The RIEGL VPX-1 is a lightweight and stream-lined pod that carries a complete airborne laser scanning platform for easy and quick mounting on suitable support arms on helicopters. Being perfectly suited for corridor mapping applications the platform consists of a RIEGL VUX-240 airborne laser scanner, three Sony Alpha high resolution digital cameras and a high-end IMU/GNSS system. The airborne laser scanner’s high effective repetition rate of 1.5 million measurements on the ground and the oblique orientation of the cameras (Forward/Nadir/Backward) especially account for the specifics of power line mapping applications, but also make it a perfect tool for high-density city mapping at altitudes of up to 1200m.

**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
RIEGL VPX-1 with VUX-240 Technical Data

RIEGL VUX-240 LiDAR Sensor

- **Laser Class**: 3R
- **Max. Effective Measurement Rate**: up to 1,500,000 meas./sec
- **Max. Range @ target reflectivity 20%**: 1200 m
- **Minimum Range**: 5 m
- **Accuracy / Precision**: 20 mm / 15 mm
- **Field of View (FOV)**: 75°

RIEGL VUX®-240 Sensor System

**System Components**
- RIEGL VUX-240 LiDAR sensor
- IMU/GNSS unit with GNSS antenna
- control unit
- digital cameras (optional)

**Scanner Performance**
refer to VUX-240 table below

**Total Weight**
approx. 20 kg (depending on camera configuration)

**IMU/GNSS Unit**
<table>
<thead>
<tr>
<th>accuracy Roll, Pitch / Heading</th>
<th>IMU sampling rate</th>
<th>position accuracy (typ.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applanix AP20</td>
<td>0.015° / 0.035°</td>
<td>0.05 m - 0.3 m</td>
</tr>
<tr>
<td>Applanix AP60</td>
<td>0.002° / 0.005°</td>
<td>0.05 m - 0.1 m</td>
</tr>
</tbody>
</table>

**Camera Interfaces**
trigger and event marker

**Camera Orientation Angles**
- forward / nadir / backward
  - -20° / 0° / +20°

**Technical Data**
quick installation & removal using the existing mounts
(e.g. AirFILM Camera System); mounting and operation at enduser's responsibility; area exposed to wind 0.114 m²

Class 3R Laser Product according to IEC60825-1:2014
The following clause applies for instruments delivered into the United States: Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed.3., as described in Laser Notice No. 56, dated May 8, 2019.

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This data sheet is compiled with care. However, errors cannot be fully excluded and alterations might be necessary.

www.riegl.com

Watch our videos:
youtube.com/rieglidar

Preliminary Info Sheet, RIEGL VPX-1, 2020-10-05