

# 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

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



## Camera

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



## Power

<b>400 VDC power module</b>
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)



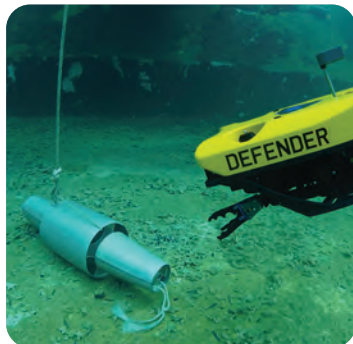
## Buoyancy

**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](http://VideoRay.com).