

SPS ZOOM 300



3D Laser Scanner

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A 3D laser scanner is a device that collects precise spatial data of objects or environments. The collected point cloud data can then be used to construct digital three dimensional models.

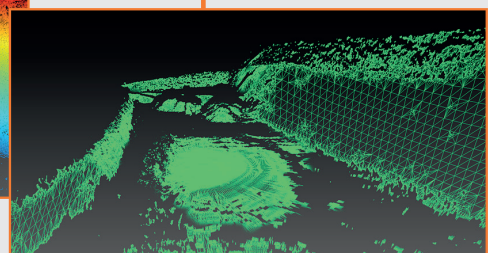
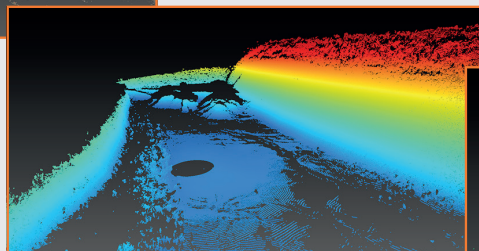
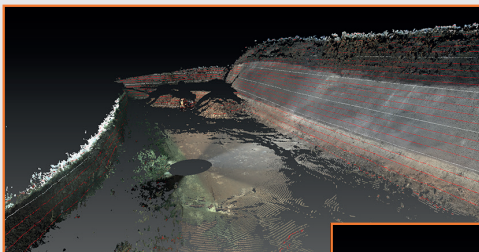
ZOOM 300 is a high performance, easy to use, complete solution for all 3D survey requirements. Manufactured to withstand adverse conditions, the design is also lightweight and portable.

The perfect combination of robustness, performance and price

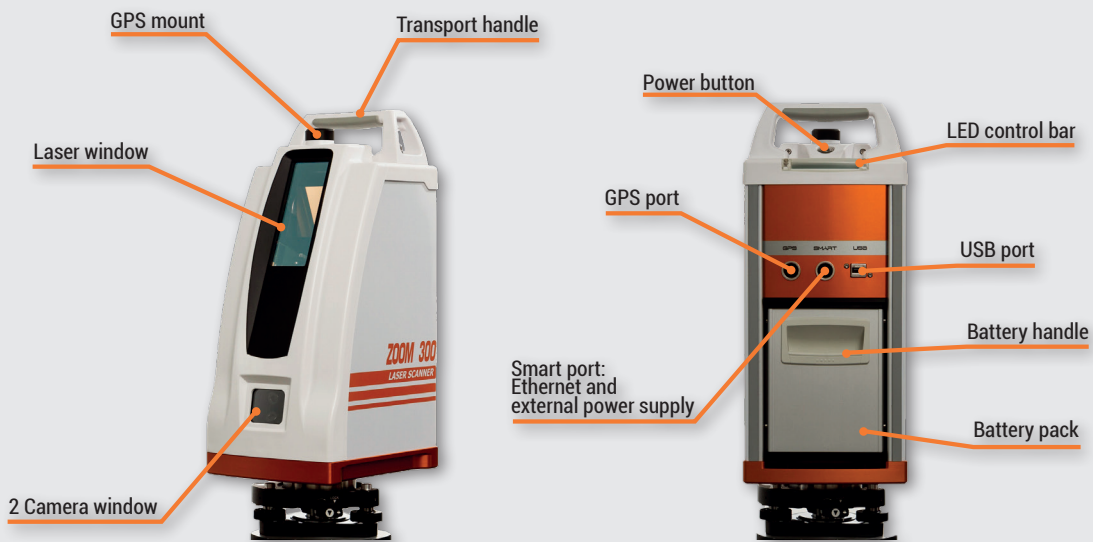
ZOOM 300 is a rugged and reliable Time of Flight Laser Scanner recommended for all working environments, especially topographic surveys.

The sealed casing protects the internal components, providing an IP65 dust and waterproof rating.

ZOOM 300 is simple to use and ready to scan at the press of a button. The scanner can be controlled and operated directly from all mobile devices with a WLAN connection. A menu driven interface makes selection straightforward.



Features



Principal features

- Compact Laser Scanner, everything in a single case
- Easy interface
- Ready to work in few minutes for increased productivity
- Wi-Fi functionality - operate the scanner directly from your PC or Smartphone (iOS, Android and Windows Mobile)
- 2 intergrated cameras 5+5 Mpx
- Integration of GPS data
- Laser class 1 - work safely without eye protection
- Robust but lightweight (7 kg incl battery)
- > 6 hours of continuous work with the 2 batteries provided
- Operating temperature -10° to +50°
- IP65 protection, the top of the range for a laser scanner
- The best performance/price ratio solution available on the market



Performance

Operational specifications

ZOOM 300 supports four scan modes at different resolutions.

Depending on the object and the area to scan, the user can define the best resolution to optimize scan time and the size of data output. The scan time varies according to the scan mode.

Resolution	H. res. (360°)	V. res. (90°)	Total points	Time x 360°	Columns/sec.
Fine	16.000	4.000	64.000.000	1h 06m 40s	4
Standard	8.000	2.000	16.000.000	0h 16m 40s	8
Fast	4.000	1.000	4.000.000	0h 04m 10s	16
Preview	2.000	500	1.000.000	0h 01m 02s	32

Scanner resolution (*: referred to scan time only, excluding warmup, initialization, positioning, photo capture)

Grid step distance	10m	30m	50m	100m	200m
Fine	0.39cm	1.17cm	1.96cm	3.92cm	7.85cm
Standard	0.78cm	2.35cm	3.92cm	7.85cm	15.90cm
Fast	1.57cm	4.71cm	7.85cm	15.70cm	31.41cm
Preview	3.14cm	9.42cm	15.70cm	31.41cm	62.83cm

