

PN: 73421

## Mission Specialist Defender

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

The Defender 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.

### Electrical

Power Requirements: 110/220VAC (1-2.4 kW)  
400 VDC Power Module: 1,500 W @ 48 VDC  
Power Output: 12 V/120 W, 24V/300 W, 48 V/1,500 W  
(5) 100 Mbps Ethernet ports, (5) RS-485 ports  
Power Control and Monitoring

### Environmental

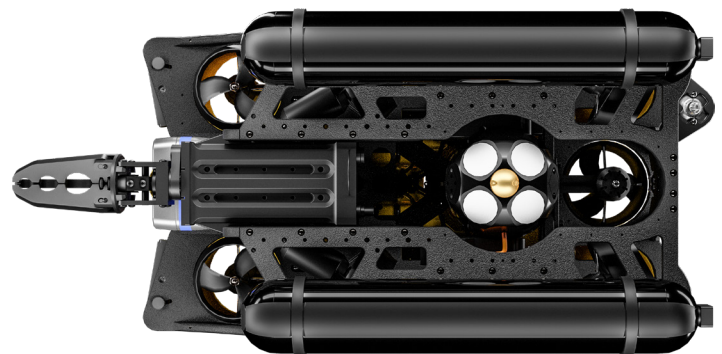
Dry Weight: 17.2 kg (38 lbs)  
Dimensions: 71.1 x 39.4 x 23.8 cm  
(28.8 x 15.5 x 10.4 in)  
Depth Rating: 300 m standard/1,000 m optional  
Case: Hard-sided watertight



Mission Specialist Defender



Defender shown with optional Manipulator and Sonar



Defender shown with optional Subsea Batteries, Manipulator, Deep-Rated Sonar, USBL, and Navigation Package

## Mission Specialist Defender



### Propulsion

Brushless Thrusters with Integrated Controller

4 Vectored Horizontal, 3 Vertical

Thrust:

Forward 23.6 kg

Reverse 15.0 kg

Lateral 8.6 kg

Lifting:

9.5 kg

Speed:

Forward: 3.8 kts

Vertical: 0.8 m/s

Sway: 0.9 kt



### Lighting

2 independent LED light arrays (38 W max ea.)

60° spot beam

110° flood beam

Each array individually controlled

3,000 K CCT, 80 CRI White

7,600 total lumens per LED light module



### IMU

9 DOF IMU & Magnetic Compass

Pressure-based depth sensor:

100 Bar, with 400 Bar optional

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



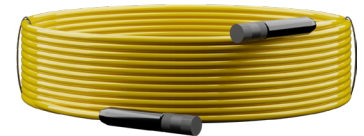
Workhorse Splashproof Controller



Workhorse Control Console



Expeditionary Tether & Reel



VideoRay Performance, Neutral, & Negative Tether



Fiber Optic Tether & Reel