

Gemini 1200is

High resolution, dual-frequency
forward-looking imaging
multibeam sonar

The Gemini 1200is multibeam sonar operates at two acoustic frequencies, 720 kHz for long range target detection, and 1200 kHz for enhanced high-resolution imaging. With the same physical size and connection interface as the Gemini 720is, the Gemini 1200is offers an easy upgrade path to higher resolution imaging.

The Gemini 1200is is built on the same platform as the industry standard 720is sonar. It features, a wide 120° horizontal field of view when operating at 720kHz or 1200kHz frequencies and has improved attenuation of waterborne electrical noise for optimal imaging performance. An integrated velocity-of-sound sensor ensures that a target is displayed to a high degree of positional accuracy. CHIRP processing provides improved target separation over longer ranges.

The 1200is is fully compatible with Trittech's software package, Genesis. This ensures improved user interaction and allows for control of multiple Trittech products from within one software package. Software development kits (SDK) are also available for Windows and Linux operation systems.



Benefits

- Obstacle Avoidance
- ROV/AUV Navigation
- Detailed object imaging
- Target Detection
- Subsea monitoring

Features

- Switch between 720 kHz and 1200 kHz
- Wide 120° horizontal field of view
- CHIRP processing
- Integrated velocimeter for accurate ranging
- 4000m depth rating
- Real-time video-like imagery
- Long range object detection
- Short range detailed imaging
- Same size and interfaces as the Gemini 720is
- Software development kit available

Key Specification	Low Frequency Mode	High Frequency Mode
Operating frequency	720 kHz	1200 kHz
Angular resolution	1.0° acoustic, 0.25° effective	0.6° acoustic, 0.12° effective
Range	0.1 m - 120 m / 4 in - 394 ft	0.1 m - 50 m / 4 in - 164 ft
Depth rating	4000 m / 13123 ft	
Supply Voltage	19 to 74 VDC	
Power Requirements	16 - 27 W (range dependent)	
Main Port Protocol	Ethernet or VDSL	
Update rate	5 - 40 Hz (range dependent)	
Mode of operation	CHIRP or CW	

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Operating frequency	720 kHz	1200 kHz
Angular resolution	1.0° acoustic, 0.25° effective	0.6° acoustic, 0.12° effective
Range	0.1 m - 120 m / 4 in - 394 ft	0.1 m - 50 m / 4 in - 164 ft
Number of beams	512	1024
Horizontal beam width	120°	120°
Vertical beam width	20°	12°
Range resolution	4 mm / 0.2 in ¹	2.4 mm / 0.1 in ¹
Update rate	5 - 40 Hz (range dependent)	
Mode of operation	CHIRP and CW	
Speed of sound	Integrated Velocity of Sound sensor for accuracy	

Interface

Supply voltage	19 to 74 Vdc
Power requirement	16 - 27 W (range dependent) ²
Main port protocol	Ethernet or VDSL
Auxiliary port protocol	RS232, RS485 (half duplex), TTL in, Ethernet
Connector type	Seacon 55 series, Subconn FCR 15 series or Schilling SeaNet
VDSL cable length	Maximum length for VDSL and power is 300 m / 984 ft, if power is provided locally the maximum length for VDSL communication is 500 m / 1640 ft

Physical specification

Depth rating	4000 m / 13123 ft
Weight in air	5.0 kg / 11.0 lbs
Weight in water	3.0 kg / 6.6 lbs
Temperature rating (operating)	-10 °C to 35 °C / 14 °F to 95 °F
Temperature rating (storage)	-20 °C to 50 °C / 4 °F to 122 °F

Software requirements	Minimum	Recommended
Included	Genesis	
Processor	2 GHz	3 GHz Quad Core
Graphics	3D hardware accelerated graphics card	
SDK	Available on request	
Operating system	Microsoft Windows 7, 10, 11	

1 Software switchable

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

2 The power consumption range quoted is accurate for a standalone unit and ignores cable losses

