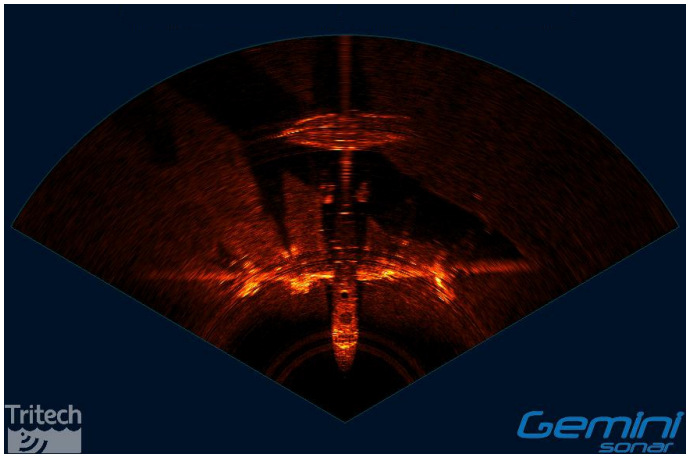
Gemini 720is

Real-time Multibeam Imaging Sonar

Underwater visualisation from a low power, compact unit.

With a 120° field of view and a fast update rate of 30Hz, the Gemini 720is is ideal for poor visibility environments.

The Gemini 720is is supplied with Seanet Pro, Tritech's data acquisition and logging software, which offers users the ability to network and operate the sonar along with a range of other Tritech sensors from a single software interface. The Gemini standalone software also provides users with additional control over the Gemini 720is and can be upgraded to Gemini SeaTec to provide a variety of target classification and tracking capabilities. The capability to record data in a range of digital video formats and output screen shots for review comes as standard.



Gemini sonar image of a WWII bomber PB4Y, Washington Lake (US).

The 720is is the latest generation from Tritech's renowned multibeam sonar range and offers a real-time, high frequency imaging solution. The Gemini 720is operates at 720kHz and this combined with Tritech's state-of-the-art processing electronics, produces images of superb clarity. This latest design is ideal for pan and tilt mounting on observation class ROVs.

Benefits

- Near field focussing
- 8mm range resolution
- Crisp, clear, wide angle field of view
- Use in low visibility environments
- Easier interpretation of sonar imagery

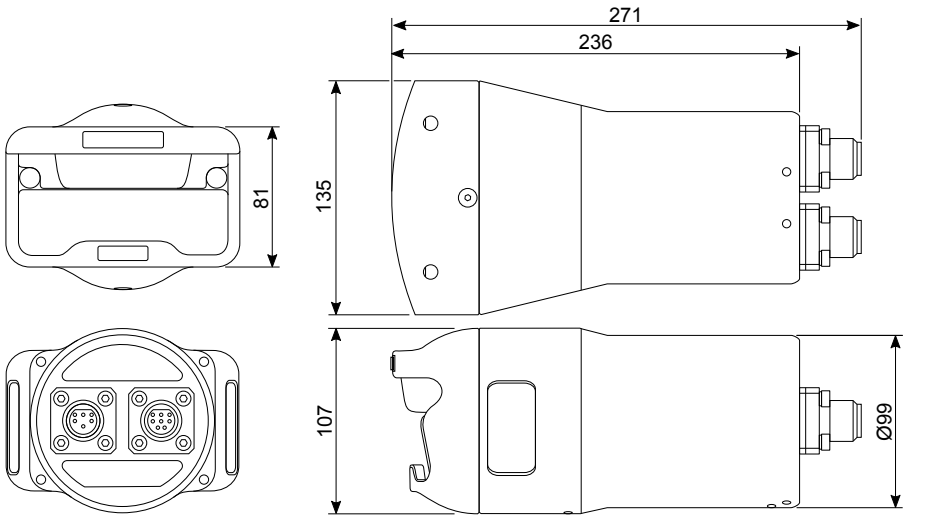
Features

- 720kHz operating frequency
- Wide 120° field of view
- Real-time updates for video like imagery
- Integrated velocimeter for accurate ranging
- Ethernet or VDSL communications
- Software Development Kit available
- SeeByte target tracking capability

Applications

- ROV/ AUV Navigation
- Obstacle Avoidance
- Target Recognition
- Search and Rescue (SAR)
- Salvage Operations
- Subsea Monitoring and Inspection
- Object detection

Specification



All dimensions are in mm, not to scale

Acoustic Specifications	
Operating Frequency	720kHz
Angular Resolution	1.0° acoustic, 0.5° effective
Field of view	120°
Number of Beams	256
Vertical Beamwidth	20° (tilted down 10°)
Range	0.2m to 120m
Update Rate	5-30Hz (range dependent)
Range Resolution	8mm (range dependent)

Interface	
Power requirement	25W max
Supply Voltage	19 to 74V DC
Communications Protocols	Ethernet or VDSL
Additional I/O	RS232, RS485 (half duplex), TTL in, Ethernet
Connector Type	SeaCon 55 series, SeaCon MCBH or Schilling SeaNet (single port as standard)
VDSL cable length	Maximum length for VDSL and power is 300m, if power is provided locally then maximum cable length for VDSL communication is 500m.

Physical Specifications	
Depth Rating	1000m (Aluminium) 4000m (Titanium)
Weight in air	3.5kg (Aluminium) 5.0kg (Titanium)
Weight in water	1.5kg (Aluminium) 3.0kg (Titanium)
Temperature ranges	-10 to 35°C (operating), -20 to 50°C (storage)

Specifications subject to change according to a policy of continual development.

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