

# Gemini 720ik

Real-time multibeam imaging sonar



## Applications

- ROV/AUV navigation
- Obstacle avoidance
- Target recognition
- Search and Recovery
- Object detection

The Gemini 720ik 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 720ik is ideal for small ROVs and shallow water operation where size and weight is critically important.

## Benefits

- Near field focusing
- 4mm / 0.2in range resolution
- Clear wide angle field of view
- Suitable for low visibility environments
- Easier interpretation of sonar imagery

## Features

- 720kHz operating frequency
- CHIRP processing
- Wide 120° field of view
- Real-time updates for video like imagery
- Integrated velocimeter for accurate ranging

A real-time, high frequency imaging solution, the Gemini 720ik operates at 720kHz and combined with Trittech'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 720ik is supplied with Genesis, Trittech's data acquisition and logging software, which offers users the ability to operate a number of Trittech sensors using this single software program.

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

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

Interface	
Supply voltage	19V to 74V DC
Power requirement	16W - 27W (range dependent)
Main port protocol	Ethernet
Auxiliary port protocol	RS232, TTL in, pass-through power (2.5A max)
Connector type	MAIN port: Impulse MKS(W)-307-FCR AUX port: Impulse MKS(W)-307-FCR

Physical specification	
Depth rating	350m / 1148ft
Weight in air	1.40kg / 3.08lbs
Weight in water	0.43kg / 0.96lbs
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	2GHz	3GHz Quad Core
Graphics	3D hardware accelerated graphics card	
SDK	Available on request	
Operating System	Microsoft Windows 7, 10	

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

Not to scale. Measurements in mm.

