



NACOS Platinum

Automation Systems

Integrated Automation for Assured Quality, Safety and Reliability

Read more at www.nacosmarine.com



Experts in innovation

For decades we have been at the forefront of technological developments when it comes to marine automation, and we are still leading the way with NACOS Platinum system. NACOS Platinum is the result of more than 80 years of experience hand-in-hand with more than 13.000 customers' vessels and a continuous research and development.

Endless design possibilities

Scalable, flexible and with unprecedented integration possibilities, NACOS Platinum fits any ship type and budget. We can offer from a compact Machinery Alarm System to the ultimate integrated solution, keeping the same high standard of quality, reliability, usability and safety.

Incomparable lifecycle

We build our core software and hardware in-house allowing us to manage the lifecycle of our products providing customers with 20 years guaranteed maintenance (fit, form, function).

In addition, we count on a network of hundreds highly skilled, professional and trained engineers all around the world providing remote or on-site assistance 24/7, 365 days a year.

Don't make me think!

With its vast experience in the development of ship automation and control systems, We have partnered with leading international research institutes to offer the most innovative, user friendly and comprehensive family of navigation and automation technologies.

The HMI is designed around the same operating principles commonly found in well-known software programs, thus improving operating system familiarization speed to levels never seen before.



Platform

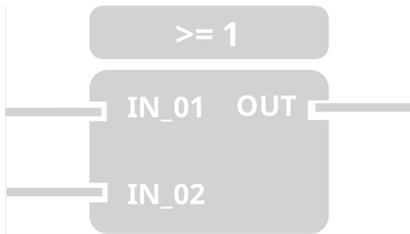
Distributed hardware combined with a modular architecture enables a very high degree of flexibility to ensure optimal installation solutions in terms of scalability and costs. Redundancy is the standard solution in our platform offering superb robustness and safety during all vessel conditions. Redundancy is made by independent yet integrated workstations and by adopting redundant LAN network (copper and fiber) tying together the control on the field and operator stations.

Software

Thanks to the flexibility of our software, any Platinum series workstation can run a wider and different ranges of application including, ECDIS, HVAC, ESD, Radar, SMCS, PMS, CCTV, Conning and more. This type of design is made easy to access thanks to a unique Home Page concept which makes it possible to run Navigation apps in ECR from any workstation, and in addition, all Automation control function mimics are available from the bridge.

Standard Function Blocks

NACOS Platinum offers a vast portfolio of standard, certified programming codes for control of the more commonly used functions such as Valve Controls, Generator controls, PID loop controllers, Motor controls and more. Through utilizing highly standardized and well documented components, system quality and reliability, together with the best value for money and reduced commissioning costs, are guaranteed.



NACOS Platinum Features

Watchkeeper Tools set

- System overview page
- Mimic browse and grouping
- HMI with zoom and pan
- Measurement points
- Local control and operation at processor level
- Control transfer rights management
- User rights management
- User ID , RFID cards
- Duty alarm system
- Engineer call system
- Extension Alarm System (EAS)
- DeadMan
- Bridge watch alarm system (MSC.128(75))
- BAM standard (IEC 62923-1, 2)
- Alarm, log, event printer
- Graphical printer
- Snapshots
- Dual Language
- Free hand drawings tools
- Sticky notes

Modularity

- Standalone or integrated with other Platinum series products
- Wide selection of workstation displays including laptop, videowalls and tactical tables
- Segregated networks between Workstation and process controller
- Scalability from 20 to 53.000 Ios
- Remote I/O cards
- UTC and local time synchronization
- Fast system recovery
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Robustness

- Dual redundant network
- Dual AC Power feeding change over
- Redundant PLC, BUS and Process Controllers
- Hot stand-by for process controller
- Hardened Operating System following CIS

Troubleshooting

- Hot swap of I/O and PLCs
- 1 ms sequence of events
- Fast Recovery Kit in complete crew autonomy
- Advanced built-in troubleshooting tools
- Remote Maintenance

Record Tool Set

- Historical Database
- Trends
- Reports
- Reports scheduler
- Journal
- Replay
- Mail server
- Electronic documentation tool
- Web based offline database tool for trend, export function reachable from ship network
- Asset inventory

Integration with external systems

- CCTV integration and network camera interface
- Paging system interface (paggers)
- Standard interface/protocols based on RS485/422 to all major marine suppliers
- Interface to VDR
- Interface to external OPC UA Client
- Export to CSV
- Vector base graphic



