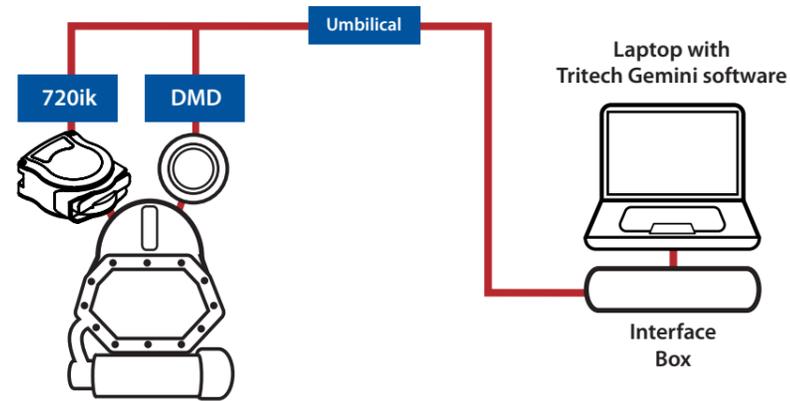


# Diver Mounted Display (DMD)

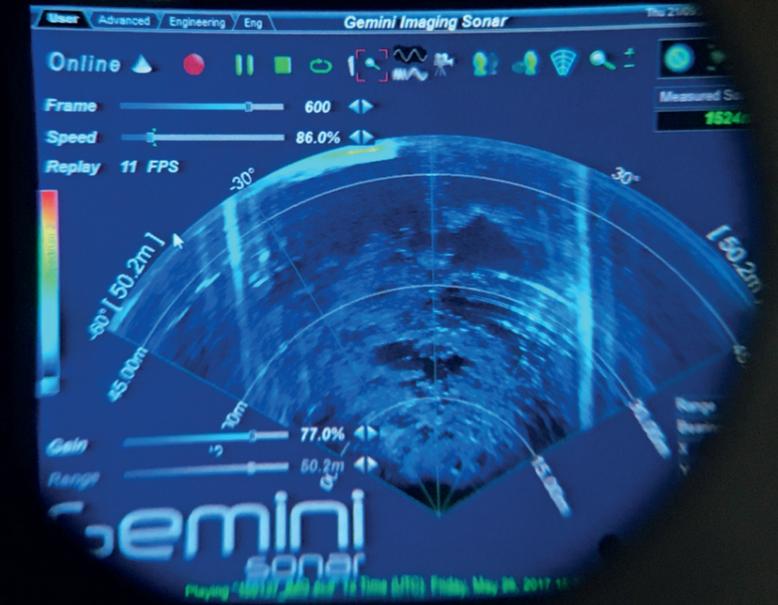
with Gemini multibeam imaging sonar technology



DMD specification		Monocle specification	
Power requirement	DC powered (battery)	Power requirement	DC powered (battery)
Depth rating	100m	Depth rating	100m
Cable length	80m	Display input	SVGA
Topside interface	Ethernet	Display resolution	800x600

Acoustic specification	Gemini 720im	Gemini 720ik	Gemini 1200ik	
Operating frequency	720kHz	720kHz	720kHz	1200kHz
Angular resolution (acoustic, effective)	2.34°, 0.7°	1.0°, 0.25°	1.0°, 0.25°	0.6°, 0.12°
Range	0.2m - 50m	0.2m - 120m	0.1m - 120m	0.1m - 50m
Number of beams	128	512	512	1024
Horizontal beamwidth	90°	120°	120°	
Vertical beamwidth	20°	20°	20°	12°
Update rate	3 - 20Hz	5 - 97Hz	5 - 65Hz	
Range resolution	8mm	8mm	4mm	2.4mm
CHIRP support	Yes	Yes	Yes	
Speed of sound	Manual Entry	VoS sensor	VoS sensor	

Sonar specification	Gemini 720im	Gemini 720ik	Gemini 1200ik	
Depth rating	300m or 750m	350m	350m	
Weight in air	0.435kg	1.40kg	1.47kg	
Weight in water	0.244kg	0.43kg	0.5kg	
Temperature rating (operating, storage)	-10°C to 35°C, -20°C to 50°C			



## Diver Installation

Suitable for helmet and full face mask diving

Marketed by:

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Outstanding Performance in Underwater Technology



# Diver Mounted Display (DMD)

with Gemini multibeam imaging sonar technology

## Main features

Compact, lightweight and portable

Durable and robust design

Crisp, clear wide angle field of view

Ideal for low visibility environments

SVGA Monocle diver display

CHIRP processing

The design of the Gemini multibeam sonars provide impressive performance in a compact unit for shallow water operations. With the recent addition of the Gemini 1200ik dual frequency sonar, high resolution images can be captured in low to zero visibility water. Each sonar is manufactured with an integrated INODIVE rail allowing it to be simply installed on a range of diver helmets and full face masks.

The Gemini multibeam series have the capability to be connected directly to a subsea computer operating the standard Gemini software. The signal can be shared with the surface over the umbilical, where the surface support team can control the sonar while also assisting the diver to interpret the data. The surface support team can also share additional data by sending this down to the Diver Mounted Display (DMD) Monocle.

By using the INODIVE mounting system the Gemini multibeam sonars can be positioned and relocated with ease. This allows the sonar to easily be relocated by sliding it off the helmet and attaching it to a pistol grip for handheld use in difficult to reach situations, or where a lower viewing angle is required.



*"The Gemini and DMD worked seamlessly together and turned a very difficult task in dark water into a simple operation"*

Sam Lapinsky

Owner of Innovative Dive Equipment and public safety diver

*"I was so impressed with the simplicity and effectiveness of the system when fitted to my helmet; allowing me to move directly to targets of interest that could just not be seen without a sonar"*

Les Gorski

Designer of the Gorski Helmet

## Case study

The multibeam sonar was fitted to the Gorski GS3000SS helmet and the Diver Mounted Display (DMD). Both sensors were fitted utilising the INODIVE accessory mounting rail system, providing easy installation and positioning.

Visibility at the test site was poor - less than 0.5m, resulting in the effectiveness of the system to be fully tested and demonstrated. On entering the water the diver was immediately reliant on the sonar imagery displayed on the DMD. The diver was instantly able to identify the outline of a sunken boat and proceed directly to the target. The diver was only able to see the boat without the aid of the sonar, once he was within approximately 0.5 metres. Whilst standing on the boat he was able to view the outline of it via the sonar image on the DMD.

The surface support diver identified a target of interest on the sonar image displayed top-side, at a range of 20m and alerted the diver. The diver proceeded to the second target utilising the sonar image displayed on the DMD. Target identified was a discarded chair which was then recovered.

The ability to easily identify areas of potential interest and to quickly navigate to them illustrates the significant benefits of using the DMD with Gemini Multibeam sonar.

