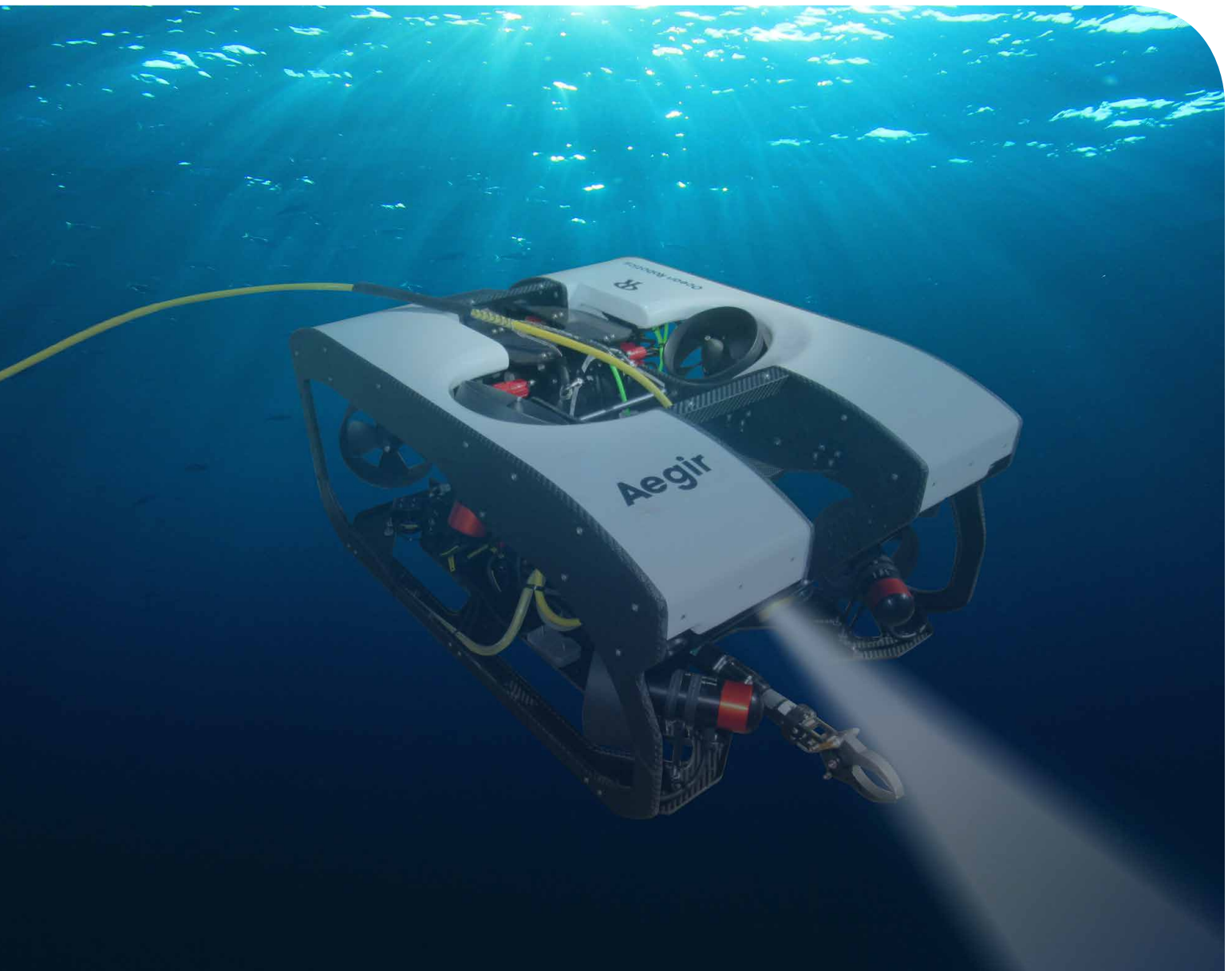
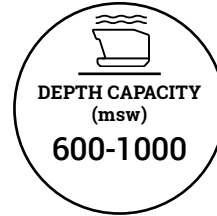
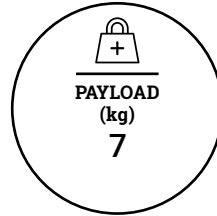
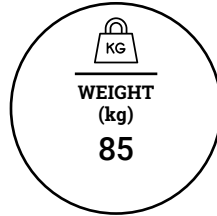
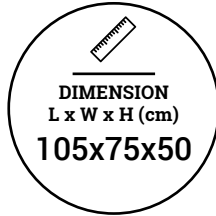
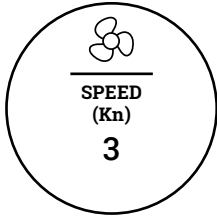
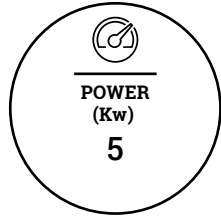


AEGIR 50 ROV

The workhorse of Ocean Robotics inshore observation ROVs



The Aegir 50 ROV is the workhorse of Ocean Robotics inshore OBS ROVs. Building on and incorporating the best features both from the smaller Aegir ROVs and Ocean Robotics bigger off-shore machines, the -50 line of vehicles can handle every job in the man-portable category. Based on an XCS control system the vehicle can be delivered in several set-ups, with thruster and buoyancy layout altered to suit client needs. The ability to carry a multitude of sensors and tools while delivering a powerful thrust under full control makes it a favorite among inshore operators. The system can be delivered as rugged units, for field-deployment and with easily exchangeable parts, or for extra long tether excursions.

