



GEMINI

MORE **POWERFUL**. MORE **ALTITUDE**.

Your Base Mapping Solution

The ALTM Gemini incorporates revolutionary multipulse technology allowing users to double conventional operating altitudes, without compromising data density, compared to single-pulse systems. With an effective pulse repetition rate of 167 kHz and the latest in tightly-coupled inertial technology, the ALTM Gemini maximizes base mapping collection efficiency.



The ALTM Gemini is the most recent member of the ever growing ALTM family. While maintaining the full performance characteristics of the ALTM 3100EA, the ALTM Gemini offers higher altitude operation at its peak repetition rates, making it the perfect choice for your base mapping needs. Feature rich capabilities include intensity capture with large dynamic range, providing users with exceptional quality lidar imagery.

Optech
The Lidar Company™



ALTM GEMINI

Parameter	Specification
Operational Altitudes ¹	150-4000 m AGL, nominal
Horizontal Accuracy ^{2, 3}	1/5,500 x altitude (m AGL); 1 s
Elevation Accuracy ³	< 5–30 cm; 1 s
Effective Laser Repetition Rate	Programmable, 33–167 kHz
Range Capture	Up to 4 range measurements, including 1 st , 2 nd , 3 rd , last returns
Intensity Capture	12-bit dynamic range Measurements for all recorded returns, including last return
Scan FOV	0-50° Programmable in $\pm 1^\circ$ increments;
Scan Frequency ⁴	0 to 70 Hz (>70 Hz optional) Programmable in 1 Hz increments
Roll Compensation	$\pm 5^\circ$ at full FOV More compensation available if FOV reduced Programmable in $\pm 1^\circ$ increments
Position and Orientation System	POS AV 510 OEM Includes embedded BD960 GNSS receiver (GPS and GLONASS)
Data Storage	Ruggedized removable SCSI hard disks
Beam Divergence	Dual divergence: 0.25 mrad (1/e) and 0.8 mrad (1/e) , nominal
Laser Classification	Class IV (US FDA 21 CFR)
Power Requirements	28 V 35 A (peak)
Operating Temperature	Control rack: +10° to +35°C Sensor head: -10° to +35°C (with provided sensor insulating jacket)
Storage Temperature	Control rack: -10°C to +50°C Sensor head: 0°C to +50°C
Humidity	0-95% non-condensing
Dimensions and Weight	Control rack: 65 cm x 59 cm x 49 cm; 53.2 kg Sensor head: 26 cm x 19 cm x 57 cm; 23.4 kg
Video Camera	Internal video camera (NTSC or PAL)

¹ Operational eye-safe altitudes

² Optional horizontal accuracy of 1/10,000 x altitude (m AGL)

³ Accuracies dependant on selected operational parameters using nominal 50° FOV in standard atmospheric conditions.

⁴ Customizations available to meet your specific requirements.

