RIEGL VP-1
with *RIEGL* VUX-1UAV[22] or *RIEGL* VUX-1LR[22] fully integrated

The *RIEGL* VUX-SYS airborne laser scanning system – comprising laser scanner, IMU/GNSS unit, and optional cameras – smoothly fits into the small and lightweight *RIEGL* VP-1 Helicopter Pod, designed to be mounted on standard hard points and typical camera mounts of manned helicopters.

Quick release adapter brackets and minimum external cabling (i.e. power supply, LAN, GNSS antenna) allow quick system installation and removal.

RIEGL VP-1

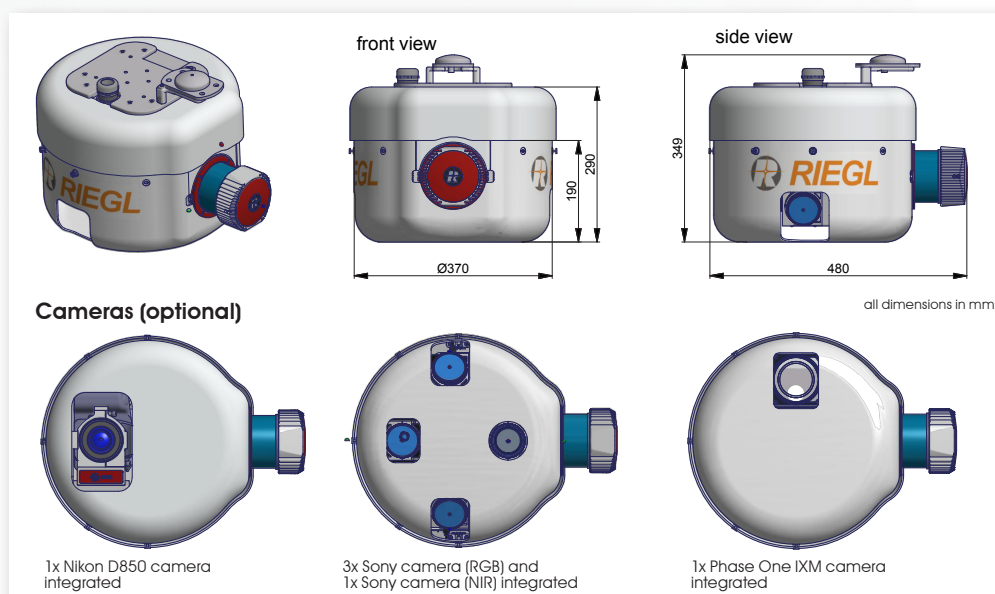## Helicopter Pod for
Airborne Laser Scanning (ALS)

Typical Applications

• Corridor Mapping • 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 Technical Data

front view

side view

290
190
Ø370

349
480

all dimensions in mm

Cameras (optional)

1x Nikon D850 camera integrated

3x Sony camera (RGB) and 1x Sony camera (NIR) integrated

1x Phase One IXM camera integrated

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

RIEGL VUX®-SYS Sensor System

System Components	1x RIEGL VUX-1LR[22] or RIEGL VUX-1UAV[22] 1x IMU/GNSS unit with GNSS antenna 1x control unit 1x laptop or Phase One iX controller for data acquisition digital cameras (optional) 1x flight management system (optional)		
Total Weight	approx. 20 kg (depending on IMU/GNSS unit and camera configuration)		
IMU/GNSS Unit accuracy Roll, Pitch / Heading IMU sampling rate position accuracy (typ.)	AP+30 0.010° / 0.025° 200 Hz 0.02 m - 0.05 m	AP+50 0.005° / 0.010° 200 Hz 0.02 m - 0.05 m	AP+60 0.0025° / 0.005° 200 Hz 0.05 m - 0.1 m
Additional Information	quick installation & removal using the existing mounts (e.g. Meeker Aviation Camera System); mounting and operation at enduser's responsibility; area exposed to wind 0.114m²		

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

mounting example on BELL Long Range Helicopter

Scanner Performance

LiDAR Sensor	RIEGL VUX-1LR[22]	RIEGL VUX-1UAV[22]
Laser Class	1	1
Max. Effective Measurement Rate	up to 1,500,000 meas./sec	up to 1,200,000 meas./sec
Max. Range @ target reflectivity 20%	1,000 m	755 m
Minimum Range	1.5 m	1.5 m
Accuracy / Precision	15 mm / 5 mm	10 mm / 5 mm
Field of View (FOV)	up to 360°	up to 360°

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

Further details to be found on the current RIEGL VUX-1LR[22] / VUX-1UAV[22] Data Sheet.

system operation and data acquisition with RiACQUIRE

RIEGL VP-1 Helicopter Pod with GNSS antenna mounted

Watch our videos!
youtube.com/riegllms

www.riegl.com

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