Machinery Solutions

NACOS Platinum is available for different propulsion alternatives:

- Dual fuel diesel electric propulsion (DFDES)
- Slow speed diesel electric propulsion (SSDR)
- Conventional steam propulsion (STEAM)
- New fuels eg.methanol, ammonia.
- LNG
- Hybrid, fuel cells, battery packages

The system integrates the control and monitoring of all the basic machinery systems:

- Propulsion plant
- Power plant
- Auxiliary machinery
- Fuel plant / bunker system
- Bilge system
- Ballast system

- Tank Monitoring and control
- Level gauging sensors (SMART EPL)
- Thrusters
- Cooling system
- LO system
- compressed air system
- Fuel consumption calculation
- hydraulics system
- ER ventilation
- Water systems
- Flow counters
- Light column
- GSP or motor starter panels control
- Motor controller unit (SMART—MCU)
- Valve monitoring and control (VRCS)
- Handling Exhaust Gas Flaps and Sea Water Cooling Valves
- And more

Application Options

- Monitoring Systems (MOS)
- Monitoring and Control Systems (MCS)
- Machinery Alarm Systems (MAS)
- Emergency Shutdown Systems (ESD)
- Cargo Monitoring and Control Systems (CCS)
- Ballast Water Management Systems (BWMS)
- Power Management Systems (PMS)
- Energy Management Systems (EMS)
- Heating, Ventilation and A.C. (HVAC)
- Reefer Container Monitoring Systems (RMS)
- Safety Management Control Systems (SMCS)
- Fuel Gas Supply System (FGSS)
- Camera Systems (CCTV)
- Propulsion Control Systems (PCS)
- Engine Protection Systems (EPS)
- Propulsion Telegraph Systems (PTS)
- Third Party System Integration



Power Management

We have vast experience in standard power management systems, but also support latest and future vessel power plants such as LNG and Hybrid.

Our power management system offers a high level of redundancy which provides a unique level robustness.

Power management does not need to run as a stand-alone system but is operable by the same workstations used to control other applications, giving you savings when it comes to maintenance and installation costs.

The system offers a wide range of functions that can easily be adjusted to fit the actual machinery configuration or operational needs.

The Platinum Power Management System comprises standard functions to control the ship's electrical Power Plant. The Power Management System controls the generator sets and breakers. It includes standard function blocks for:

- Auxiliary engine start/stop
- Auxiliary engine monitoring system
- Converter control
- Diesel generators
- Blackout start
- Shaft generators with constant RPM
- Shaft generators with variable RPM
- Bus tie breakers
- Shore connection breakers
- Interconnection breakers
- Heavy Consumers with constant load
- Heavy Consumers with variable load

The Platinum Power Management system may also include customized functions for:

- Mode selector
- Preferential trip
- Load shedding
- Power distribution
- PTO/PTI
- Take Me Home
- Power Boost
- intelligent PMS

Safety Solutions

Our safety solution is a central part of the NACOS Platinum capabilities for all activities that concern passengers, crew and ship safety.

Safety solutions provide access to all information and procedures related to the handling of incidents and emergencies.

Overview of any danger like fire, smoke, gas or flooding with logs and events are continuously synchronized.

Layer based graphics give the user the possibility to filter information relevant to the actual incident or emergency.

The system can include control functions related to the interfaced safety systems.

Efficient training of users and crew is supported by a simulation mode. Safety solutions does not need to run standalone but is operable by the same workstations used to control other applications, giving you savings when it comes to maintenance and installation costs.

Functions which are part of safety solutions comprise:

- Safety management system
- Fire fighting system with control and alarm indication.
- Auto and manual plotting of smoke, fire, flooding etc
- ESD incident management and reports
- Mustering system
- CCTV integration & network camera interface
- Door monitoring and control (with on-site actuators)
- Action Cards / Kill cards
- Fire detection and fire patrol
- Free hand drawings
- Suspicious item search
- Damage control and decision support system
- Low location lights
- Ventilation system interlock
- Smart Dampers
- Traffic lights
- Flood detection system (Smart VSL2)

Cargo Solutions

The NACOS Platinum system integrates all the main functions related to the cargo handling process. The cargo control and monitoring system can be fully integrated with the machinery system or designed as a stand-alone system with a redundant communications link to the machinery system.

