



# ORION

**MORE ADVANCED. MORE FLEXIBLE.**



## MID-ALTITUDE MICRO MAPPING SENSOR

Optech's new ALTM Orion is the world's smallest airborne lidar mapping solution. Purpose-built for engineering-scale mapping applications, the ALTM Orion maintains mid-altitude capability for added flexibility. With the same features you have come to expect from much larger systems, a high-accuracy capability that is independent of laser pulse rate, and the latest in tightly-coupled inertial technology, the ALTM Orion offers maximum accuracy and survey efficiency in an ultra-compact design.

**Optech**  
The Lidar Company™

# ALTM ORION

## The ALTM Orion Advantage:

- High accuracy and precision regardless of pulse rate, enabled by Optech's iFLEX™ technology platform.
- A rugged and modular design purpose-built for maximum reliability and ease of field serviceability.
- The world's most compact full-system design for unlimited flexibility and installation options.
- ALTM-NAV Flight Management Software with underlying DEM planning capability, and real-time swath coverage directly exportable to Google™ Earth, and others.
- The latest in tightly-coupled inertial and Virtual Reference System processing technology, enabling steep turns, extended baselines, and the elimination of remote base stations for maximum collection efficiency without sacrificing accuracy.
- Powerful DASHMap lidar pre-processing software with embedded 3D viewer for rapid XYZI data output and visualization.
- Optional integrated digital camera, hyperspectral, and waveform digitizer solutions for multiple data end-products.

Performance Specifications	
Operational Altitudes <sup>1</sup>	~200-2500 m AGL, nominal
Effective Laser Repetition Rate	Programmable, 50–150 kHz
Horizontal Accuracy	1/5, 500 x altitude (m AGL); 1 $\sigma$
Elevation Accuracy <sup>2</sup>	< 5–20 cm; 1 $\sigma$
Range Capture	Up to 4 range measurements, including 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> , last returns
Intensity Capture	12-bit dynamic range
Scan Width (FOV)	Programmable, 0-50°
Position and Orientation System	POS AV 510 OEM (GPS and GLONASS)
Data Storage	Internal or external data storage via ruggedized HDD
Laser Classification	1064 nm Class IV (US FDA 21 CFR)
System Dimensions and Weight	<0.030 m <sup>3</sup> ; 27 kg

<sup>1</sup>10% reflective target

<sup>2</sup>Accuracy dependant on selected operational parameters using nominal 50° FOV in standard atmospheric conditions.



The Lidar Company™

## Many Products - One Family

300 Interchange Way • Vaughan, ON • Canada L4K 5Z8

Tel: [905] 660-0808 • Fax: [905] 660-0829

[www.optech.ca](http://www.optech.ca)