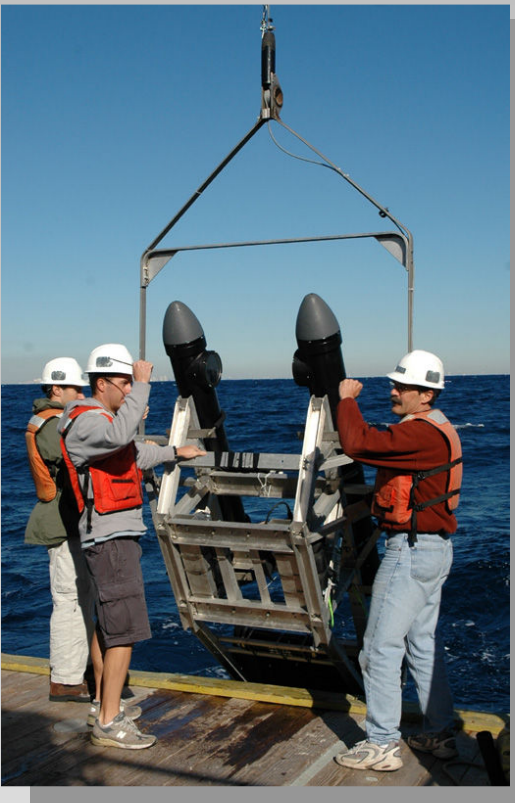




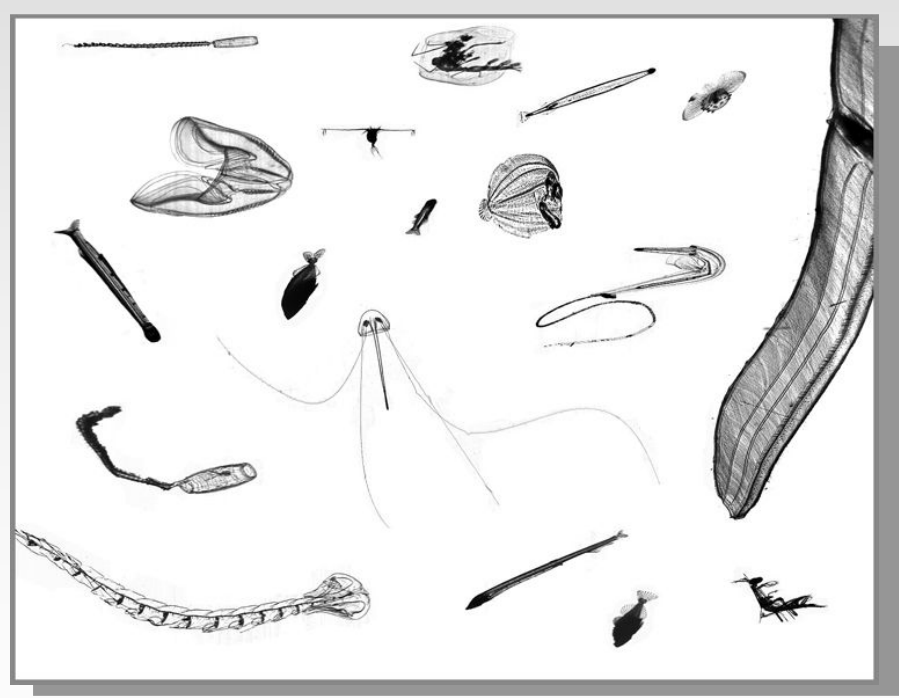
# Plankton Imaging



ISIS instruments utilize a Patent Pending technology (Cowen & Guigand) that uses line scan cameras from the machine vision industry to scan the water and provide a continuous imaging with 60 micron pixel at 4-5knots speed.

The line scan camera is coupled with a back illumination technique (shadowgraph) that provides exceptional resolution and depth of field while providing a telecentric image (magnification is not affected by distance from object to lens). The data is either ported to shipboard via Fiber-optic towing cable or recorded internally.

ISIS instruments are designed to image large volume of water in order to study relatively rare organisms (fish larvae). The vehicles and its imaging system are configurable and give the versatility needed for studying a range of organism from small, abundant plankton, to larger and rarer specimens (i.e fish larvae).



### ISIIS-2



This vehicle is the newest and most advanced design. The first model is being delivered and ocean deployments are scheduled in the spring of 2009. With a depth rating of 200m, the vehicle is capable of pre-programmed undulation and can be towed off the side of the ship to avoid the disturbances created by the tether. Particular attention has been given to provide for undisturbed flow path in front of the imaging view-ports. This vehicle is equipped with environmental sensors (CTD, PAR, Fluorometer) and a navigation ADCP. Plankton images are transferred via fiber-optic to the ship. This vehicle can also be delivered as a basic non-undulating platform, and fitted with your own environmental sensors.

#### Specifications

<i>Dimensions:</i>	73 x 55 x 48 Inches	<i>Volume imaged:</i>	130 L/sec
<i>Weight in Air:</i>	975 Lbs	<i>Data Transfer Rate:</i>	80 MB/sec
<i>Weight in Water:</i>	30 Lbs	<i>Required Towing Equipment:</i>	Fiber-Optic Winch
<i>Depth Rating:</i>	200 m Standard		Electro-Optic Slip Ring
<i>Tow Speed:</i>	5 Knots		Electro-optic Cable

### ISIIS-GigE



This vehicle is in development and will provide a lower cost alternative to ISIIS-2.

ISIIS-GigE is a non undulating platform. Its position in the water column is function of the length of tether deployed.

The vehicle stores data onboard and only requires the use of a standard oceanographic CTD winch system.

As for ISIIS-2, particular attention has been given to provide undisturbed flow path in front of the imaging view-ports. This vehicle is equipped with a CTD and a navigation ADCP.

#### Specifications

<i>Dimensions:</i>	85 x 61 x 29 inches	<i>Volume Imaged:</i>	130 L/sec
<i>Weight in Air:</i>	700 Lbs	<i>Data Transfer Rate:</i>	80MB/Sec
<i>Weight in Water:</i>	150 Lbs	<i>Required Towing Equipment:</i>	Std CTD Winch System
<i>Depth Rating:</i>	200 m Standard		
<i>Tow Speed:</i>	5 Knots		

Ask us about ISIIS onboard AUVs, ROVs and Mooring Buoys and for possible applications in the aquaculture industry, cargo ship ballast monitoring or applications in the Defense industry.

Specifications subject to change without notice

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