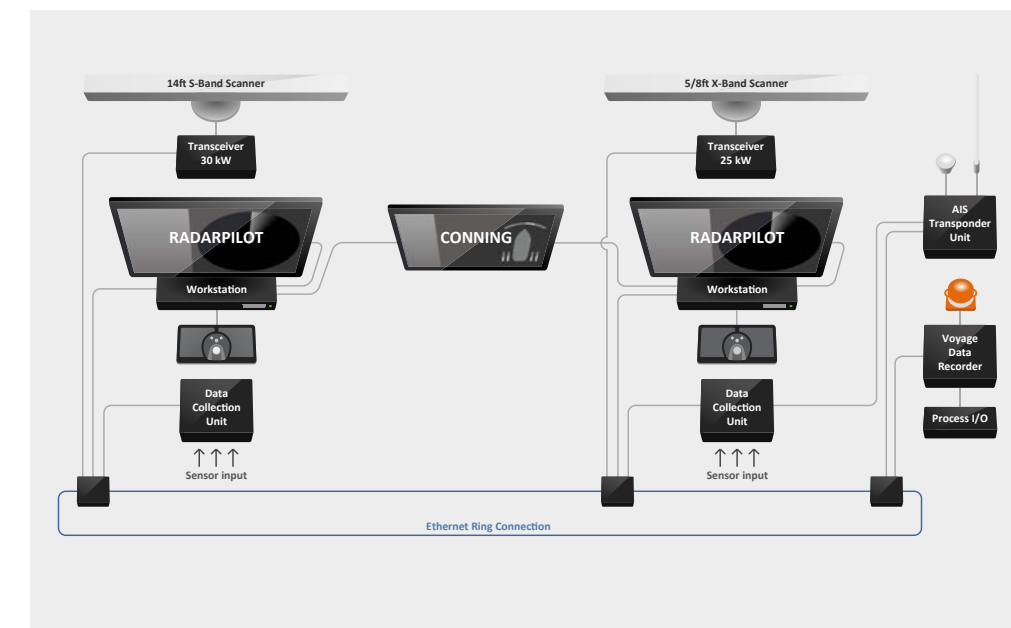
Wärtsilä NACOS Platinum offers the entire scope of ship control systems, hosted on a shared set of work stations and using a common network.

