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 for 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
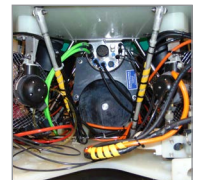- Optical diagnostics
- Power switching

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 at the controlling end of the 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

	EMO Mini-T	EMO Mini-T HD	EMO Mini-T MultiBeam
Mechanical			
Dimensions	19" rack mount, 1U High (custom 7" front to back)		
Electrical			
Supply Voltage (VAC / Hz)	85-240 / 50/60		
Power consumption (W)	23-30		
Transport			
	Delivered in Pelicase		

Specifications - subsea unit

	EMO Mini-T	EMO Mini-T HD	EMO Mini-T MultiBeam
Mechanical			
Pipe diameter OD (mm)	101.10		101.10
Pipe length (mm)	381		508
Depth rating (m)	1,000 / 4,000 / 6,000		1,000 / 3,000 / 6,000
Material	Anodized Aluminum / 316 Stainless Steel / Titanium (Gr2)		Anodized Aluminum / 316 Stainless Steel / Titanium (Gr2)
Weight in air (kg) Approx	6.55 / 10.34 / 7.25		8.55 / 12.34 / 9.25
Electrical			
Video (NTSC/PAL - 75 ohm)	1	0	0
HD-Video (SDI, HD-SDI, 3G-SDI)	0	2	0
RS-232 (up to 500 Kbaud)	1	1	2
RS-485 (up to 2.5 Mbaud)	2	2	1
Ethernet (10/100Mb)	2	0	0
(P) ECL uplink	0	0	2
Gigabit Ethernet (10/100/1000Mb)	0	0	2
Subsea supply voltage	9-28 VDC	9-28 VDC	85-240 VAC
Output voltages	9-28 (through) VDC - Switchable from Topside rack via serial controlled EMO PSU controller	9-28 (through) VDC - Switchable from Topside rack via serial controlled EMO PSU controller	24VDC @ 3A total max 48VDC @ 7A total max
Fibre Optic			
Fibre type, singlemode (um)	9/125	9/125	9/125
Data rate	622 Mbps	2x4.25 Gbps	2x 1.25 Gbps, + 2x 125Mbps, + 622Mb
Wavelengths	1471-1531nm CWDM	1471-1531nm CWDM	1471-1531nm CWDM
Number of fibers required	1 (+1 for fibre redundancy suite, including optical splitter & switch)	1 (+1 for fibre redundancy suite, including optical splitter & switch)	1 (+1 for fibre redundancy suite, including optical splitter & switch)
Flux budget (dB)	20	20	20
Max link distance (km)	10	10	10