



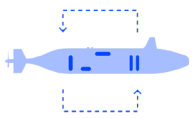
DATA SHEETS & PRODUCT INFORMATION

Insight Underwater Laser Scanners

Capture **Incredibly Detailed** 3D Data

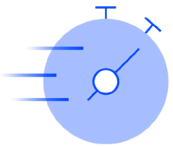
Voyis' Insight Underwater Laser Scanners capture 3D data with submillimeter accuracy to help you see the depths, just like we see the surface. Assets in remote subsea environments can be modelled from a dynamic subsea vehicle or static installation, with all data processed in real-time so that results are immediately available for review.

Benefits & Features



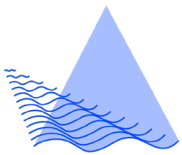
Vehicle Integration

Proven and reliable integration options for subsea vehicles using an easy-to-use software API interface



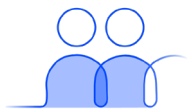
Real-Time Data

3D data is processed onboard the sensor to deliver real-time actionable data for machine learning



Dynamic Scanning

Proven integration with common navigational sensors enables scanning from moving subsea vehicles



Customer Support

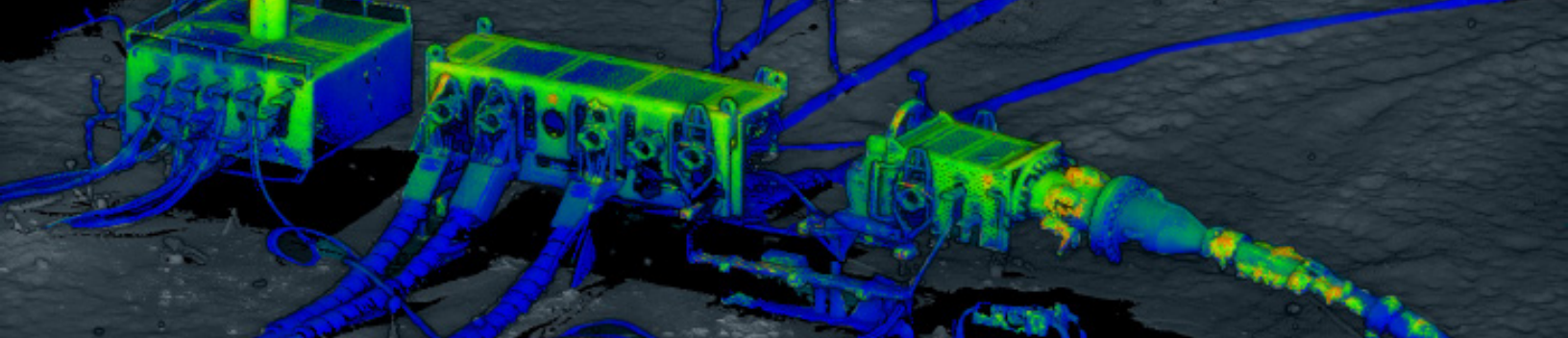
Our team partners with you to find the best solution for your project



Get the Best Data Possible

Sensors that push the limits to deliver the highest resolution, accuracy, and range at any vehicle speed





Find The **Right Product** For Your Project

Each Insight laser scanner produces high-resolution laser data but there are a few options to best suit your project/deployment.



Insight Nano (formerly ULS-100/200)

Compact size for 3D modelling small spaces & short to mid-range targets. Simplified static scanning with embedded actuator.

Depth rating: 1000m

Scan range: 0.13m - 1m & 0.4m - 2.5m (XR)

Points per line: 2064

[View All Details](#)



Insight Micro

(formerly ULS-500 Micro)

A long-range laser scanner but in a smaller package making it suitable for small vehicles.

Depth rating: 1000m

Scan range: 1.2m - 7m

Points per line: 2464

[View All Details](#)



Insight Pro

(formerly ULS-500 PRO)

Our longest-range scanner providing the highest quality data possible from larger vehicles.

