FIND OUT MORE ABOUT PHOENIX LiDAR SYSTEMS

PHOENIX LiDAR SYSTEMS

EXPLORE A PHOENIX LiDAR SYSTEM FOR YOUR TEAM, CONTACT US!

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SpatialExplorer 8

PHOENIX LiDAR SYSTEMS

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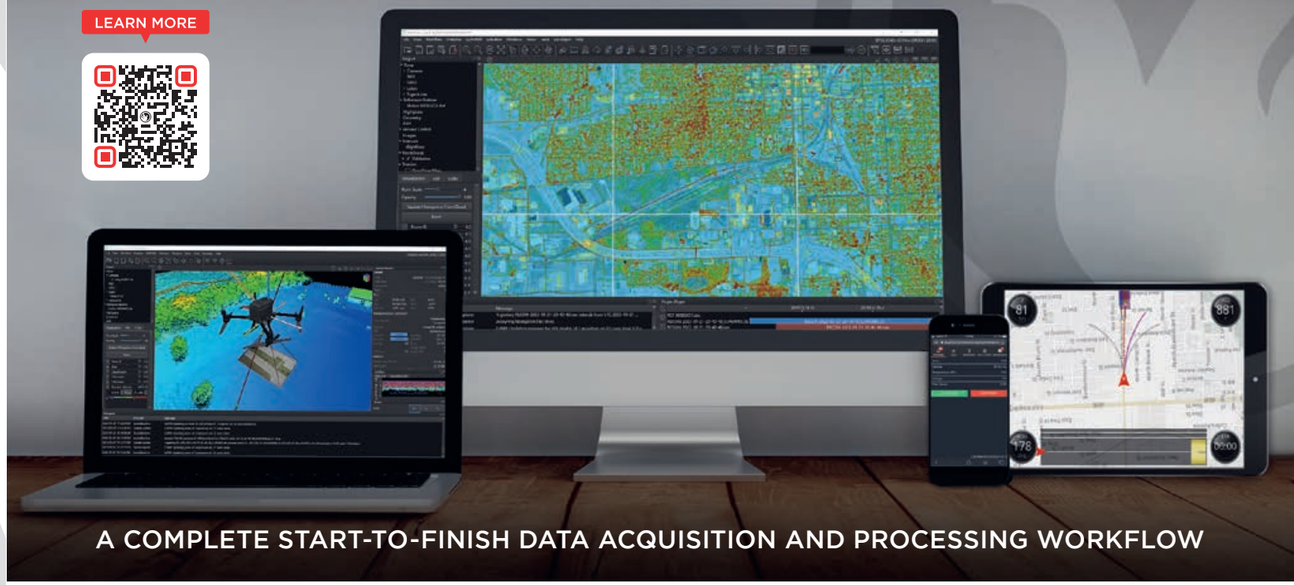


A COMPLETE START-TO-FINISH DATA ACQUISITION AND PROCESSING WORKFLOW

SpatialExplorer is the core of Phoenix LiDAR's software suite. It is an expandable program that is built to ensure you get the data you need. Starting from data acquisition, **SpatialExplorer** provides tools for real-time streaming point clouds, telemetry monitoring, and other in-field quality control.

Post acquisition data processing tools put users in control of their datasets. **SpatialExplorer** transforms raw data inputs into geospatially accurate and refined outputs.

SpatialExplorer can be expanded with a selection of plug-in modules that add advanced functionality at critical steps in the data collection and production workflow.

KEY FEATURES

ACQUISITION

- Configure all system sensors and store custom profiles to ensure the correct settings during each acquisition
- Live sensor control during acquisition allows the operator to respond as necessary

IN-FIELD QC

- A real-time point cloud and detailed navigation feedback provide instantaneous data quality control in the field
- Interactive data inspection with measurements and profile slices

POST PROCESSING

- Process data from airborne, mobile, or other types of acquisitions using a single software
- Flightline management and data filters
- LiDAR and imagery fusion and export
- Robust coordinate reference system selections
- Virtually unlimited project sizes

EXPANDABILITY

- Additional plug-in modules for tailoring the workflow to your specific needs

EXPLORE AND EXPAND

MissionGuidance: An SE module that provides live flight navigation for piloted airborne and mobile vehicle operations

NavLab Embedded: An SE module that provides desktop GNSS+INS trajectory processing

SpatialPro: An SE module that adds robust calibration, analytic and reporting tools to complete the workflow

SLAM: An SE module that enables SLAM processing through GNSS denied environments

MissionGuidance

IN-FLIGHT NAVIGATION GUIDANCE FOR PILOTS

The MissionGuidance module for SpatialExplorer helps streamline piloted data acquisitions by providing automated navigation tools for the pilots to stay exactly on course and for the sensor operator to ensure flawless acquisition.

