Micron Gemini

Real-time micro multibeam imaging sonar

World's smallest multibeam sonar with improved image quality

The Micron Gemini is the latest addition to Tritech's Micron and Gemini product families and offers powerful, real-time sonar imaging in the body of a Gemini 720im.

With greatly improved image quality, a 90° horizontal field of view and 50m range, the Micron Gemini offers cost effective obstacle avoidance and navigation for small ROVs and AUVs, as well as utilisation with Tritech's Diver Mounted Display system (DMD).

With Tritech's advanced processing electronics, the Micron Gemini operates at 720kHz, to produce images of outstanding clarity. The system benefits from 128 beams and an effective angular resolution of 0.7°.

To ensure the most detailed image possible, the Micron Gemini utilises advanced adaptive processing by switching between Compressed High Intensity Radar Pulse (CHIRP) and Continuous Wave (CW) modes of operation.

With incredibly compact dimensions, the Micron Gemini can be used in applications where size is critical but a small mechanically scanning sonar doesn't offer the real-time imaging required. Alongside improved image quality, the Micron Gemini now includes a built in pressure sensor, depth sensor and optional AHRS.

The Micron Gemini is ideally suited for micro ROV/AUV applications when real-time, navigation imagery is required, and where space is restricted or weight is critical, such as diver helmet and pole mounted applications for Search and Recovery (SAR) operations.

The auxiliary port on the sonar allows for the daisy-chaining of sensors including the MicronNav 200 USBL Modem, Micron Battery Modem and Micron EchoSounder.

The Micron Gemini is supplied with Tritech's Genesis integrated software suite which communicates with the sensor by using Ethernet or Tritech's advanced Serial Multibeam Protocol (TSMP).

Genesis is also available for download from the Tritech website.

Benefits

- Improved image quality
- 90° horizontal field of view
- Ethernet and serial communications
- Serial Auxiliary port
- Low power

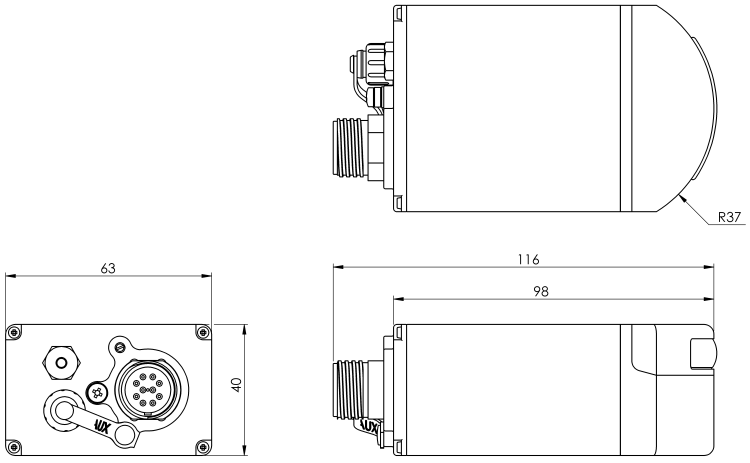
Features

- 20Hz update rate
- 300m or 750m depth rated
- CHIRP & CW processing
- Depth and pressure sensors
- Optional built in AHRS

Applications

- Obstacle avoidance
- Target Identification
- Navigation
- Diver operations

Specification



Drawing shown with Impulse MKS(W)-3L10 connector. All dimensions are in mm, not to scale.

Acoustic Specifications	
Operating frequency	720kHz
Angular resolution	2.34° acoustic, 0.7° effective
Range	0.2m to 50m
Number of beams	128
Horizontal beam width	90°
Vertical beam width	20° (±10° about horizontal axis)
Update rate (typical operation)	3 to 20Hz (range dependent)
Range resolution	8mm
Mode of operation	CW or CHIRP
Speed of Sound	Adaptive beamforming based on user specified speed of sound

Integrated Sensors	
Depth	Integrated pressure sensor
Temperature	Integrated temperature sensor
Attitude & Heading	AHRS sensor[1]

Interface	
Supply voltage	12 to 48V DC
Power requirement	5W - 8.5W (range dependent)
Main port protocol	Ethernet (100Base-T) and/or Serial (RS232 or RS485)
Auxiliary port protocol	Serial (RS232 or RS485)
Connector type	Main: Impulse MKS(W)-3L10, Impulse MKS(W)-307 & Tritech Micron Aux: Tritech Micron

Physical specification	
Depth rating	300m or 750m
Weight in air	0.429kg
Weight in water	0.240kg
Temperature rating	-10°C to 35°C (operating), -20°C to 50°C (storage)

[1]Additional extra.

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

Marketed by:

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