

3D Recon OC

3D Modeling with Live Survey QC

3D Recon OC is a lightweight, compact version of 3D Recon V2 designed for observation-class ROVs. It delivers the same capabilities as our deepwater system in a payload built for smaller, more economical vehicles. Housed in a compact subsea enclosure, it features two high-resolution machine vision cameras and a high-performance MEMS IMU. Easy to integrate, the system connects via low-profile Ethernet and hybrid fiber interfaces, enabling rapid deployment across observation -class spreads.

By combining inertial navigation with imaging sensors, 3D Recon OC generates real-time dense point clouds for navigation and quality control, along with accurate, scalable 3D models that support digital twins, pipeline surveys, chain mooring inspection, and GVI image set generation. Leveraging advanced 3D reconstruction, computer vision, and inertial navigation techniques, it delivers geospatially accurate point clouds, object detection, and pose estimation of underwater structures, bringing metrology-level inspection and modeling to smaller vehicles without the need for work-class systems.

Compact, real-time, absolute subsea 3D model accuracy

with unmatched precision.

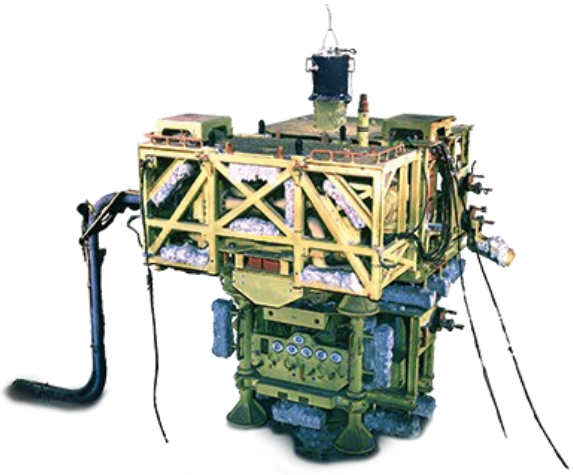
3D Recon OC Applications:

Positioning Applications:



- **Under On/Hull Positioning:** Tricky to position free moving targets in the water column.
- **Metrology:** Delivers metrology level accuracy, 30mm over 30m (1/1000).
- **Out of Straightness (OOS):** Accurate offset determination. Multibeam like deliverable with position solution in the model.
- **The last few meters - perception:** Precise positioning for autonomous intervention into structures/control panels, etc.

Model Generation Applications:



- **Asset Integrity Monitoring:** Facilitates automated change detection, position and feature definition.
- **Pipeline surveys:** High resolution free span data, anode depletion volumes possible.
- **As Built:** Delivers exactly what is on the seabed and exactly where it is – import into operator GIS.
- **Chain/mooring inspection:** Dynamic structure

3D Recon OC Key Features:

- **Lightweight Design:** It weighs 9.4 kg in air and 4.5 kg in water and easy to integrate on observation-class ROVs.
- **Connectivity:** 3 low-profile SubConn Ethernet connectors and 1 hybrid fiber optic cable.
- **Full Capability:** Digital twins, pipeline surveys, chain mooring inspection, and GVI image sets.
- **Efficiency:** Brings metrology-level inspection and modeling to observation-class spreads.
- **Flexibility:** Enables advanced inspection without the need for heavy work-class vehicles.

Zupt is a global leader in offshore survey solutions. We develop all core technologies in-house to deliver accurate subsea positioning, modeling, and monitoring for oil and gas, renewables, and marine construction projects worldwide.