Depth rating: 4000m & 6000m

Scan range: 1.5m - 15m

Points per line: 2048

[View All Details](#)





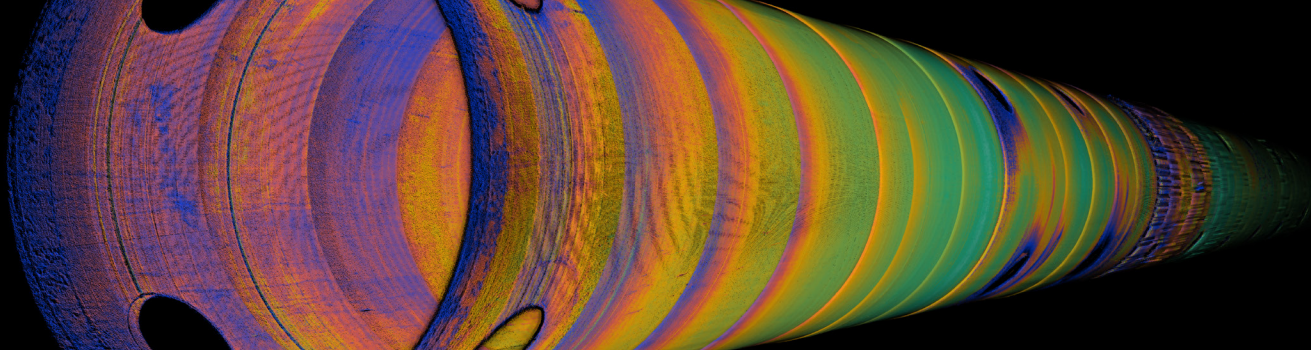
COMPACT LASER SCANNERS

Insight Nano

The Insight Nano is a compact laser scanner designed for straightforward 3D modelling. The integrated actuator and simple user interface enable non-intrusive qualitative inspection without any external aiding sensors.





The system is capable of integration with a variety of deployment vehicles, including small ROVs and pipe crawlers, to deliver high resolution data in confined spaces like pipes, tunnels, and flume tanks.

This new generation Nano is available with time synchronization, dynamic scanning, and high-speed scanning options.




At A Glance

An overview of the main benefits to using an Insight Nano for your project.

-  3D modelling in confined spaces, in air or water
-  Sub-millimeter resolution
-  Accurate measurements without external sensors
-  High-speed rotational or dynamic scanning

Specifications Integration drawings available - [contact sales](#)

Feature	Nano - Short Range	Nano XR - Medium Range
Scan Range *	0.13m - 1.0m	0.4m - 2.5m
Points Per Line **	2064 data points 50° (water) 70° (air) Angle of View	
X Resolution (Along laser line)	0.1mm @ 0.13m 0.3mm @ 0.5m 0.5mm @ 1.0m	0.2mm @ 0.4m 0.7mm @ 1.5m 1.0mm @ 2.5m
Y Resolution (Profile to profile)	0.5mm @ 0.13m 0.1mm @ 0.5m 0.2mm @ 1.0m	0.1mm @ 0.4m 0.3mm @ 1.5m 0.5mm @ 2.5m
Z Resolution (Depth Resolution)	0.05mm @ 0.13m 0.1mm @ 0.5m 0.4mm @ 1.0m	0.05mm @ 0.4m 0.5mm @ 1.5m 1.2mm @ 2.5m
Profile Rate	35 Hz Range limiting option for higher captured rates	
Laser 	Max output: <5mW Pulse duration: 1mSec to CW Wavelength: 450nm or 520nm	WARNING - LASER RADIATION AVOID DIRECT EYE EXPOSURE Class 3R Laser Product
Power Consumption	25W, 24V	
Data Interface	Ethernet, TCP/IP Communication	
Depth Rating	1000m	
Data Storage	Topside or Network Storage	
Data Acquisition	ViewLS Software C++ API Factory Calibrated Acquisition Modes: Precision Scanning, High-speed Scanning & Dynamic Scanning	
Export Data Formats	.XYZ (CSV), LAS Publishing	
3rd Party Integration	EIVA NaviSuite, QPS QINSy, HYPACK HYSWEEP, 4D NAV	

