

LITE M APPER®



LiteMapper is a series of affordable airborne LiDAR mapping systems for 3D topographic surveys with fixed-wing aircraft and for 3D corridor mapping with helicopters. The system is designed to provide highly accurate measurements for DTM and DSM creation and for the precise survey of technical facilities as power lines. It is compact, lightweight and can be installed easily on small survey aircraft or different helicopter models.

LiteMapper laser scanners sample the surface in parallel lines with regular point spacing both in and across flight direction to provide the most accurate surface representation. The scan speed can be varied in a range to provide very dense point spacing within each scan.

The continuously rotating scanner used for beam deflexion is resistant to temperature variations and accelerations which typically occur under airborne operating conditions.

Easy to use

Automated data acquisition with *LiteMapper* is achieved by tight integration with the *CCNS* precise guidance system. The *CCNS* system guides the pilot and controls the data registration during flight, a dedicated LiDAR operator is not mandatory.

Both LiDAR and optional digital image data are directly geo-referenced through the *AEROcontrol* GNSS/IMU system that continuously registers sensor position and attitude in flight.

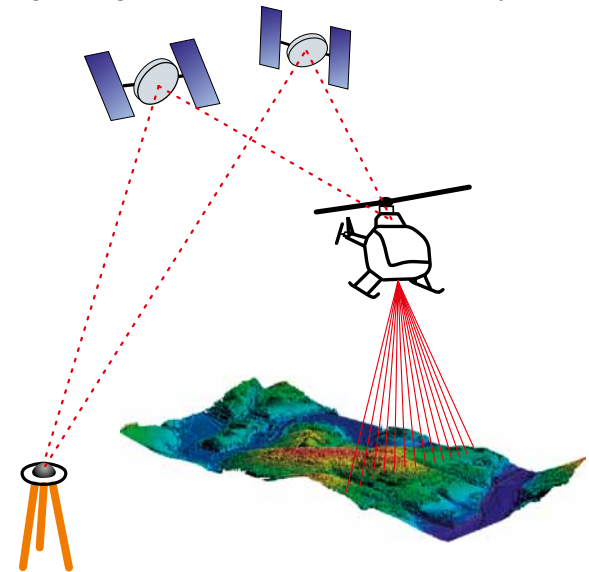
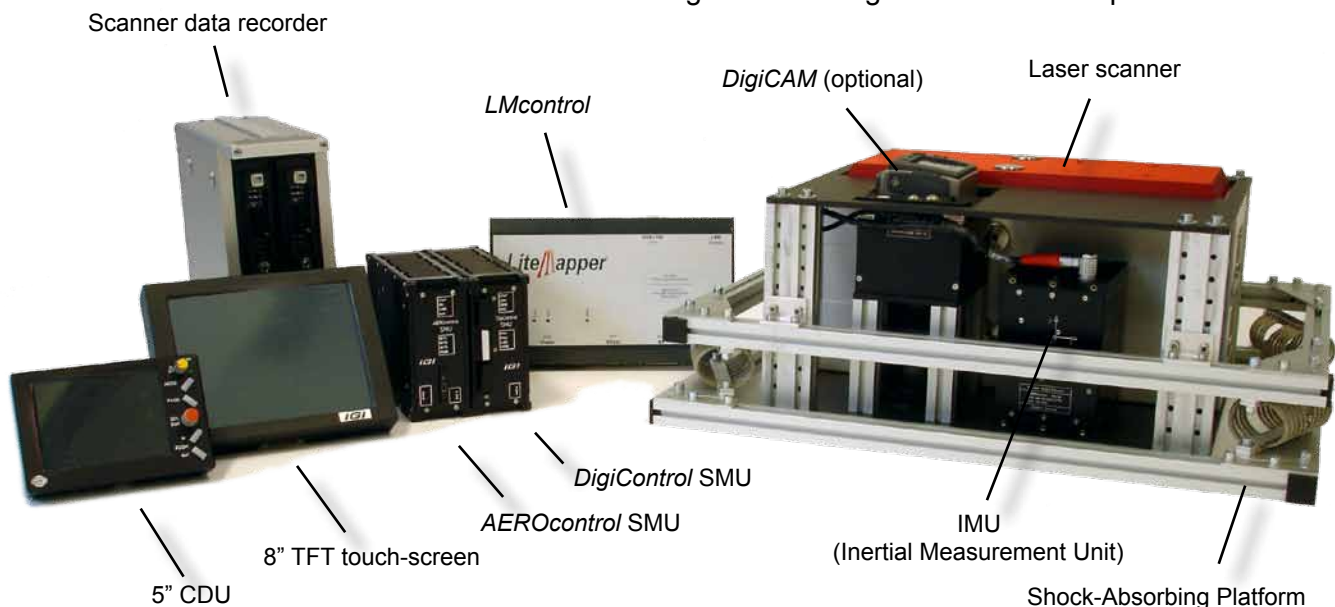


Image showing the operation of the LiteMapper system.

