# Gemini 1200ik Sonar
## Sonar (1000m)



The Gemini 1200ik sonar offers dual-frequency operation: 720 kHz for long-range detection and 1200 kHz for high-resolution imaging, with a wide 120° horizontal field of view at both frequencies.

Built for harsh, noisy environments, it actively reduces interference from other subsea equipment, like thrusters, ensuring clear imaging. An integrated velocity-of-sound sensor enhances positional accuracy, while CHIRP processing improves target separation over long distances.

With the same size and interface as the 720ik, upgrading to the 1200ik (350 m) is straightforward. Enhanced resolution supports more accurate target classification, aided by SeaTec software for advanced decision-making

## Specifications

| | |
|---|---|
| **Product** | Gemini 1200ik Sonar (1000m) |
| **Country of origin** | UK |
| **Manufacturer** | Tritech International Limited |

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## Key features

- Switch between 720 kHz and 1200 kHz
- Wide 120° horizontal field of view
- CHIRP processing
- Integrated velocimeter for accurate ranging
- 350 m or 1000 m depth rating

- Real-time video-like imagery
- Long range object detection
- Short range detailed imaging
- Compact and easy to install
- Software development kit available

## Specifications

| Acoustic specifications | Low frequency mode | High frequency mode |
|---|---|---|
| Operating frequency | 720 kHz | 1200 kHz |
| Angular resolution | 1.0° acoustic, 0.25° effective | 0.6° acoustic, 0.12° effective |
| Range | 0.1 m - 120 m / 4 in - 394 ft | 0.1 m - 50 m / 4 in - 164 ft |
| Depth rating | 350 m | 1000 m |
| Weight in water | 0.44 kg | 0.92 kg |
| Number of beams | 512 | 1024 |
| Horizontal beam width | 120° | 120° |
| Vertical beam width | 20° | 12° |
| Range resolution | 4 mm / 0.2 in | 2.4 mm / 0.1 in |
| Update rate | 5 - 65 Hz (mode and range dependent) | |
| Mode of operation | CHIRP and CW | |
| Speed of sound | Integrated Velocity of Sound sensor for accuracy | |



Not to scale. Measurements in mm.

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## Interface

| | |
|---|---|
| **Supply voltage** | 19 V to 74 V DC |
| **Power requirement** | 9.5 W - 27 W (range dependent) |
| **Main port protocol** | Ethernet |
| **Auxiliary port protocol** | RS232, TTL in, pass-through power (2.5 A max) |
| **Connector type** | Impulse MKS(W)-307-FCR |

## Physical specification

| | |
|---|---|
| **Depth rating** | 350 m or 1000 m |
| **Weight in air** | 1.46 kg or 2.03 kg |
| **Weight in water** | 0.44 kg or 0.92 kg |
| **Temperature rating** | -10 °C to 35 °C |

## Software requirements

| | Minimum | Recommended |
|---|---|---|
| **Included** | Genesis | |
| **Graphics** | 3D hardware accelerated graphics card | |
| **SDK** | Available on request | |
| **Operating system** | Microsoft Windows 7, 10, 11 | |
| **Processor** | 2 GHz | 3 GHz Quad Core |



Not to scale. Measurements in mm.

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