

RIEGL RiLOC®-E²⁵

RIEGL's enhanced entry-level IMU/GNSS solution for (mini)VUX-series laser scanners

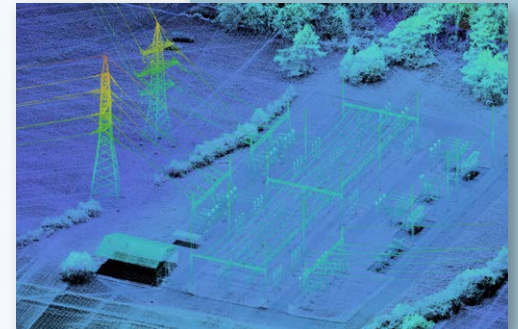
RIEGL now offers their own LiDAR system solution for the miniVUX-series and the VUX-series comprising a fully integrated subsystem for localization and orientation (**L**ocalization/**O**rientation **C**omponent).

This version of the (mini)VUX-SYS includes a Micro Electro Mechanical System (MEMS) Inertial Measurement Unit (IMU), a GNSS unit, and appropriate software. All components are included in a compact and lightweight housing.

The combination of a (mini)VUX-series LiDAR sensor and RiLOC-E²⁵ into a compact complete LiDAR system is the ideal solution for small-scale LiDAR surveying with drones. In such applications, using a nearby local base station ensures the shortest base length and thus maximum accuracy in the georeferencing of the high-precision LiDAR data from the RIEGL LiDAR sensor.

Key Features

- tight coupling of IMU / GNSS / LiDAR data
- seamlessly integrated into the RIEGL post-processing workflow
- lightweight, small form factor



Specifications RiLOC®-E²⁵

IMU system	MEMS based
IMU sampling rates	up to more than 700 Hz
IMU acceleration range	±8 g
IMU angular rate range	± 300°/sec
Roll/Pitch	0.010°
Heading	0.025°
Performance specifications ¹⁾	0.02 - 0.04 m (position, post-processed)
GNSS system	L1/L2, GPS, GLONASS, Galileo and BeiDou
RiLOC-E ²⁵ dimensions	approx. 85 x 85 x 44 mm
RiLOC-E ²⁵ weight	approx. 0.35 kg / 0.8 lbs

¹⁾ Typical accuracy under ideal conditions, RMS values, no GNSS outages, short baseline < 10 km. Positioning performance depends on satellite visibility, atmospheric conditions, and other environmental effects. Navigation performance depends on platform dynamics. Overlapping flight strips with at least 25% overlap and cross strips; significant elevation changes and/or objects with planar features need to be available.

total system weight
(scanner with subsystem RiLOC-E²⁵)
1.84 kg / 4.05 lbs



RIEGL RiLOC-E²⁵
directly attached to the miniVUX-series LiDAR sensor