



DATA SHEETS & PRODUCT INFORMATION

Observer & Nova Imaging Systems



Capture **Crisp, Evenly Illuminated** Stills Images

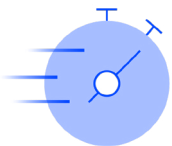
Our high-resolution Observer cameras paired with our Nova LED panels produce crisp, evenly illuminated stills images at high vehicle speeds. On-board image enhancement and colour-correction machine-learning produces true-colour images to accurately see your subject.

Benefits & Features



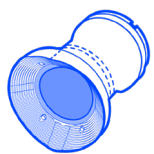
Clarity at High Speeds

Our high-sensitivity sensors enable short exposures so you can achieve clarity even at high vehicle speeds



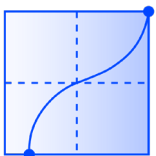
Real-Time Image Processing

Onboard image enhancement corrects water distortions and light illumination to deliver real-time actionable data



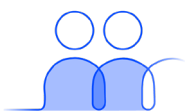
Designed for Machine Vision

High dynamic range images capture light and dark areas for effective tracking and mosaicing



True Colour Images

Automated machine-learning delivers colour correction that brings out true target colours



Customer Support

Our team partners with you to find the best solution for your project

Find The **Right Product** For Your Project

Each Observer and Nova package produces high-resolution stills images but there are a few options to best suit your project/deployment.



Observer & Nova Micro

Our compact imaging system for small, high-speed vehicles - the perfect combination of speed & range.

[View All Details](#)



Observer & Nova Pro

Our longest-range imaging system with actively cooled sensors and ultra high-density Nova LED panels with over 700,000 lumens.

[View All Details](#)



Recon AUV Imaging

Complete, ready-to-deploy imaging module sections specifically designed for your AUV.

[Click here to learn more.](#)

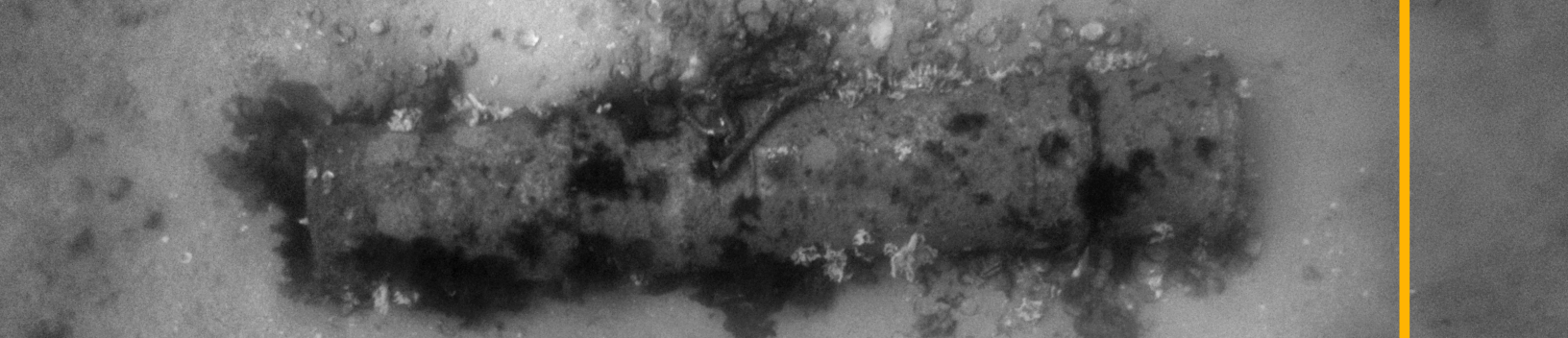


IMAGING SYSTEMS

Observer & Nova Micro

The Observer & Nova Micro imaging system was designed to collect crisp, high-resolution images on small high-speed vehicles.

The highly compact camera enables simple integration into tight platforms, and our Nova LED panel can be adapted to meet any vehicle needs. The system is highly versatile and can be optimized for any project goals, offering both colour and monochrome images in 5MP and 12MP.



At A Glance

An overview of the main benefits to using the Observer & Nova Micro for your project.

- ☰ Colour or monochrome real-time enhancement
- 📷 Compact 12MP camera
- 💡 Over 350,000 lumen LED strobe for 7m range
- 🎥 Captures light and dark areas

Specifications

Integration drawings available - [contact sales](#)

Feature	Observer Micro	Observer Micro - 4K
Sensor	CMOS 2.3", Global Shutter	CMOS 1.1", Global Shutter
Type	Monochrome	Monochrome & Colour
Resolution	2464 x 2056 - 5MP	4112 x 3008 - 12MP
Lens	6mm, F2.1	8.5mm, F2.8 (mono), 12mm, F2.0 (colour)
Bit-Depth	12 bit	12 bit
Max Range	7m	7m
Field of View	H:50°, V:43°	H:56°, V:45° (mono), H:60°, V:46° (colour)
Frame Rates	4 FPS (max)	4 FPS (max)
Time Synchronization	PPS, ZDA Timestamp	PPS, ZDA Timestamp
Metadata	EXIF tags: Time, Navigation, Camera Parameters	EXIF Tags: Time, Navigation, Camera Parameters
Power Consumption	5W (plus LED)	5W (plus LED)
Weight	Water: 0.6kg, Air: 0.9kg	Water: 1.6kg, Air: 2.5kg
Depth Rating	1000m or 6000m	1000m or 6000m
Data Output	8-bit JPEG or TIFF processed 12-bit RAW or TIFF images	8-bit JPEG or TIFF processed 12-bit RAW or TIFF images



