

Leica ALS50-II
The point density you want,
the accuracy you need.

150 kHz!



- when it has to be **right**

Leica
Geosystems

Leica ALS50-II

Airborne Laser Scanner

Low-noise pulses from a single laser deliver outstanding accuracy... even at 150 kHz pulse rates

Industry's largest receiving optics provide unmatched sensitivity and leading altitude performance



Industry's highest performance scanner



All controls via airborne-qualified display

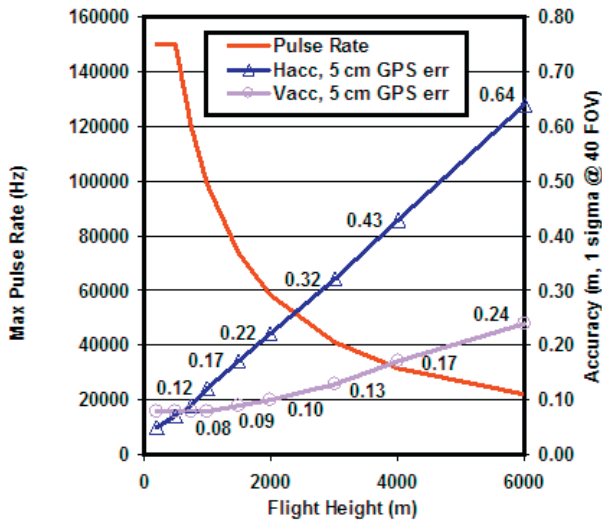


Smallest, lightest electronics in class

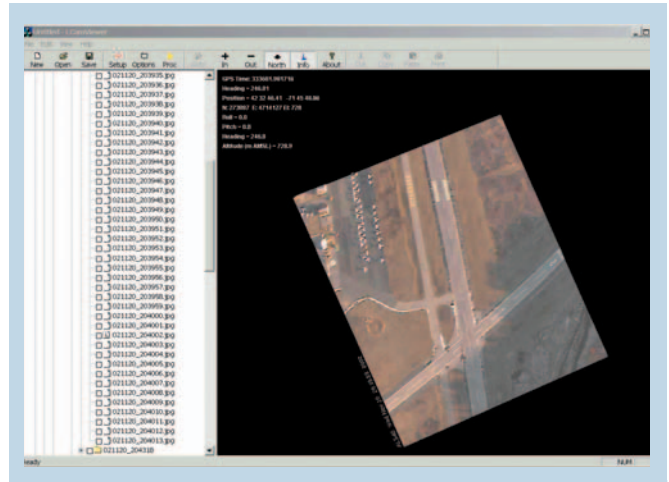
The Leica ALS50, now in its second generation, breaks all the traditional paradigms: having to choose between rapidly-acquired, high-density data and achieving outstanding accuracy, or having to choose between a compact system and one with high altitude performance. The newest ALS50 allows accurate data collection independent of pulse rate, depending instead only on flying height. And a flying height envelope ranging from a helicopter-compatible 200 m AGL to 6000 m AGL for wide area mapping. Now, more than ever, ALS50 is redefining how LIDAR mapping is done. The point density you want, the accuracy you need.

Performance Specifications

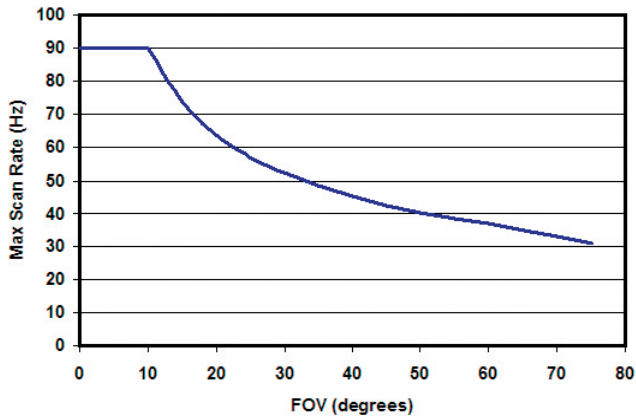
- **Operating Altitude** 200 m – 6000 m AGL
- **Accuracy** (see graph at right, example for 40-degree FOV, including 5 cm GPS error)
- **Number of Returns** 4 (first, second, third, last)
- **Number of Intensities** 3 (first, second, third)
- **Intensity Digitization** 8 bit intensity + 8-bit AGC level + continuously variable laser output
- **Maximum FOV** 75 degrees full angle
- **Roll Stabilization** automatic adaptive, range = 75 minus current FOV
- **Laser Divergence** 0.22 mr @ 1/e² (~0.15 mr @1/e)
- **Recording Media** 300 GB removable HDD (~17 hours at maximum pulse rate)
- **Waveform Profiling** 8 bits @ 1 nsec interval @ 50 kHz (option)



