

**NEW**

# RIEGL miniVUX-1 UAV

World Premiere at  
**INTERGEO 2016**



The new **RIEGL miniVUX-1 UAV** is a user-friendly and cost-efficient device to acquire survey-grade measurement data by use of remotely piloted helicopters and unmanned aircrafts for a variety of applications.

Based on **RIEGL's** sophisticated waveform processing LiDAR technology, the **RIEGL miniVUX-1 UAV** provides high-speed data acquisition using echo signal digitization and online waveform processing. Its excellent multiple-target capability enables achieving superior measurement results even under adverse atmospheric conditions.

The 360° field of view allows data acquisition of the entire surroundings, a well designed housing supports mounting even under limited weight and space conditions.



## Miniaturized LiDAR Sensor for Unmanned Laser Scanning

### Typical applications include

- Agriculture & Forestry
- Archeology and Cultural Heritage Documentation
- Construction-Site Monitoring
- Glacier and Snowfield Mapping
- Landslide Monitoring



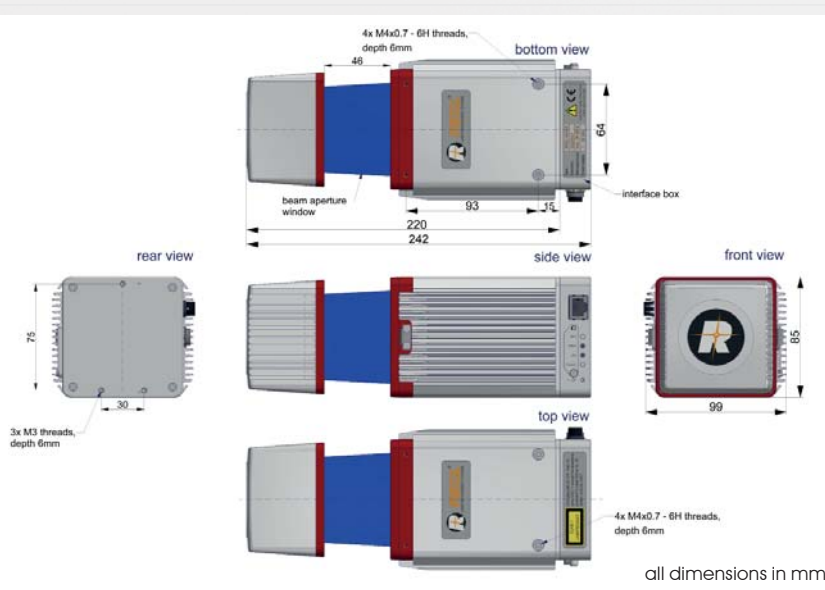
[www.riegl.com](http://www.riegl.com)



## Highlights

- extremely lightweight (1.55 kg)
- compact, robust aluminium housing, ready to be mounted to fixed-wing and rotary UAV's
- 360° field of view for unrestricted data acquisition
- exceptionally suited for measuring snowy and icy terrain
- RIEGL's unique echo signal digitization and online waveform processing
- Multiple target capability – up to 5 target echoes per laser shot
- Narrow measurement beam with low divergence for high spatial resolution
- Mechanical and electrical interface for IMU mounting

## Mechanical Drawings



RIEGL miniVUX®-1 UAV with protective cap



RIEGL miniVUX®-1 UAV with external IMU-Sensor (optional)



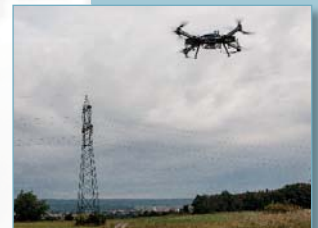
RIEGL miniVUX®-1 UAV with cooling fan device



compact & lightweight miniVUX®-1 UAV



RIEGL miniVUX®-1 UAV mounted on RICOPTRER



RICOPTRER with RIEGL miniVUX®-1 UAV in action

## RIEGL miniVUX®-1 UAV Preliminary Technical Data

- max. operating flight altitude AGL
- pulse repetition rate PRR (peak)
- eye safe operation at Laser Class 1
- online waveform processing
- multiple target capability

<b>Eye Safety Class</b>	Laser Class 1
<b>Max. Range @ Target Reflectivity 60%</b>	250 m
<b>Max. Range @ Target Reflectivity 20%</b>	150 m
<b>Minimum Range</b>	3 m
<b>Accuracy / Precision</b>	15 mm / 10 mm
<b>Max. Effective Measurement Rate</b>	up to 100,000 meas./sec
<b>Field of View (FOV)</b>	up to 360°
<b>Max. Operating Flight Altitude AGL</b>	100 m / 330 ft

Class 1 Laser Product according to IEC60825-1:2014



RIEGL miniVUX-1 UAV Data Sheet



Watch our videos!  
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