GlobalMapper
LiDAR Module

LIDAR MODULE HIGHLIGHTS

Pixels-to-Points Tool
- Point cloud creation from drone/UAV images
- 3D mesh generation

Manual Point Classification Tools

Automatic Point Classification Tools
- Ground
- Noise
- Buildings
- Poles
- Trees
- Above ground utility cables

Automatic & Custom Feature Extraction
- Above ground utility cables and poles
- Buildings
- Trees

Point Cloud Thinning

Point Filtering Options

LiDAR Quality Control for Vertical Accuracy

Proximity & Encroachment Querying

Point Cloud Colorization Options
- From raster imagery
- By point type/class/value

Path Profile (side-view) Editing

Elevation Grid Creation

Advanced point cloud and LiDAR processing

Global Mapper is a robust and inexpensive GIS application that combines a comprehensive array of data processing tools with access to an unparalleled variety of data formats.

The *LiDAR Module* is an optional add-on to Global Mapper that provides advanced point cloud processing tools, including: *Pixels-to-Points™* for photogrammetric point cloud creation from overlapping drone/UAV images; automatic point cloud classification; feature extraction; hydroflattening; and more.
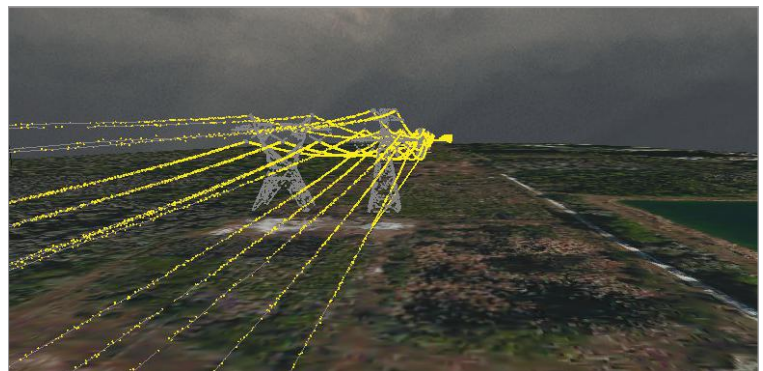
LiDAR points representing powerlines can be automatically reclassified.

The LiDAR Module is embedded in the current release of Global Mapper and is activated in the License Manager. A 14-day free trial is available for evaluation.

The Pixels-to-Points tool offers the ability to photogrammetrically create orthoimages, point clouds, and 3D meshes from drone-collected images.

Software Comparison

Feature	Global Mapper	LiDAR Module
Read/Write support for LAS/LAZ files with over one billion points [64-bit only]	●	●
Pixels-to-Points for creating a 3D point cloud from drone/UAV images		●
3D Mesh creation from selected points		●
Orthoimage creation from selected points		●
Option to render point cloud by elevation values	●	●
Option to render point cloud by height above ground		●
Option to render point cloud by RGB values	●	●
One-button point cloud colorization from underlying imagery		●
Option to render point cloud by LiDAR point attributes (classification, intensity, etc.)	●	●
Option to render point cloud by the difference in height between the first and last return	●	●
Option to render point cloud by calculated NDVI or NDWI value (requires NIR attribute)	●	●
Option to render point cloud by point density		●
Ability to interactively change rendering method from Toolbar		●
Ability to crop point clouds	●	●
Ability to manually edit or delete points	●	●
Ability to filter by LiDAR point classes	●	●
Ability to filter selected LiDAR points by elevation/color range		●
Ability to manually adjust elevations in entire point cloud		●
Ability to display and edit LiDAR points in Path Profile (cross-sectional view)		●
One-button point reclassification tools		●
Automatic ground point classification		●
Automatic identification of noise points		●
Automatic reclassification of building, tree, poles, and powerline points		●
Building, tree, and powerline extraction from classified LiDAR points		●
Custom 3D digitizing and feature extraction using perpendicular path profile views		●
Ability to reproject LiDAR point clouds	●	●
Ability to transform point cloud coordinates (including rectification)		●
LiDAR QC to vertically correct LIDAR elevations from ground control points		●
Option to spatially sort point clouds for faster display and analysis		●
Elevation grid creation using Triangulated Irregular Network (TIN) method	●	●
Elevation grid creation using local minimum (DTM) or maximum (DSM) elevation		●
Elevation grid creation using local average elevation		●
Option to filter points applied in gridding process		●
Ability to create grid from heights above ground		●
Ability to create grid based on intensity, classification, or color values		●
Ability to calculate statistics for point cloud data using a script		●
Option to export LiDAR points within elevation range		●
Option to export LAS files using height above ground instead of elevation		●