* Range measured from Scanner Origin, defined as the center of rotation

** Angle of view is measured at center of Scan Range

Enabling every subsea vehicle to see the depths **like we see the surface.**



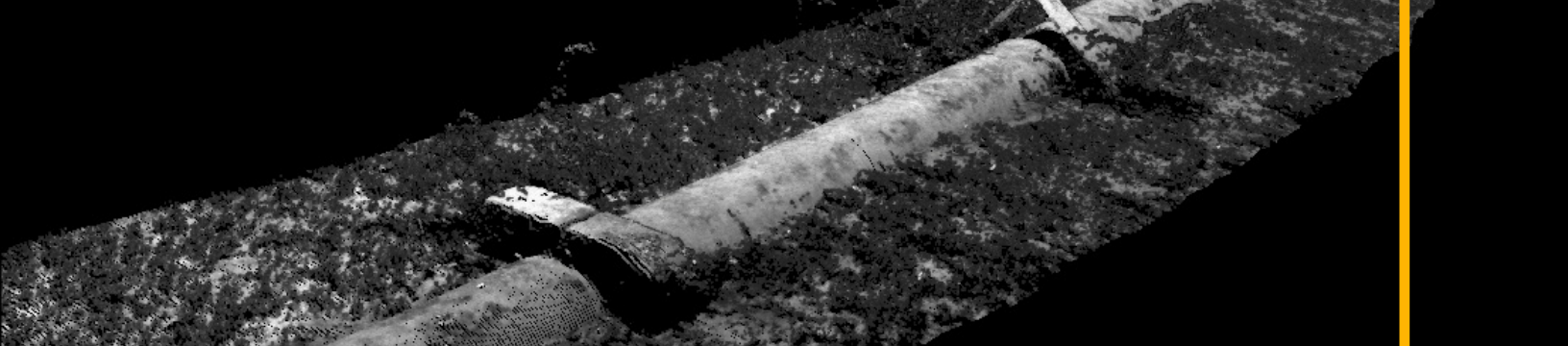


STATIC & DYNAMIC LASER SCANNERS

Insight Micro

The Insight Micro enables small vehicle platforms to perform high accuracy inspection tasks with tightly integrated laser and stills data. The package provides long range data collection (7m) in a compact and low power draw package.

The system has been integrated with AUVs like the REMUS 600, and ROVs like the Saab Falcon, utilizing its software API and time synchronization to enable rapid adoption onto existing vehicle assets. Laser and Image data is processed and enhanced in real-time onboard the system to deliver actionable data for machine learning applications.




At A Glance

An overview of the main benefits of using an Insight Micro for your project.

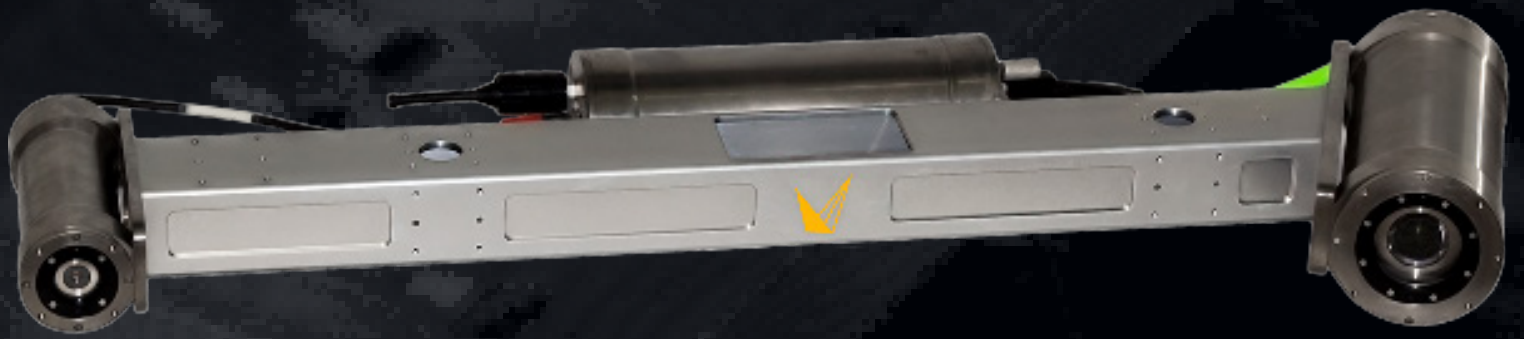
- 🎯 High-accuracy models from small vehicles
- 🔋 Compact & low power draw
- 📷 Seamless stills imaging integration
- 💾 Onboard storage & data enhancement