#### Wärtsilä NACOS Platinum Products

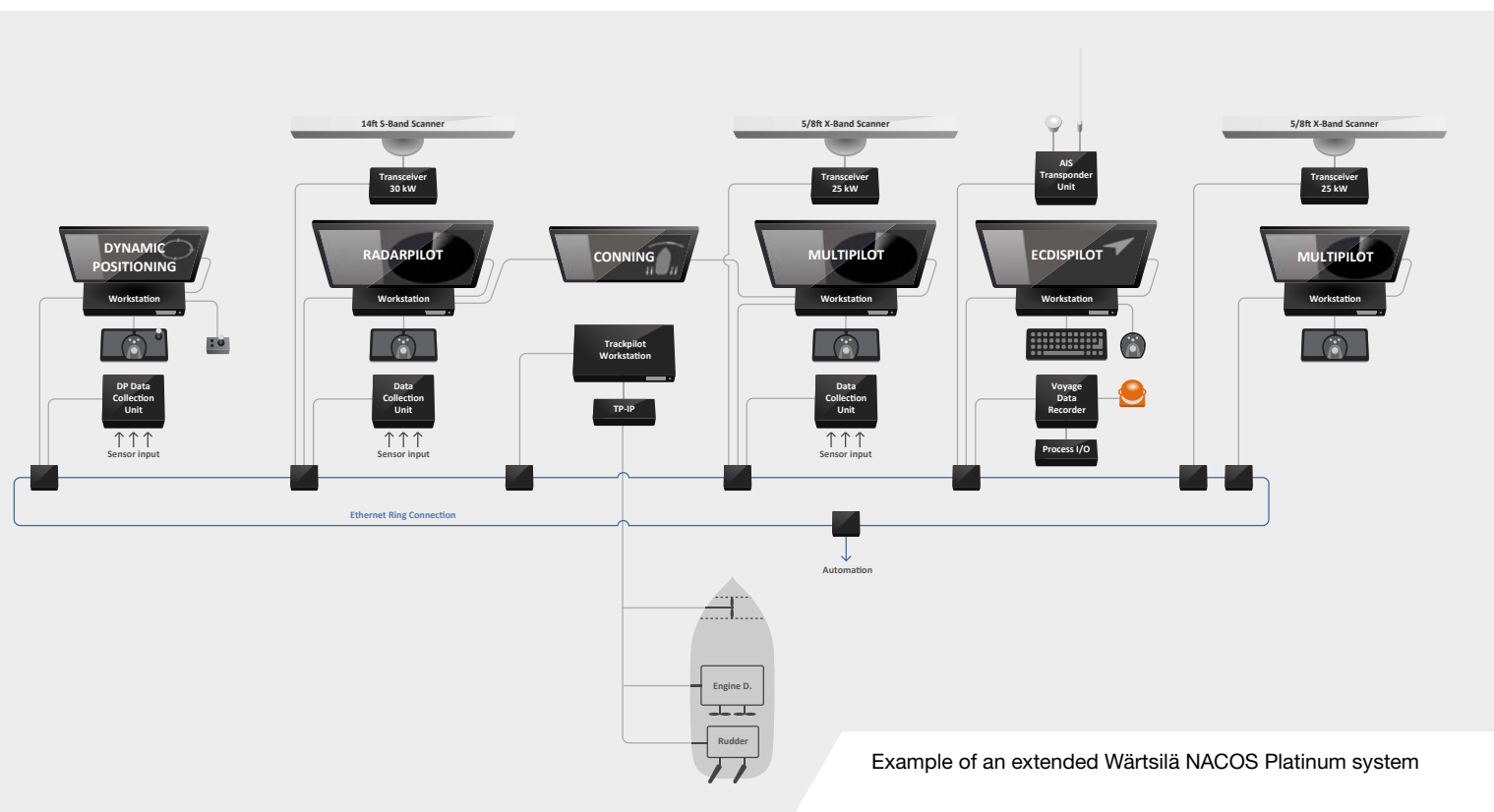
- RADARPILOT
- ECDISPILOT
- MULTIPILOT
- TRACKPILOT
- CONNINGPILOT.

#### Navigation Sensors/Communication Components

- Speedlogs
- Position sensors
- Echosounder
- AIS
- Wind/weather
- VDR
- GMDSS
- Satellite communication
- Internal communication systems.

