Gemini 1200ik

High resolution imaging multibeam

Dual Frequency Gemini ik

The Tritech Gemini 1200ik multibeam sonar operates at two acoustic frequencies, 720kHz for long range target detection, and 1200KHz for enhanced high resolution imaging at shorter ranges. Switching between acoustic frequencies is done either manually or automatically at a range set by the user.

Unique to the 1200ik is the ability to maintain a 120° field of view when operating at high frequency. This allows the target of interest to remain within view at all times, even when the target is in the nearfield.

CHIRP processing ensures that the Gemini 1200ik can provide high-resolution imaging at longer ranges, while the integrated VOS sensor ensures the image is displayed at a high degree of accuracy.

Operating to a depth of 350m, the Gemini 1200ik can be used on a range of small to mid-size vehicles, as well as installed on larger vehicles operating in shallow water.

The Gemini 1200ik is fully compatible with Tritech's software package, Genesis, which improves user interaction and allows control of a number of Tritech sensors from within one software package.

With the same physical size and identical interface connection, the Gemini 1200ik can be swapped out with any 720ik which is already installed, providing an easy upgrade path to higher resolution imaging.

As with all Gemini products, SeaTec software can be utilised to undertake more advanced decision based activities based on the sonar data. The higher resolution capability of the Gemini 1200ik has the ability to perform target classification to an even higher degree of accuracy.

Finally, the Gemini software development kit (SDK) also supports the Gemini 1200ik and is available for Windows and Linux operating systems.

Benefits

- Switch between 720kHz and 1200kHz
- Long range object detection
- Short range detailed imaging
- Compact and easy to install

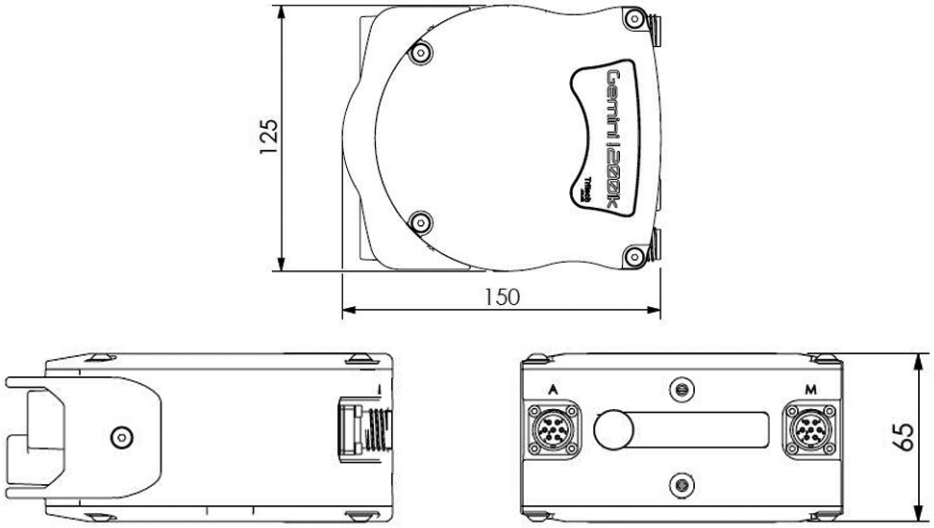
Features

- Real-time updates for video-like imagery
- 120° field of view
- CHIRP processing
- Integrated velocimeter for accurate ranging
- Software development kit available

Applications

- ROV/AUV navigation
- Obstacle avoidance
- Detailed object imaging
- Diver Mounted Display
- Subsea monitoring and inspection

Specification



All dimensions are in mm, not to scale

Acoustic specifications	Low Frequency Mode	High Frequency Mode
Operating frequency	720kHz	1200kHz
Angular resolution	1.0° acoustic, 0.25° effective	0.6° acoustic, 0.12° effective
Range	0.1m - 120m	0.1m - 50m
Number of beams	512	1024
Horizontal beamwidth	120°	120°
Vertical beamwidth	20°	12°
Range resolution	4mm	2.4mm
Update rate	5 - 65Hz (mode and range dependent)	
CHIRP support	Yes	
Speed of Sound	Integrated Velocity of Sound sensor for accuracy	

Interface	
Supply voltage	19V to 74V DC
Power consumption	9.5W - 27W (range dependant)
Main port protocol	Ethernet
Auxiliary port (optional)	RS232, TTL in, pass-through power
Connector type	MAIN port: Impulse MKS(W)-307-FCR AUX port: Impulse MKS(W)-307-FCR

Physical specification	
Depth rating	350m
Weight in air	1.47kg
Weight in water	0.5kg
Temperature rating	-10°C to 35°C (operating), -20°C to 50°C (storage)

Specification subject to change in line with Tritech's policy of continual product development

Marketed by:

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