

Gemini 1200id

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

The Gemini 1200id 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 1200id offers an easy upgrade path to higher resolution imaging.

The Gemini 1200id is built on the same platform as the industry standard 720is sonar. It features a wide 120° horizontal field of view when operating at 720 kHz or 1200 kHz frequencies and has improved attenuation of waterborne electrical noise for optimal imaging performance. An integrated speed-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 1200id 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 (SDKs) are also available for Windows and Linux operating 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 speed-of-sound sensor for accurate ranging
- 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	

Acoustic Specifications	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
Number of beams	512	1024
Horizontal beam width	120°	120°
Vertical beam width	20° (tilted down 10°)	12° (tilted down 10°)
Range resolution	4 mm / 0.2 in	2.4 mm / 0.1 in
Update rate	5 - 40 Hz (range dependent)	
Mode of operation	CHIRP and CW	
Speed of sound	Integrated Speed-of-Sound sensor for accuracy	

Interface

Supply voltage	19 to 74 Vdc
Power requirement	16 - 27 W (range dependent) ¹
Main port protocol	Ethernet or VDSL
Auxiliary port protocol	RS232, RS485 (half duplex), TTL Trigger In, Ethernet
Auxiliary port output power	24 V regulated output with a maximum capacity of up to 29 W to power other subsea equipment
Connector type	Seacon 55 series, Subconn FCR 15 series or Schilling SeaNet

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
Software application	Genesis	
Processor	2 GHz	3 GHz Quad Core
Graphics	3D hardware accelerated graphics card	
SDK	Available on request for Windows and Linux	
Operating system	Microsoft Windows 7, 10, 11	

¹ The power consumption range quoted is accurate for a standalone unit and ignores cable losses

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

