

Mission Specialist Defender

The VideoRay **Mission Specialist Defender** ROV is a system which utilizes interchangeable, modular components residing on a single, intelligent network. This topology provides an extremely flexible and customizable platform which can be easily adapted to target specific missions. It is this flexibility which sets the Mission Specialist ROV series apart from current technology in the Remotely Operated Vehicle industry.



System Information

Power Requirements:	110/220 VAC (1 to 2.4 kW)
Total System Weight (Sub & OCC):	32.5 kg (71.6 lb)
Cases:	2 Watertight Rugged Hard Cases
Owner's Manual:	Online Digital
System Tool Kit:	Basic Tool Kit
Communications Protocol:	RS-485 and Ethernet
Warranty:	2 Year Limited



Camera

High Definition Video:	With Ethernet interface (IP) up to 1920 x 1080, 25 fps
Mechanical:	Standard VideoRay 9 pin connection Ethernet, 12 VDC, RS-485 Auto or Manual Focus Optical Glass Dome
Features:	White Balance Control up to 16x Digital Zoom (64 steps) 13 Megapixel Still Image Capture
Sensitivity:	Less than 1 lux (standard)
View Angle:	160° Tilt (180° FoV) Horizontal: 136° Vertical: 91°
Compression:	h.264



Power

400 VDC power module
1500 W @ 48 VDC
Full monitoring of input voltage, output current, temperature



Submersible

Depth Rating:

- Up to 1,000 m (3,280 ft)

Size:

- 71.12 x 39.37 x 23.80 cm (28.80 x 15.50 x 10.37 in)

Weight:

- 17.2 kg (38 lb) without ballast

Ballast:

- Modular

Case:

- 79.5 x 51.8 x 31 cm (31.3 x 20.4 x 12.2 in)
- 9.4 kg (20.8 lb)



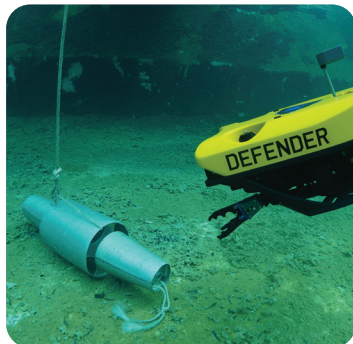
Buoyancy

Float: 400 m (1,312 ft)
2 km (6,561.68 ft) – optional



Operator Control Console (OCC)

Power Input: 90–260 VAC (47–440 Hz)
Power Output: 400 VDC, 2400 W
Display: Daylight Viewable Monitor
Weight: 15.2 kg (33.6 lb)
Case: Water tight
0.62 x 16.87 x 8.12 in
(52.37 x 42.85 x 20.62 cm)
Processing: Integrated i7
system processor
Controller: Industrial Programmable
Hand Controller
Safety: Integral Line Isolation
Monitor Emergency
Kill Switch
Ports: 7 external USB ports
1 external Ethernet port



Communications

(5) 100 Mbps Ethernet ports
(5) RS-485 ports
Power Available: 12 V, 120 W
24 V, 300 W
48 V, 1500 W
Power control and monitoring



Propulsion

Brushless thrusters with integrated controller

4 Vectored Horizontal Thrusters
Forward: 26.7 kg (59 lbs)
Reverse: 15 kg (33 lbs)
Lateral: 8.6 kg (19 lbs)
3 Vertical Thrusters
Up 23.1 kg (50.9 lbs)
Down 12.9 kg (28.4 lbs)



Lighting

LED

2 independent light arrays (38 W max ea.)
60° spot beam
110° flood beam
Each array can be individually controlled
3,000 K CCT, 80 CRI White
7,600 total lumens per LED light module



IMU

9 DOF IMU and Magnetic Compass

Pressure based depth sensor:
100 Bar, with 400 Bar optional
0.2° Static Roll/Pitch
0.5° Dynamic Roll/Pitch
1.0° Yaw
18°/h Gyro Bias Stability



Tether

Neutral Performance: Neutral buoyancy,
smaller diameter
Standard Neutral: Neutral buoyancy
Negative Extension: Negative buoyancy
Breaking Strength: 680 kg (1,500 lb)
Management: Tether Deployment
and Storage Reel

For more details about our accessories,
visit [VideoRay.com](https://www.videoray.com).