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# TitanMux

STR TitanMux provides an advanced solution to the challenges of integrating the ever expanding multitude of sensor types required for ROV survey and inspection operations.

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The system operates with exceptional levels of technology density supporting higher numbers of sensors than previously possible. Data communication is provided via a 4 Gbps fibre-optic link, supporting Gigabit Ethernet (GbE), Serial RS232 & RS485 and TTL communications for up to 21 sensors.

High power output is possible through its use of ultra high efficiency power and control systems, innovative cooling and thermal management systems ensure reliable operation at maximum power. Advanced power management circuits allow the most challenging loads to be enabled with ease and allow fully remote management, control and electronic fusing.



The TitanMux has been designed for reliable operation in harsh conditions, the standard titanium housing is capable of operation at 6000 m and supports long duration deployment without risk of corrosion. It benefits from robust metal shell connectors with fully open face pressure rating.

The system has been designed for quick integration into existing ROV systems with an intuitive 12" touch screen LCD (liquid crystal display) display with the ability to be controlled via our integrated web Graphical User Interface (GUI).

## Key features

- High bandwidth fibre-optic communications
- Very high density functionality
- Advanced power management technology
- High efficiency power supply technology
- Fully configurable eFuses and power reporting
- Ground fault detection
- Galvanic isolation

## Key benefits

- **Ultra-compact footprint:** Facilitating uncompromised installation of larger packages of survey sensor installations, on smaller ROVs than possible with competitor products.
- **High count 1000 / 100 / 10 Mbps Ethernet, Serial RS232 & RS485 connectivity:** Ease of integration & networking with virtually all survey sensors, simultaneously supporting higher numbers of sensors than previously possible, and ensuring future-proof expandability.

## TECHNICAL SPECIFICATIONS

| PROPERTIES               | DESCRIPTION                                                                                                                                                                                                                                                                                                    |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power output             | 1000 W                                                                                                                                                                                                                                                                                                         |
| Input voltage            | 80 – 264 V AC                                                                                                                                                                                                                                                                                                  |
| Output voltage           | 48 V, 24 V DC<br>80 V – 264 V AC                                                                                                                                                                                                                                                                               |
| Output power features    | <ul style="list-style-type: none"> <li>• Switchable outputs</li> <li>• Current / power measurement</li> <li>• Fully configurable with remote reset</li> <li>• Ground fault detection</li> <li>• High energy load management</li> <li>• Highly configurable</li> </ul>                                          |
| Ethernet channels        | 3 x independent gigabit (1000 / 100 / 10 Mbps)<br>6 x fast ethernet (100 / 10 Mbps)                                                                                                                                                                                                                            |
| Serial channels          | 10 x configurable - Serial RS232 & RS485                                                                                                                                                                                                                                                                       |
| TTL triggers             | 9 x output<br>9 x input                                                                                                                                                                                                                                                                                        |
| Sensor connector type 1  | <ul style="list-style-type: none"> <li>• Quantity x 3</li> <li>• Rampart RP5FCR-K19</li> <li>• 48 V output @ 8 A</li> <li>• 24 V output @ 5 A</li> <li>• Gigabit ethernet (1000 / 100 / 10 Mbps Ethernet)</li> <li>• TTL trigger output</li> <li>• TTL trigger input</li> </ul>                                |
| Sensor connector type 2  | <ul style="list-style-type: none"> <li>• Quantity x 6</li> <li>• Rampart RP5FCR-K19</li> <li>• 48 V output @ 5 A</li> <li>• 24 V output @ 5 A</li> <li>• 10 / 100Mbps Ethernet</li> <li>• TTL trigger output</li> <li>• TTL trigger input</li> </ul>                                                           |
| Sensor connector type 3  | <ul style="list-style-type: none"> <li>• Quantity x 1</li> <li>• Rampart RP5FCR-K14</li> <li>• 2 x AC output @ 3 A</li> <li>• RS232</li> </ul>                                                                                                                                                                 |
| Material of construction | Titanium / aluminium                                                                                                                                                                                                                                                                                           |
| Safety features          | <ul style="list-style-type: none"> <li>• Galvanic isolation</li> <li>• Over current protection</li> <li>• Output fault monitoring</li> <li>• Ground fault detection</li> <li>• Thermal management</li> <li>• Power management</li> <li>• Electronic fuse outputs</li> <li>• Rapid status monitoring</li> </ul> |
| Depth rating             | 6000 m / 3000 m                                                                                                                                                                                                                                                                                                |
| Size                     | 535 x 169 L x D (mm)                                                                                                                                                                                                                                                                                           |
| Weight                   | 22.5 kg / 15 kg                                                                                                                                                                                                                                                                                                |

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## Key benefits cont.

- **Increased survey sensor payload:** Maximising operational survey time by reducing the time required to install different sensors or perform multiple inspections.
- **Advanced internal diagnostics versatile and user friendly:** Diagnostic functions ensure reliable operation and provide advanced warnings to ensure safe & reliable sensor operation, minimising down time for trouble shooting. Intuitive & advanced user interface ensures smooth & simple operation, offering significant reductions in mobilisation timescales.
- **Design tested with industry standard Survey Sensors:** Tried and tested as an integral part of large underwater sensor packages, this provides high levels of confidence that systems operate correctly and reliability to ensure that surveys and inspections are concluded without interruption or compromise.
- **Standardised connectors and pinouts with open face pressure to full ocean depth:** The connector system in use offers un-paralleled levels of robustness and reliability, ensuring the survival of the mux in the event of a failed or disconnected cable. STR have standardised the pinout of the sensor connections to ensure all cables are interchangeable, minimising cable variants, minimising cost of stock-holding and improving connectivity. Each sensor connector offers simultaneous operation of all power and data types without compromise.