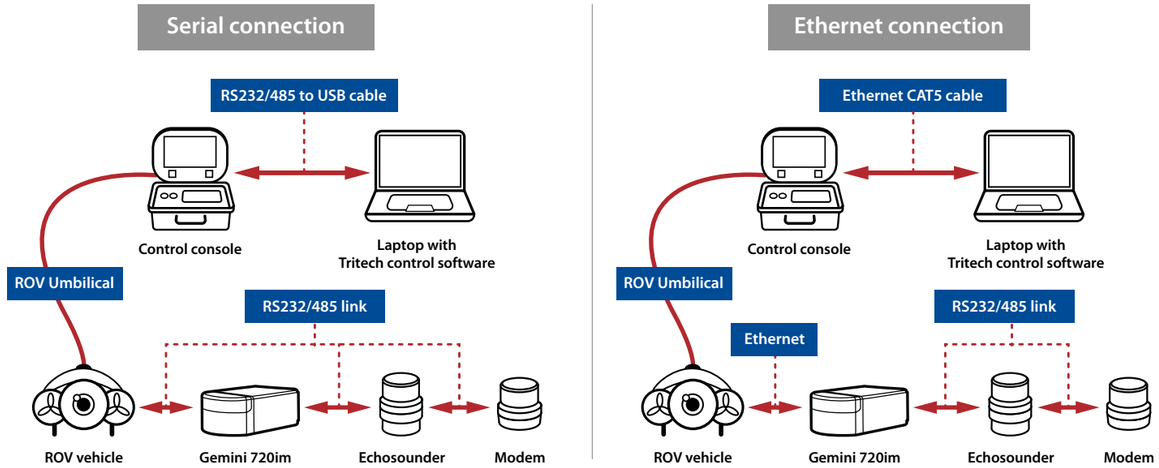

Please select the parts you are interested in from a single column that corresponds to the communication protocol you prefer.
This will allow identification of the parts required for your ROV installation.

Gemini 720im communication protocol	Serial (RS232/RS485)		Ethernet	Ethernet & Serial (RS485)
Gemini 720im multibeam sonar connector type preference	**Tritech**	**Seacon**	**Seacon**	**Impulse**
Mounting attachment options[1]				
Enclosed bracket				
Enclosed bracket 10° wedge				
Clamp bracket				
Sensor connection tail options				
Straight connector				
Right angled connector				
Topside connection (optional)				
Serial (RS232/RS485) to USB Cable				
Test kits				
Ethernet test kit				
Serial (RS232/RS485) test kit				
Ethernet/Serial (RS485) test kit				
Packaging				
Cardboard transport carton				
720im sonar only rugged transit case				
720im sonar system rugged transit case				
Selection of typical ancillary parts				
Micron tail for AUX port (1m)				
MicronNav system				
Micron Echosounder				

[1] The Micro ROV clamp bracket has been optimised for Micro ROVs while the enclosed bracket is more suitable for fitting on ROVs where weight is less critical. The optional enclosed bracket 10° wedge allows the sonar to be tilted in applications where a downward tilt may be of benefit.

The latest Tritech software provides control and display of the Gemini 720im while also allowing you to control and display other Tritech sensors such as the Micron Echosounder or MicronNAV USBL.

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MOOG

Gemini 720im

The world's smallest imaging multibeam sonar

ROV Installation

Tritech Serial Multibeam Protocol (TSMP)
RS485 Twisted Pair Installation

Outstanding Performance in Underwater Technology

Gemini 720im

The world's smallest imaging multibeam sonar

Engineered to be the ideal imaging sonar for Micro ROVs due to its compact design, the Gemini 720im is capable of being the primary Tritech sensor on your Micro ROV, allowing additional sensors to be daisy-chain interfaced through the AUX port of the sonar.

Main features

- Affordable multibeam sonar technology
- Compact, lightweight and portable
- Durable and robust design
- Easy to use mounting system
- Compatible with the Tritech Micron range

ROVs fitted with a multiplexer can be interfaced to the sonar using Ethernet or RS232 communication. When no multiplexer is fitted, a spare twisted pair (TP) in the umbilical can be used to communicate with the sonar over an RS485 serial interface, utilising the Tritech Serial Multibeam Protocol (TSMP).

Transfer of multibeam data over a twisted pair is usually restricted to a short cable length or requires additional equipment. However, the Tritech Serial Multibeam Protocol (TSMP), allows the Gemini 720im data, as well as data from the AUX port to be transferred to the surface without the need for additional equipment.

Tritech Genesis software provides control and display of the Gemini 720im, as well as other sensors that are attached to the sonar's auxiliary port. This new software has been developed for ease of use and is supplied free of charge for installation on the users PC.

Specially designed brackets offer a choice of mounting options allowing fast and easy installation of the 720im on to the ROV. A 10° adapter is also available in situations where it is beneficial to tilt the sonar towards the seabed.

Sensors suitable to be daisy chained:

Micron Echosounder
Provides information on accurate altitude from seabed

Micron Modem
Can be configured as a transponder to allow the ROV to be tracked using the Tritech MicronNav USBL system

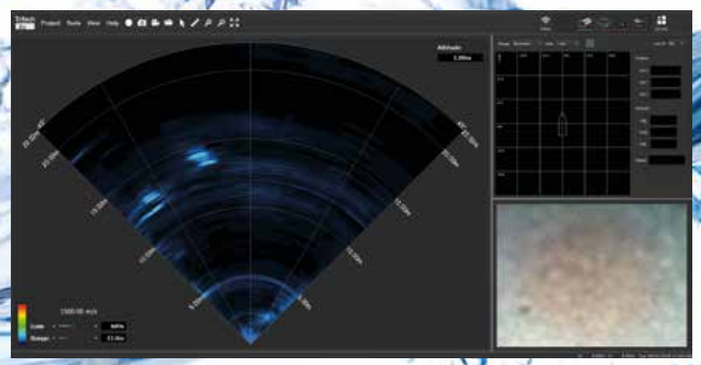
Case study

The Gemini 720im was installed on a Micro ROV and the system deployed from a small boat on Loch Tay. Underwater visibility was extremely poor and the conditions illustrated the benefits of using a multibeam sonar.

With visibility of around 2m, the ROV was lowered towards the seabed. The Gemini 720im image produced by the sonar, was used to monitor the seabed approach, whilst also surveying the scene in front of the ROV. Once within a few meters of the seabed, the ROV was rotated to allow the multibeam sonar to survey the area and identify potential areas of interest. Although the ROV camera was unable to see any targets of interest, the Gemini 720im was able to pick out potential targets allowing the ROV operator to navigate directly to the wreck of a sunken steamship. Once within a few meters of the wreck, it was possible to visually survey the wreck using the camera on the ROV.

Locating the wreck would have taken significantly longer had the ROV not been fitted with a Gemini 720im. It is highly likely that the wreck would not have been found unless a slow systematic tracked grid survey was undertaken.

In conclusion, the benefits of using the Gemini 720im on Micro ROVs was clearly demonstrated - utilising a compact sonar on Micro ROVs allows for navigation and search & recovery operations to be conducted with increased efficiency.



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