Defender

MISSION SPECIALIST

VideoRay
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The Mission Specialist Series is designed and built with power, reliability, and flexibility in mind. The Defender is our most capable and compatible ROV configuration, optimized for precise control, larger payloads, lifting capability, and specialized operations.

The Defender ROV utilizes interchangeable, modular components that comprise a single, intelligent network, providing an extremely flexible and customizable platform that can be easily adapted to target-specific missions. It is this flexibility that sets the Mission Specialist ROV series apart from current technology in the Remotely Operated Vehicle industry.

A Mission Specialist Defender ROV system is the operator's choice for rugged capability and reliable performance.

Compatibility for Any Industry

DEFENDER

_Specifications

[ELECTRICAL]

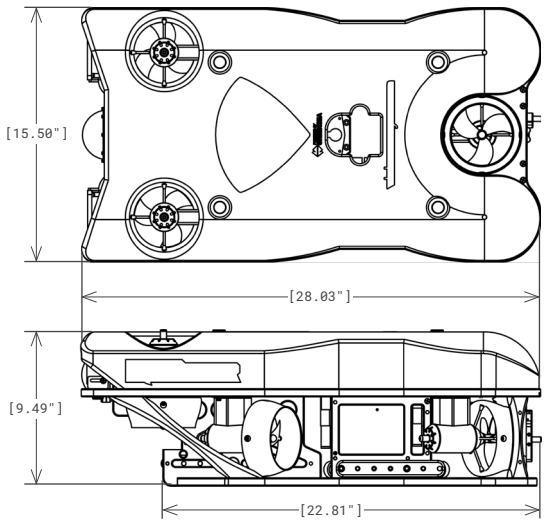
POWER REQUIREMENTS	110/220VAC (1-2.4 kW)
POWER MODULE	400 VDC
POWER OUTPUT	12 V/120 W, 24 V/300 W, 48 V/1,500 W
FEATURES	Power Control/Monitoring

[CONNECTIONS]

5-PIN	48 VDC - Thruster/LED RS-485
9-PIN	12/24 VDC - Accessories 100Mbps Ethernet RS-485
8-PIN	Tether - Power/Comms
TYPE ST	Fiber Optic (Optional)

[ENVIRONMENTAL]

DRY WEIGHT	17.2 kg (38 lbs)
DIMENSIONS LxWxH	71.1 × 39.4 × 23.8 cm (28.0 x 15.5 × 9.5 in)
DEPTH RATING	300 m, 1,000 m, 4,000 m
TRANSPORT	Hard-sided, watertight case



_Modules

[ULTRA 4K SMART CAMERA]

PROCESSOR/STORAGE	NVIDIA Jetson Orin NX/1 TB SSD
OPTICAL SENSOR	1/2.3″
RESOLUTION/FOV	12.3 MP/200˚, Digital Pan/Tilt/Zoom

[THRUSTERS]

HORIZONTAL (4) VERTICAL (3)	Oil-filled brushless with quick-change propeller, programmable
THRUST	Forward 23.6 kg Reverse 15.0 kg Lateral 8.6 kg
VELOCITY	Forward: 3.8 kts Vertical: 0.8 m/s Sway: 0.9 kt
LIFTING	9.5 kg

[LIGHTING]

LED LIGHT ARRAYS (2)	Individually controlled spot and flood arrays, 38 W max each. 3,000 K CCT, 80 CRI White 7,600 total lumens/module

[IMU]

ATTITUDE & HEADING REFERENCE SYSTEM (AHRS)	9 DOF & Magnetic Compass Pressure-based depth sensor, 100 Bar, 400 bar opt., 0.2° Static Roll/Pitch, 0.5° Dynamic Roll/Pitch, 18°/h Gyro Bias Stability, 1.0° Yaw

_Integrated Options

- Subsea Batteries—Li-ion, NiMH
- Camera—Auxiliary, 3d Modeling
- Navigation — DVL/GPS, USBL
- SONAR—Forward, Side, Scanning
- Manipulator—Single, Dual, Multi-Axis
- NDT/Sampling/Cavitation Cleaner
- MCM/UXO Neutralizers

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