

Gemini Imaging Sonars

Comparison sheet

Tritech has a range of Multibeam imaging sonars which can be used for shallow water operations and also deep water operations. The Gemini sonars are suitable for integration onto ROVs, AUVs, Vessel/Pole mounted and Diver Navigation Platforms.



Micron Gemini

Shallow water navigation and obstacle avoidance.



Gemini 720ik

Shallow water navigation, obstacle avoidance and target inspection.



Gemini 1200ik

Shallow water navigation, obstacle avoidance and high resolution target inspection.



Gemini 720is

Deep water navigation, obstacle avoidance and target inspection.

| Specification | Micron Gemini | Gemini 720ik | Gemini 1200ik | | Gemini 720is | |
|------------------------------|--|---------------|---------------|----------|------------------|----------|
| Operating frequency | 720 kHz | 720 kHz | 720 kHz | 1200 kHz | 720 kHz | |
| Horizontal beamwidth | 90° | 120° | 120° | | 120° | |
| Vertical beamwidth | 20° | 20° | 20° | 12° | 20° | |
| Effective angular resolution | 0.7° | 0.25° | 0.25° | 0.12° | 0.25° | |
| Maximum range | 50 m | 120 m | 120 m | 50 m | 120 m | |
| Range resolution | 8 mm | 4 mm | 4 mm | 2.4 mm | 4 mm | |
| Minimum range | 0.2 m | 0.2 m | 0.1 m | | 0.2 m | |
| Supply voltage | 12 to 48 V DC | 19 to 74 V DC | 19 to 74 V DC | | 19 to 74 V DC | |
| Comms | Ethernet Serial (RS232 / RS485) | Ethernet | Ethernet | | Ethernet VDSL | |
| Material | Aluminium | Aluminium | Aluminium | | Alu | Titanium |
| Depth rating | 300 m or 750 m | 350 m | 350 m | 1000 m | 1000 m | 4000 m |
| Weight in air | 0.43 kg | 1.40 kg | 1.46 kg | 2.03 kg | 3.4 kg | 5.0 kg |
| Weight in water | 0.24 kg | 0.43 kg | 0.44 kg | 0.92 kg | 1.3 kg | 3.0 kg |
| Temperature rating | -10 °C to 35 °C (operating), -20 °C to 50 °C (storage) | | | | | |

Underwater Targets and Identification

| | | |
|---|---|--|
|  | <div>Micron Gemini</div>  <div>Approx target range = 7.5 m</div> | <div>Tyres on seabed</div>  <div>Approx target size: 2 x 2 x 4 m</div> |
| | | |
|  | <div>Gemini 720ik</div>  <div>Approx target range = 4.5 m</div> | <div>Umbrella</div>  <div>Approx target size: 1.5 x 1.5 x 2 m</div> |
| | | |
|  | <div>Gemini 1200ik</div>  <div>Approx target range = 10 m</div> | <div>Steamboat Railings</div>  <div>Approx target size: 3 x 0.5 x 50 m</div> |
| | | |
|  | <div>Gemini 720is</div>  <div>Approx target range = 30 m</div> | <div>Offshore Wind Turbine</div>  <div>Approx target size: 10 x 10 x 10 m</div> |
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