

# Gemini 720iks

## Real-time multibeam imaging sonar

The Gemini 720iks is a shallow rated version of the industry recognised Gemini 720is, offering the same imaging performance as the Gemini 720is but in a more compact package. The smaller and lighter Gemini 720iks is ideal for small ROVs and shallow water operation where size and weight is critically important.

A real-time, high frequency imaging solution, the Gemini 720iks operates at 720 kHz and combined with Tritech's advanced processing electronics, it produces images of outstanding clarity, benefitting from 512 beams which results in a 0.25° effective angular resolution. The Gemini 720ik has been developed specifically for shallow water operations with low power consumption and Compressed High Intensity Radar Pulse (CHIRP) processing for greater definition at long range. The product also has an integrated Velocity of Sound

(VoS) sensor to ensure extremely accurate imaging and measurement.

The Gemini 720iks is supplied with Genesis, Tritech's data acquisition and logging software, which offers users the ability to operate a number of Tritech sensors using this single software program.



### Applications

- Obstacle Avoidance
- ROV/AUV Navigation
- Target Detection
- Diver Mounted Display
- Search and Recovery

### Features

- 720 kHz operating frequency
- Wide 120° horizontal field of view
- CHIRP processing
- Integrated velocimeter for accurate ranging
- Real-time video-like imagery
- Clear wide angle field of view
- Suitable for low visibility environments

Key Specification	Low Frequency Mode
Operating frequency	720 kHz
Angular resolution	1.0° acoustic, 0.25° effective
Supply voltage	19 V to 74 V DC
Power requirement	16 W - 27 W (range dependent)
Main port protocol	Ethernet
Depth rating	350 m / 1148 ft
Weight in air	1.40 kg / 3.08 lbs
Weight in water	0.43 kg / 0.96 lbs

Acoustic specifications	Low frequency mode
Operating frequency	720 kHz
Angular resolution	1.0° acoustic, 0.25° effective
Range	0.1 m - 120 m / 4 in - 394 ft
Number of beams	512
Horizontal beam width	120°
Vertical beam width	20°
Range resolution	4 mm / 0.2 in
Update rate	5 - 97 Hz (range dependent)
Mode of operation	CHIRP and CW
Speed of sound	Integrated VoS sensor

### Interface

Supply voltage	19 to 74 V DC
Power requirement	9.5 W - 27 W (range dependent) <sup>1</sup>
Main port protocol	Ethernet
Auxiliary port protocol	RS232, TTL in, pass-through power (2.5 A max)
Connector type	MAIN port: Impulse MKS(W)-307-FCR AUX port: Impulse MKS(W)-307-FCR

### Physical specification

Depth rating	350 m / 1148 ft
Weight in air	1.40 kg / 3.08 lbs
Weight in water	0.43 kg / 0.96 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	

<sup>1</sup> 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