- Confidence in flight through real-time monitoring and line rescheduling
- Improved data quality with steady flying at the planned height and line spacing
- Peace of mind - No data gaps - No remobilization

KEY FEATURES

- Pilot navigation display screen
- Velocity, Heading, and Elevation monitor
- Height maps and custom terrain models
- Remaining flight time estimates
- Operator flight plan view
- Interactive line scheduling
- Configurable tolerances
- Automatic line management
- Basemaps for spatial reference
- AGL oracle

SpatialPro

ADVANCED CALIBRATION, ANALYTICS, AND REPORTING

The SpatialPro module for SpatialExplorer expands the software with tools for fine tuning and deliverable data production.

- Complete your post-processing workflow with the right tools for high quality data production
- No compromise data accuracy with user control along each step of the way
- Built and designed by Phoenix LiDAR based on a decade of data production experience

KEY FEATURES

- **LiDARSnap** - LiDAR sensor calibration, flightline matching, adjustment to control, and adjustment to other pointclouds
- **CameraSnap** – Camera calibration, automated and interactive feature detection, individual frame adjustment
- Advanced colorization with radiometric balancing and depth awareness for correct pixel to point mapping
- Multi-mission project calibration
- Import and calibrate 3rd party data and LAS/LAZ
- Classification with automated routines and fast interactive selections
- Statistical outlier removal and advanced noise reduction
- Change detection
- Raster and vector products (DEM, DSM, Contours, georeferenced floor plans)
- Application-specific exports (TopoDOT, Pix4D)
- Automated QC and accuracy reporting

NavLab Embedded

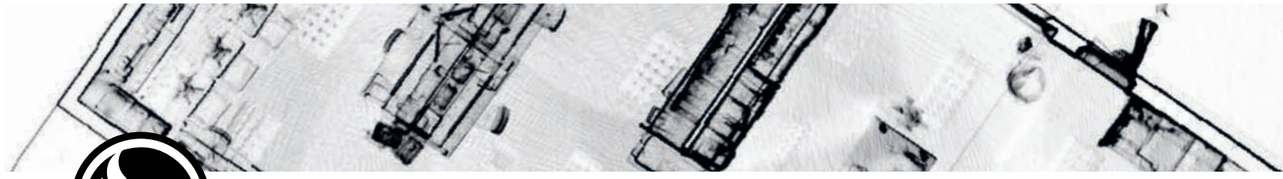
GNSS + INS TRAJECTORY PROCESSING

The NavLab Embedded module for SpatialExplorer simplifies and automates trajectory post-processing for achieving the best estimated trajectory from your navigation data.

- Seamless integration of Novatel's InertialExplorer
- All-in-one software workflow to eliminate coordinate reference system confusion
- Fast, simplified, automated processing

KEY FEATURES

- GNSS differential corrections
- Precise Point Positioning
- INS loosely and tightly coupled integrations
- Embedded directly into SpatialExplorer desktop
- Reference station configuration
- IMU-to-Antenna lever arm offsets estimation and quality control reporting



SLAM

SIMULTANEOUS LOCALIZATION AND MAPPING FOR GNSS DENIED AREAS

- Map indoor and outdoor spaces that have little to no GNSS reception
- Hybrid SLAM uses any available GNSS during the scan for automatic georeference
- SLAM assisted trajectory processing for confidence through spotty GNSS

KEY FEATURES

- Estimate a trajectory from LiDAR data
- No GNSS required
- Automatic georeference with available GNSS
- Interactive processing and data refinement
- Noise filtering and outlier removal
- Automatic trajectory drift mitigation with loop closure detection
- SLAM profiles for pedestrian and mobile style data sets
- Interactive optimization to control points or control point clouds
- Simplified data acquisition using mobile device or tablet