Leica RTC360 3D Reality Capture Solution

Fast. Agile. Precise.

3D Reality Capture

Fast

The Leica RTC360 laser scanner makes 3D reality capture faster than ever before. With a measuring rate of up to 2 million points per second and advanced HDR imaging system, the creation of coloured 3D point clouds can be completed in under 2 minutes. Plus, automated targetless field registration (based on VIS technology) and the seamless, automated transfer of data from site to office reduce time spent in the field and further maximise productivity.

Agile

Small and lightweight, the Leica RTC360 scanner's portable design and collapsible tripod mean it's compact enough to fit into most backpacks, ready to be taken anywhere. Once on-site, easy-to-use one-button operation makes for fast, hassle-free scanning.

Precise

Low noise data allows for better images, resulting in crisp, high-quality scans that are rich in detail and ready for use in a range of applications. Combined with Cyclone FIELD 360 software for automated registration in the field, the Leica RTC360 scanner offers outstanding precision that can be checked on-site.

Leica RTC360 Product Specifications

GENERAL	
3D laser scanner	High-speed 3D laser scanner with integrated HDR spherical imaging system and Visual Inertial System (VIS) for real time registration
PERFORMANCE	
Data acquisition	‹2 mins for complete full dome scan and spherical HDR image at 6mm @ 10 m resolution
Real time registration	Automatic point cloud alignment based on real time tracking of scanner movement between setups based on Visual Inertial System (VIS) by video-enhanced inertial measurement unit
Double scan	Automatic removal of moving objects
Check & Adjust	Field procedure for targetless checking of angular parameters
SCANNING	
Distance measurement	High-speed, high dynamic time of flight enhanced by Waveform Digitising (WFD) technology
Laser class	1 (in accordance with IEC 60825-1:2014), 1550 nm (invisible)
Field of view	360° (horizontal) / 300° (vertical)
Range	Min. 0.5 - up to 130 m
Speed	Up to 2,000,000 pts / sec
Resolution	3 user selectable settings (3/6/12 mm @ 10 m)
Accuracy*	Angular accuracy 18" Range accuracy 1.0 mm + 10 ppm 3D point accuracy 1.9 mm @ 10 m 2.9 mm @ 20 m 5.3 mm @ 40 m
Range noise* **	0.4 mm @ 10 m, 0.5 mm @ 20 m
IMAGING	
Camera	36 MP 3-camera system captures 432 MPx raw data for calibrated 360° x 300° spherical image
Speed	1 minute for full spherical HDR image at any light condition
HDR	Automatic, 5 brackets
NAVIGATION SENSORS	
Visual Inertial System	Video enhanced inertial measuring system to track movement of the scanner position relative to the previous setup in real time
Tilt	IMU based, Accuracy: 18" (for upright and upside down setups with +/- 5° inclination)
Additional sensors	Altimeter, Compass, GNSS

OPERATION	
On scanner	Touch-screen control with finger touch, full colour WVGA graphic display 480 x 800 pixels
Mobile devices	Leica Cyclone FIELD 360 app for iOS and Android tablet computers and smartphones including: - Remote control of scan functions - 2D & 3D data viewing - Tagging - Automatic alignment of scans
Wireless	Integrated wireless LAN (802.11 b/g/n)
Data storage	Leica MS256, 256 GB exchangeable USB 3.0 flash drive
DESIGN & PHYSICAL	
Housing	Aluminium frame and sidecovers
Dimensions	120 mm x 240 mm x 230 mm / 4.7'' x 9.4'' x 9.1''
Weight	5.35 kg / 11.7 lbs, nominal (without batteries)
Mounting mechanism	Quick mounting on 5/8" stub on lightweight tripod / optional tribrach adapter / survey tribrach adapter available
POWER	
Internal battery	2 x Leica GEB361 internal, rechargeable Li-Ion batteries. Duration: Typically up to 4 hours Weight: 340 g per battery
External	Leica GEV282 AC adapter
ENVIRONMENTAL	
Operating temperature	-5° to +40°C
Storage temperature	-40° to +70°C
Operating low temperatures****	-10° to +40°C
Dust/Humidity***	Solid particle/liquid ingress protection IP54 (IEC 60529)

Leica Cyclone FIELD 360

Leica Cyclone REGISTER 360

Leica ScanStation P50

active CUSTOMER CARE

Your Trusted Active Customer Care

Active Customer care is a true partnership between Leica Geosystems and its customers. Customer Care Packages (CCPs) ensure optimally maintained equipment and the most up-to-date software to deliver the best results for your business. The myWorld @ Leica Geosystems customer portal provides a wealth of information 24/7.

All specifications are subject to change without notice.

All accuracy specifications are on a level of confidence of 68% according to the Guide of the Expression of Uncertainty in Measurement (JCGM100:2008) unless otherwise noted.

* At 89% albedo.

** For single shot measurements

*** For upright and upside down setups with a +/- 15° inclination

**** Extended low temperature operation is possible to -10°C if internal temperature is at or above -5°C when powered on. For extended low temperature measurement, it is recommended that QA procedures are followed.

Scanner: Laser class 1 in accordance with IEC60825:2014

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- when it has to be **right**

Leica Geosystems