



## 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
- Tools Module
- Field Analyzer Module
- Asset Management Module
- 3D Coordinate Conversion/Reprojection Module
- GIS Integration Module
- Boresite Module

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