

SeaRaptor™ AUV

Deep Water Autonomous Underwater Vehicle

High Resolution Survey for Deep Sea Applications

The SeaRaptor is a deep water autonomous underwater vehicle (AUV) designed to operate at abyssal depths. A wide range of sensors allow the SeaRaptor to complete several types of missions including: broad area search with side-scan sonar, hydrographic survey with multibeam and sub bottom profiler, and high resolution inspection survey with camera and acoustic sonar. These surveys support a variety of applications, such as search and recovery, salvage, exploration, construction support, marine archaeology, and oceanography.

The SeaRaptor AUV is depth rated to 3000m or 6000m.



SeaRaptor (3000m & 6000m)

PRODUCT FEATURES

Features

- Depth rated to 3000m & 6000m
- Modular payload
- Wide array of additional sensors available including SAS, SSS, MBES, SBP, and camera systems
- Custom sensor integrations available
- Flexible architecture allowing a variety of payloads and sensors to meet current and future mission requirements
- Various Autonomy options including onboard processing, real time pipe tracking and automatic target recognition
- Extended endurance allows for harbor based operations capability

Applications

- Search and Recovery
- Deep Water Geophysical Survey
- Construction Support
- Marine Archaeology
- Oceanography
- Deep Sea Mineral Survey



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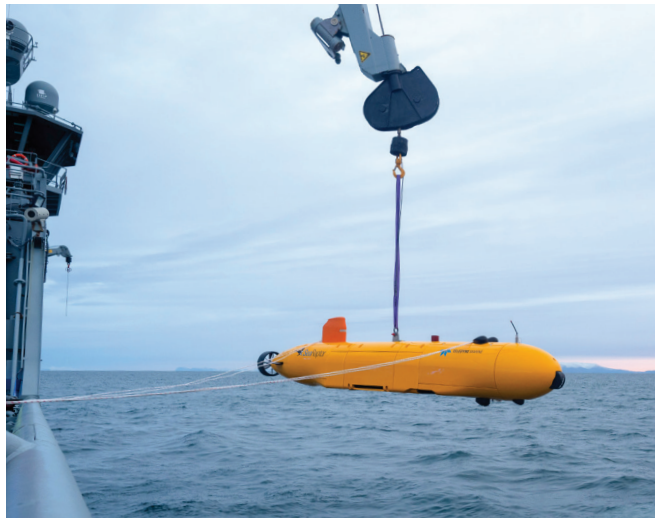
SeaRaptor AUV

Deep Water Autonomous Underwater Vehicle

TECHNICAL SPECIFICATIONS

SPECIFICATIONS	
Length	5.5m to 8m (configuration dependent)
Weight in Air	Up to 2000Kg (configuration dependent)
Diameter	~0.68m
Depth Rating	3000m or 6000m
Battery Module	From 13 kWh to 92 kWh (configuration dependent)
Speed	> Nominal: 3 Knots, Maximum: 4 Knots
Endurance	From 24 hrs to 9 days (configuration dependent)
Range	>1000km
COMMUNICATION	
Communication & Data Transfer	IEEE 802.11g compliant
Radio Frequency (RF)	User selectable from 400kHz - 2.4GHz
Satellite communications	Full global coverage via Iridium link
Acoustic Modem	For tracking and status updates (>10 km range)
Strobe Light	For visibility at the surface
LAN	1Gbit
Data Storage	Removable 32TB

Communication & Data Transfer
Radio Frequency (RF)
Satellite communications
Acoustic Modem
Strobe Light
LAN
Data Storage



NAVIGATION

- Inertial Navigation System - 0.01% TD (CEP 50)
- Doppler Velocity Log (DVL): TRDI Tasman 300 kHz
- Global Navigation Satellite System (GNSS)
- Positioning accuracy can be maintained over longer duration deployments by utilizing industry standard Ultra Short Baseline (USBL) or ranging to bottom-moored Long Baseline (LBL) transponders (optional).

VEHICLE SOFTWARE

The vehicle software is based on the proven software used on the Gavia AUV for over a decade. The mission planning software features a chart based planning tool that allows the user to easily program a wide range of missions for the vehicle. The same software is used for operations, data retrieval, and post mission analysis

TOPSIDE EQUIPMENT

The vehicle will be delivered with all required topside equipment that aid in vehicle operations and recovery including:

- Containerized (ISO) storage and operation facility
- Ruggedized operation laptop
- Industry standard self contained launch and recovery systems allowing safe recovery in high sea-states



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www.teledynemarine.com

Vesturvör 29, 200 Kópavogur, Iceland
 Tel +354 511 29 90 • Email: gavia_sales@teledyne.com

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