DigiCAM & DigiTHERM option

Complementing the *LiteMapper* LiDAR system, IGI offers its *DigiCAM* and *DigiTHERM* systems as option. *DigiCAM* is a medium-format airborne digital camera system. *DigiTHERM* is IGI's solution for digital aerial thermography. Both *DigiCAM* & *DigiTHERM* are fully integrated in *CCNS* & *AEROcontrol* for direct georeferencing and automated operations.



LiteMapper® - Airborne LiDAR Terrain Mapping System

Complete Solution:

With a fully digital process chain from primary data acquisition through all processing stages to the final product, *LiteMapper* provides the basis for efficient production with a return on investment within one year. *LiteMapper* is a complete solution containing all hardware and software components necessary to create a DTM and a DSM.

- Complete solution for DTM and DSM creation consisting of:
 - *IGIplan* - Mission Planning Software
 - *CCNS* - Aircraft Guidance & Sensor Management
 - *AEROcontrol* & *AEROoffice* - precise GNSS/IMU System for direct georeferencing
- Optional *DigiCAM* & *DigiTHERM* for georeferenced optical and thermal images

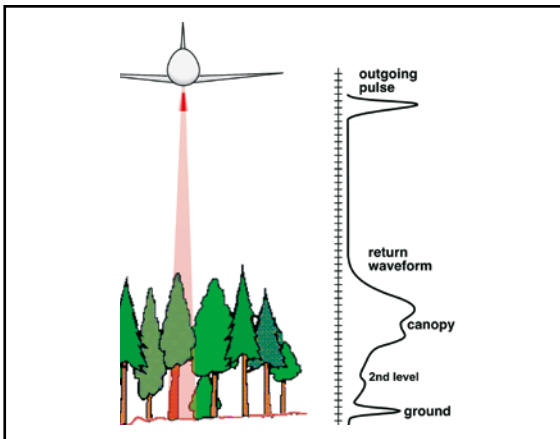
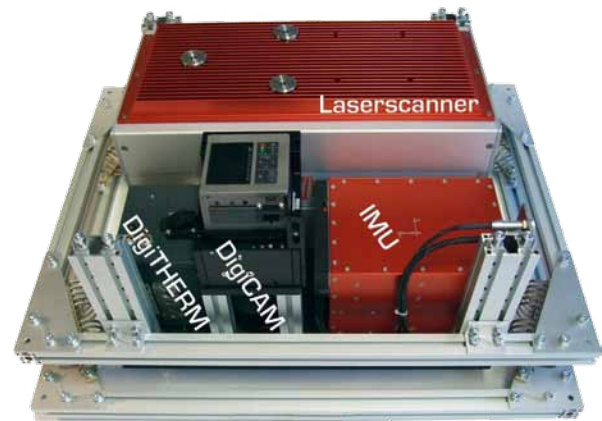


Image showing the fully digitized laser beam return.

LiteMapper is a revolutionary LiDAR system for airborne LiDAR mapping. It is the world's first available commercial system to feature high-resolution waveform digitization and recording. Its ability of waveform analysis for each individual laser beam offers the opportunity of a detailed view into the vertical structure of the surface to the user. Different height classifications become available. For instance, the vertical density at different height levels or the roughness and slope of the surface.



Applications

Corridor Mapping:

highway / railway / pipeline / power line / airports

Flood Mapping:

Shoreline protection
Flood visualisation

City Modelling:

Urban planning
Waste management
Route planning (emergency, traffic)
Noise protection
Cadastral registration (trees, buildings)
Tourism

Forestry:

Canopy height
Single tree segmentation, height, crown diameter
Classification
Derive a bare earth DTM under the trees

Opencast pits, archeology, applied research

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