



# RIEGL Laser Scanning in Archeology and Cultural Heritage Documentation

## Innovation in 3D for the preservation of historical sites

RIEGL specializes in research, development, and production of terrestrial, industrial, mobile, airborne, bathymetric and UAV-based laser scanners and scanning systems. In combination with these systems, RIEGL creates innovative software to provide powerful solutions for multiple fields of application in surveying, including Archeology and Cultural Heritage Documentation.

RIEGL has demonstrated a long-standing commitment to the preservation of cultural heritage sites. Its support of digital preservation of sites such as the Pyramids in Giza, the Sphinx, the Domitilla Catacombs in Rome, Frauenkirche in Dresden, St. Stephen's Cathedral in Vienna and numerous other significant monuments provides future generations the ability to visit such sites in digital form.



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# RIEGL LiDAR Technology in Archeology & Cultural Heritage Documentation

## Various Acquisition Platforms even for Most Challenging Projects

**Terrestrial Laser Scanning**

A comprehensive suite of sophisticated RIEGL Terrestrial Laser Scanners with ranges up to 6000 m is ready to be used for acquisition of highly accurate and informative scan and image data.

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

- ultra high speed data acquisition with up to 500,000 meas./sec, survey-grade accuracy  $\leq 5\text{mm}$  and up to 800 m measurement range
- on-board registration with GPS and orientation sensors








**Airborne & Unmanned Laser Scanning**

RIEGL Airborne Laser Scanners and Scanning Systems especially designed for the use with fixed wing aircrafts, helicopters, RPAS and UAVs allow capturing of scan and image data of large areas, which are a sound basis for the generation of Digital Terrain Models, etc.

**RiCOPTER**  
**Remotely Piloted Aircraft System for Multi-Purpose Applications**

- complete miniaturized ALS system
- RIEGL VUX-SYS (comprising RIEGL VUX-1 UAV LiDAR sensor, IMU/GNSS unit with antenna, control unit, and optional cameras) integrated
- field of view up to 230°
- accuracy 10 mm
- eyesafe Laser Class 1








**Mobile Laser Scanning**

High performance RIEGL Scanners and high-end RIEGL Scanning Systems with fully integrated position and attitude sensors allow for a rapid and efficient data acquisition from moving platforms by simply driving past.

**RIEGL VMX-2HA**  
**High Speed, High Performance Dual Scanner Mobile Mapping System**

- 2 RIEGL VUX-1HA laser scanners and high accuracy IMU/GNSS unit fully integrated
- up to 2 MHz effective measurement rate
- up to 500 scan lines/sec
- 3 mm precision, 360° vertical field of view
- aerodynamically-shaped protective cover
- interface for up to 9 optional cameras with low distortion optics
- spherical imaging system for 360° visual coverage
- high-speed 10 GigE Link for image data acquisition

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