



by **GTT**

The background of the entire page is a close-up photograph of blue ocean waves, showing the texture and movement of the water.

Digital Solutions for Smart Ships

Our solutions for sustainable ships

Our mission is to deliver innovative solutions for ship owners, operators, and charterers worldwide, supporting all vessel types. We provide decision-support software, data collection systems, sensors, and expert consulting to enhance efficiency and sustainability. With deep maritime expertise and a collaborative approach, we help our clients achieve operational excellence. Our digital solutions optimise ship performance, weather routing, LNG cargo management, OSV operations, and bunkering, ensuring a seamless experience.

PERFORMANCE

Voyage management



Time Consumption Speed

Performance monitoring



Charter party Propulsion performance Fleet benchmark

Transparency



Bunkering monitoring Ship activities

Performance optimisation



Weather routing Voyage optimisation Trim optimisation Machinery usage

Reporting & Compliance



TCE optimisation Crew reporting Regulatory reporting Emissions and CII ShaPoLi management

SENSORS



Mass Flow Meter Shaft Power Meter Bunkering monitoring



Gas analyser Emissions measurement

LNG CARGO & FUEL

Onboard monitoring



BOG SLOSHING

Boil-off modules



LNG Ageing HEEL LNG OPTIM

Sloshing modules



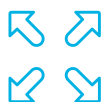
SLOSHING PREDICTION PUMP TRIPPING RISK-BASED INSPECTION

Safety



ROLL-OVER EMERGENCY DEPARTURE EMERGENCY RESPONSE SERVICE

WHY US?



