

EMO Nano-MUX

Fibre optic multiplexer system



Features and benefits

- Only 2.75" diameter (70 mm)
- Only 5 lbs weight in air (2.2 kg)
- Rugged design for extreme environments

Applications

- Remotely operated vehicles (ROVs)
- Subsea ocean observatories
- Tidal energy installations
- Security, defence and industrial sensor applications
- Pipe/hull inspection robotics

Options

- Fibre redundancy
- Optical diagnostics
- Power switching

The EMO Nano-MUX has dramatically reduced the subsea form factor offered for video and data conversion to fibre. The nano subsea housing offers the ability to convert high definition video feeds as well as high speed gigabit Ethernet data within the most compact and lightweight form factor available to date.

The standard configuration for the nano mux offers two high bandwidth primary channels (HD-video or gigabit Ethernet) together with four supporting serial data channels. These additional serial channels can provide control of a camera's pan-and-tilt utility as well as zoom and other lens control functions. Alternatively, the additional serial channels can be used to transmit other subsea sensor data within the single fibre optic signal.



Specifications - topside unit

Mechanical		Transport	
Dimensions:	19" rack mount, 1 U high (Custom 7" front to back)	Delivered in Pelicase	
Electrical			
Supply voltage:	110-230 VAC, 50/60 Hz		
Power consumption:	10 W		

Specifications - subsea unit

Mechanical		Nano-Hybrid:	
Dimensions:	OD 2.75" (69.85 mm) Length 7.75" (196.85 mm)	HD video:	1 x high definition video HD-SDI SMPTE-292 M, 1,485-290 Mbps, 75 ohm
Depth rating:	1,000 m	Ethernet:	1 x 10/100/1000Base-T
Material:	Anodised aluminium	RS 232:	2 x 120 Kbaud (optional)
Weight in air:	Approx. 1.50 kg (3.3 lbs)	RS 485:	2 x up to 5 Mbaud (optional)
Depth rating:	3,000 m	RS 422:	1 x up to 5 Mbaud (optional)
Material:	Stainless steel (AISI 316)	Electrical	
Weight in air:	Approx. 2.54 kg (5.6 lbs)	Supply voltages:	9-28 VDC
Depth rating:	6,000 m	Output voltages:	5, 12, 24 (through) VDC
Material:	Titanium (Gr 2)	Fibre optic	
Weight in air:	Approx. 1.76 kg (3.9 lbs)	Fibre type:	Single mode 9/125
Multiplexer		Data rate:	1.5-3 GB video, 622 Mb for serial data
Nano-HD:	2 x high definition video HD-SDI SMPTE-292M, 1,485-290 Mbps, 75 ohm	Wavelengths:	CWDM red band 1,471-1,611 nm
Nano-GBE:	2 x 10/100/1000Base-T	Number of fibres required:	1
		Flux budget:	20 dB
		Max link distance:	10 km