■ Maximum Pulse Rate 150 kHz



■ **Digital Camera** improved 1280 x 1024 camera displays real-time imagery on GUI, while recording individual frames with embedded navigation data; simple post-flight display with any .jpg viewer, plus easy lookup and oriented display (with annotation) using included Leica LCam Viewer software



■ Maximum Scan Rate 90 Hz

Leica ALS50-II

Physical Specifications

Size, Weight

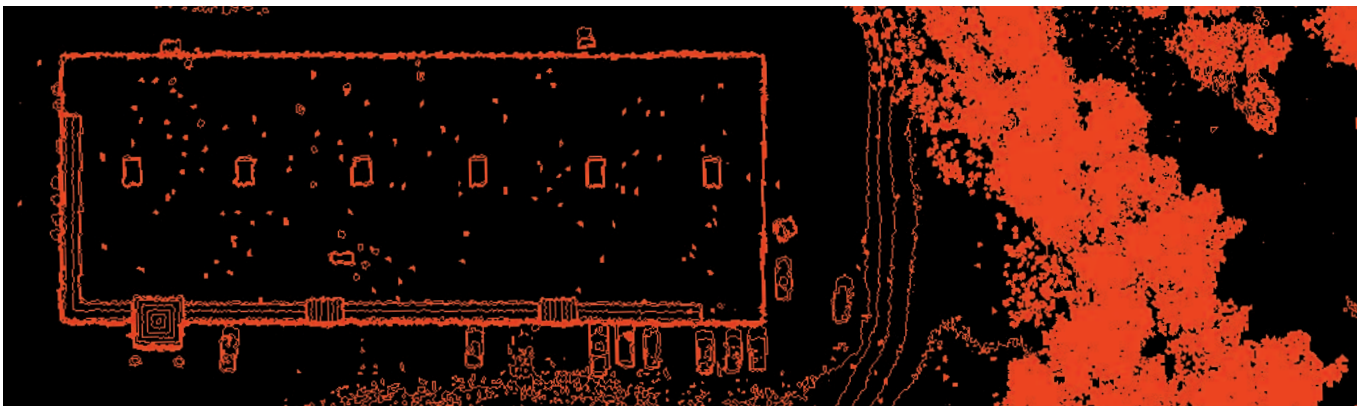
Scanner 37 W x 56 L x 24 H cm, 30 kg
Control Electronics 45 W x 47 D x 36 H (8U) cm, 40 kg

Power Consumption 28 A average
35 A peak @ 28 VDC

Extended Operating Temperature

Scanner 0 °C - 40 °C cabin-side temperature
Control Electronics 0 °C - 40 °C

Contours generated from cover image data set



When building image-based maps, you need reliable measurements and solutions for your entire workflow. So when it has to be right, more geospatial professionals trust Leica Geosystems to help them collect, analyze, and present spatial information. Leica Geosystems is powering geospatial imaging by putting precise imaging to work. Its broad array of airborne sensors and integrated software solutions capture data efficiently, reference imagery accurately, measure and analyze easily and present spatial information in 3D.

Those who use Leica Geosystems products every day trust them for their precision, their seamless integration, and their superior customer support.

Precision, integration and service from Leica Geosystems.

When it has to be right.

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Ask your local Leica Geosystems dealer for more information about our TQM program.



Leica ADS40
Product Brochure



Leica FCMS
Product Brochure



Leica FPES
Product Brochure



Leica IPAS10
Product Brochure

Cover image
 Fitchburg, MA, January 2006 flown from 780 m AGL at 90 knots, with a 15-degree FOV, 74 Hz scan rate and 116 kHz pulse rate. Post spacing ~12 points/m², average post spacing 30 cm.