



RIEGL VP-1 with integrated RIEGL VUX-SYS



RIEGL VUX-1LR features

The VUX-SYS fits the small and lightweight RIEGL VP-1 HeliCopterPod, to be mounted on standard hard points and typical camera mounts of manned helicopters. Quick release adapter brackets and a minimum of external cabling (i.e. power supply, LAN, GNSS antenna) allow quick system installation and removal.

RIEGL VP-1 Helicopter Pod for Airborne Laser Scanning (ALS)

Typical Applications

- Precision Agriculture
- Archeology and Cultural Heritage Documentation
- Terrain and Canyon Mapping
- Flood Zone Mapping
- Surveying of Urban Environments
- Topography in Open-Cast Mining
- Construction-Site Monitoring
- Power Line, Railway Track, and Pipeline Inspection
- Accident Investigation
- Emergency Management Planning



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RIEGL VP-1 Components & Technical Data

front view

bottom view

side view

side view

dia 370

190

280

480

all dimensions in mm

System Components:

- RIEGL VUX-1LR LiDAR sensor
- IMU/GNSS unit
- GNSS antenna
- Control unit
- digital camera options (e.g. Nikon D810 or Phase One iXU, 2x Sony Alpha 6000)
- connecting cables

Technical Data:

- quick installation & removal using the existing mounts (e.g. AirFILM Camera System); mounting and operation at enduser's responsibility
- total weight approx. 19 kg
- area exposed to wind 0.114 m²



mounting example on a helicopter (EC135) for power line mapping/inspection

RIEGL VUX[®]-SYS Sensor System

System Components	RIEGL VUX-1 LiDAR sensor IMU/GNSS unit with antenna control unit digital camera	
Scanner Performance	refer to VUX-1LR table below	
IMU/GNSS Unit	IMU Option A (Applanix AP20)	IMU Option B (Applanix AP60)
accuracy Roll, Pitch / Heading	0.015° / 0.035°	0.005° / 0.015°
IMU sampling rate	200 Hz	200 Hz
position accuracy (typ.)	0.05 m - 0.3 m	0.05 m - 0.3 m
Camera Interfaces	trigger and event marker	

Further details to be found on the current RIEGL VUX-SYS Data Sheet.



mounting example on BELL Long Range Helicopter

RIEGL VUX[®]-1LR LiDAR Sensor

Laser Class	1
Max. Effective Measurement Rate	up to 750,000 meas./sec
Max. Range @ target reflectivity 20%	820 m
Minimum Range	5 m
Accuracy / Precision	15 mm / 10 mm
Field of View (FOV)	up to 330°

Class 1 Laser Product according to IEC 60825-1:2014

Further details to be found on the current RIEGL VUX-1LR Data Sheet.

RIEGL VP-1 Main Features & Key Facts

- robust und reliable airborne scanner carrying platform
- full mechanical and electrical integration of sensor system components into aircraft fuselage



system operation and data acquisition with RiACQUIRE



RIEGL VP-1 HeliCopterPod with GNSS antenna mounted



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