The system interfaces the different sub-systems and provides manual, semi-automatic, or automatic operation modes.

The Cargo solution part of NACOS Platinum is operable by the same workstations used to control other applications, giving you savings when it comes to maintenance and installation costs.

Among others we can offer:

- Container soft load shedding solution
- 4 pin plug monitoring system
- Bay plan
- Container connected
- Container within temperature range
- Activation signal to brakes, cycle time, priority.
- Automatic update from BAPLIE file to all MFDs
- Tank level gauging
- Tank content calculation
- Tank alarm
- Cargo operator unfitness alarm timer
- Cargo valve control
- Cargo pump control (hydraulic or electrical)
- Integrated loading calculator in workstation
- Crude oil cargo control
- Product cargo control
- LNG/LPG Cargo control
- Integrated cargo control room

HVAC & Hotel Solutions

When you deal with passengers your priority is their comfort.

Our Hotel Solutions are made to simplify and strengthen your staff operation and keep the quality of your guest services at unique and incomparable standards with very high level of granularity and control.

Our platform provides reports and trend tools, that you can use to verify the services offered towards customers, making sure your standards are high and at a consistent level.

Our HVAC Solutions comprise:

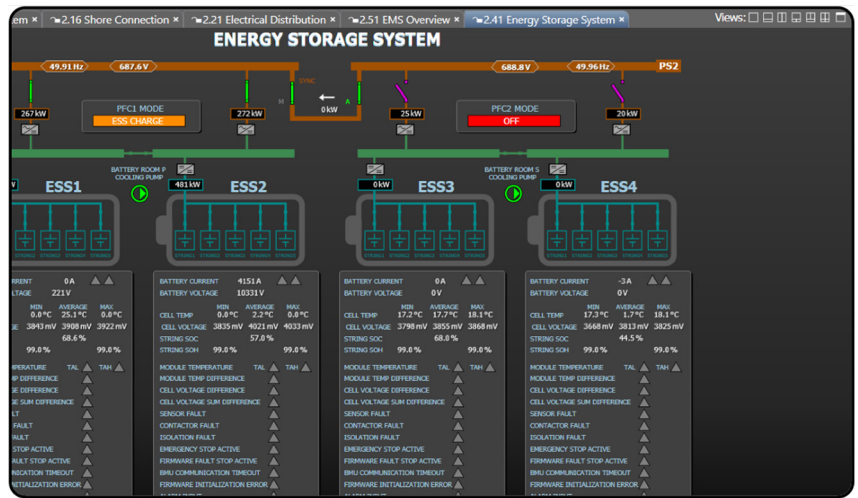
- HVAC Scheduler
- Local starter panels
- AHU overview and control
- Fan coil units
- Fans and dampers controls
- GA overview
- Deck plane overview
- Temperature, humidity, CO2, pressure measurement of room and areas
- Season settings
- Custom operator settings
- Advanced diagnostic tools and granular fine tuning
- Total control from one or more MFDs
- Our other Hotel Solutions include:
- Potable water overview (distribution, consumption)
- Refrigerating system (provision)
- USPH system (health controls)
- Pool, whirlpools system
- Lift monitoring
- Cabin control system
- Integrated ESD, SMS and HVAC to reach the maximum possible savings of installation cost and lifecycle, enhancing at same time safety, operations and comfort.



Sensors, actuators and more

To reach more granular, safe and robust control and monitoring, minimize installation costs and provide you with the best NACOS Platinum experience, we have designed the below products used today by many maritime leaders.

- SMART MCU (motor controller unit)
- VRCS (Valve Remote Control System)
- SMART VSL2 (flood detection sensors)
- SMART EPL (level gauging sensors)
- SMART TLS (light sound columns)



NACOS Platinum provides the following:

Integration with

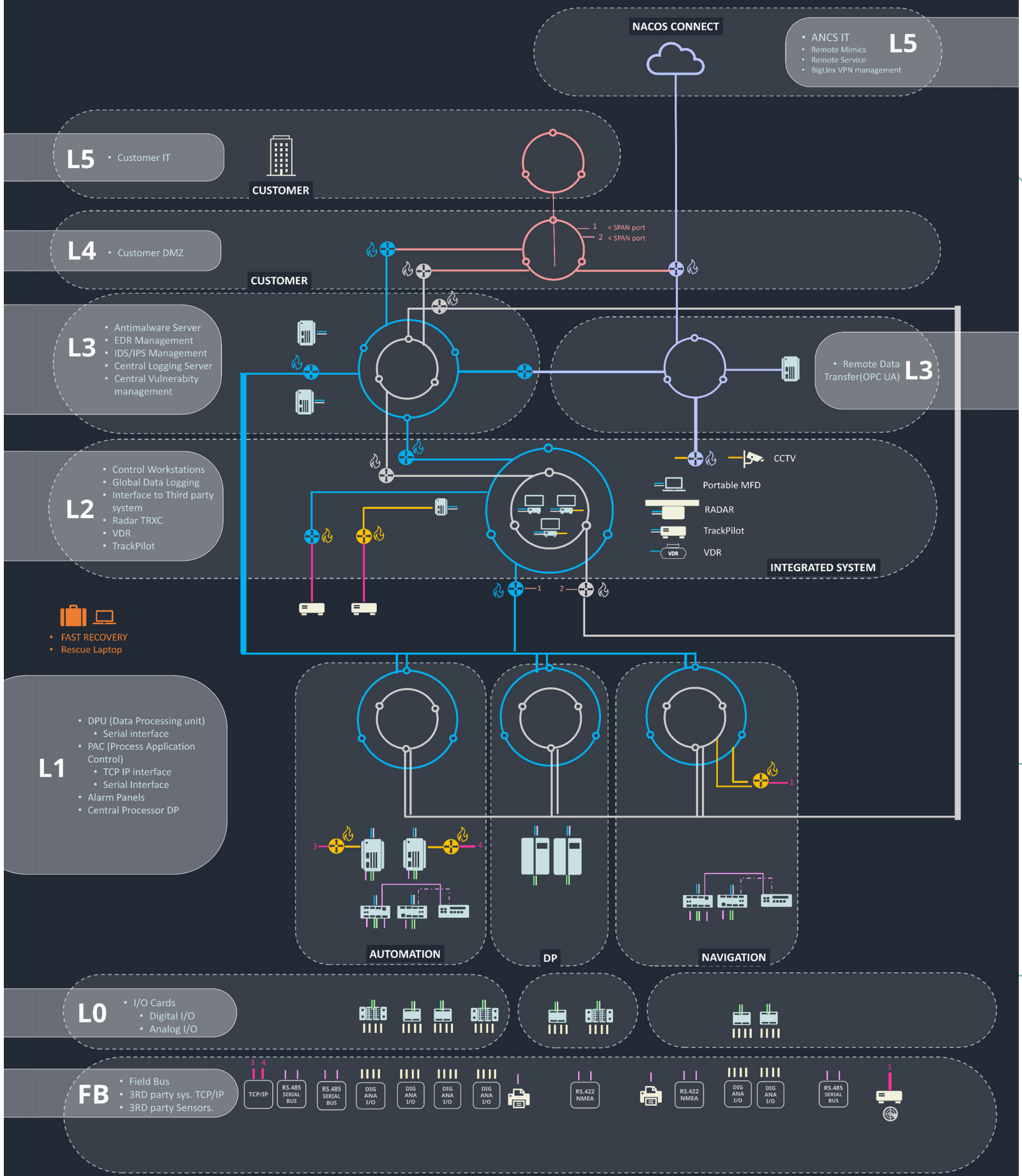
- ECDIS, RADAR, Conning
- NACOS Platinum DP
- Propulsion Control System
- Information Management System (IMS)
- WebServer, webapps
- NACOS Platinum Navigation
- Tactical Table
- Video Wall
- Virtual MFD machine server

Interface to

- Propulsion plant
- Power plant
- Engine & Auxiliary machinery
- Fuel plant / bunker system
- Bilge system
- Integrated bridge system
- Voyage data recorder – VDR
- Ship performance system
- Ship administrative system
- OPC UA Client
- Loading computer
- Maintenance system
- Fire detection & safety system
- Stability computer
- Thrusters and more

System Layout

Our platform's flexibility allows for a range of design options, from a small standalone alarm panel to a complete integrated system, all without compromising performance or quality.



Pioneering Maritime Excellence for Over 80 Years:
Setting the Standard in Marine Automation, DP,
and Navigation with a Legacy of 13,000+ Vessels
and Unmatched Customer Collaboration.

www.nacosmarine.com



NACOS Marine in brief

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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