

ISIIS-DPI Plankton Shadowgraph Camera

Model: ISIIS-DPI P125F

Overview

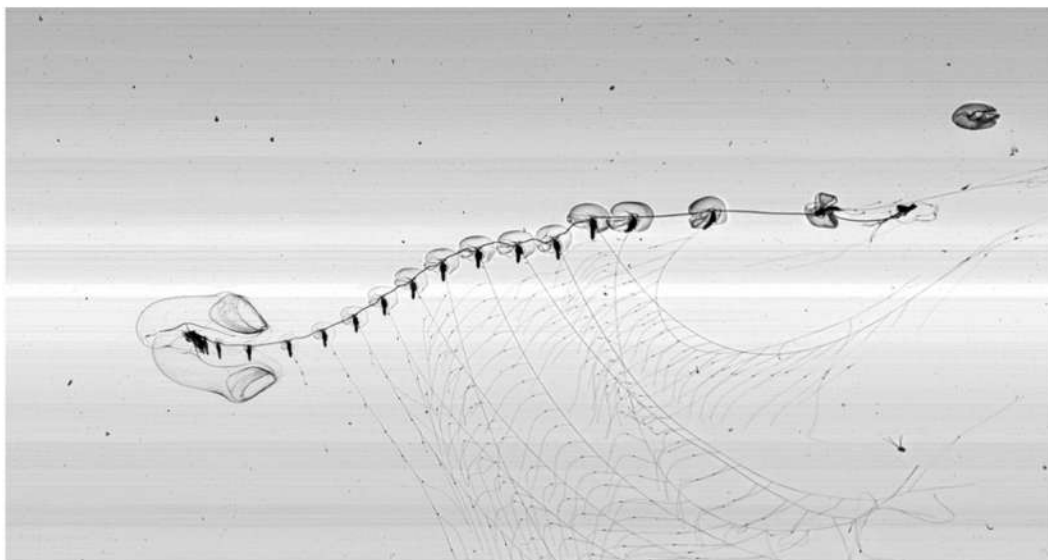
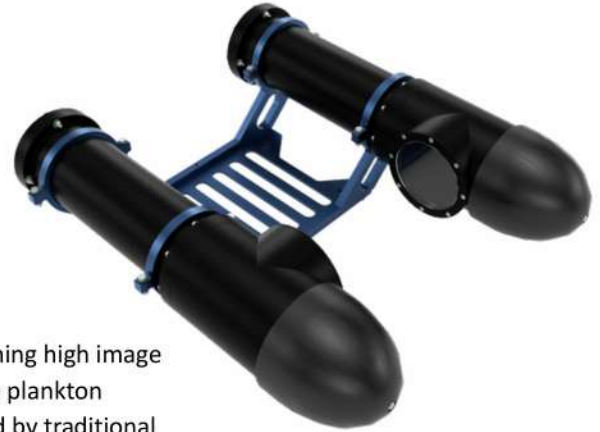
The **ISIIS-DPI P125F** is a workhorse member of the ISIIS-DPI **telecentric shadowgraph** plankton cameras family, engineered for high-speed, large-volume sampling of **plankton and particles larger than 1 mm**. Proven through long-term ecological transects and broad-scale oceanographic surveys, the P125F is optimized for applications where consistent coverage, high sampling efficiency, and robust operation are essential.

Its ability to operate at elevated tow speeds up to 6.5 knots, while maintaining high image quality, makes it particularly well suited for ecosystem-scale studies, sparse plankton distributions, and fragile gelatinous organisms that are often undersampled by traditional methods.

Configured with a high-speed line-scan camera and a folded optical-path architecture designed to improve hydrodynamics and reduce instrument drag, the P125F delivers a field of view of approximately **120 mm × 120 mm with a depth of field of 30 cm, resulting in a sampling capability of up to 180 liters of water per second**.