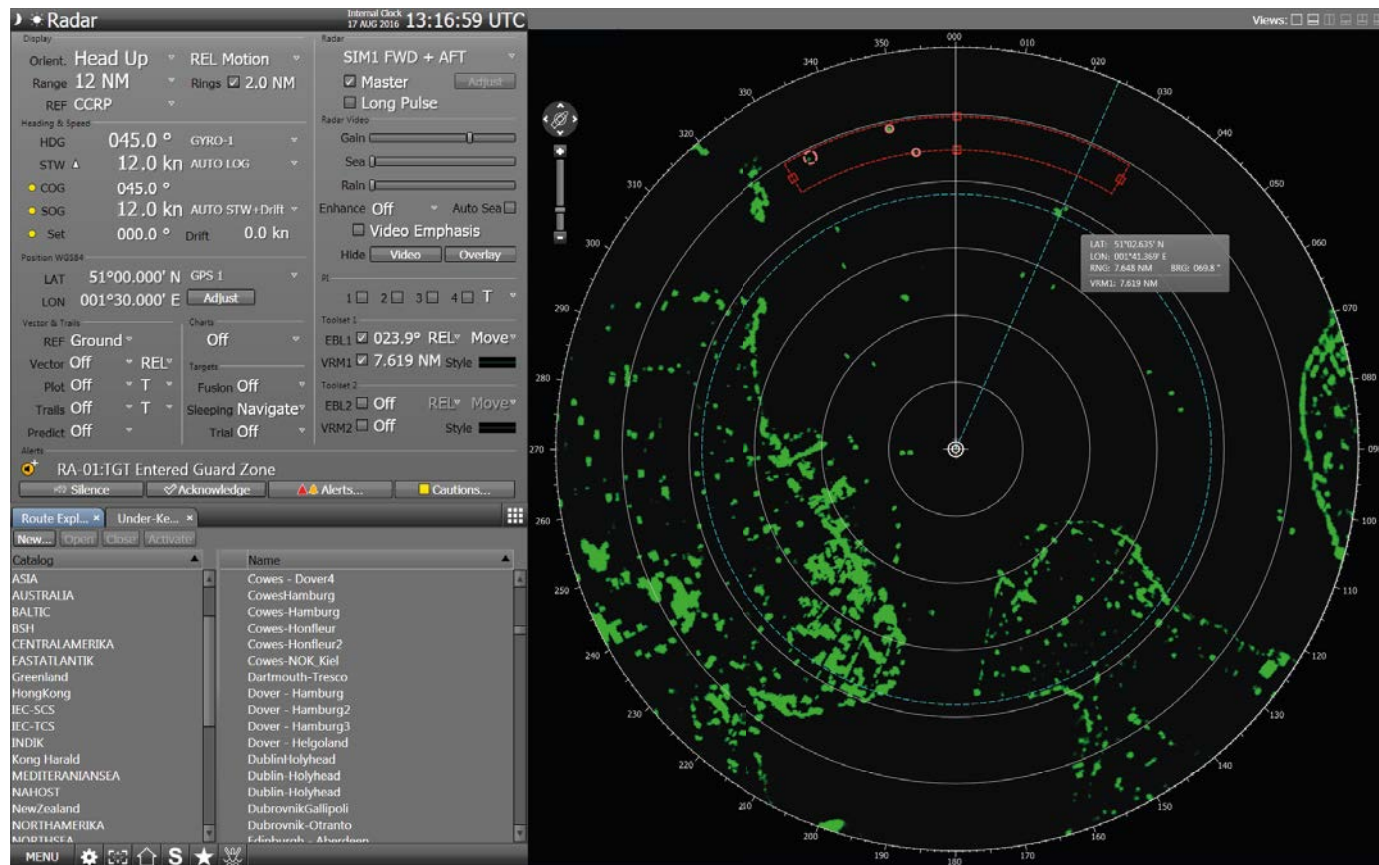


Example of a basic Wärtsilä NACOS Platinum system



Example of an extended Wärtsilä NACOS Platinum system





Radar display

## Wärtsilä NACOS RADARPILOT Platinum

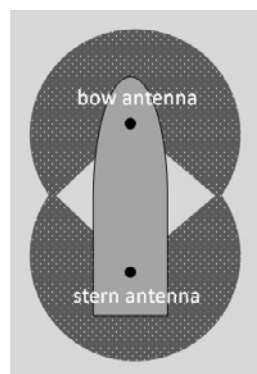
As the first manufacturer of network based IP radar systems, Wärtsilä is proud to present a product based on advanced radar technology.

The raw radar video, as well as the radar targets, are processed within the transceiver unit and distributed via the network to a number of radar work stations. Advanced filter techniques are used for clutter suppression and enhanced small target detection.

The innovative and ergonomic design provides unprecedented levels of usability and safe operation for experts and novices alike.

### Radar Merging

The Wärtsilä NACOS RADARPILOT Platinum can be upgraded with a type approved option for multi antenna



operation. In case of coverage limitations, for example due to the vessels superstructure or cargo arrangement, radar images of different antennas from the same type can be combined. All radar functions, such as acquisition, trail and others, remain working. A typical configuration is the combination of a bow radar and stern radar antenna.

### High Speed (HSC) Capabilities

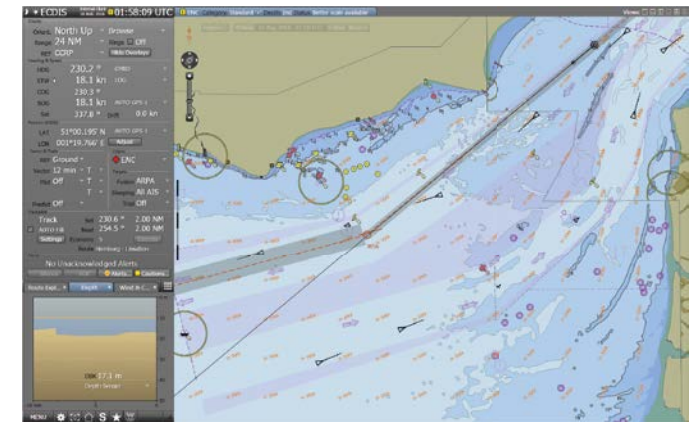
All types of radar transceivers are available with dual speed gearboxes for high speed craft (HSC) applications. A double refresh rate is also helpful in small passages and gives enhancements of target detection algorithms, e.g. at helicopter approach.



