

Matrix MUX MK II+



The Matrix is a stand-alone fibre optic multiplexer and control solution, providing a simple, plug and play interface for a large array of sensors and equipment to any remotely operated system. The system consists of a compact, one-atmospheric subsea unit rated for 3000 MSW, and a 19" rack mounted topside unit with touch screen and status for all channels on the screen. The Matrix's internal control system provides individual 2-pole switching of all power outputs as well as DC power insulation monitoring. The DC power outputs are equipped with software resettable fuses to save operation time. All DC power outputs are equipped with voltage and current monitoring, which is also displayed in the topside controller.

Key Features

- 7-inch Linux based touch screen interface for control and diagnostics
- Status for all channels on screen
- Voltage and current monitoring
- Alarm / warning logging
- Operational hours logged
- Web-browser based interface for mirrored control
- Ethernet connection for control
- 19" 3U rack mount

Power Input

Subsea	47-63 Hz, 85-264 VAC / 120-370 VDC
Topside	90-265 VAC, 47-63Hz

Power Output

2 x 48 VDC/24 VDC noise attenuated 6A - Software switchable
1 x 48 VDC 3A/24V, 6A for 2x100Mbps Ethernet -
Fixed output. Hardware switchable
10 x 24 VDC 2A outputs 2-pole relay
1 x 110 VAC 2-pole relay output
Software resettable fuses on DC power output
1200 W available DC power

Signal Interface

9 x RS232
4 x software switchable RS232/RS485
3 x 100 Mbps Ethernet
2 x Gb Ethernet 2 x single direction PECL
3 x HD-SDI
2 x 5V TTL trigger
All serial and trigger interfaces are isolated

Mechanical Properties

Materials	Aluminium 6082-T6, hard anodized or Titanium Grade 5
Dimensions	D 230mm (223mm) x L 600mm
Depth rating	3000 MSW
Shock and vibration	According to ISO 13628-6

Other

Water ingress detection
Two-stage noise attenuation filter on power input
Humidity sensor subsea, trending available in software
Temperature sensor topside and subsea
DC ground fault detection system
Fibre and SFP diagnostics
Control board diagnostics

Connectors

C1: Seacon 5506-2021-E	Gbps Ethernet, 24/48 VDC, RS232, Sync with C2
C2: Seacon 5506-2021-E	PECL, Gbps Ethernet, 24/48 VDC, RS232, Sync with C1
C3: Seacon 5506-2021-E	TTL 5V, 2 x 100 Mbps Ethernet, RS232/RS485, 24VDC/48VDC
C4: Seacon MINL-5515-75 Ω	Camera 1 (HD-SDI) RS232, 24 VDC
C5: Seacon MINL-5515-75 Ω	Camera 2 (HD-SDI) RS232, 24 VDCI
C6: Seacon MINL-5515-75 Ω	Camera 3 (HD-SDI) RS232, 24 VDC
C7: Seacon MCBH8FS	RS232, 24 VDC
C8: Seacon MCBH8FS	RS232, 24 VDC
C9: Seacon MCBH8FS	Ethernet, TTL, 24 VDC
C10: Seacon MCBH8FS	TTL 5V, RS232, 24 VDC
C11: Seacon MCBH8FS	RS232/RS485, 24 VDC
C12: Seacon MCBH6FS	RS232, 110 VAC (depending on voltage supplied to the Matrix)
C13: Seacon MCBH8FS	RS232/RS485, 24 VDC
C14: Seacon MCBH8FS	RS232/RS485, 24 VDC
Fibre: Seacon	Topside<->Subsea Comms
Power: Seacon 5506-2006	47-63 Hz, 85-264 VAC / 120-370 VDC