TECHNICAL SPECIFICATION / ROV

COMMUNICATION NETWORK

For communication between the ROV and the surface the setup looks as follows:

- 1 x HD-SDI fiber link
- 1 x GB Ethernet link as option
- 2 x Analog video, PAL or NTSC
- 3 x DATA

None of the data channels are used for ROV controls, they are all available to be used by user specified equipment, like sonars and sensors. The communication between the vehicle and the surface is done over a SM fiber connection that employs CWDM technology to increase bandwidth. The CWDM has free wavelengths available for further expansion. The system can be equipped with dual independent fiber links running all the way through the tether to enhance the robustness of the fiber link.

SURVEY CONNECTIONS ON VEHICLE

For user specified equipment the vehicle comes as standard with the following connectors supplied:

- 3 x DATA + 24VDC
- 1 x 16-bit isolated A/D converters

The DATA channels can be individually configured as RS-232/RS-485/TTL/Trig. Through easily replaceable adapter cards either communication standard can be chosen and all channels are isolated. More channels can be fitted by simply adding connectors. Gb Ethernet channels are available as a standard upgrade.

TOOLING POWER SUPPLIES ON VEHICLE

The standard connections for external power include:

- 1 x 300VDC, up to 1kW
- 2 x 24VDC, up to 250W
- 2 x ±24VDC, 3A

As an option the ROV can be fitted with 230VAC external power.

POWER SUPERVISION

Both high and low voltage connections on the vehicle are constantly monitored for isolation faults. All connectors can be physically disconnected from the power bus by the pilot during operation to test for location of isolation faults. The affected ports can then be disabled until a repair can be made of the faulty wiring, connectors or whatever the problem might be. A total of 7 channels 24VDC power is available on the ROV for equipment use, all individually switchable.

CAMERA SYSTEM AND TILT

The ROV comes with 2 camera connections as standard:

- 2 x Analog video (PAL/NTSC) + 24VDC

All cameras can also be remotely controlled by one of several available channels: UART, xTLK or analog control. A front mounted tilt with user defined presets makes delicate monitoring easy. HD-SDI video is available as a standard upgrade. The vehicle can be fitted with any type of camera, to customer requirements.

LIGHTING SYSTEM

The vehicle comes equipped with 4 LED lights, each individually controllable. Data per light:

- 3500lm light output
- Fully dimmable
- Temperature watchdog with automatic limit

SENSORS

The vehicle is as standard equipped with:

- 1 x depth sensor with over-depth warning
- 2 x IMU with 3D magnetometer, accelerometer and gyro
- Water ingress alarms
- Earth leakage alarms

SONAR AND TRANSPONDER

The vehicle can be fitted with any sonar and transponder. To keep the precise control characteristics of the ROV please consult with Ocean Robotics to get units that match the rest of the systems layout.

AUTO FUNCTIONS

Standard (all can be disabled by user under operation):

- Depth
- Heading

Optional:

- Altitude (requires altimeter or DVL)
- AutoPilot / Station-keep

TECHNICAL SPECIFICATION / SURFACE

POWER DISTRIBUTION

The ROV is supplied by DC power from the surface. The voltage levels are automatically tuning under operation, to enable long tether excursions without compromising ROV performance. The power network is constantly monitored for isolation faults to give the pilot clear warning when something is wrong. Automatic shut-down under hazardous conditions can be user-disabled to ensure safe recovery of the system.

Rugged cases ensures the systems operational state even under adverse conditions, as an option the whole system can be delivered in IP-rated (under use) cases to enable running even outside in the pouring rain and breaking waves.

TETHER WINCH

A sturdy but light-weight and easily transportable winch complete with slip ring is used for tether handling. The winch can be hand-operated or equipped for electrical drive. The winch can be adapted to carry any length tether up to 500m. A larger fully electric winch is also available, the drum can be delivered to handle up to 2500m tether.

PILOT CONTROLLER

The client can choose to control the ROV from the integrated pilot chair or the portable controller. Both gives full control during operations. The pilot environment is delivered to every clients requirements, taking into consideration number of screens, portability, available space, and requests. The same is true for overlays, multiviews and recording equipment which can be tailored to the exact needs of the user.

The modular telemetry and control system is rack-based, making it easy to integrate into existing equipment. A touch controller in the pilot station enables system status checks and loading of new hardware into the distributed control system for expansion or replacements.