FURUNO

Cyber Security & Remote Monitoring Platform

HermAce

Real time remote monitoring, access, and troubleshooting of NavCom equipment from shore ensures cyber security.

HermAce

HermAce has obtained the following certifications.

- · Digital Twin READY
- · Cyber Security Level 3
- · Innovation Endorsement

**www.furuno.com**

VDR Remote APT

Next Generation Annual Inspections

Annual VDR inspections, which previously required the dispatch of a technician, can be remotely completed with necessary data acquired via HermAce.
Remote inspection can be carried out anytime, anywhere. By removing the need to schedule technicians, the reduction of running costs and operation burden is achieved.

Pre-survey check

Perform a pre-survey check at any time to ensure the data is recorded correctly in the VDR. This practice dramatically reduces the possibility of unexpected events occurring during inspections and can significantly improve service completion rates.
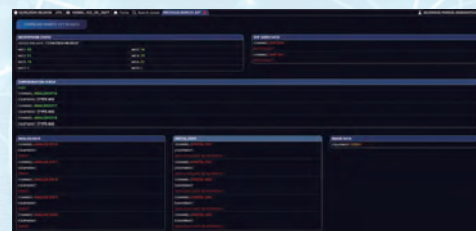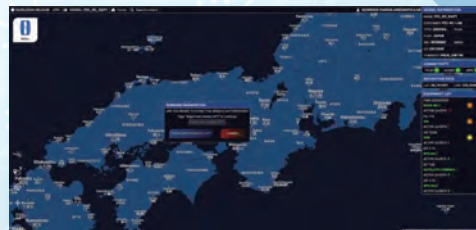
Predictive Maintenance

Health Status, such as CPU temperature and fan speed, can be extracted and visualized with threshold information. Predictive maintenance of Radar magnetrons can also be achieved efficiently.

With Furuno's expertise and decades of experience, it is now possible to replace parts based on actual measured values according to the usage of each magnetron instead of relying on the less accurate recommended replacement time.
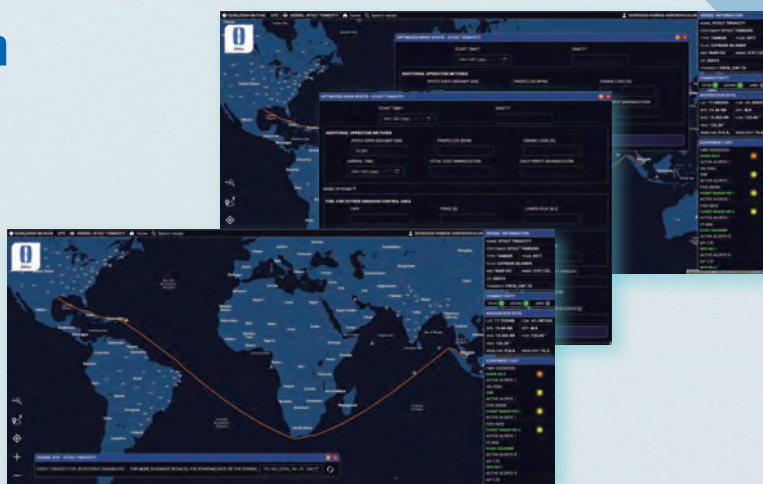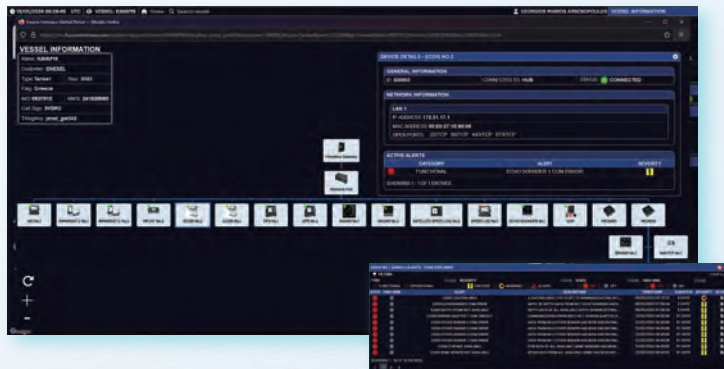
Voyage Optimization

Route Optimization

To optimize the ship's route through the new HermAce Portal, users can use the route optimization function to improve operational efficiency during the voyage. Planned routes can be remotely monitored with ETA information, and an optimized route can be returned to the ship.

Real-time Remote Monitoring


System Diagram

E-MAIL Alert Notification

If an important alert is received, notification and troubleshooting instructions will be immediately sent to designated accounts without waiting for a crew member's report.

Real-time Remote Monitoring

Critical data pertaining to the vessel's equipment is collected through the HermAce gateway and then transmitted to cloud infrastructure, making it available to users anytime through a web portal interface.