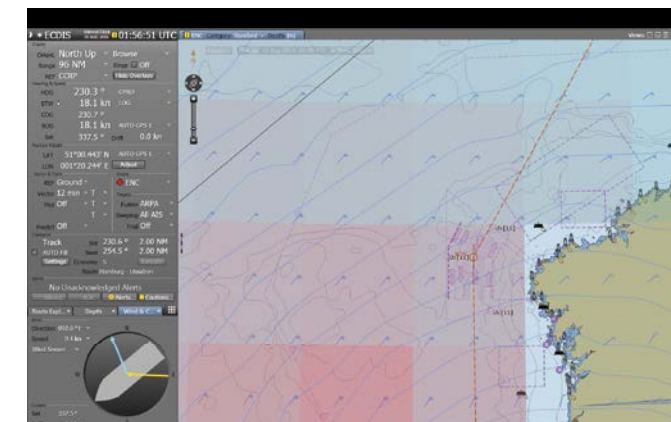
## Wärtsilä NACOS ECDISPILOT Platinum

Nowadays ECDIS is accepted as an indispensable and ultimate tool for route planning, voyage monitoring and maneuvering. The Wärtsilä ECDISPILOT Platinum exceeds the demands of a standard ECDIS by a comprehensive variety of intelligent support functions for effective route planning and monitoring. Standard interfaces from AIS and NAVTEX are incorporated within the ECDIS. Optionally, weather forecast information is available on a separate layer which can be used for intelligent route and schedule planning.

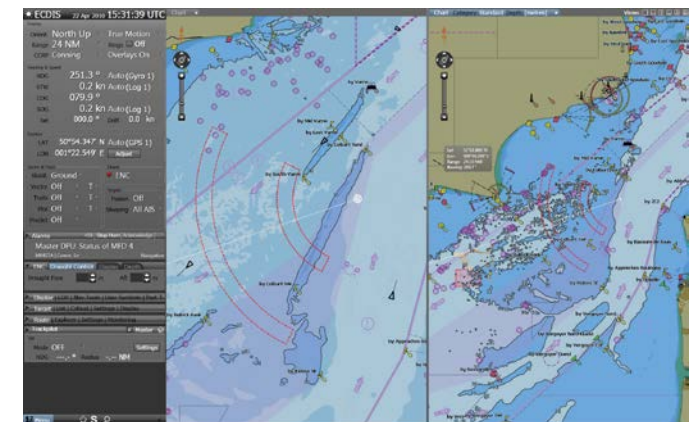
ECDISPILOT Basic is the compact stand-alone version, designed especially for retrofit applications.



ECDIS display



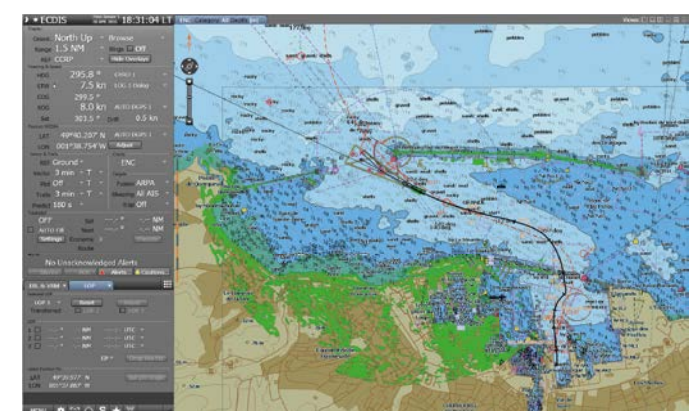
Weather data overlay



ECDIS split window

## Wärtsilä NACOS MULTIPILOT Platinum

A MULTIPILOT work station combines all navigational tools, including RADARPILOT, ECDISPILOT, CONNINGPILOT, TRACKPILOT and even an integrated DP/joystick control and automation into a single, compact work station. It is the universal solution providing all information for the reliable, safe and easy operation of a vessel. It is easy to use and provides clear, consistent and intuitive handling.



