

## SeaMotion Integration: AUTOP012356

The vsTASKER SeaMotion Integration connects the simulation capabilities of vsTASKER with the high-fidelity marine scene simulator, SeaMotion. This setup decouples heavy mathematical scenario logic from specialized 3D visual graphics to maximize processing efficiency.

### Hardware Architecture

- **Single Laptop:** Runs the **vsTASKER** application to handle primary scenario execution, vehicle logic, and event handling.
- **Dedicated Computer:** Runs the **SeaMotion** software, equipped with a high-end GPU solely responsible for rendering complex marine visualizations.

### Core Capabilities

- **Logic-Visual Separation:** The C++ code generated by vsTASKER manages entity behaviors, tactical missions, and environmental triggers, while SeaMotion executes real-time ocean and sea-surface rendering.
- **Scalable Maritime Scenarios:** Allows users to design multi-vessel operations, naval exercises, or drone missions over 2D tactical maps and monitor them through realistic 3D marine views.

If you are currently setting up this deployment, please let me know your specific **network protocol** (e.g., HLA, DIS, or custom sockets) or the types of **maritime entities** you need to sync so I can provide precise configuration steps.

The **SeaMotion** integration for **vsTASKER** enables the simulation of highly realistic, multi-spectral marine and underwater environments. vsTASKER handles the complex tactical logic and AI of surface/air assets, while SeaMotion renders accurate, GPU-based ocean dynamics and multi-band sensor data (EO, IR, Radar).

## Key Capabilities and Features

- **Multi-Sensor Simulation:** Generates simultaneous visible, infrared, and radar imagery, making it ideal for training sonar and periscope operators.
- **Distributed Setup:** The setup can be split; vsTASKER runs all the tactical logic on a standard laptop, while SeaMotion runs on a dedicated, high-end GPU for rendering visual scenes.
- **Tactical Control:** Integrates perfectly with vsTASKER's HMI Builder, allowing operators to control payloads and adjust scenarios in real-time.

For a closer look at the advanced multi-band rendering and ocean simulation capabilities of the SeaMotion engine, this overview from the developers:

Would you like to know more about how vsTASKER bridges tactical logic with other engines, or are you looking for details on configuring a specific naval scenario?



## SeaMotion Integration

by VirtualSim

Alyotech Technology has developed a Multi-spectral Real Time GPU-based marine scenes simulator. It produces multi-band output in various bands (Visible, IR, EM) for analysis in Defense and Security.

vsTASKER is sending the entities position and attitude into the simulator using LAN sockets, at real-time (30 hz) and controls the camera. Output mode can also switch from Radar to 3D View.

SeaMotion can be running on a dedicated computer with high end GPU card for visualization and vsTASKER can run on a single laptop.

Features:

- SeaMotion software from Alyotech
- NVidia RTX 1660TI card
- Joystick
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Note: \*\* Specifications are copied from manufacturer data. Please contact before buying.