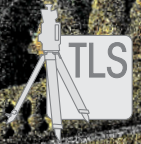


# RIEGL VZ-400i



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 data acquisition, waveform processing and system operations, and a second processing platform which enables automatic on-board registration, geo-referencing, and analysis to be executed simultaneously.



## 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](http://www.riegl.com)



## RIEGL VZ-400i Main Features

- ultra high speed data acquisition with up to 500,000 meas./sec, survey-grade accuracy  $\leq 5$  mm, up to 800 m measurement range
- easy to use / easy to train: user-friendly touchscreen interface, single touch operation, etc.
- 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)

## NEW 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	Processor 2
<ul style="list-style-type: none"> <li>• scan data acquisition</li> <li>• acquisition of photographs</li> <li>• pose estimation (using GNSS/IMU/environment sensors)</li> </ul>	<ul style="list-style-type: none"> <li>• conversion of scan data into RIEGL data base</li> <li>• on-board multiple time around resolution</li> <li>• registration of scan data as a background process</li> </ul>

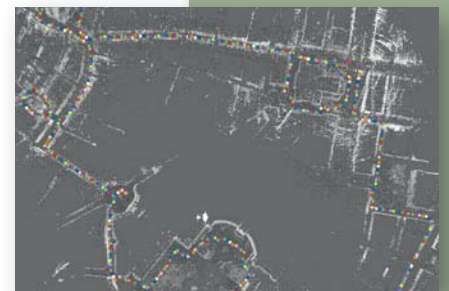


### VZ-400i Field Experience:

One of the fastest scanners on the market:  
**500+ scans (50 mdeg) within 8 hours,**  
 handled by one operator!



RIEGL VZ-400i night scan in Vienna



overview of scan positions (colored dots)



scan data detail, reflectance-scaled

### Further Application Examples:



city modeling



forensics & investigation

## RIEGL VZ-400i Technical Data

800m max. measurement range	1.2MHz pulse repetition rate PRR	online waveform processing	Wi-Fi and 3G/4G LTE
optional camera	multiple target capability	Laser Class 1	

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

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