Smart Logistic Application Note

Powering Safer Maritime Navigation with Autonomous Shipping

The coastal shipping industry grapples with the dual challenges of an aging workforce and shortages in human resources, exacerbated by the demanding work environment. Additionally, human errors reportedly contribute to 70-80% of maritime accidents, emphasizing the need for a solution to reduce such incidents. The proposed answer lies in implementing fully autonomous navigation, leveraging the combined capabilities of AIoT and image analysis.

Aetina's GPU-based MXM, designated as M3A2000-VYX-A1, addresses this requirement. It supports a broad temperature range from -40°C to 85°C and boasts a robust coating, ensuring reliable operation even under harsh maritime conditions. The object detection algorithm integral to the autonomous shipping system operates stably owing to the MXM's support for Error Correction Code (ECC). ECC bolsters system accuracy and reliability by detecting and correcting data errors, mitigating the risk of system crashes or data corruption. As a result, autonomous ships can navigate safely in real time based on precise object detection results. This improvement significantly reduces maritime accidents and streamlines the flow of goods and traffic, thereby enhancing overall convenience.
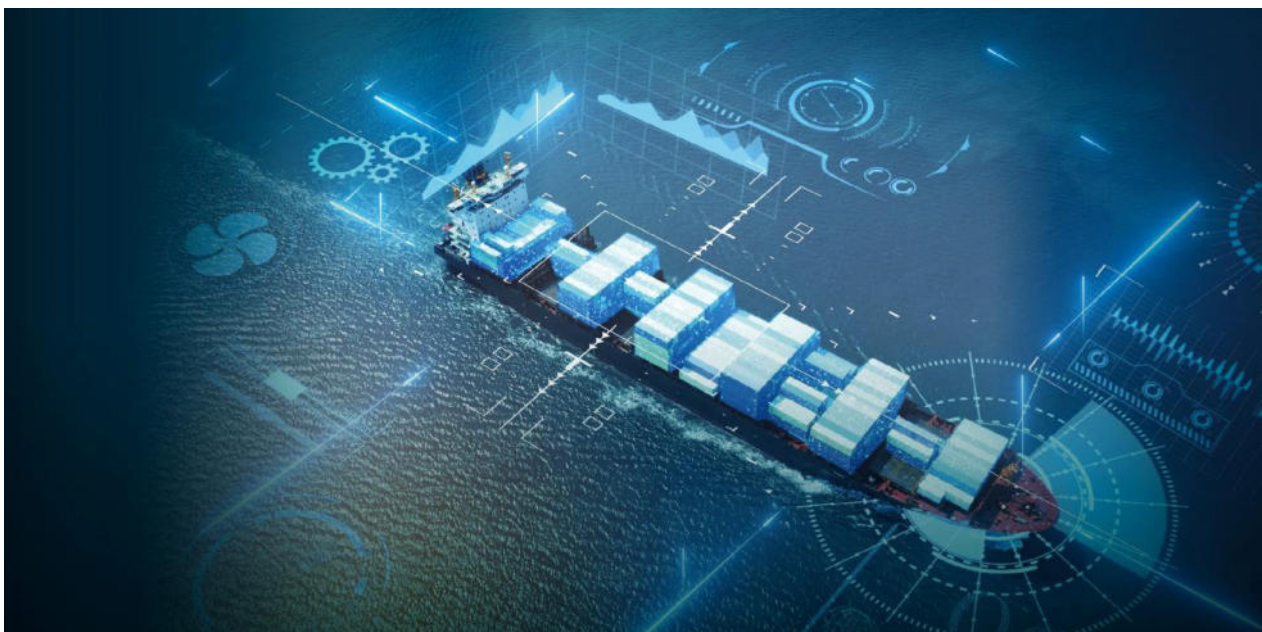
▶ Benefits

- Supports Error Correction Code (ECC) to ensure accurate, reliable operation
- Designed for harsh maritime environments with a robust coating and a broad operational temperature range from -40°C to 85°C
- Guarantees five years of availability coupled with exclusive technical support, resulting in maintenance cost and time savings

▶ Results

- Fewer accidents at sea

- Streamlined goods and traffic flow

- Enhance overall convenience

Diagram

Integrated Navigation System

Fanless Computer

M3A2000-VY

Related Product

M3A2000-VY