Specifications

Integration drawings available - [contact sales](#)

Feature	Insight Micro	
Scan Range	0.7m - 5.0m (SR) 1.0m - 7.0m (XR)	
Points Per Line	2464 data points 50° (water)	
X Resolution (Along laser line)	0.4m @ 1m 1.1mm @ 3m 1.9mm @ 5m 2.6mm @ 7m	
Y Resolution (Profile to profile)	3.1mm @ 0.5 knot 12.5mm @ 2 knot 25mm @ 4 knot	
Z Resolution (Depth Resolution)	0.1mm @ 1m 1.0mm @ 3m 2.2mm @ 5m 4.0mm @ 7m	
Profile Rate	50 Hz Laser with 3Hz Stills Imaging 100 Hz (Laser Only) with Range Limiting	
Laser 	Max output: <75mW Pulse duration: 1mSec to CW Wavelength: 450nm +/- 10nm	WARNING - LASER RADIATION AVOID EXPOSURE TO BEAM Class 3B Laser Product
Power Consumption	21-60 VDC Input Laser & Stills: 30W LED Strobe: 30W @ 1Hz, 2ms	
Data Interface	Ethernet, TCP/IP Communication	
Depth Rating	1000m or 4000m	
Data Storage	Onboard (2TB), Topside, Network	
Data Acquisition	ViewLS C++ API Included Factory Calibrated Acquisition modes: Dynamic Laser Scanning & Imaging	
Export Data Formats	Laser: .XYZ (CVS), LAS Publishing Stills: .JPG, .TIFF	
3rd Party Integration	EIVA NaviSuite, QPS QINSy, HYPACK HYSWEEP, 4D NAV, Pix4D	
Stills Camera	4112 x 3008 (12.4 MP)- Colour Imaging, onboard enhancement Horizontal: 60° Vertical: 46° - 4 FPS (max)	
Lighting (Stills)	White Light, 500,000 lumens, 32 LEDs	



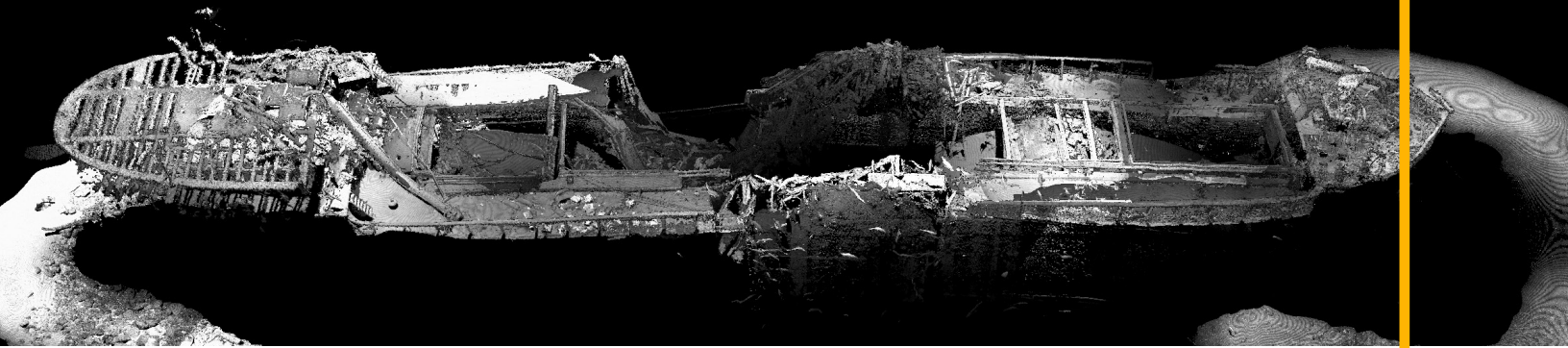


STATIC & DYNAMIC LASER SCANNERS

Insight Pro

The Insight Pro is a long range laser scanner designed for wide area 3D modelling from dynamic and static platforms. The proven design has been deployed since 2013, scanning over 10,000km of subsea pipeline, seabed, and subsea structures.