Turnkey & end-to-end

Sensors, web application, API, experts



Flexible

Noon reports & autologged data
From in-house or 3rd party APIs



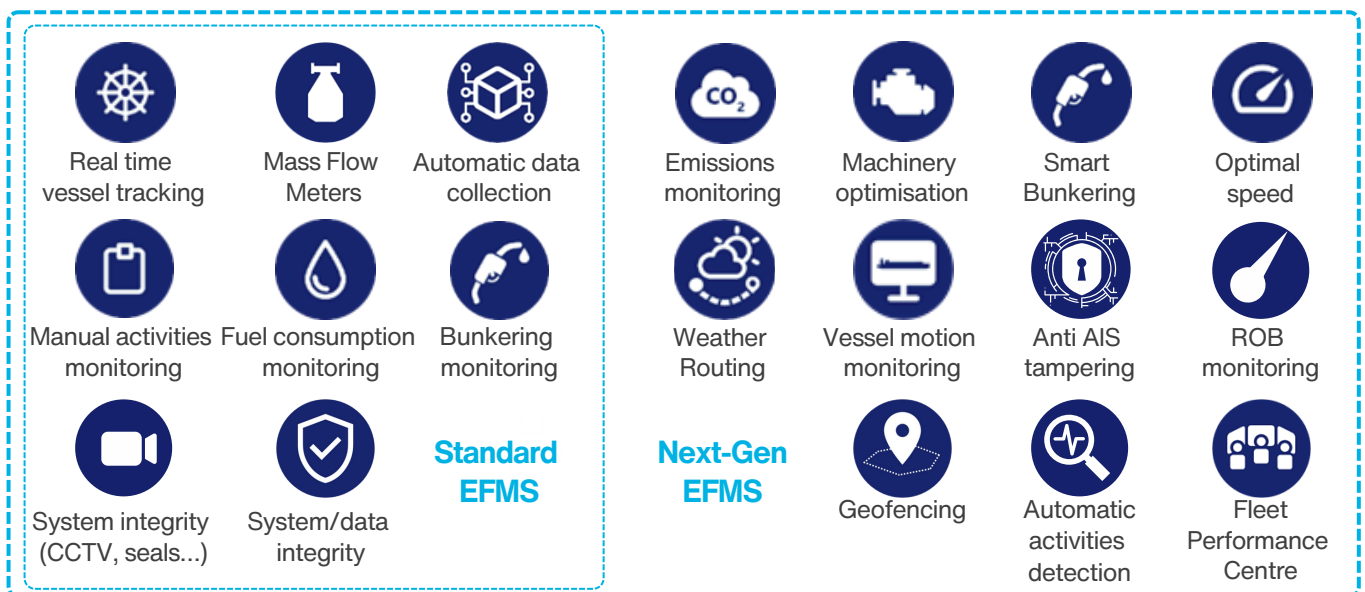
20+ years experience

120+ passionate employees
3000+ ships equipped

Electronic Fuel Monitoring Solution



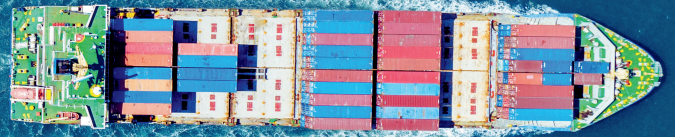
Our EFMS is an independent, tamper-proof, automated energy monitoring solution. It helps customers achieve measurable goals to optimise efficiency, cut emissions, and improve economic performance. The system integrates onboard applications, sensors, and cloud-based platforms with AI and expert oversight. With seamless API interfaces, it connects to customer servers for robust, real-time data management.



Key benefits






- **Real-time vessel and fleet tracking:** Gain immediate insights into fleet and individual vessel performance, enabling proactive decision-making.
- **Fuel malpractices prevention and detection:** Advanced sensors and monitoring prevent fuel loss, safeguarding resources and reducing costs.
- **Enhanced operational efficiency through activities monitoring:**
 - Ensures fuel is used for productive tasks only.
 - Validates crew-reported activities with AI-driven automatic detection.
 - Supports fleet activity analysis for potential ship overcapacity identification.
- **Machinery optimisation for GHG savings:** Optimised machinery operations help reduce greenhouse gas emissions while minimising operational costs.
- **Accurate emissions monitoring:** Compliant and automated emissions data collection aids in accurate reporting and regulatory compliance.

Vessel Performance Optimisation



VESPER is a performance tool that turns data into decision support, helping ship owners and charterers monitor, optimise, and manage fleets. It enhances maintenance, cost-efficiency, and regulatory compliance for peak vessel performance.

Key features

-  **Fleet tracking:** Monitor operations in real-time to compare vessel performance and support maintenance planning
-  **Added resistance:** Evaluate added resistance automatically updated from ship's data (noon reports and/or autolog) in relationship with ship operations and cleaning events.
-  **Scenario:** Run simulations to test operational strategies by optimising TCE and increase commercial performance based on actual ship's condition.
-  **Compliance:** Automated IMO DCS, EU MRV, EU ETS, and Fuel EU reports ensure compliance with stringent environmental regulations.
-  **Crew feedback:** Enable interactive dashboards for crew members to track performance KPIs and allow them identifying issues in reported data.

Key benefits

- **Fleet visibility:** Immediate access to operational insights across the fleet supports quicker, more informed decisions.
- **Cost-efficient performance monitoring:** Reduce operational costs through precise management of fuel, CO2, and equipment.
- **Enhanced condition-based maintenance:** Improve dry-docking and maintenance plans by monitoring engine, hull, and propeller performance, enhancing vessel longevity and efficiency.
- **Sustainability and compliance:** Simplified environmental reporting and real-time emissions tracking promote sustainable operations and regulatory adherence.

Additional optimisation features

Fleet Centre: Fleet map with weather forecasts and key vessel's information.

Dashboard: Customisable dashboards ensuring access to all ship's data, manual and autologged.

Event Centre: Customisable alert engines focused on deviation detections that can trigger notifications.

Trim: Trim optimisation leveraging trim tables, saving potential tracking.

Machinery: Optimised machinery usage based on auxiliaries baselines, saving potential tracking.

LNG Fuel & Cargo Solutions

Ascenz Marorka offers the most advanced platform for LNG vessels, leveraging GTT's 60 years of expertise in LNG technology. Tailored for both LNG carriers and LNG-fuelled ships, our solutions optimise operations, enhance safety, and drive superior performance.

