


PEGASUS HD500

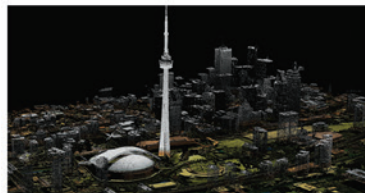
Summary Specification Sheet




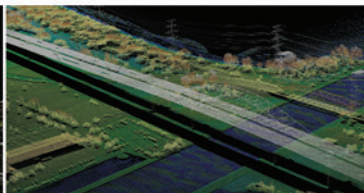
 The benchmark in airborne lidar mapping and active imaging technology.


HIGH DENSITY **500 kHz**

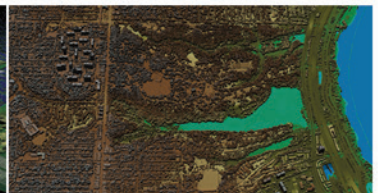
ALTM Pegasus




 Urban Modeling



 Asset Management



 Topographic Mapping

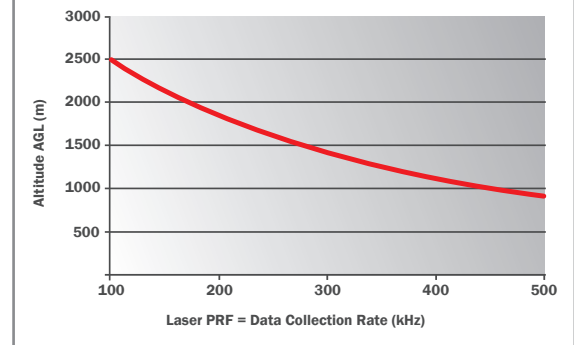


The ALTM Pegasus Advantage

Pegasus is ideally suited for applications that require maximum collection efficiency in a wide FOV design, while maintaining enhanced target detail and maximum ground density with high range accuracy and precision.

- Dual output laser system for maximum density capability
- High laser sampling rate for enhanced efficiency in XY point distribution
- Extended operating envelope
- “Drop-in” sensor design for unrestricted use of advertised FOV in deep portal installations
- High accuracy and precision independent of pulse rate, enabled by Optech’s iFLEX™ technology
- The latest in tightly-coupled inertial and Virtual Reference System processing technology, enabling steep turns, extended GPS baselines, and the elimination of remote base stations
- Powerful Optech LMS lidar pre-processing software with automated lidar rectification

ALTM Pegasus Operating Envelope



Parameter	Specification
Operational envelope ^{1,2,3,4}	300-2500 m AGL, nominal
Laser wavelength	1064 nm
Horizontal accuracy ²	1/5,500 x altitude; 1 σ
Elevation accuracy ²	<5-15 cm, 1 σ
Effective laser repetition rate	Programmable, 100-500 kHz
Position and orientation system	POS AV™ AP50 (OEM) 220-channel dual frequency GPS/GNSS/Galileo/L-Band
Scan width (FOV)	Programmable, 0-75°
Scan frequency ⁵	Programmable, 0-140 Hz (effective)
Sensor scan product	800 maximum
Beam divergence	0.25 mrad (1/e)
Roll compensation	Programmable, $\pm 32.5^\circ$ (FOV dependent)
Vertical target separation distance	<1.0 m
Range capture	Up to 4 range measurements, including 1st, 2nd, 3rd, and last returns
Intensity capture	Up to 4 intensity returns for each pulse, including last (12 bit)
Image capture	5 MP interline camera (standard); 60 MP full frame (optional)
Full waveform capture	12-bit Optech IWD-2 Intelligent Waveform Digitizer (optional)
Data storage	Removable solid state disk SSD (SATA II)
Power requirements	28 V, 600 W, 21 A
Dimensions and weight	Sensor: 630 x 540 x 450 mm; 65 kg; Control rack: 650 x 590 x 490 mm; 46 kg
Operating temperature	-10°C to +35°C
Relative humidity	0-95% non-condensing

1 Target reflectivity $\geq 10\%$

2 Dependent on selected operational parameters using nominal FOV of up to 50° in standard atmospheric conditions with 24-km visibility

3 Angle of incidence $\leq 25^\circ$

4 Target size \geq laser footprint

5 Dependent on system configuration



US FDA 21 CFR 1040.10 and 1040.11; IEC/EN 60825-1

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