

DATA SHEET

TMI-Orion Dynamics

S-ROV



Underwater modular vehicle platform for inspection, measurement and operation.

The S-ROV is a rugged configurable and upgradable platform for underwater inspection, measurement and operation.

The additional modules and sensors create tailored solutions for a wide range of customer needs.

STANDARD CONFIGURATION

S-ROV

Technical specifications

Depth rating	300 m
Maximum speed	3 knots
Payload capacity	3.5 kg
Thrusters	4 thrusters for horizontal movements 4 thrusters for downward and upward movements
Power supply	Enclosure for 2 lithium-ion batteries (with charger supplied): Up to 6 hours of navigation depending on the configuration OR Enclosure with external surface power supply: no limitation in usage duration
Minimum dimensions	(L x W x H): 600 mm x 590 mm x 296 mm
Weight	23.5 kg (in air)
Material	Aluminum, Delrin, Stainless steel, resin



S-ROV

Equipment and sensors

Add-on capacity	Up to 5 free connectors for additional equipment
Integrated sensors	AHRS, temperature/pressure sensor, detector of internal presence of water
Automatic functions	Auto heading, auto-depth, speed and movement

Cameras and lights

Front camera	High resolution 1/3" progressive CMOS chip on tilt (-45°/+45°). Resolution 1080P/720P. Minimum light: 0,001 Lux. Autofocus aspheric view port to reduce parallax effect
Light	2 x 1500 lm LED at the front with intensity control

Surface Control Unit

Technical specifications

Console integrated in a waterproof case	
Graphical user interface	Installed TMI-Orion software including a graphical interface: <ul style="list-style-type: none"> - Front and rear cameras, - Compass, - Artificial horizon (pitch and roll), - Depth, - Camera tilt, - Autopilot function status, - Turns count, - Day and time on the video display.
Data storage	Data recording on integrated hard drive 128 GB SSD or on external storage.
Control	Joystick and keyboard
Video display	17" Full HD high luminosity and anti-reflection screen.
Dimensions	Case open: (H x L x W) 21.1 cm x 53.8 cm x 40.6 cm
	Case closed: (H x L x W) 60 cm x 53.8 cm x 40.6 cm
Weight	17.5 kg
Power supply	Voltage: 88 to 264 VAC (50Hz, 60Hz)



Surface Control Unit

Umbilical cable

Technical specifications

Cable length	300 m. Copper, neutral at 300 m, wound on a manual winch. Please contact us for other length.
Cable diameter	Maximum 14 mm
Tractive force	Maximum 300 kg - Traction discharge connector.
Water launching and taking out	Manual



Umbilical cable on winch

Documentation and guarantee

Included documentation

Products specifications,
 User's manual,
 Quick start guide,
 Maintenance manual for TMI-Orion system,
 Maintenance manual for each module.

Guarantee

1 year, labor and parts, except transport fees.

Miscellaneous

Spare parts

Tools and spare parts

Transport case

For the ROV

OPTIONS

Equipment

Pingers, sonar and echo sounder, to help maintain the S-ROV at a constant distance from an object, minimum distance 70 cm (development in progress).

Pingers, sonar and echo sounder, altimeters.

360° pinger

Acoustic camera	2D or 3D imaging sonar, model to be defined with the customer (adaptation upon request).
Acoustic positioning	USBL
Gripper	2 or 3 jaws
Other equipment	Thickness measurement, cathode protection measurement... Adaptation upon request.



S-ROV with optional gripper

Cameras and lights

4K front camera	Blackmagic® micro studio camera 4K + Blackmagic® Design Video Assist 4K HDMI/6G-SDI (optical fiber umbilical necessary for real time display)
1K front camera	TMI-Orion Color camera.
<i>Other camera models, adaptation upon request</i>	
Rear camera	High resolution 1/3" progressive CMOS chip. Resolution 1080P/720P. Minimum light : 0.001 Lux. Autofocus Manual positioning.
Front light	10 000 lm spot LED Manual positioning, surface power supply necessary.
Rear light	1 500 lm or 2 000 lm LED spots, manual positioning.

Depending on the configuration, it is possible to add 2 more lights



S-ROV with optional camera

Power supply

Necessary power for surface power supply	4kW
Specifications	2,5A/115VAC or 1,3A/230VAC (50Hz, 60Hz)
Dimensions	450 mm x 371 mm x 180 mm

The S-ROV can be used with batteries or an external surface power supply. The power supply cases are interchangeable.



Power supply case

Umbilical cable

Cable type	Tight structure optical fiber
Length	Upon request for length < 300 m. Please contact us for length > 300 m.

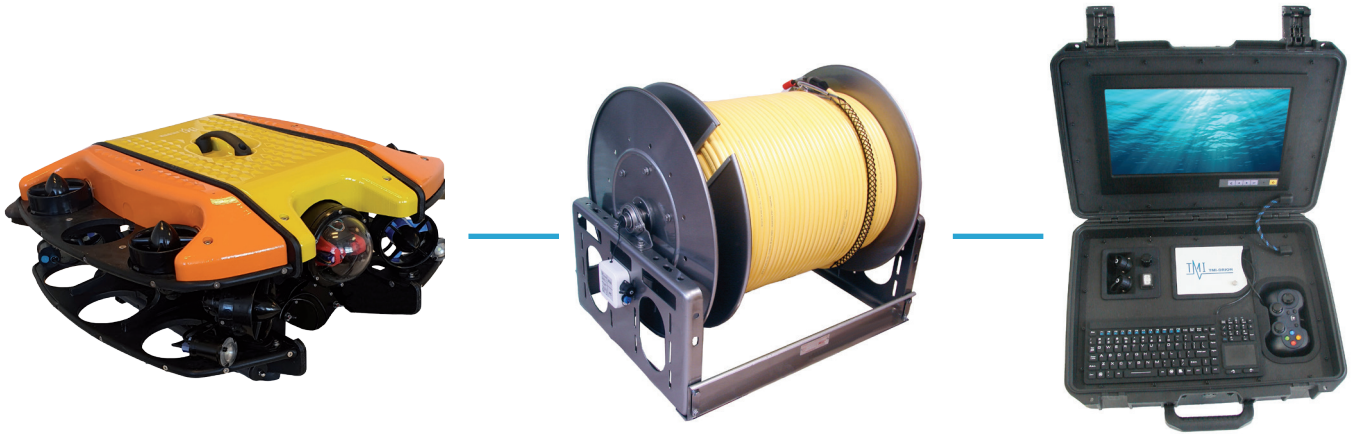


Surface Control Unit

TMI-Orion software	Can be installed on a rugged and watertight PC.
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Training

Commissioning and training (FAT, SAT, on site user training)
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