

# Gemini 720is

Real-time, forward-looking  
multibeam imaging sonar

The Gemini 720is is a key product in Trittech's renowned multibeam sonar range and offers a realtime, high frequency imaging solution. The Gemini 720is operates at 720 kHz and this combined with Trittech's state-of-the-art processing electronics, produces images of superb clarity in harsh and deep water applications.

The industry standard Gemini 720is sonar features, a wide 120 deg horizontal field of view and has improved attenuation of waterborne electrical noise for optimal imaging performance. An integrated velocity-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 720is 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 (SDK) are also available for Windows and Linux operation systems.



## Benefits

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

## Features

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

| Best Suited          | Depth Rated    | Frequency | 3 Year Warranty | SDK |
|----------------------|----------------|-----------|-----------------|-----|
| WROV, AUV, Trenching | 1000 or 4000 m | 720 kHz   | ✓               | ✓   |

| Acoustic specifications | Low frequency mode                               |
|-------------------------|--------------------------------------------------|
| Operating frequency     | 720 kHz                                          |
| Angular resolution      | 1.0° acoustic, 0.25° effective                   |
| Range                   | 0.1 - 120 m / 0.4 - 394 ft                       |
| Number of beams         | 512                                              |
| Horizontal beam width   | 120°                                             |
| Vertical beam width     | 20° (tilted down 10°)                            |
| Range resolution        | 4 & 8 mm / 0.2 & 0.3 in                          |
| Update rate             | 5 – 97 Hz (range dependent)                      |
| Mode of operation       | CHIRP and CW                                     |
| Speed of sound          | Integrated Velocity of Sound sensor for accuracy |

#### Interface

|                             |                                                                                                                                                |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage              | 19 to 74 Vdc                                                                                                                                   |
| Power requirement           | 16 - 27 W (range dependent) <sup>1</sup>                                                                                                       |
| 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, BH10M series, Scorpion 420-K-FCRL or Schilling SeaNet                                                        |
| VDSL cable length           | Maximum length for VDSL and power is 300 m / 984 ft, if power is provided locally the maximum length for VDSL communication is 500 m / 1640 ft |

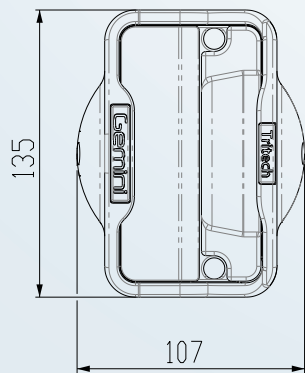
#### Physical specification

|                    |                                                                                  |
|--------------------|----------------------------------------------------------------------------------|
| Depth rating       | 1000 m / 3281 ft (Aluminium) or 4000 m / 13123 ft (Titanium)                     |
| Weight in air      | 3.40 kg / 7.50 lbs (Aluminium) or 5.00 kg / 11.02 lbs (Titanium)                 |
| Weight in water    | 1.30 kg / 2.86 lbs (Aluminium) or 3.00 kg / 6.61 lbs (Titanium)                  |
| Temperature rating | Operating: -10 to +35 °C / -14 to +95 °F; Storage: -20 to +50 °C / -4 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



Not to scale. Measurements in mm