MULTIPILOT display

## Wärtsilä NACOS CONNINGPILOT Platinum

The CONNING application provides an overview of the navigational situation of the vessel. It displays all navigation data, and if fitted with the optional engine interface, also rudder and propulsion related data.

The presentation varies with the individual propulsion and generator layout of the vessel. An individual layout is shown.



CONNING display





## Wärtsilä NACOS TRACKPILOT Platinum

Technological advances in ship control have raised the standards in economic, efficient and reliable vessel management. As a result, the demand is greater than ever for highly accurate automated steering to optimize vessel performance whilst reducing the crew workload.

Wärtsilä successfully combines decades of experience in heading and track control with the benefits of modern platform technologies and innovative user centered design. Thus we can provide navigators with a reliable co-pilot for the most demanding navigational situations.

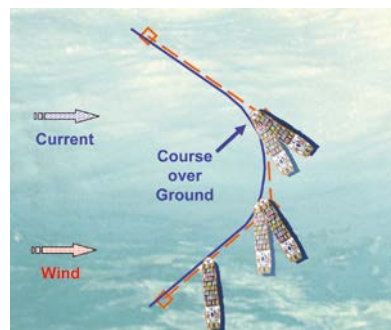
### Functional Package "Heading Control"

- Heading mode according to the heading control standard
- Intuitive and easy to operate remotely from RADARPILOT/ECDISPILOT/MULTIPILOT (joystick control)

- Radius control with display of curved heading line
- Use of adaptive algorithms based on the internal ship's model
- Operates with various rudder/propulsion types
- Adjustable from precise to tolerant control (economy)
- Consistent alarm management within all sub-systems of the Platinum series.

### Functional Package "Track Control"

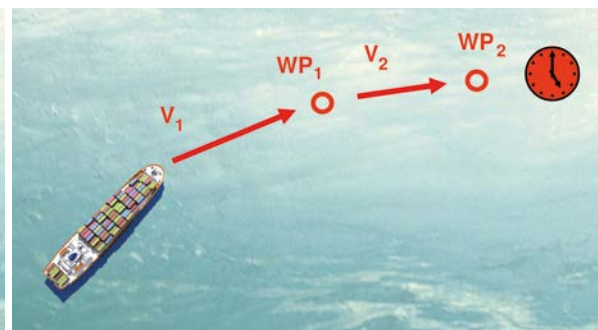
- All "Heading Control" features
- Course mode (compensation of drift)
- Track mode according to IMO/IEC track control standard category C
- Remote maintenance function
- Optional speed control
- Optional anchor control



**Track mode** In track mode the Trackpilot is steering along a sequence of waypoints. Wind and current are considered and a drift correction angle will be calculated.



**Anchor control mode** Monitoring of the anchorage and automatic control of stern thrusters to keep the vessel on its heading and position.

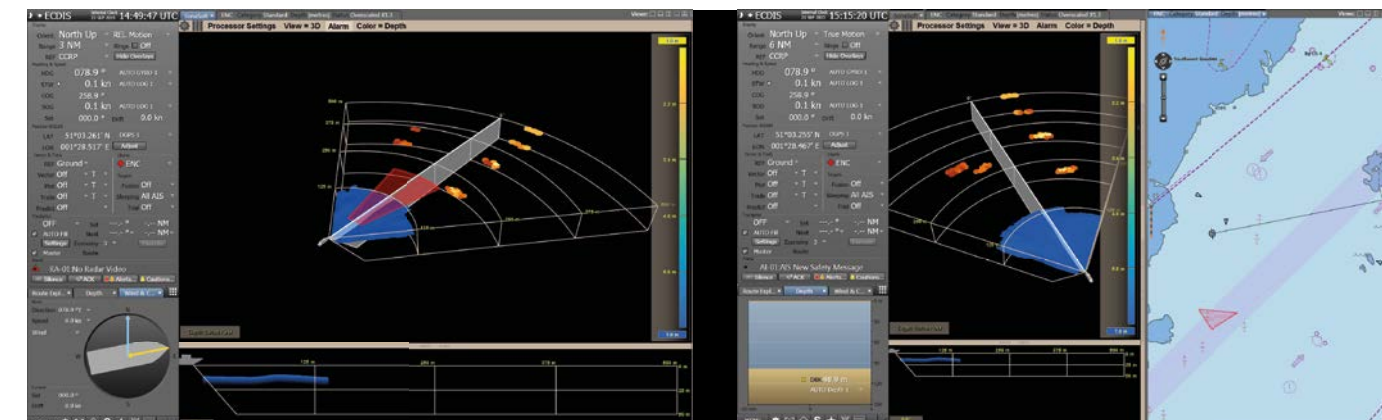


**Speed control - arrival mode** An arrival time is set for the destination and the system will calculate automatically the required set speed in order to reach the destination at the defined arrival time.

