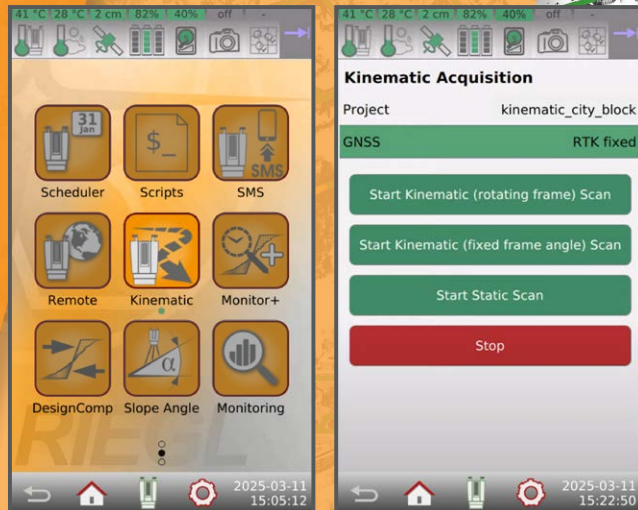


RIEGL VZ-i Series Kinematic Data Acquisition



Mobilize your Terrestrial Laser Scanner

RIEGL VZ-i series 3D terrestrial laser scanners can be switched right away from static to kinematic data acquisition without additional equipment.



RIEGL VZ-i Series Kinematic App is already pre-installed on the VZ-i series laser scanners.*

Two bundled licenses allow the processing of kinematic data within RISCAN PRO.

For further information please contact your local distributor or sales@rieigl.com.

* except VZ-4000i²⁵

Highlights of the Kinematic Function for RIEGL VZ-i Series Scanners:

- simple scanner setup
 - » no cables and external hardware needed
 - » power via internal battery / add-on battery
 - » easy scanner control via RIEGL VZ-i Kinematic App
- wide range of applications
- applicable on various moving platforms
- data acquisition of large areas in short time



Urban Area



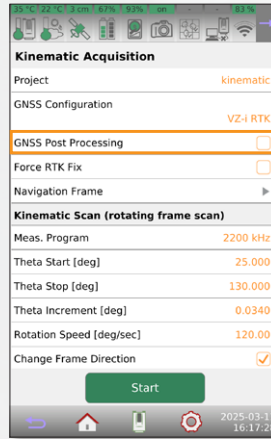
Mining Environment

Contact us



Kinematic App Configuration

Quick adjustment of settings can be done directly in the *RIEGL VZ-i* Kinematic App. The trajectory is refined either by using **Real-Time Kinematic (RTK)** data or through post-processing using **Post-Processed Kinematic (PPK)** with base station data.



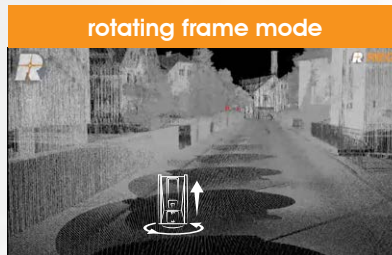
- ☒ **Real-Time Kinematic (RTK)**
in areas with a stable internet connection and RTK provider signal via NTRIP (RTCM).
- ☐ **Post-Processed Kinematic (PPK)**
in, e.g. remote areas with a base station for GNSS data logging (RINEX).



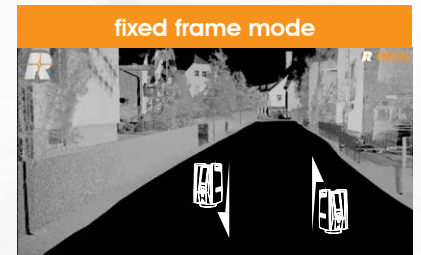
Watch the
RIEGL VZ-i Series
Kinematic App
Video!

Kinematic Scanning Modes

Kinematic data can be acquired in two ways: Use the **Rotating Frame Mode** as a base mode for accurate trajectory calculation. In this mode, the scanner is in permanent rotation and acquires 360° data in one pass. In addition to the Rotating Frame Mode the **Fixed Frame Mode** can be executed to achieve regular point spacing. The scanner is fixed in one direction and continuously acquires data without rotation.



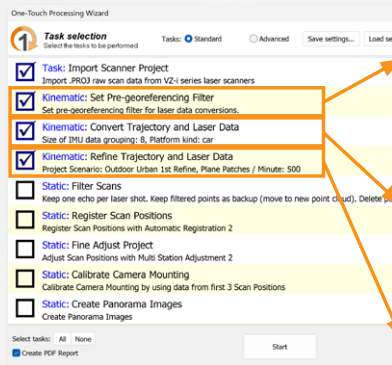
base mode for accurate trajectory –
one single pass



additional mode for regular point
spacing – two further passes (left & right)

Data Processing Workflow

A straightforward data processing workflow within *RiSCAN PRO*'s **One-Touch Processing Wizard** allows automatic task processing from filtering and initial trajectory calculation to the final trajectory refinement. The result is a high-accuracy point cloud.



Kinematic Data Filter

- define a bounding box to delete very close data (platform) and distant data
- filter by reflectance

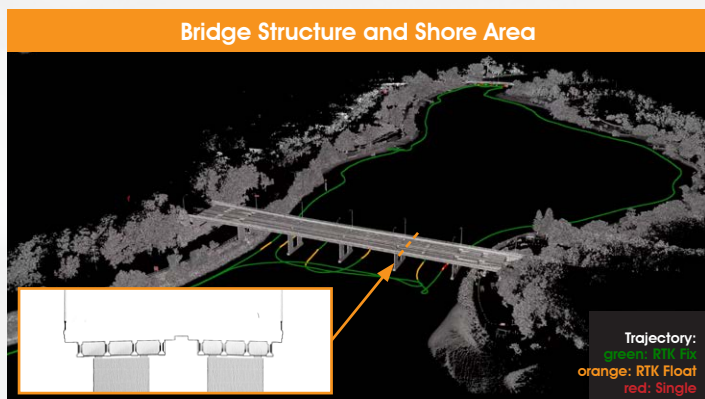
Initial Trajectory Calculation

- select IMU settings and platform kind
- PPK: import base station data files

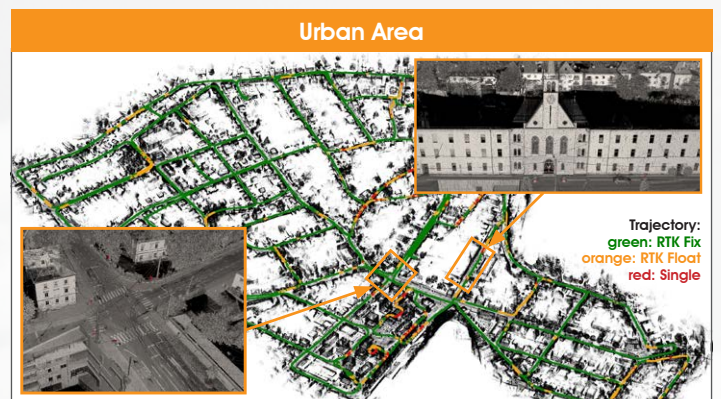
Final Trajectory Refinement

- select project scenario
- configure trajectory refinement settings

Project Scenario Examples



number of points: 218 million
time of data acquisition: 25 min



number of points: 4.6 billion
time of data acquisition: 2 h 38 min