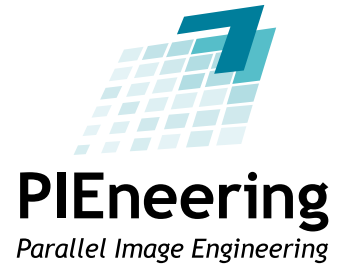


At PIEnengineering, we are specialized in photogrammetry. For people who fly UAVs and aircraft for aerial mapping, we offer the best solutions with our innovative software and services.



Aerial Mapping Operators

RapidTerrain

Terrain Modeling Software

PIEnengineering's RapidTerrain is software for the automatic generation of highly detailed and accurate Digital Surface Models (DSMs). It's targeted at aerial mapping operators. RapidTerrain is integrated with RapidStation, PIEnengineering's photogrammetric software suite, but it can also be used as standalone software too.

Superior 3D modeling quality

The purpose of RapidTerrain is to generate detailed and accurate DSMs with photogrammetric methods. RapidTerrain applies cutting edge multi-image matching and data filtering techniques in generating the output surfaces. As a very large number of image combinations are being used in the process, multiple heights per each input image pixel will be measured. These heights represent ground, intermediate and top surfaces in the object space.

RapidTerrain is especially suitable for data captured with UAV platforms where image overlaps typically are high and a large number of image combinations can be used for 3D modeling. As a result, the output surfaces include points from narrow street corridors, the forest floor, along building walls and roof tops and even under bridges. We call these very dense point clouds MicroDSMs. μ DSMs are truly comparable with LIDAR point clouds and are ideal for generating city models and true orthomosaics. [▶](#)

RapidTerrain Terrain Modeling Software

Production oriented workflow

RapidTerrain creates seamless μ DSMs from a user definable area or from the entire image block according to the given parameter settings. Water or void areas can be excluded from the processing with user definable polygons. There is no capacity limitation regarding the area of interest.

RapidTerrain provides high throughput by supporting GPU processing. For customers with the need to manage multiple processing jobs, we offer an optional RapidBatch extension module.

μ DSM point cloud data is often being used in engineering applications, where there are more specific needs, such as a need to extract bare ground surface from the data. This can be done with software built for effective point cloud processing, such as Terrascan from Terrasolid. ■

Features

Simple workflow

- Data import from block adjustment software (RapidStation, EnsoMOSAIC, Inpho)
- Job creation, processing area and parameters setting in a graphical user interface

Detailed and powerful modeling

- Advanced multi-image matching and data filtering techniques
- Pixel level measurement with multiple output surfaces
- Advanced filtering techniques
- Unlimited spatial capacity
- Efficient use of computer resources

Options

RapidTerrain Pro

for full frame camera support

RapidBatch

for managing multiple processing jobs

- Job priority setting
- Pause, resume job
- Delete job
- Job monitoring