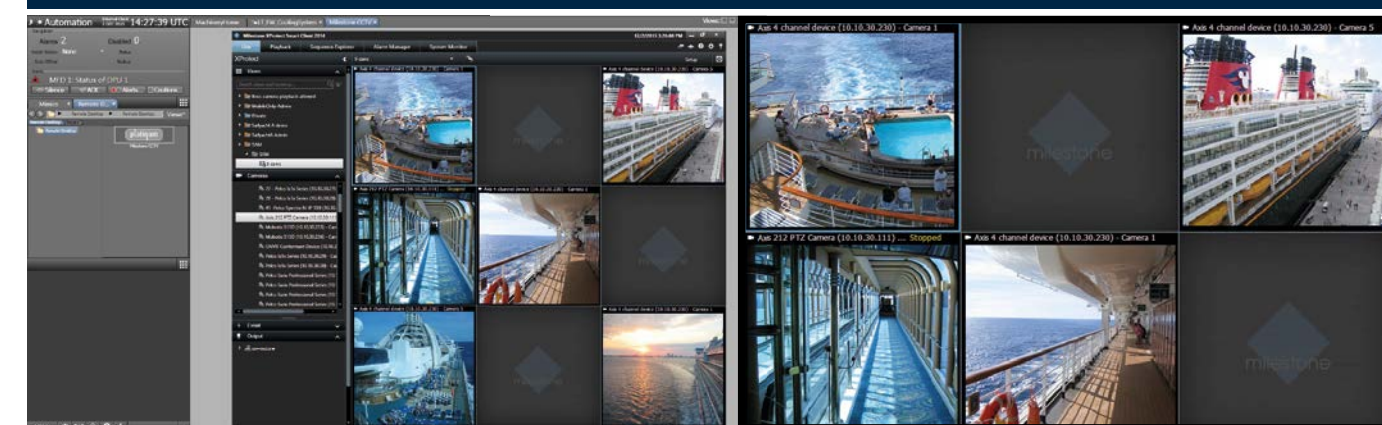
## Wärtsilä NACOS Platinum Platform for System Integration

The easy and effective integration of third party applications is an important feature of the Wärtsilä NACOS Platinum platform. Different technologies are

used, such as SDK or API, for direct integration or alternatively remote desktop protocol to allow access to an existing HMI.



**Integration of forward looking sonar** 3D sonar data from FarSounder can now be visualized and controlled directly from all NACOS Platinum MULTIPILOT work stations. The forward-looking capabilities of FarSounder's Sonar add a new dimension of situational awareness to the NACOS Platinum Series. This additional monitoring tool is particularly important in polar areas, shallow waters and other challenging environments.



**Integration of CCTV cameras** The NACOS Platinum platform offers different techniques to integrate CCTV cameras in a range from single web based cameras to complex CCTV-systems with various functionalities.

**Integration of optical bearing device** The seamless integration of the Optical Bearing Device (OBD) into the ECDISPILOT allows fast and accurate real-time bearing measurements (LOP's). The results can easily be transferred to the ECDIS.

**Integration of FUGRO Satellite Positioning** provides guidance information for precise berthing manoeuvres. FUGRO is based on a global network of reference stations generating corrections which are transmitted to vessels via a robust broadcast infrastructure. The Wärtsilä NACOS CONNINGPILOT Platinum page provides captain and/or the pilot with accurate information in the cm range for safe and accurate berthing manoeuvres.







SCC ship control center

Wärtsilä is a global leader in complete lifecycle power solutions for the marine and energy markets. By emphasising technological innovation and total efficiency, Wärtsilä maximises the environmental and economic performance of the vessels and power plants of its customers.

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