The new HermAce Portal analyzes equipment failure and monitors the ship's OT network system diagram, providing connectivity status, alerts, and network configuration for IT department review. Troubleshooting with the HermAce Portal is effortless!
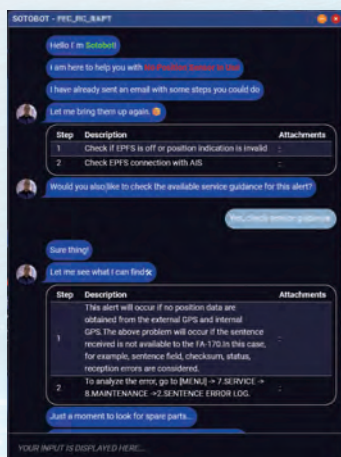
Furuno Tips

By combining alert information with health status data, it is possible to identify the cause of symptoms and suspected spare parts.

Furuno Tips, a compilation of digitized Furuno technical know-how, allows users to access necessary troubleshooting methods without contacting the manufacturer when equipment symptoms occur.

Data Distribution

Data from various navigational and communication devices collected by HermAce can be distributed through API (Application Programming Interface), including:

- Device Connectivity
- ECDIS Route
- Functional Alerts
- Operational Alerts
- Equipment List with serial number and software version
- Position
- Heading
- SOG / COG
- DPT
- Wind Speed / Direction

This data and more can be distributed to any 3rd party system locally or through the cloud, depending on customer needs.

Efficient operation and security for all vessels

HermAce is a remote monitoring tool that uses digital twin technology to remotely monitor the status of electronic equipment onboard while ensuring the security of the ship's network. Data from Furuno's navigation and communication equipment can be collected, distributed, and monitored in real time, enabling quick support of ships. A new diagnostic tool called FurunoTips encapsulates Furuno's 70+ years of technological expertise into a digital solution, providing insightful information and troubleshooting capabilities that allow customers to quickly take action when alerts occur.

HermAce can also deliver Navigation equipment information to shore, automatically update ENC charts, remotely update software, and minimize the time required for annual VDR inspections, depending on customer needs.

» HermAce System Solution

Onboard

- Monitoring health status of equipment
- 1st level support with troubleshooting steps
- Preventive maintenance
- Automatic chart update
- Identifying suspected parts

Shipping Company

- Monitoring health status of equipment
- 1st level support with troubleshooting steps
- Preventive maintenance
- Data analysis

HermAce

Furuno Engineers

- Monitoring the condition of equipment
- Remote VDR APT
- Advanced Troubleshooting
- Remote access

›› User-friendly Interface

Main menu
• Remote access
• Remote APT
• High Risk Alerts, etc.

FurunoTips（SOTOBOT）
SOTOBOT troubleshoots specific alerts and symptoms and identifies necessary replacement parts

Setting route (orange)
Optimal route (green)

Ship's position

Basic Information
• Ship name, ship registry, IMO, MMSI
• Connectivity Status
• Position, Speed, Heading, etc.

Sub Menu
• Optimized route
• ECDIS Route
• Recenter on Vessel
• Zoom IN/OUT

Alert list

Equipment List
• Serial number information
• Software Version

›› Bridge Cyber Security

HermAce is used as a security gatekeeper between Furuno's navigation and communication equipment and onboard IT systems. Its high performance and reliability strengthen the network's security, allowing the use of HermAce's main functions of data communication between land-based shore and vessel and data distribution to external devices with peace of mind.

Under review for compliance with IACS UR E27.

Anytime, anywhere, all in one solution.

HermAce

Provides detailed and relevant troubleshooting "Furuno Tips"

Furuno Tips

The BOT function provides appropriate troubleshooting assistance for alerts generated by the equipment.

Predictive maintenance minimizes unexpected breakdowns

Predictive Maintenance

Predictive maintenance is vital to analyzing the operating condition of equipment (such as Radar magnetrons) and foreseeing replacement intervention.

Improved safety, security, and convenience

Data Distribution

Data can be distributed between land-based cloud storage as well as locally on the vessel.

Secured information and communication

Cyber Security

It functions as a gatekeeper, segregating Furuno's navigation and communication equipment from onboard IT systems to ensure cyber security within the network.

Lloyd's Register

Optional Services

Regulatory inspections can be prepared in advance remotely

Remote APT
(Annual Performance Test)

Data required for annual VDR inspections can be remotely acquired and completed in a short period of time.

Optional Services

Synchronization with ECDIS

Automatic Chart Updates

Receive the latest data from charts and publications and synchronize with ECDIS.

FURUNO ELECTRIC CO., LTD.

www.furuno.com

Find your local contact point

D-2504LB
Catalogue No. CA000002681