


GEMINI

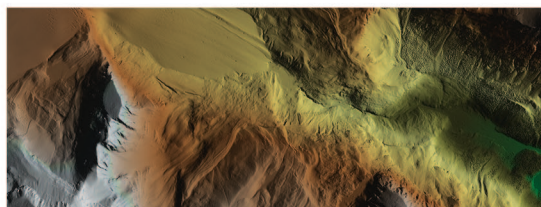
Summary Specification Sheet



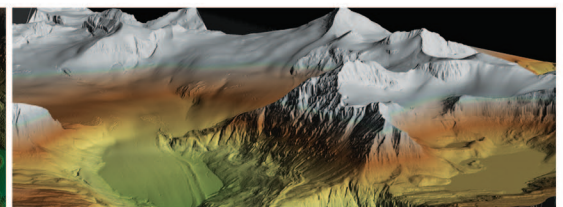
 A wide-area, high-altitude airborne lidar mapping system incorporating the industry's only fully-automated Continuous Multipulse (CMP™) technology system.

POWERED BY
CMP™
TECHNOLOGY

ALTM Gemini



 Wide Area



 High Altitude

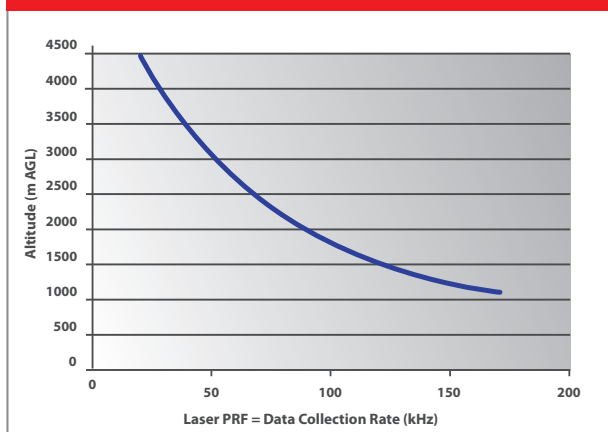


GEMINI

The ALTM Gemini Advantage

- 167 kHz effective laser repetition rate
- Fully automated Continuous Multipulse (CMP) technology, enabling users to double conventional single-pulse operating altitudes without having to plan around range gates
- ALTM-NAV Flight Management Software with DEM planning capability, and real-time swath coverage directly exportable to Google™ Earth
- The latest in tightly-coupled inertial and Virtual Reference System processing technology, enabling steep turns and extended baselines
- Powerful DASHMap lidar processing software for rapid XYZI data output
- Optional integrated digital camera, hyperspectral imager, and waveform digitizer solutions for multiple data end-products

ALTM Gemini Operational Envelope



Parameter	Specification
Operational envelope ¹	150-4000 m AGL, nominal
Laser wavelength	1064 nm
Horizontal accuracy ²	1/5, 500 x altitude (m AGL)
Elevation accuracy ²	<5-35 cm; 1 σ
Effective laser repetition rate	Programmable, 33-167 kHz
Position and orientation system	POS AV™ 510 (OEM) includes embedded 72-channel GNSS receiver (GPS and GLONASS)
Scan width (FOV)	0-50°
Scan frequency	0 to 70 Hz
Roll compensation	$\pm 5^\circ$ at full FOV
Range capture	Up to 4 range measurements, including 1 st , 2 nd , 3 rd , and last returns
Beam divergence	Dual divergence: 0.25 mrad (1/e) and 0.8 mrad (1/e), nominal
Intensity capture	12-bit dynamic measurement range
Data storage	Ruggedized removable SCSI hard disk
Image capture	60-MP medium format camera (optional)
Power requirements	28 V; 900 W; 35 A (peak)
Dimensions and weight	Sensor: 260 mm (w) x 190 mm (l) x 570 mm (h); 23 kg Control rack: 650 mm (w) x 590 mm (l) x 530 mm (h); 53 kg
Video camera	Internal video camera (NTSC or PAL)
Peripheral sensor options	Digital camera, waveform digitizer
Humidity	0 – 95% non-condensing

1 10% reflective target

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



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

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