

Leica RealTerrain

Airborne reality capture





Leica RealTerrain

Efficient LiDAR mapping across all applications

RealTerrain is about efficient and flexible airborne LiDAR reality capture. Intelligent information is produced with accurate, high-density elevation data from a choice of two remarkable but distinctively different airborne technologies. Both take advantage of Leica HxMap, the high-performance, multisensor, post-processing workflow that reduces data delivery time.

For the highest flexibility across widely-varying use cases and for the delivery of highest fidelity data, RealTerrain is used with the Leica TerrainMapper-2 airborne linear-mode LiDAR sensor. This combination is most suitable for regional mapping projects spanning from narrow-swath corridors to high altitude applications over complex and changing environments.

RealTerrain provides the highest efficiency for large area LiDAR mapping projects with the lowest cost per data point and up to 10 times more efficiency when used with Single Photon LiDAR (SPL) technology in the Leica SPL100. This configuration works best for country- and state-wide mapping, disaster risk planning, emergency management and forest inventory.



Seamless, boundless data

In an increasingly connected world where interactions occur across local, regional and national borders, it is important to base decisions on reliable and consistent information. Making informed decisions starts with readily available, high-resolution terrain and elevation data. Seamlessly capturing, qualifying and visualising data with RealTerrain is the base for smart decision making.



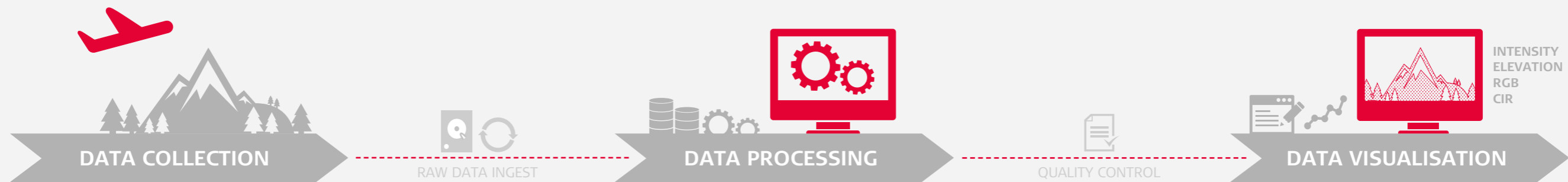
Unmatched efficiency

While the SPL100 is up to 10 times more efficient over large areas and dramatically reduces flying costs, the TerrainMapper-2 offers the most competitive collection rate among linear-mode LiDAR, with huge flexibility to accommodate varying applications. Combined with the fastest post-processing workflow, these solutions enable efficient collection and rapid processing of any LiDAR data sets.



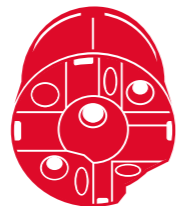
A natural next step

RealTerrain is the result of Leica Geosystems' many years of expertise in airborne LiDAR sensing, driving the evolution and constant improvement of both linear-mode and single-photon LiDAR solutions. We now offer the most competitive LiDAR technologies in the market as the logical next step in the advancement of the airborne mapping industry.



Leica TerrainMapper-2

Flexibility for complex terrain



The Leica TerrainMapper-2 linear-mode LiDAR sensor provides the highest performance for regional mapping projects. Thanks to gateless MPiA, the system delivers outstanding accuracy, unmatched point density and even point distribution in mountainous terrain.

The sensor is designed to offer maximum flexibility for applications from narrow-swath corridors to high altitude mapping over complex terrain. The TerrainMapper-2 includes a 2 MHz LiDAR combined with two nadir 150 MP cameras in RGB and NIR that deliver high quality imagery for point cloud colourisation and orthophoto creation.

Leica SPL100

Efficiency over large areas



The SPL100 is the first commercially available Single Photon LiDAR airborne sensor. With 100 output beams and a total of 6 million measurements per second, this system is ideal for large area terrain mapping projects.

During day or night, leaf-on or leaf-off conditions, and in dense vegetation, the SPL100 captures more data faster. Create high density point clouds by collecting 12 - 30 points per sqm (depending on flying heights) and penetrate semi-porous obscurations, such as vegetation, ground fog and thin clouds. The SPL100 is combined with an 80 MP camera for RGBN colour information.

Leica HxMap

High-performance processing

HxMap is the high-performance multisensor workflow for airborne sensors, featuring the industry's fastest data throughput. Process the data captured with SPL100 or TerrainMapper-2 in one simple, intuitive user interface. Generate any LiDAR data product at the push of a button while eliminating the limitations of single workstation processing, and reduce training costs.

The newly introduced LiDAR processing module offers full flexibility to produce the high-density point clouds you need. HxMap is modular, scalable, upgradable and perfectly adaptable to your needs.

Enabler Enabler	●
Provider Ingest, Raw QC, Workflow Manager, Point Cloud Generator, Projection Engine	●
Core LiDAR AutoCalibration, Color Encoding, Registration, Data Metrics, LiDAR QC	●
Core Image APM, Aerial Triangulation, Ortho Generator, InfoCloud	●
3D Modeller City Modeller, Texture Mapper, 3D Editor, Building Finder	○

● = Standard ○ = Optional

Leica Geosystems – when it has to be right

With more than 200 years of history, Leica Geosystems, part of Hexagon, is the trusted supplier of premium sensors, software and services. Delivering value every day to professionals in surveying, construction, infrastructure, mining, mapping and other geospatial content-dependent industries, Leica Geosystems leads the industry with innovative solutions to empower our autonomous future.

Hexagon is a global leader in sensors, software and autonomous solutions. Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.9bn EUR.

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Leica RealCity
Airborne reality capture



Leica TerrainMapper-2
Flexibility & Scalability



Leica SPL100
Highest efficiency over large areas



Leica HxMap
High-performance multisensor workflow

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- when it has to be **right**

