VideoRay

Accessory Data Sheet
Gemini 720is

The Gemini 720is is the latest generation from Tritech's renowned multibeam sonar range and offers a real-time, high frequency imaging solution. The Gemini 720is operates at 720kHz and this combined with Tritech's state-of-the-art processing electronics, produces images of superb clarity.

With a 120° field of view and a fast update rate of 30Hz, the Gemini 720is is ideal for poor visibility environments. The Gemini 720is is supplied with Seanet Pro, Tritech's data acquisition and logging software, which offers users the ability to network and operate the sonar along with a range of other Tritech sensors from a single software interface.

The Gemini stand-alone software also provides users with additional control over the Gemini 720is and can be upgraded to Gemini SeaTec to provide a variety of target classification and tracking capabilities. The ability to record data in a range of digital video formats and output screen shots for review comes as standard.

The product offers world-class 97Hz update rate at 1 m range for video-like imagery. Target tracking algorithms developed by SeeByte are embedded with in the Gemini software as standard.

FEATURES
- 720kHz operating frequency
- CHIRP processing for high resolution imagery
- Wide 120° field of view
- Real-time updates for video-like imagery
- Integrated velocimeter for accurate ranging
- Ethernet or VDSL communications
- Software Development Kit available
- SeeByte embedded target algorithms

ACOUSTIC SPECIFICATIONS

Operating Frequency	720kHz
Angular Resolution	1.0° acoustic, 0.25° effective
Range	0.2m - 120m
Number of Beams	512
Horizontal Beamwidth	120°
Vertical Beamwidth	20° (±10° about horizontal axis)
Update Rate	5 - 30Hz (range dependent)
Range Resolution	8mm
CHIRP Support	Yes
Speed of Sound	VoS sensor

INTERFACE

Supply Voltage	19V to 74V DC
Power Requirement	18W - 27W (range dependent)
Main Port Protocol	Ethernet or VDSL
Additional I/O	RS232, RS485 (half duplex), TTL in, Ethernet
Connector Type	SeaCon 55 series, SubConn FCR 15 series or Schilling SeaNet (single port as standard)
VDSL Cable Length	Maximum length for VDSL and power is 300m, if power is provided locally, the maximum cable length for VDSL communication is 500m

PHYSICAL SPECIFICATIONS

Depth Rating	1000m (3280 ft) (Aluminum) 4000m (13,120 ft) (Titanium)
Weight in Air	3.35kg (Aluminum) 5.0kg (Titanium)
Weight in Water	1.3kg (Aluminum) 3.0kg (Titanium)
Temperature Rating	-10°C to 50°C (operating), -20°C to 50°C (storage)

BENEFITS

- Near field focusing
- 8mm range resolution
- Clear wide angle field of view
- Suitable for low visibility environments
- Easier interpretation of sonar imagery

APPLICATIONS

- ROV navigation
- Obstacle avoidance
- Search and Rescue (SAR)
- Taret recognition
- Subsea monitoring and inspection
- Subsea monitoring and inspection
- Object detection

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