

NEW RIEGL RiLOC®-F

RIEGL's high-precision IMU/GNSS solution for VUX-series laser scanners

In addition to the already proven RiLOC-E, RIEGL now also offers a new high-precision, fully integrated subsystem for localization and orientation (Localization/Orientation/Component), the RiLOC-F IMU/GNSS solution for VUX-series laser scanners.

RiLOC-F is directly attached to the rear panel of the VUX-100²⁵ or VUX-120²³. It includes a high-precision 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, that is directly attached to the RIEGL VUX-series laser scanners. The combination of a VUX-series laser scanner and RiLOC-F into a compact complete LiDAR system is the ideal solution for small-scale LiDAR surveying with unmanned platforms such as multirotor, fixed-wing, or VTOL drones. In such applications, using a nearby local base station ensures the shortest base length and thus maximum accuracy in the georeferencing of the RIEGL VUX-series laser scanner's high-precision LiDAR data.

Key Features

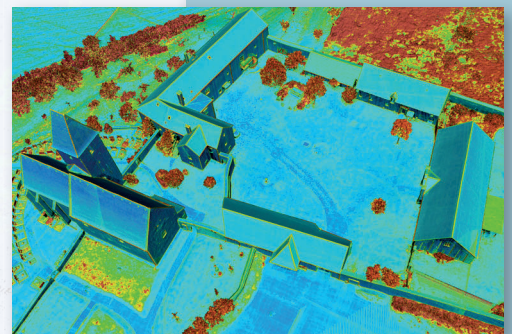
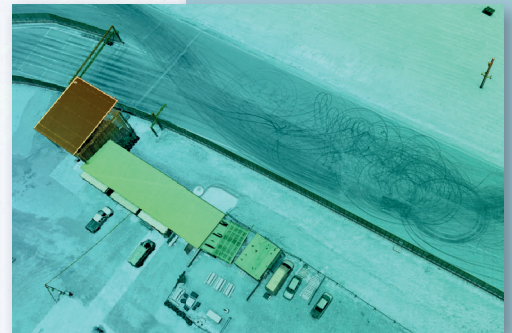
- tight coupling of IMU / GNSS / LiDAR data
- seamlessly integrated into the RIEGL post-processing workflow
- lightweight, small form factor



Specifications RiLOC®-F

IMU system	MEMS based
IMU sampling rates	up to more than 700 Hz
IMU acceleration range	±8 g, full scale
IMU angular rate range	± 300°/sec
Performance specifications ¹⁾	0.02 -0.03 m (position, post-processed)
GNSS system	multi-constellations (GPS, GLONASS, Galileo and BeiDou) up to triple-frequency
RiLOC-F dimensions	approx. 85 x 85 x 44 mm
RiLOC-F weight	approx. 0.36 kg / 0.8 lbs

¹⁾ single base station (short base line operation < 10 km); overlapping flight strips with at least 25% overlap and cross strips; elevation changes applies and/or man-made objects with planar features need to be available



RIEGL RiLOC-F directly attached to the e.g. RIEGL VUX-100²⁵ LiDAR sensor