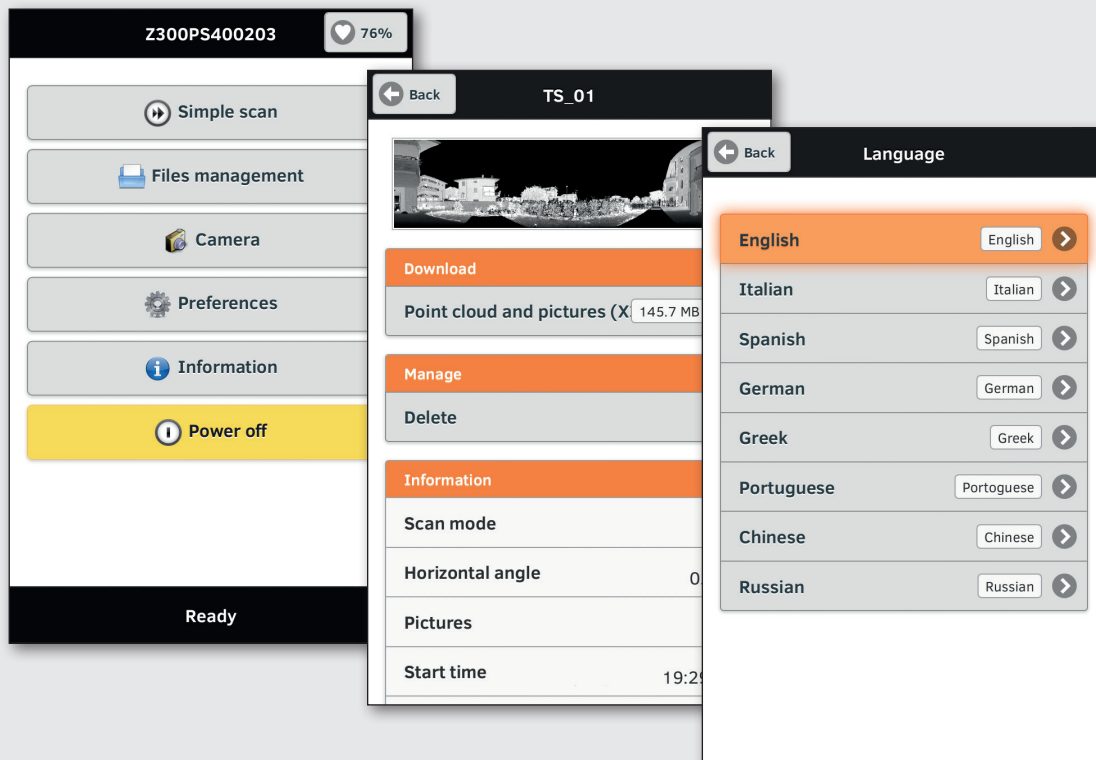
Distance reference



Software

Simple and intuitive interface

To operate the ZOOM 300 Laser Scanner, all you need is a PC, Tablet or Smartphone with Wi-Fi and a web browser. You do not even need to install any drivers or software, since the web interface server is built into the scanner.



X•PAD MPS

A new concept in software for processing topographical data, capable of integrating a variety of different information, including: import of all common data formats, calculations, scan registration and management of the point clouds and photography, topographical drawing functionality.

Simplicity and interactivity all in one application!



Operating Mode

Georeferencing of the survey with GPS/GNSS

It is now possible to use a GPS/GNSS receiver to calculate the position of the scan and georeference the point cloud data.

A GPS/GNSS antenna can be mounted on the ZOOM 300 and orientation can be calculated from a reference target with known coordinates using a second GPS/GNSS receiver.

The equipment ensures accuracy and precision for all 3D projects using a single 3D reference system.



Framework

Framework is a Laser Scanner support accessory particularly useful for the scanning of closed environments such as caves, architectural structures and tunnels, where ceilings are particularly high.

This accessory allows the scanner to perform a full surface scan through a rotation of 240°.



Applications



Quarry



Landfills



Landslides



Monitoring Rock Faces



Volume Calculation



Tunnels



Survey



Collision Investigation



Structures



Architecture

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Technical data

Technical features

Max Range	300m 100% reflectivity (on white target)
Operating conditiions	250m
Min Range	2.5m
Horizontal field of view	360°
Vertical field of view	90° (-25° +65°)
Scan rate	40.000 points/sec
Laser beam divergence	0.37mrad
Resolution	37mm x 37mm @ 100m
Accuracy	6mm @ 50m <10mm @ 100m

Physical specifications

Scanner size	215mm x 170mm x 430mm
Scanner weight	6.15Kg
Battery size	42m x 165mm x 120mm
Battery weight	0.85Kg
Power supply size	147mm x 63mm x 38mm
Power supply weight	0.2Kg

System specifications

Scanning optics vertically	Rotating mirror
Scanning optics horizontally	Rotating base
Laser class	Class 1 (eye safe)
Camera	2 calibrated camera
Resolution	5 megapixel each camera
Internal memory	32Gb
Data transfer	Wi-Fi, USB, Ethernet
Software on board	Dedicated Wi-Fi web interface for Smartphone and Tablet (Android, iOS and Windows Mobile)

Electrical specifications

Power supply	12V (battery or external power unit)
Power consumption	40W (on average)
Battery type	Li-Poly
Operation	>3h each battery (2 included)

Enviromental specifications

Operation temperature	-10°C + 50°C
Storate temperature	-25°C + 80°C
Humidity	Non-condensing
Protection class	IP65



KIT standard SPS ZOOM 300

- 1 ZOOM 300 instrument unit
- 1 Rugged carrying case (Yellow)
- 2 Li-Poly battery 8200 mAH
- 1 Battery Charger
- 1 Tribrach with optical plummet



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