

# NEXUS MK IV Multiplexer



## Description

The MacArtney NEXUS MK IV is replacing the successful NEXUS MK I, which has served the subsea ROV/ROTV market for 6 years since the introduction in 2000. The MK IV is the “Multibeam-Sonar Multiplexer” and does not interface video cameras. It is based on the MacArtney (P)ECL fibre optic converters, our Cypress multiplexer, MiniController and E2P ethernet converters. The new power switching of all the sensors is software controlled and combined with monitoring of sensor power status.

The subsea housing is made of 6082 hard anodised aluminium and the Subconn connectors are also the anodised aluminium type. If more than 3000 msw depth rating is required the pressure vessel will be produced in Titanium or high tensile Duplex steel.

The fibre optic telemetry takes advantage of the CWDM (Course Wavelength Division Multiplexing) technology and communicates all signals over one singlemode optical fibre.

## Features and benefits

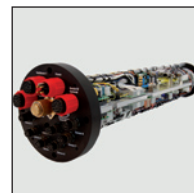
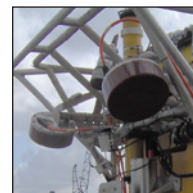
- Interfaces all standard multibeam sonars and survey sensors
- Supplies power to sensors. Software controlled
- Operates on one singlemode optical fibre.

## Applications

- ROV/ROTV multiplexer for multibeam-sonar survey sensor setup

## Options

- Titanium or high tensile Duplex steel pressure housing for water depths > 3000 metres.
- Interface for SeaBat 71xx series multibeam sonars
- Customised subsea controls



# Technical Specifications

## Specifications topside unit

### Mechanical

Dimensions: 19" rack mount, 1 U high

### Electrical

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

Power consumption: 25 W

Various: Light diodes for status indication

## Specifications subsea unit

### Mechanical

Dimensions pod: OD 197 mm, total length including connectors app. 770 mm

Depth rating: 3000 msw (standard)

Material: Hard anodised aluminium (standard)

Weight in air: App. 50 kg

Weight in water: App. 26 kg

### Electrical

Supply voltage: 85-132 & 180-264 VAC  
50/60 Hz

Output voltage: 24/12 VDC/others

Power switching: 12 x 24V & 7 x 12V

### Multiplexer

Multibeam-sonar signals: 2 (P)ECL, 125 Mb/s  
(Option: SeaBat 71xx interface)

RS 232: 5

RS 232/485: 2

RS232/485/422/TTL 2

Ethernet: 10/100 Base-T

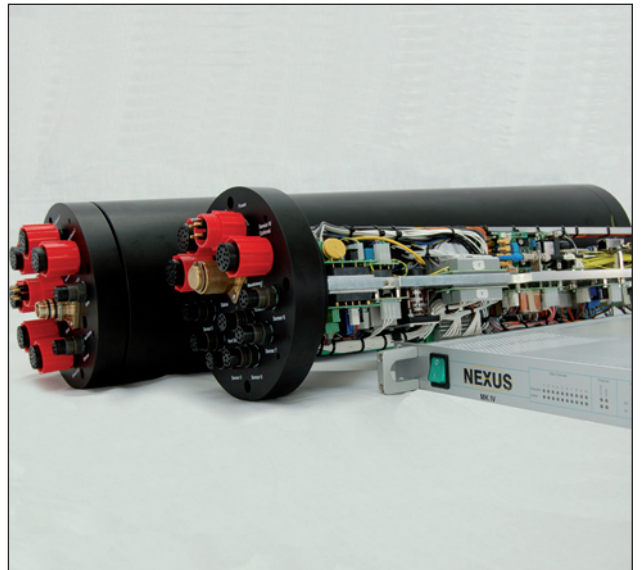
Digital channels: 16 I/O

Analog channels: 8 input (12 bit),  
2 output (12 bit)

Leak: Occupies either 1 analog input or 1 digital input

Topside unit delivered in Pelican case.

Subsea unit delivered in flightcase.



### Fibre optic

Fibre type: Singlemode 9/125 or multimode 50/125-62,2/125

Number of fibres required: 1 or 2

Flux budget: > 26 dB

Specification subject to change without notice

