


# PEGASUS HD500

## Summary Specification Sheet

**NEW!**




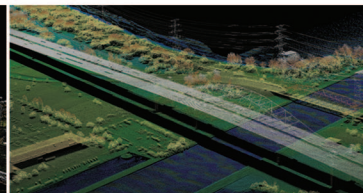
 A new benchmark in airborne lidar mapping and active imaging technology.

**HIGH DENSITY 500 kHz**

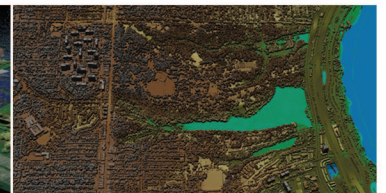
ALTM Pegasus




 Urban Modeling



 Asset Management



 Topographic Mapping

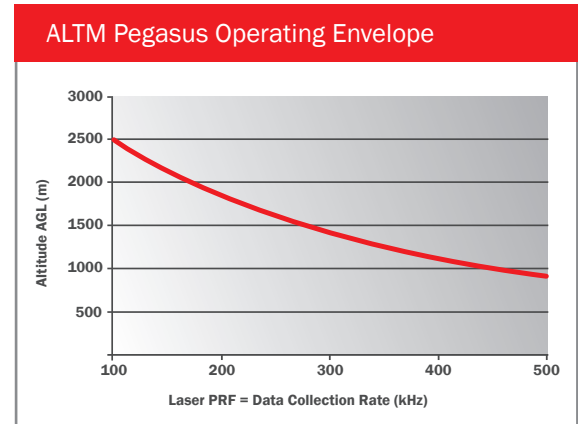


# PEGASUS HD500

## 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



| Parameter                           | Specification  |
|-------------------------------------|--|
| Operational envelope <sup>1,2</sup> | 300 – 2500 m AGL, nominal  |
| Laser wavelength                    | 1064 nm  |
| Horizontal accuracy <sup>2</sup>    | 1/5,500 x altitude; 1 $\sigma$   |
| Elevation accuracy <sup>2</sup>     | < 5-15 cm; 1 $\sigma$  |
| Effective laser repetition rate     | Programmable; 100 – 500 kHz  |
| Position and orientation system     | POS AV™ AP50 (OEM);<br>220-channel dual frequency GPS/GNSS/Galileo/L-Band receiver                           |
| Scan width (FOV)                    | Programmable; 0-65°  |
| Scan frequency <sup>3</sup>         | Programmable; 0-140 Hz (effective)   |
| Sensor scan product                 | 1000 maximum   |
| Beam divergence                     | 0.20 mrad (1/e)  |
| Roll compensation                   | Programmable; $\pm 5^\circ$ at full FOV  |
| Vertical target separation distance | < 1.0 m  |
| Range capture                       | Up to 4 range measurements, including 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> , 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 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 head: 630 x 540 x 450 mm, approx. 49 kg<br>Control rack: 650 x 590 x 490 mm, 46 kg                    |
| Operating temperature               | -10°C to +35°C   |
| Relative humidity                   | 0 – 95% non-condensing   |

1 10% reflective target

2 Dependent on selected operational parameters using nominal 50° FOV in standard atmospheric conditions

3 Dependent on system configuration



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

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