Monitor ship & cargo operations



LNG cargo monitoring



Sloshing management



LNG ageing



Emergency response

Protect assets & reduce maintenance



Pump tripping avoidance



Emergency departure



Roll over prevention



Alternative Survey Plan

Optimise consumption & cargo delivered



LNG cargo conditioning



Boil off gas optimisation



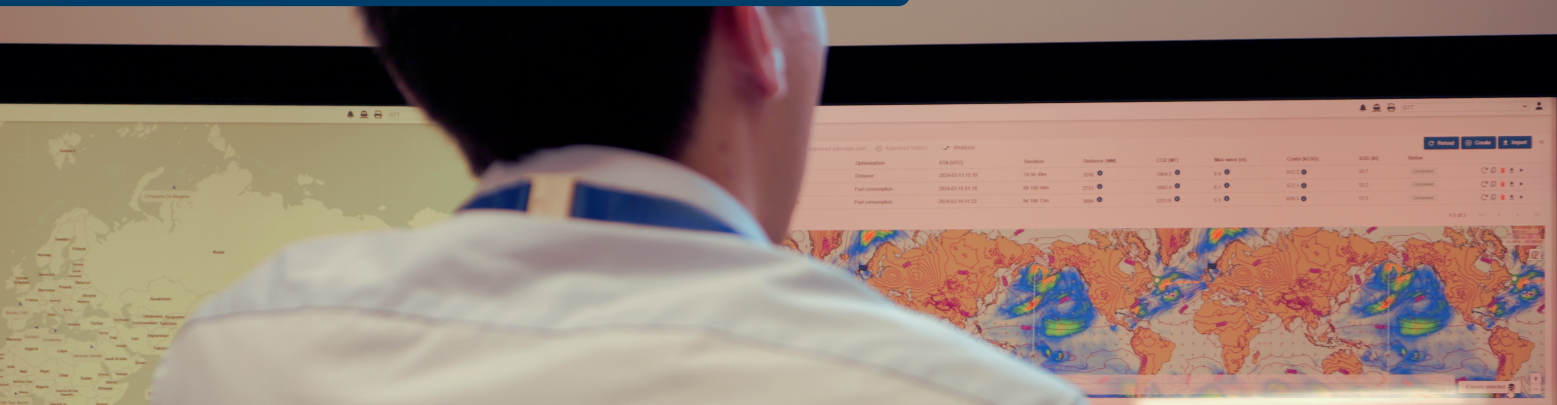
Heel management



Ship-to-ship optimisation

As part of our comprehensive suite, we also provide LNG warranty checks integrated into charter party monitoring, ensuring compliance and operational excellence.






Voyage Optimisation



Our Voyage Optimisation enhances safety and efficiency, minimising costs and CO₂ emissions through dynamic route and speed management. Supported by our Fleet Performance Centre, it leverages advanced AI for proactive and real-time adjustments.

A unique digital twin is created for each vessel, incorporating its energy profile, weather limitations, engine parameters, and motion constraints, with LNG-specific features like cargo and boil-off gas optimisation.

Key features

-  **Multi-mode optimisation:** Select from Distance, Time, CO₂, Fuel Costs, or Overall Cost to create the most efficient voyage strategy tailored to the needs of owners and charterers.
-  **Proactive weather & route updates:** Real-time route and speed adjustments based on changing weather, ensuring safety and maximising performance.
-  **Comprehensive passage planning & monitoring:** Includes detailed passage planning and real-time monitoring by experienced mariners, integrating all navigational constraints and regulatory compliance, and ENC-based data with seamless export to/from ECDIS.
-  **Post-voyage analysis & charter party claim support:** Benefit from detailed post-voyage analysis and efficient charter party claim management for optimised operational insights.
-  **Routing for Wind Assisted Ship Propulsion:** Advanced developments ensuring safe and efficient routing for WASP vessels.

Key benefits

- **Enhanced operational safety and efficiency:** Dynamic routing and monitoring help reduce risks and support optimal voyage management.
- **Cost and emission reductions:** Decrease operational expenses and CO₂ emissions by selecting optimal routes and speeds.
- **Regulatory compliance:** Stay compliant with international and local navigational regulations easily, ensuring smooth and lawful operations.

Fleet Performance Monitoring Centre, staffed by seasoned mariners

Real-time fleet efficiency monitoring: Holistic approach and live monitoring with expert oversight, enabling rapid adjustments.

7/7 voyage optimisation and weather routing support thanks to shore-based teams in France and in Singapore.

