

The **NEW RIEGL VUX[®]-1 Series**

High-Performance LiDAR Sensors for KINEMATIC Laser Scanning



RIEGL's VUX-1, the world's first survey-grade UAV LiDAR sensor, was unveiled in 2014. Since its introduction, it has already been deployed by more than 30 customers around the world, and now is made available in three different application-optimized versions.

The sensors are designed to be mounted in any orientation and even under limited weight and space conditions. The VUX-1 series instruments provide high performance data acquisition for all fields of kinematic Laser Scanning, from mobile, to UAV-based and airborne applications.

NEW RIEGL VUX[®]-1HA High Accuracy

- compact, rugged and very lightweight design
- easily mountable to whatsoever type of moving platform
- field of view 360°
- Laser Pulse Repetition Rate PRR > 1 MHz
- high accuracy 5 mm

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|--------------------------------------|----------------------------|
| Eye Safety Class | Laser Class 1 |
| Max. Range @ Target Reflectivity 80% | 400 m |
| Max. Range @ Target Reflectivity 10% | 150 m |
| Minimum Range | 1.2 m |
| Accuracy | 5 mm |
| Precision | 3 mm |
| Max. Effective Measurement Rate | 1,000,000 meas./sec |
| Max. Scan Speed | 250 scans/sec |
| Field of View (FOV) | 360° |

Typical Applications

- indoor and outdoor laser mapping
- tunnel profile measurements
- railway applications like clearance analysis, etc.

RIEGL VUX[®]-1UAV

- compact, rugged and very lightweight design
- easily mountable to professional UAS, UAV, RPAS, etc
- field of view 330°
- fully-integrated system solution RIEGL VUX-SYS and RICOPTER available
- optionally available with integrated APX-15 INS

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|--------------------------------------|-------------------|
| Eye Safety Class | Laser Class 1 |
| Max. Range @ Target Reflectivity 60% | 920 m |
| Max. Range @ Target Reflectivity 20% | 550 m |
| Minimum Range | 3 m |
| Accuracy / Precision | 10 mm / 5 mm |
| Max. Effective Measurement Rate | 500,000 meas./sec |
| Max. Scan Speed | 200 scans/sec |
| Field of View (FOV) | 330° |
| Max. Operating Flight Altitude AGL | 350 m / 1,150 ft |

Typical Applications

- topography in open-cast mining
- agriculture and forestry
- terrain and canyon mapping
- corridor mapping

NEW RIEGL VUX[®]-1LR Long Range

- compact, rugged and very lightweight design
- ideally suited for airborne surveying from helicopters
- field of view 330°
- fully-integrated system solution RIEGL VP-1 Helipod available for user-friendly mounting to helicopters

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|--------------------------------------|--------------------------|
| Eye Safety Class | Laser Class 1 |
| Max. Range @ Target Reflectivity 60% | 1,350 m |
| Max. Range @ Target Reflectivity 20% | 820 m |
| Minimum Range | 5 m |
| Accuracy/Precision | 15 mm / 10 mm |
| Max. Effective Measurement Rate | 750,000 meas./sec |
| Max. Scan Speed | 200 scans/sec |
| Field of View (FOV) | 330° |
| Max. Operating Flight Altitude AGL | 530 m / 1,740 ft |

Typical Applications

- corridor mapping
- power line, railway track and pipeline inspection
- surveying of urban environments
- archeology and cultural heritage documentation



Additional data to be found in the RIEGL VUX-1 Series datasheets.

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Info Sheet, RIEGL VUX-1 Series, 2015-09-14

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