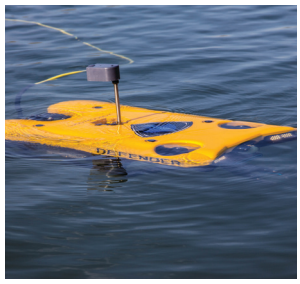
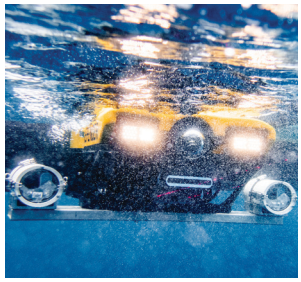
Product Data Sheet

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	110/220VAC (1 to 2.6kW)
Total System Weight (sub and OCC)	32.5 kg (71.6 lbs)
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

SUBMERSIBLE

Depth Rating	Up to 1,000m (3,280ft)
Size (l x w x h)	75.16 x 39.37 x 26.67 cm (29.59" x 15.5" x 10.5")
Weight	17.2 kg (38 lbs)
Ballast	Modular
Case	79.5x51.8x31 cm (31.3"x20.4"x12.2") 9.4 kg (20.8lbs)

CAMERA

HD with Ethernet interface (IP)

Video	1920 x 1080, 25 FPS 1280 x 720, 25 FPS 640 x 480, 25 FPS
Mechanical	Standard VideoRay 9 pin connection Ethernet, 12VDC, RS-485 Auto Focus or Manual Focus Optical Glass Dome
Features	White Balance Control 16x Digital Zoom (64 steps) 13 Megapixel Still Image Capture
Sensitivity	Less than 1 lux (standard)
View Angle	160 degrees Tilt (180-degree FoV)
Horizontal	136 degrees
Vertical	91 degrees
Interface	Ethernet/RS-485
Compression	h.264

PROPULSION

Brushless thruster with integrated controller

4 Vectored Horizontal Thrusters

Forward	26.7 kg (59 lb.)
Reverse	15 kg (33 lb.)
Lateral	8.6 kg (19 lb.)

3 Vertical Thrusters

Up	23.1 kg (50.9 lb.)
Down	12.9 kg (28.4 lb.)

POWER

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

BUOYANCY

400m (1,312ft)
2km (6561.68ft) - *optional*

COMMUNICATIONS

5 x 100Mbps Ethernet ports
5 x RS-485 ports

Power Available:	12 V, 120 W 24 V, 300 W 48 V, 1500 W

Power control and monitoring

LIGHTING

LED
2 independent light arrays each at 38 Watts max
- 60-degree spot beam
- 110-degree 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 degree Static Roll/Pitch / 0.5 degree Dynamic Roll/Pitch
- 1.0 degree Yaw
- 18 degree/h Gyro Bias stability

OPERATOR CONTROL CONSOLE (OCC)

Power Input	90-260 VAC (47-440 Hz)
Power Output	400VDC, 2600W
Display	Daylight Viewable Monitor
Weight	15.2 kg (33.6 lb)
Case	Water tight - 0.62" x 16.87" x 8.12" (52.37 x 42.85 x 20.62cm)
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

TETHER

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

Payloads For more details, visit **www.videoray.com**

Sonar
Blueprint Oculus 750d
Blueprint Oculus 1200d
Blueview M Series
Tritech MicronNav

Manipulator
Rotating with 5 interchangeable heads

Cavitation Cleaners
Dome
Lance

Navigation & Positioning Systems
Seatrac USBL
Nortek 1000 DVL

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