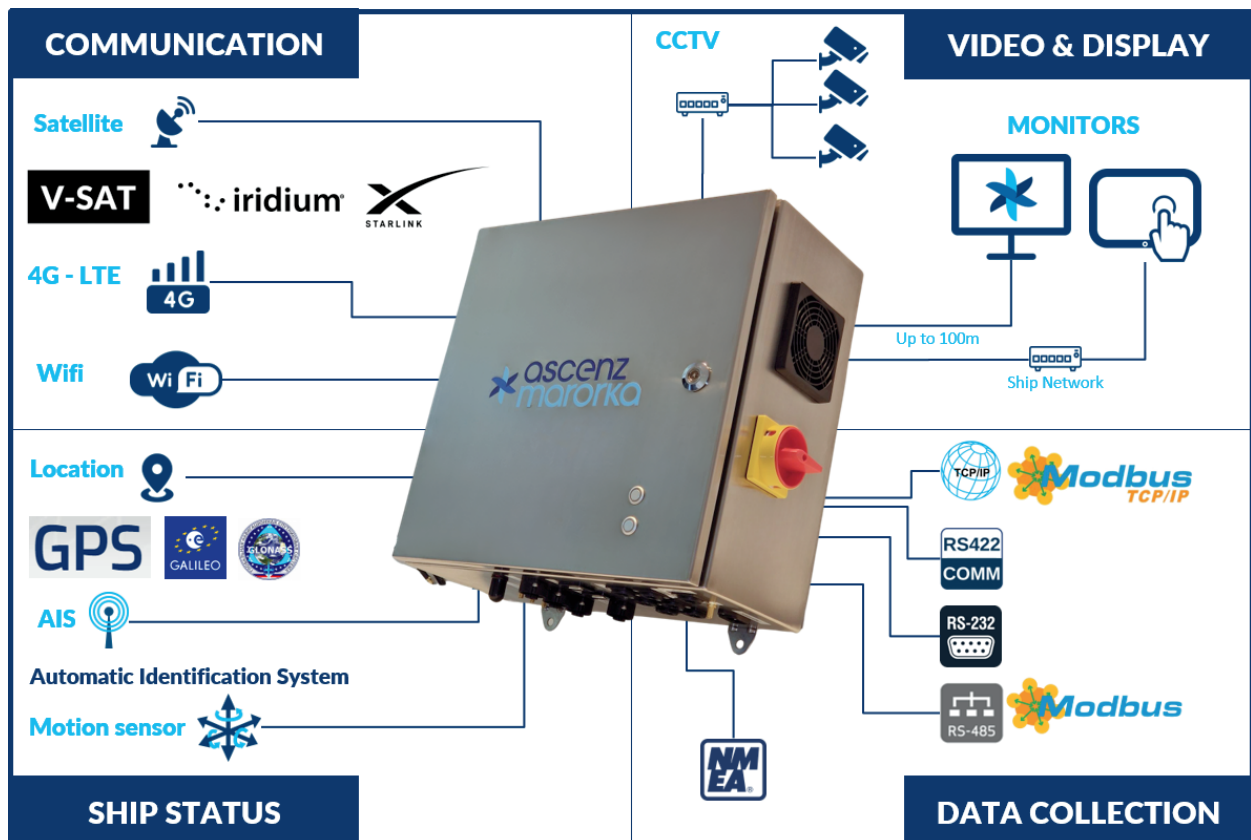
Severe weather avoidance: Expert guidance and advanced weather forecasting, including weather bulletins, to avoid severe weather and enhance fleet safety and performance.

Data Acquisition System

Our latest Data Acquisition System (DAS), engineered specifically for maritime applications.

Key features

- **Dimensions:** Compact stainless-steel enclosure of 400x400x200mm.
- **Connectivity:** Designed to gather data from any vessel through various communication protocols.
- **Communication:** Designed to transfer data to shore through ship VSAT or various independent solutions



Key benefits

- **Unique DAS:** The device and applications are the central point for all onboard Ascenz Marorka products.
- **Flexibility:** Based on its compact design, the DAS can be installed on any vessel of any size.
- **Ship environment:** In addition of onboard data collection, it can collect ship's environment data such as location of surrounding ships through AIS signal and ship motion.

**Our offices and distributor network
are close to you, wherever you are.**



contact@ascenzmarorka.com
www.ascenzmarorka.com



info@vpsolutions.dk
www.vpsolutions.dk

