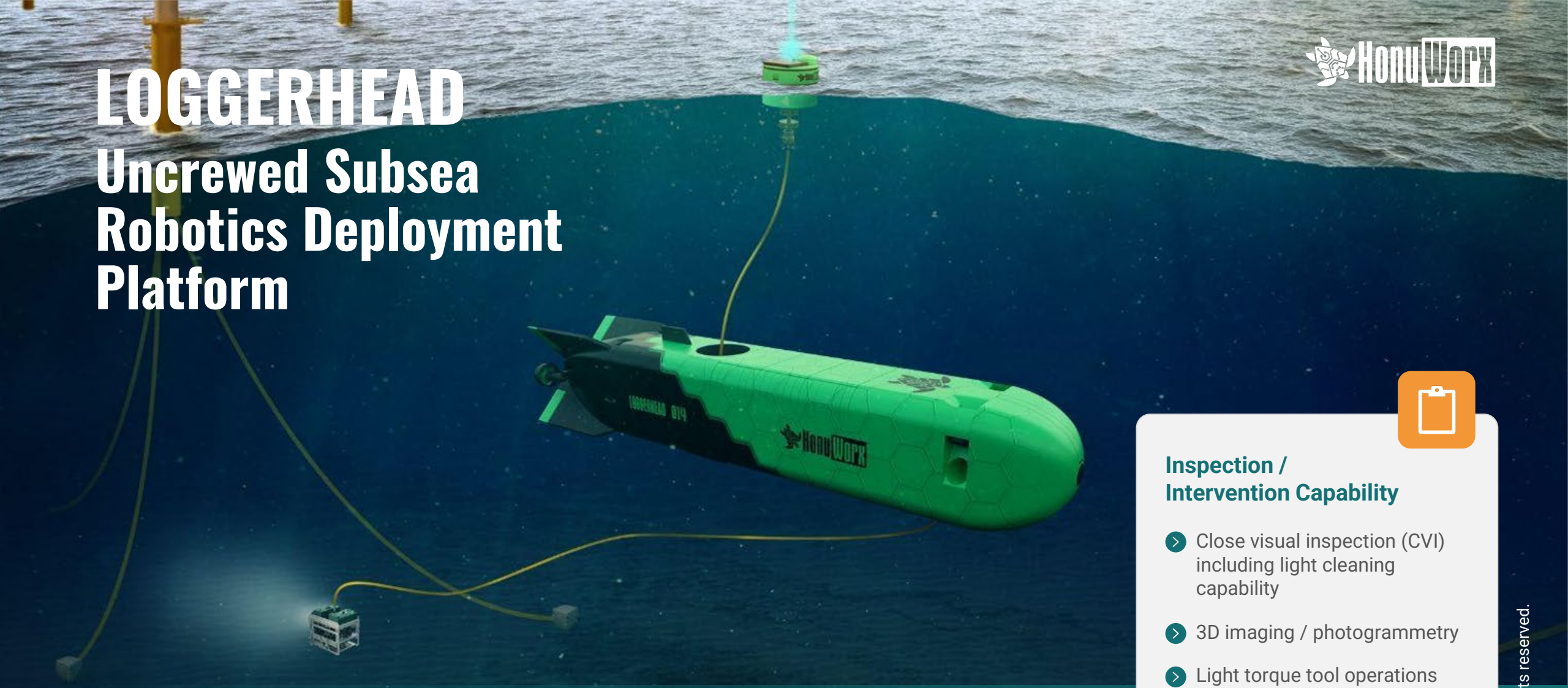
LOGGERHEAD

Uncrewed Subsea Robotics Deployment Platform



Inspection / Intervention Capability

- Close visual inspection (CVI) including light cleaning capability
- 3D imaging / photogrammetry
- Light torque tool operations
- Chain measurement
- Pipe tracking

Loggerhead™ is an all-electric, autonomous system for subsea survey and inspection, maintenance, and repair (IMR) tasks. Transiting subsea from shore, the system is designed to allow real-time supervised autonomy - a deployable communications buoy provides command and control capability to onshore operators via a proprietary cloud-based mission control platform.

LOGGERHEAD

Loggerhead eliminates the need for the large, expensive, polluting fossil fuel-powered crewed surface vessels that have traditionally transported remotely operated vehicles (ROVs) to offshore worksites.

AUV 'Mothership'

Depth Rating	• 500 m* • *Additional depth rating on request
Range	• 5,000km
Energy	• 1 MWh+
Speed	• Cruising 4 knots • Max. 8 knots
Dimensions [LxBxH]	• 12 m x 2.0 m x 2.0 m
Weight in air	• 12Te

ROV

Deployment sea state	• Supervised autonomy – Sea state 6 • Full autonomy - Not limited
Tether length	• 500m
Dimensions [typ.]	• 0.8 m x 0.6 m x 0.5 m [LxBxH]
Weight in air	• 100kg+
Max. payload	• 21kg

Autonomous Underwater Vehicle (AUV) – "The Loggerhead Mothership"

- Provides power to the ROV and communications buoy
- Mid-water station keep capabilities provide a stable deployment platform for the communications buoy and ROV
- Hydrogen fuel cell powered for zero emissions at sea
- Stays fully submerged once out of port

Tethered Communications Buoy

- Provides an "on demand" stable surface platform for communications devices, marine navigation aids and midwater positioning sensors
- Low surface footprint reduces risk to marine traffic

Power and Communications Enabled Worker Vehicle

- A highly-versatile, industry-standard light work-class robot specifically designed for inspection and light intervention tasks
- Has a significant payload and power capability for managing complex tooling and sensor packages

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Collaborative and Embedded Autonomy

- Coordinates all system components to optimise mission performance, removing the burden on the operator
- Minimal direct input from the pilot required, while still providing situational awareness and mission oversight functionality
- Uses real-time and a priori world information for optimised mission execution
- Task execution uses variable levels of autonomy according to complexity, communications availability and operational / mission requirements
- Resilient to latency and communications dropouts
- Works independently of preinstalled communications infrastructure

HonuNet (HonuWorx Cloud-Based Control)

- Web-based user interface allowing access from anywhere
- Configurable layouts customisable to user preferences
- View live HD or SD video streams from multiple sources simultaneously (subject to available bandwidth)
- Remote screen sharing and control of offshore systems with support for both Windows and Linux
- Full team collaboration suite (voice / chat) provided for conference or 1:1 communications
- Role-based access control for all users allowing granular permissions and access
- End-to-end data encryption in transit and at rest
- Up to 100 users with support for multiple projects and role based permissions
- Can be provided with bundled, "pop-up" network connectivity or connected to existing network infrastructure