Specifications

Integration drawings available - [contact sales](#)

Feature	Nova Micro
Type	LED Strobe
Light Output	350,000 Lumens
Control	Synchronized to camera exposure
Depth	1000m or 6000m
Power Consumption	5W - 50W - depends on settings & range
Weight	LED: Water: 2.9kg, Air: 1.6kg LED Bottle: Water: 2.5kg, Air: 4kg





IMAGING SYSTEMS

Observer & Nova Pro





The Observer Pro imaging system was designed to push the limits of long-range imaging on AUVs and achieve wide-area optical surveys up to and exceeding 10m range.

Actively cooled sensors come together with incredibly high output Nova LED panels to achieve blur-less images at 6 knots to enable ultra short exposure times. The 5MP sensor limits data storage requirements for long duration missions. The product can be controlled as a stand-alone imaging system, or seamlessly integrated with a laser scanner to automatically sequence images between laser profiles.



At A Glance

An overview of the main benefits of using the Observer & Nova Pro for your project.

-  Long range surveys at 10+m altitudes
-  Actively cooled 5MP sensor
-  Real-time enhancement enables machine learning
-  Over 600,000 lumen LED strobe

Specifications

Integration drawings available - [contact sales](#)

Feature	Observer Pro
Sensor	sCMOS 4/3", Actively Cooled, Global Shutter
Type	Monochrome & Colour
Resolution	2560 x 2160 - 5.5MP
Lens	12mm, F2.0, Low distortion
Bit-Depth	16-Bit
Max Range	> 10m
Field of View	H:50°, V:50° (flat) H:68°, V:59° (dome)
Frame Rates	5 FPS (max)
Time Synchronization	PPS, ZDA Timestamp
Metadata	EXIF tags: Time, Navigation, Camera Parameters
Power Consumption	35W (plus LED)
Weight	Water: 4.4kg, Air: 7.5kg
Depth Rating	4000m or 6000m
Data Output	16-bit RAW or TIFF images, 8-bit JPEG or TIFF (processed)



Specifications

Integration drawings available - [contact sales](#)

Feature	Nova Pro
Type	LED Strobe
Light Output	350,000 Lumens per panel
Control	Synchronized to camera exposure
Depth	4000m or 6000m
Power Consumption	5W - 60W - depends on settings & range
Weight	LED: Water: 2.9kg, Air: 1.6kg LED Bottle: Water: 2.5kg, Air: 4kg

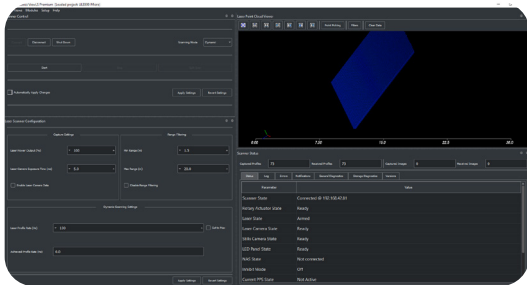


Raw Image

Colour-Enhanced

Browse Other Products

For more information on all of our products visit www.voyis.com or [contact sales](#).



ViewLS

Our ViewLS software is an all-in-one software interface for directly controlling Voyis products. It gives you the ability to view the system's status and diagnostics and to view data in real-time.

[This is included with all imaging systems.](#)



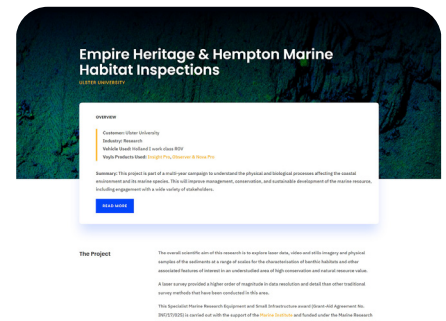
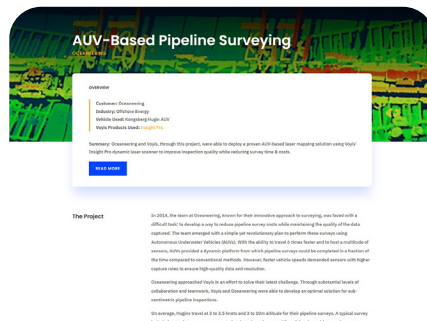
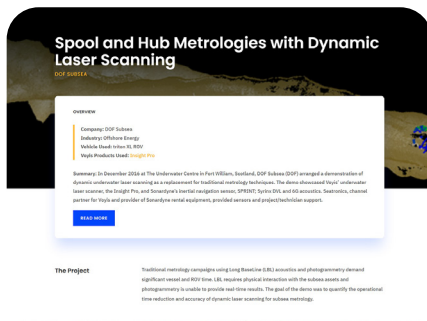
Laser Scanners

Our Insight Underwater Laser scanners seamlessly integrate to provide quantitative data to your imaging surveys.

[Click here to learn more.](#)

Case Studies

Click on a case study to read how some of our customers have used Voyis products.



VOYIS 

Illuminate The Unknown

For More Information Contact sales@voyis.com

www.voyis.com

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