



VG4D SmartLiDAR™ Explorer

SmartLiDAR Explorer

LiDAR Explorer is the underlying enabling platform of the VG4D SmartLiDAR solution. Built to fully exploit any type of LiDAR data to its fullest, the solution features a powerful, efficient and stand-alone point cloud processing engine designed to handle large strips (billions of points).

LiDAR Processing

- Automatic filtering for classification and intelligent contextual filtering
- Batch processing, macro creation and management with shareable libraries
- Flexible, multi-targeting, multivariable, sequencable macro application
- Robust conversion and import capabilities with unique "one-to-many" export features
- Inbuilt project management and data management
- LiDAR and Image data fusion capability

Feature Extraction

- Wide range of powerful information extraction tools
- "One-click" bare earth, RGB, and intensity feature extraction tools
- Create cartographic and realistic quality 3D contours
- 3D Breakline collection/draping/conflation
- One-step process for DEM, DTM, contours, ESRI Grids, etc.
- Flexible data import / export capabilities

Optimized Workflows

- Complete end-to-end solution that tunes internal processes to airborne LiDAR datasets
- Easy LiDAR and imagery merging
- Database tracking of project and data flow status, including spatial view of project status
- Flexible work flow sequencing with manual editing tools for final clean-up

Visualization

- Robust 3D visualization of vast point cloud data, even multiple strips at a time

- Full 3D interactive manual and profile LiDAR data editing
- Comprehensive QA / QC methods and tools
- Full featured toolset to generate 3D breaklines
- Visual slope and gradient analysis tools
- Ability to visualize vector datasets (polygons and polylines)

3D Viewer

- Various coloring options (By Elevation, Classification, Intensity, Color etc) for LiDAR
- On-the-fly triangulation capability
- On-the-fly profile view capability
- On-the-fly manual editing capability
- Contour visualization
- 3D line collection feature to extract vector components quickly
- QA/QC Red Lining Capability
- Ability to pick/select area of interest (AOI) polygons/points.
- Intelligent panning of complete strip
- Export options to convert AOI points to LAS or ASCII format
- Contour export capability
- Change detection visualization
- Slope Analysis (Aspect)
- Flexible class selection and grouping capability
- Measurement tool
- Import -LAS, and GIS formats
- Export - LAS , ASCII, GIS formats, Grids, GeoTIFF image files (elevation, Intensity, Shaded Relief, RGB, 32 and 16 bit), DXF

SmartLiDAR Solution Modules

Ask about the Solution Modules to extend the power of VG4D SmartLiDAR Explorer:

- Calibrator Module
- Smart Classification Module
- Application Tools Module
- 3D Coordinate Conversion/Reprojection Module
- Asset Management Module
- GIS Integration Module
- Field Analyzer Module
- Boresite Module
- iLiDAR Module

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