EMO Mini-T
Fibre optic multiplexer system

Features and benefits

- Small form-factor multiplexer
- Rugged design for extreme environments
- Depth rating down to 6,000 m rated subsea housings

Applications

- Remotely operated vehicles (ROVs)
- Subsea ocean observatories
- Bomb disposal systems
- Security, defence and industrial sensor applications
- Pipe/hull inspection robotics

Options

- Fibre redundancy
- Optical diagnostics
- Power switching

The Mini-T fibre optic multiplexer (MUX) system offers digital fibre optic transmission of multiple video, Ethernet and serial data channels over a single fibre optic link. The size of the Mini-T subsea hull is approximately 5 x 14 inches. The Mini-T can provide a telemetry solution for remotely operated vehicles (ROVs) including smaller observation, explorer and light working class models. The small subsea unit is complemented by a 19" 1U Euro-rack style enclosure at the surface or controlling end of a telemetry system.

The Mini-T utilises state-of-the-art CWDM optical technology and offers the ability to upgrade or modify the optical configuration or electrical specification of a system.

The Mini-T MUX system can be built specifically to suit a range of integration platforms including stand alone telemetry. Options are available for an upgrade of accessory optical configurations to add further data channels to existing optical telemetry systems.

Specifications - topside unit

Mechanical

Dimensions: 19" rack mount, 1 U high

Electrical

Supply voltage: 110-230 VAC, 50/60 Hz
Power consumption: 20-30 W

Transport

Delivered in Pelicase

Specifications - subsea unit

Mechanical

Dimensions:	OD 3.98" (101.10 mm)
	Length 14.52" (368.85 mm)
Depth rating:	1,000 m
Material:	Acetal/Delrin
Weight in air:	Approx. 6.55 kg (14.44 lbs)
Depth rating:	4,000 m
Material:	Stainless steel (AISI 316)
Weight in air:	Approx. 10.34 kg (22.75 lbs)
Depth rating:	6,000 m
Material:	Titanium (Gr 2)
Weight in air:	Approx. 7.25 kg (15.98 lbs)

Multiplexer

Video: 1 x PAL/NTSC 10-bit
              @ 30 MHz sampling, 6.0 MHz
              bandwidth, 75 ohm
HD video: 1 x high definition video
              (optional)
              HD-SDI SMPTE-292M,
              1,485-290 Mbps, 75 ohm

Ethernet: 1 x 10/100Base-T
              1 x 1000Base-T
RS 232:   2 x 120 KBaud
RS 485:   2 x up to 5 MBaud
RS 422:   1 x up to 5 MBaud

Electrical

Supply voltages: 9-28 VDC
Output voltages: 5, 12, 24 (through) VDC

Fibre optic

Fibre type: Single mode 9/125
Data rate: 1.5-3 GB (video), 622 Mb for
                           serial data
Wavelengths: CWDM red band
                           1,471-1,611 nm
Numbers of fibres required: 1
Flux budget: 20 dB
Max link distance: 10 km