TELEDYNE MARINE

SeaRaptor™ AUV

Deep Water Autonomous Underwater Vehicle

High Resolution Survey for Deep Sea Applications

The SEARAPTOR is a survey grade 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 & 60000m)

PRODUCT FEATURES

Features

- Depth rated to 3000m & 6000m
- Modular payload ports
- Wide range of available sensor integrations
- Custom sensor integrations available
- Equipped with all necessary navigation sensors and support for acoustic aiding

Applications

- Search and Recovery
- Salvage
- Exploration
- Construction Support
- Marine Archaeology
- Oceanography

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TECHNICAL SPECIFICATIONS

SPECIFICATIONS	
Length	~5.5m
Weight in Air	~1000 kg - 1200 kg (configuration dependent)
Diameter	~0.63m
Depth Rating	3000m or 6000m
Battery Module	Standard 13kWh Extended 16kWh
Speed	> Nominal: 3 Knots, Maximum: 4 Knots
Endurance	~24 hrs at 3 Knots
Range	130km @ 3 Knots with Side Scan Sonar

COMMUNICATION	
Wireless LAN	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

NAVIGATION

- Inertial navigation system (0.1% DT accuracy)
- Doppler Velocity Log (DVL) and depth sensor
- Global Navigation Satellite System (GNSS)
- Positioning accuracy can be maintained over longer duration deployments by utilizing 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

VEHICLE SOFTWARE

The vehicle can be delivered with extensive topside equipment that aid in vehicle operations and recovery including:

- Containerized (ISO) storage and operation facility
- Ruggedized operation stations
- Industry standard launch and recovery system allowing safe recovery in high sea-state

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