Neptune

Goal-based, Collaborative Autonomy

Neptune is SeeByte’s intelligent, mission-level autonomy system for goal-based planning and optimal mission execution for squads of uncrewed maritime systems (UMS).

Neptune automatically assigns goal-based plans and objectives to the available assets and their capabilities, ensuring each system is used to its potential. In mission, Neptune will adapt to changes in the environment and coordinate assets to ensure mission success. By augmenting decision making, Neptune allows users to focus on the end goal.

Adopted by the US, UK and Dutch Navies for use in EOD and MCM missions

- Neptune can integrate with a diverse range of UMS
- Users can coordinate multiple assets as part of a single operation
- Mission plans are built on goals, rather than individual waypoints
- Field proven planning that is faster, with fewer errors
- Neptune recognises common behaviours so can optimally re-assign an asset to a different task during a mission.
- Commercially controlled open architecture with comprehensive Software Development Kit
Neptune

In-mission adaption
On-board AI will respond to changes in mission objectives, the environment, and other vehicles. Vehicles will collaborate and adapt to ensure mission success.

Decentralised control
Run multiple tasks in parallel with the vehicles automatically taking responsibility for tasks. This optimises mission execution by allowing vehicles to swap tasks, add new tasks, or manage malfunctions. The decentralised autonomy ensures vehicle operate even in communications restricted environments.

3rd party integration
Neptune is built on top of our commercially controlled open architecture so you easily integrate third-party vehicles, sensors, autonomy behaviours or signal processing functions using the Software Development Kit.

Specifications

Supported Platforms:
- Iver (L3OceanServer)
- LAUV (OceanScan-MST)
- REMUS (Hydroid Inc)

Supported Formats:
- EdgeTech Side-scan
- Klein Side-scan
- Marine Sonic Side-scan

Minimum System Requirements:
- Neptune requires SeeTrack v4

Laptop requirements:
- OS: Windows 7/10 (Pro 64-bit)
- Processor: Intel Core i5 (preferably Core i7)
- Graphics: 1GB RAM capable of OpenGL 2.0
- HDD: 10GB of free HDD space (preferably SSD)

Embedded Processor Requirements:
- Intel Atom N450 1.66 GHz Processor
- ARM (NVIDIA Jetson TX1, Raspberry Pi 3)

This is not an exhaustive list of supported formats, for latest specifications please contact us directly.

Whitepapers

Neptune Technical
Multi-domain Integration
MCM Toolbox

How can Neptune support your project?
Contact our sales team on +44 (0) 131 447 4200 or sales@seebyte.com