

Leica ALS60  
The point density you want,  
the accuracy you need.

200 kHz!



- when it has to be **right**

**Leica**  
Geosystems

# Leica ALS60

## Airborne Laser Scanner

Low-noise pulses from a single laser deliver outstanding accuracy... even at 200 kHz pulse rates

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



Industry's highest performance scanner



Airborne-qualified display with real-time coverage verification

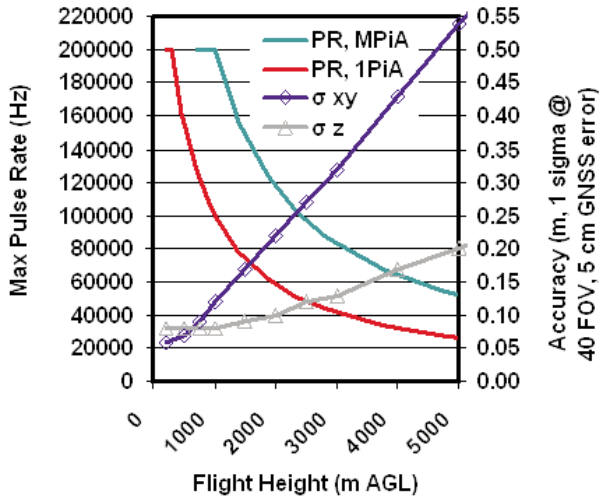


Smallest, lightest electronics in class

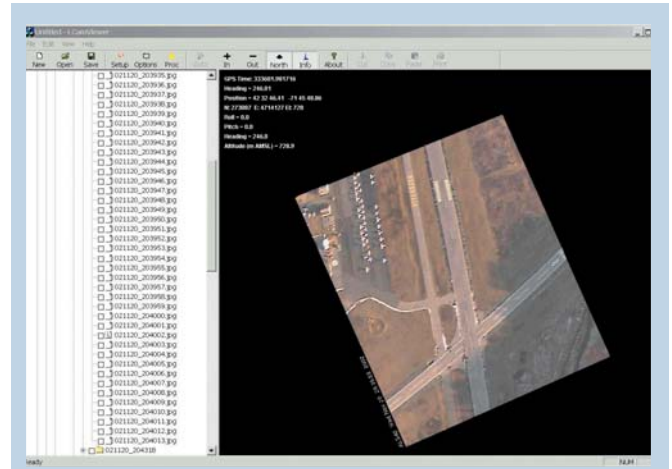
Leica Geosystems' third-generation LIDAR system, the ALS60 continues to break all the traditional paradigms: having to choose between rapidly-acquired, high-density data and achieving outstanding accuracy, or having to choose between a compact system and one with high altitude performance. The ALS60 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 5000 m AGL for wide area mapping. Now, more than ever, ALS60 is redefining how LIDAR mapping is done. The point density you want, the accuracy you need.

### Performance Specifications

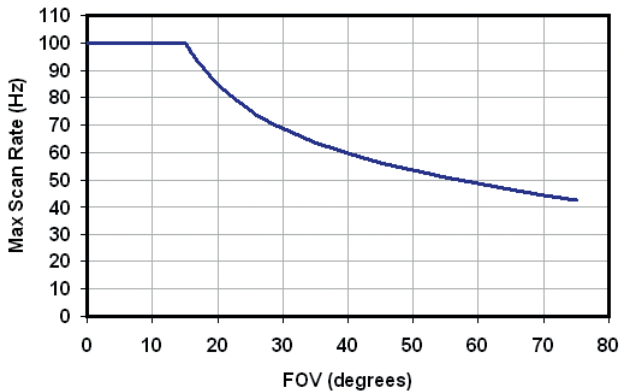
- **Operating Altitude** 200 m – 5000 m AGL
- **Accuracy** (see graph at right, example for 40-degree FOV, including 5 cm GNSS error)
- **Number of Returns** 4 (first, second, third, last)
- **Number of Intensities** 3 (first, second, third)
- **Intensity Digitization** 8 bit intensity + 8-bit AGC level + 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/e<sup>2</sup> (~0.15 mr @1/e)
- **Recording Media** 500 GB removable HDD (~18 hours at maximum pulse rate)
- **Flight Management** via Leica FCMS flight management software



■ Maximum Pulse Rate 200 kHz



■ **Digital Camera** 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 100 Hz

### Leica ALS60

#### Physical Specifications (unmounted)

##### Size, Weight

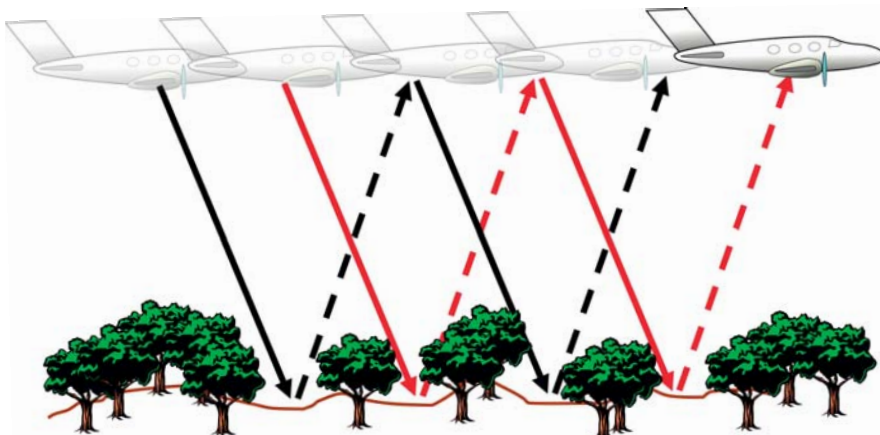
Scanner 37 W x 68 L x 27 H cm, 43 kg  
Control Electronics 45 W x 47 D x 36 H (8U) cm, 45 kg

Power Consumption 910 W @ 22.0 - 30.3 VDC

##### Extended Operating Temperature

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

Multiple Pulses in Air (MPiA) that really works, all the way to maximum rated flying height



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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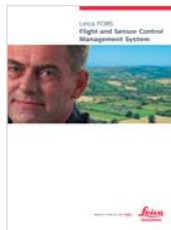
**Total Quality Management – our commitment to total customer satisfaction.**

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

Laser class 4 in accordance with IEC 60825-1 resp. EN 60825-1



**Leica ADS80**  
Product Brochure



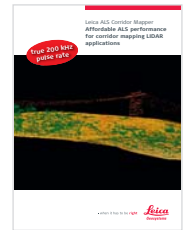
**Leica FCMS**  
Product Brochure



**Leica FPES**  
Product Brochure



**Leica RCD105**  
Product Brochure



**Leica ALS Corridor Mapper**  
Product Brochure

**Cover image**  
Alberta, Canada, 2007 flown from 1600 m AGL at 130 knots, with a 40-degree FOV, 36 Hz scan rate and 130 kHz pulse rate (MPIA). Point density ~1.6 points/m<sup>2</sup>, average post spacing 77 cm.