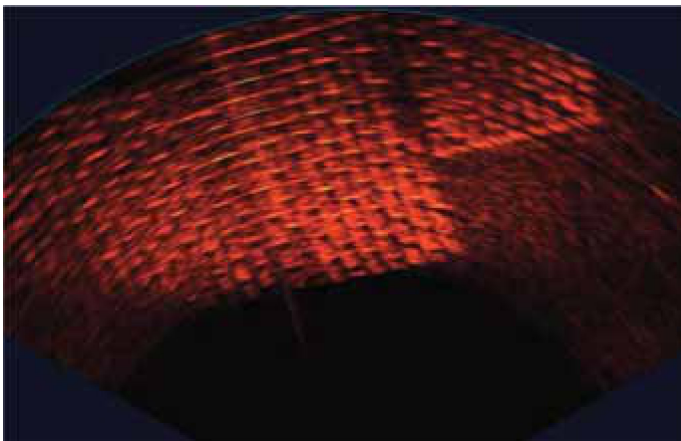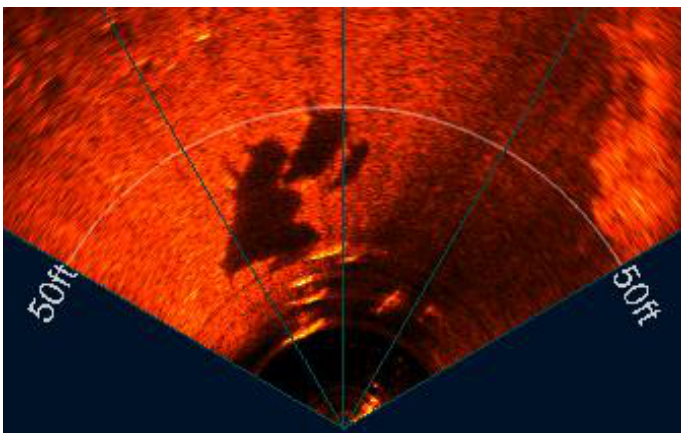# Gemini 720id

Multibeam Imaging Sonar

Ideal solution for real time target tracking and visualisation in deep water

The Gemini 720id is a deep-rated real time multibeam imaging sonar. Utilising an array of transducers, the 720id provides the operator with 120 degree constant field of vision of the underwater scene ahead. The Gemini 720id is part of Tritech's Gemini multibeam family. Network all your Tritech sensors together via Seanet Pro Software, choose the Gemini Standalone Software for control and display or upgrade to Gemini SeaTec Software for target tracking and object detection.

Gemini sonar image of a pipeline mattress.

Gemini sonar image of a school of dolphins.

Benefits
• Near field focussing
• 8mm range resolution
• Integrated velocimeter for accurate ranging
• 120m range for easy navigation
• Fast update rates for video-like imagery
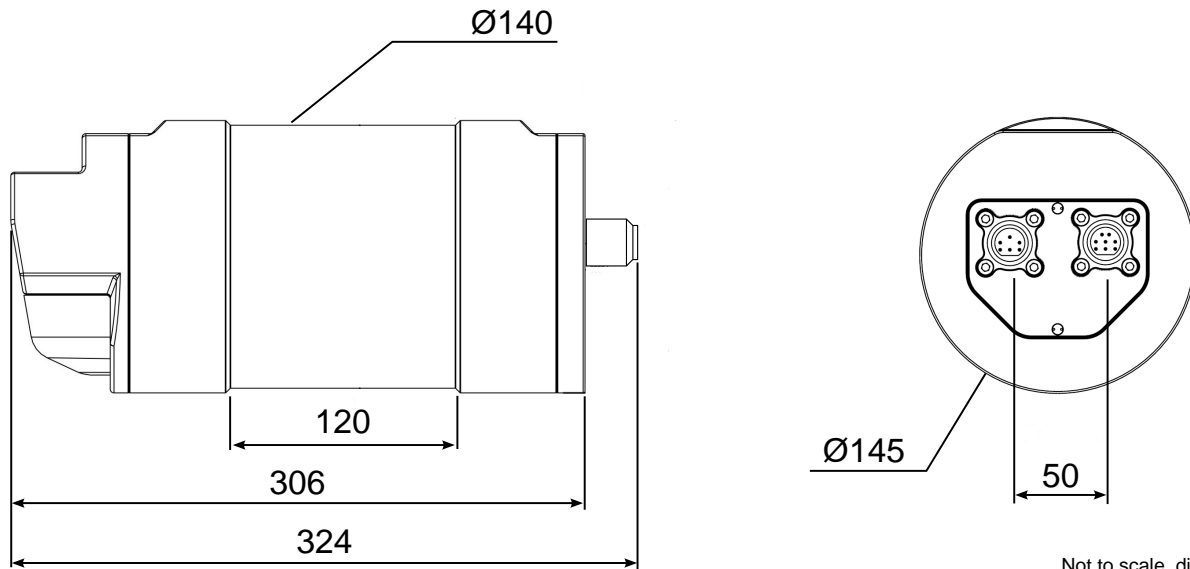• Integrated Ethernet and VDSL

Features
• 4000m depth rating
• Real time imaging sonar
• Wide field of view
• Ethernet or VDSL communications
• Network all Tritech sensors in Seanet Pro
• Gemini SeaTec Software upgrade available
• Software Development Kit available

Applications
• ROV/AUV navigation
• Obstacle avoidance
• Subsea construction and engineering
• Search and salvage
• Subsea monitoring and inspection
• Mammal detection
• Object detection
• Target recognition and tracking

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Specification

Ø140

120

306

324

Ø145

50

Not to scale, dimensions in mm.
Shown with Burton connector. Other connectors are available

Acoustic	
Operating frequency	720kHz
Angular resolution	1.0° acoustic, 0.5° effective
Transducer Angle	10° downward tilt
Scanning sector	120°
Number of beams	256
Vertical beamwidth	20°
Range	0.5 to 120m
Scan rate	5-30Hz (range dependent)
Range resolution	8mm (range dependent)

Electrical and Communications	
Power consumption	35W max (range dependent, head unit only)
Supply voltage	20 - 75V DC
Communication protocols	Ethernet (up to 80m) or VDSL (up to 1000m)
Communication options	RS232, Isolated TTL in
Connector types	Burton (Impulse Titan or Subconn optional)
VDSL cable length	Maximum length for VDSL and power is 300m, if power is provided locally (e.g., by the ROV) then maximum cable length for VDSL communication is 1000m.

Physical	Aluminium body	Titanium body
Weight in air	8kg	12kg
Weight in water	3.5kg	7.5kg
Depth rating	4000m	
Operating temperature	-10 to 35°C	
Storage temperature	-20 to 50°C	

Specifications subject to change according to a policy of continual development.

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