RIEGL VZ-400i

1.2MHz | 800m | optional

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®

RIEGL LMS GmbH, Austria | *RIEGL USA Inc.* | *RIEGL Japan Ltd.* | *RIEGL China Ltd.*

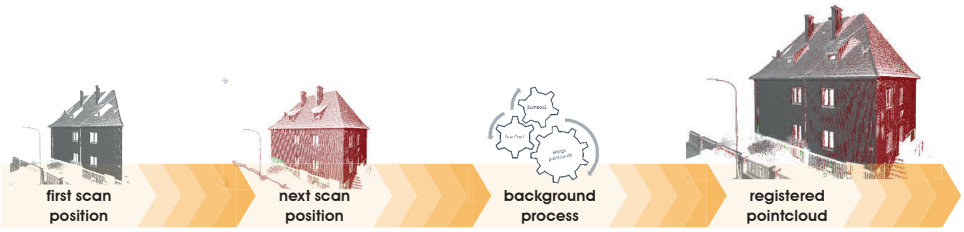
RIEGL VZ-400i Main Features

- 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 simultaneouly 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	Processor 2
• **scan data acquisition** • simultanous acquisition of photographs during scanning • pose estimation (using GNSS/IMU/environment sensors)	• conversion of scan data into *RIEGL* data base • on-board multiple time around resolution • **registration of scan data** as a background process



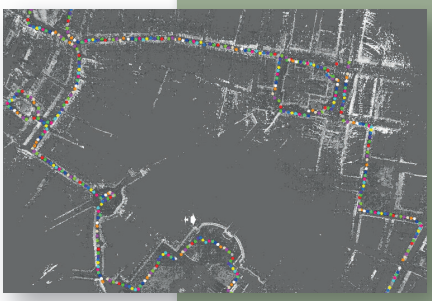
RIEGL VZ-400i Technical Data

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 (ρ ≥ 90 %)	800 m	480 m	350 m	250 m
Max. Measurement Range (ρ ≥ 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.

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

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