The Insight Pro has been integrated with countless AUVs and ROVs, simplifying integration with software API that enables autonomous control, and off-the-shelf support of standard vehicle navigation systems. The data is processed in real-time onboard the system to enable machine learning applications like defect detection and pipeline following.



At A Glance

An overview of the main benefits of using an Insight Pro for your project.

🕒 High-speed & long-range data


👍 Simple integration

🕒 Real-time actionable data

📅 Proven reliability on AUVs & ROVs since 2013

Specifications

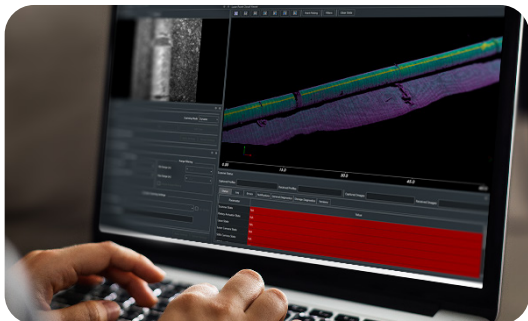
Integration drawings available - [contact sales](#)

Feature	Insight Pro	
Scan Range	1.5m - 15m	
Points Per Line	2048 data points 50° angle of view	
X Resolution (Along laser line)	1.3mm @ 3m 2.3mm @ 5m 4.5mm @ 10m 6.7mm @ 15m	
Y Resolution (Profile to profile)	2.8mm @ 0.5knot 11.1mm @ 2knot 22.2mm @ 4knot	
Z Resolution (Depth Resolution)	0.2mm @ 3m 0.5mm @ 5m 1.9mm @ 7m 4.1mm @ 10m	
Profile Rate	90Hz with range limiting	
Laser 	Max output: <75mW Pulse duration: 1mSec to CW Wavelength: 450nm +/- 10nm Temperature Controlled	WARNING - LASER RADIATION AVOID EXPOSURE TO BEAM Class 3B Laser Product
Power Consumption	60W, 24-60 VDC	
Data Interface	Ethernet, TCP/IP Communication	
Depth Rating	4000m or 6000m	
Data Storage	Network storage	
Data Acquisition	ViewLS C++ API Included Factory Calibrated	
Export Data Formats	.XYZ (CSV), LAS Publishing	
3rd Party Integration	QPS QINSy, EIVA NaviSuite, HYPACK HYSWEEP, 4D Nav	



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 laser scanners.](#)



Rotary Actuator

The Rotary Actuator enables stationary scanning without any aiding sensors required. The result is the same high-resolution data that dynamic scanning produces.

[Contact sales to learn more.](#)



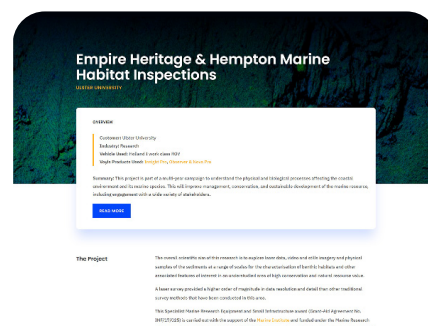
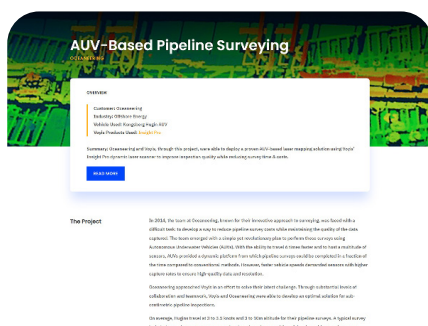
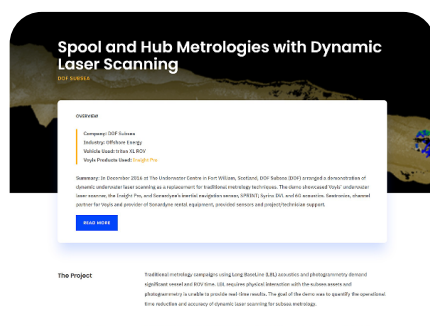
Imaging

Our Observer imaging systems provide high resolution, crisp stills images with real-time image correction onboard. The systems are seamlessly integrated with laser systems for gapless laser data.

[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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