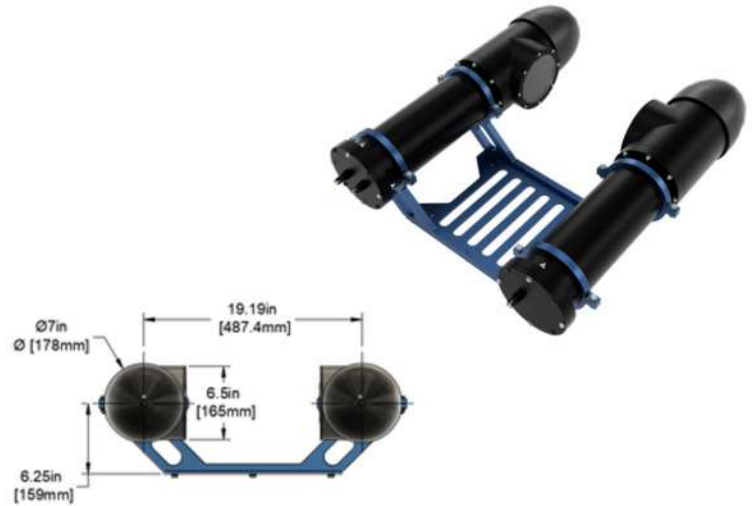
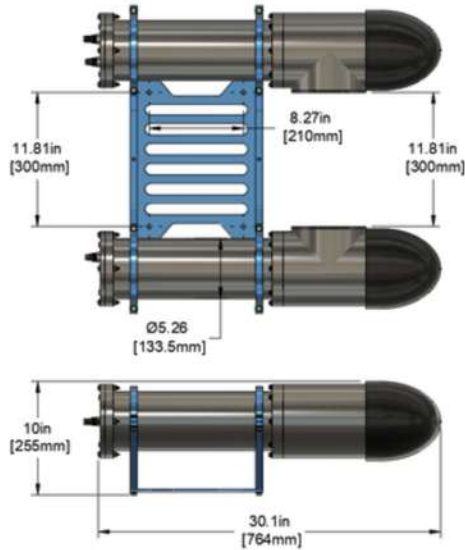
Multiple P125F units can be integrated onto a single platform to increase environmental coverage and provide simultaneous observations across a broader regions of the water column. The folded optical design also contributes to a more compact and streamlined instrument profile while maintaining high imaging performance, achieving a spatial resolution of approximately **60 $\mu\text{m}/\text{pixel}$ at a magnification of 0.12 \times** .

The P125F is depth-rated to 500 meters, making it suitable for a wide range of coastal and open-ocean survey applications.



Credit: Plankton Ecology Lab - Oregon State University - Hatfield Marine Science Center

ISIIS-DPI Plankton Shadowgraph Camera | P125F

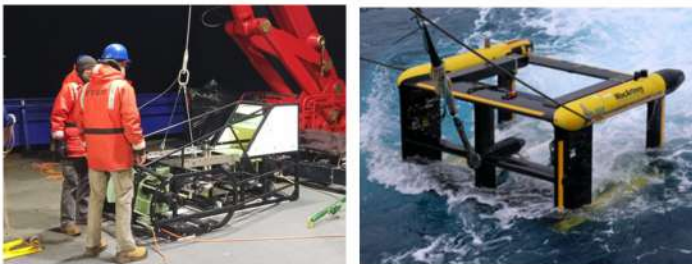


Features

Standard Field of View:	120 mm x 120 mm	Camera resolution:	2048 pixels (2k line-scan), 7µm pixel
Standard depth of Field:	300 mm	Camera sensor:	Gpixel GL3504 CMOS multi-line global-shutter line-scan sensor
Pixel Resolution:	60 µm/pixel	Camera Scanning Rate:	58 KHz
Recommended for Particles:	>1 mm	Image File Size	~4 MB / frame
Max. Water Speed	up to 6.5 knots	Power:	12V @ 6 Watts
Water Sampled per min.	up to 108 L /min	Depth Rating:	500m
Light:	Blue 475nm	Connectors:	MCBH8M-CAT, 2 x MCBH2M-Power
Material:	Hard anodized Aluminum Sapphire viewport	Communication:	Giga-ethernet with Jumbo Frames
Weight in air:	28 kg		
Weight in water:	3.5 kg		

Deployment Methods

Towed Vehicles



Plankton Nets

