

Autonomous Shipping Ocean Positioning

by [Nick Clark](#) | Published April 25, 2026

IMO MASS Frameworks

IMO MASS Code (anticipated 2026-2028) establishes the international regulatory framework for autonomous-shipping operations. The framework increasingly requires positioning lineage and resilience for autonomous-vessel certification.

Conventional maritime GPS faces structural concerns in spoofing-prone regions and operational scenarios.

Maritime Mesh Composition

Multi-modality cooperative ranging across vessel-mounted sensors (radar, optical, AIS, GPS, INS), ground-station references (where applicable), and cooperative-vessel ranging (between MASS-class and conventionally-crewed vessels) produces maritime mesh positioning.

Cross-flag operations admit through declared maritime-authority federation.

Vessel Operator Trajectory

Yara Birkeland (autonomous container vessel), Mayflower Autonomous Ship, emerging autonomous-tanker programs all face the architectural composition layer. The patent positions the substrate at the deployment trajectory point.