The RIEGL VZ-400i is a cutting-edge 3D Laser Scanning System which combines a future-oriented, innovative processing architecture and internet connectivity with RIEGL’s latest waveform processing LiDAR technology. This real-time data flow is enabled through dual processing platforms: a dedicated processing system for simultaneous acquisition of scan data and image data, waveform processing and system operations, and a second processing platform which enables automatic on-board registration, geo-referencing, and analysis to be executed in parallel.

RIEGL VZ-400i
Ultra High Performance 3D Laser Scanner
Redefining Productivity!

Typical Applications
- Architecture & Facade Measurements
- As-Built Surveying
- Archeology & Cultural Heritage Documentation
- City Modeling
- Civil Engineering
- Building Infrastructure Management (BIM)
- Forensics & Crash Scene Investigation
- Emergency Management
- Tunnel Surveying
- Forestry
- Research
- Monitoring

Scan this QR code to watch the VZ-400i video.

www.riegl.com
RIEGL VZ-400i Main Features

- ultra high speed data acquisition with up to 500,000 meas./sec, survey-grade accuracy ≤ 5 mm, up to 800 m measurement range
- high quality point cloud colorization based on Nikon® SLR camera image data taken simultaneously during scanning
- orientation sensor for pose estimation
- advanced flexibility through support for external peripherals and accessories, e.g. external Bluetooth GNSS receiver on top
- cloud connectivity via Wi-Fi and 3G/4G LTE
- fully compatible with the RIEGL VMZ Hybrid Mobile Laser Mapping System
- RiSCAN PRO standard processing software (included), RiSOLVE for fully automatic registration and colorization of scan data (optional)

Automatic On-board Registration

With two processors on-board, the RIEGL VZ-400i is able to perform different processes in real-time such as automatic on-board registration in parallel to the scan data acquisition.

Processor 1
- scan data acquisition
- simultaneous acquisition of photographs during scanning
- pose estimation (using GNSS/IMU/environment sensors)

Processor 2
- conversion of scan data into RIEGL data base
- on-board multiple time around resolution
- registration of scan data as a background process

RIEGL VZ-400i Technical Data

<table>
<thead>
<tr>
<th>Laser Pulse Repetition Rate PRR (peak)</th>
<th>100 kHz</th>
<th>300 kHz</th>
<th>600 kHz</th>
<th>1,200 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Effective Measurement Rate (meas/sec)</td>
<td>42,000</td>
<td>125,000</td>
<td>250,000</td>
<td>500,000</td>
</tr>
<tr>
<td>Max. Measurement Range (p ≥ 90 %)</td>
<td>800 m</td>
<td>480 m</td>
<td>350 m</td>
<td>250 m</td>
</tr>
<tr>
<td>Max. Measurement Range (p ≥ 20 %)</td>
<td>400 m</td>
<td>230 m</td>
<td>160 m</td>
<td>120 m</td>
</tr>
<tr>
<td>Minimum Range</td>
<td>1.5 m</td>
<td>1.2 m</td>
<td>0.5 m</td>
<td>0.5 m</td>
</tr>
<tr>
<td>Accuracy / Precision</td>
<td>5 mm / 3 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field of View (FOV)</td>
<td>100° vertical / 360° horizontal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Safety Class</td>
<td>Laser Class 1 (eyesafe)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Dimensions (width x height) / Weight</td>
<td>206 mm x 308 mm / 9.7 kg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further details to be found on the current RIEGL VZ-400i Data Sheet.