

NEXUS 8

Multiplexer for ROV and survey applications



The MacArtney NEXUS 8 is a multiplexer capable of multibeam sonar, gigabit ethernet, HD video, and, additional sensors that are carried over one single-mode optical fibre via CWDM (Coarse Wavelength Division Multiplexing).

The power switching is software controlled by a computer with at least one real or external USB com port.

The API (Application Programming Interface) is open source and can be integrated into customer software for monitoring purposes. The included software continuously monitors power consumption, sensor voltage, telemetry link and, leak alarm. Programmable eFuses protects all sensor power outputs.

The multiplexer has a Ground Fault Indicator (GFI) to detect ground faults on the sensor interfaces. The GFI and system software can be used to locate a fault source by turning on and off external sensors to shorten the time spent on failure analysis.

As standard, the subsea housing is manufactured from hard anodised aluminium. Connectivity interfaces include SubConn® anodised aluminium connectors, SubConn® coax (HD video) connectors and a MacArtney OptoLink fibre optical connector. Options include 6,000 MSW depth rating and pressure housings manufactured from titanium or high tensile duplex steel.

Features and benefits

- Interfaces most standard survey sensors
- Software controlled power switching for sensors
- Interface for Gigabit Ethernet based multibeam sonar
- Three HD video interfaces (full broadcast quality)
- Three light outputs (0-10V or RS485 control)
- Operates on one single mode optical fibre
- FOCAL™ inside

Applications

- ROV/ROTV multiplexer for HD video and multibeam sonar survey sensor setup
- Cable trencher systems
- Drop camera systems
- Towed camera and sensor systems
- Seabed monitoring applications including landers and observatory systems

Options

- Customised subsea controls
- Titanium or high tensile duplex steel housing for the subsea unit
- 6,000 m depth rating



Specifications - topside unit

Mechanical

Dimensions: 19" rack mount
2 U high

Various: LEDs for link status indication
Monitoring: LEDs for status indication
Focal Diagnostics software

Electrical

Supply voltage: 85-265 VAC, 50/60 Hz
Power consumption: 50 W

Transport

Delivered in Peli™ hard shell case

Specifications - subsea unit

Mechanical

Dimensions: OD 180 mm, total length
including connectors
approx. 680 mm
Depth rating: 3,000 m (6,000 m optional)
Material: Hard anodised aluminium
(7075 T6 standard)
Weight in air: Approx. 27 kg
Weight in water: Approx. 10 kg

Multiplexer

Serial: 6 configurable
(RS232, RS485 or RS422)
3 fixed for camera/light control
(RS485)
1 fixed RS232

Triggers: 2 bi-directional
(Buffered TTL level)

Ethernet: 4 x 10/100/1000BaseT
3 x 10/100BaseT
(Ethernet bandwidth 2.4Gbps)

HD Video: 3 x HD-SDI (SMPTE-292M)

Light interfaces: LED lights
(RS485 or analogue
controllable)

Electrical

Supply voltage: 100-250 VAC 50/60 Hz
(400 Hz optional)
140-370 VDC
Output voltage: 48 VDC/600W
24 VDC/450W
12 VDC/150W
AC (input voltage level)
Other voltages on request

Fibre optic

Fibre type: Single mode 9/125
Number of fibres required: 1
Flux budget: > 18 dB

Control and monitoring

Control: Power switching
Programmable eFuses

Monitoring: Leak
Ground fault
Voltages and current draw
Temperature
Power on/off feedback status
Optical loss

Transport

Delivered in custom made flight case