

MicronGemini 720s

Incredibly compact and light-weight, offering a cost-effective solution for obstacle avoidance and navigation of small ROVs/AUVs.

MicronGemini 720s is an obvious choice for the applications where size and weight are critical, but a small mechanical scanning sonar does not offer the required real-time imaging.

MicronGemini 720s is powered with Trittech’s robust hardware and state-of-the-art signal processing algorithms.

With Trittech’s advanced processing electronics, the MicronGemini 720s operates at 720 kHz.

In addition to its impressive compact dimensions, it has integrated sensors which provides a depth and temperature readings and an optional AHRS for bearing, roll and pitch.

MicronGemini 720s 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.



Applications

- Obstacle Avoidance
- ROV/AUV Navigation
- Target Detection

Features

- Very compact and light-weight
- 90° horizontal field-of-view
- Ethernet and serial comms
- Serial auxiliary port
- Low power
- 20 Hz update rate
- 300 m or 750 m depth rated
- CW & CHIRP processing
- Integrated sensor for depth and temperature reading
- Optional built-in AHRS

Best Suited	Depth Rated	Frequency	3 Year Warranty	SDK
ROV, AUV	300 or 750 m	720 kHz	✓	✓

Acoustic specifications	Low frequency mode
Operating frequency	720 kHz
Angular resolution	2.34° acoustic, 0.7° effective
Range	0.2 to 50 m / 79 to 164 ft
Number of beams	128
Beam width	Horizontal 90°, Vertical 20° (±10° about horizontal axis)
Range resolution	8 mm / 0.31 in
Update rate	3 to 20 Hz (range dependent)
Mode of operation	CHIRP and CW or Auto

Integrated sensors

Pressure sensor ¹	Depth accuracy: ±2 m
AHRS ²	Bearing accuracy: 2° RMS
	Roll & Pitch accuracy: 1.5° RMS (static)

Interface

Supply voltage	12 to 48 Vdc
Power requirement	8.5 W
Main port protocol	Ethernet (100Base-T) and/or Serial (RS232 or RS485)
Auxiliary port protocol	Serial (RS232 or RS485)
Connector type	Main: Aegir Marine MKS (W) BCR 07, Impulse MKS(W)-3L10 Aux: Tritech Micron

Physical specification

Dimensions	103.6 x 63 x 40 mm / 4.08 x 2.49 x 1.58 in (See Manual for Connector details)
Weight in air	0.43 kg / 0.97 lbs
Depth rating	300 m / 1148 ft or 750 m / 2460 ft
Weight in water	0.24 kg / 0.53 lbs
Temperature rating (operating)	-10 to +35 °C / -14 to +95 °F
Temperature rating (storage)	-20 to +50 °C / -4 to +122 °F

Software

Genesis: (Included)	OS: Microsoft Windows 7, 10, 11 - 2 GHz (minimum) 3 GHz Quad Core (recommended)
SDK	Windows, Linux (Available on request)

¹ Default. Applicable to 300 m depth rated variant only

² Optional extra

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

