STONEX

X300
LASER SCANNER

The first compact and lightweight Laser Scanner

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THE HARDWARE

STONEX X300 is the best available solution for 3D scanning, fully designed and manufactured in Italy.

For any work in an open pit mine, balancing economic efficiency and highly accurate outputs, Stonex X300 is the best solution for work. The **sealed external case protects optic** and **EDM components** and allow the scanner to operate even in dusty environments without fear of damaging sensitive parts.

X300 and 3D City

Thanks to its easy of use and the astonishing relationship between costs and operating performance, the Stonex X300 scanner can be used to successfully carry out large-scale campaign of 3D data collection.

EASY TO USE

The instrument is powered with only a single multi-function button for granting easy use.

EASY DATA

Three Transmission ports: 1. GPS connector, 2. USB port to download data, 3. port for external power supply and ethernet data transmission.

EASY STATUS CONTROL

LED bar showing the status of the instrument (i.e. battery charging status or scan progress.)

KEY FEATURES

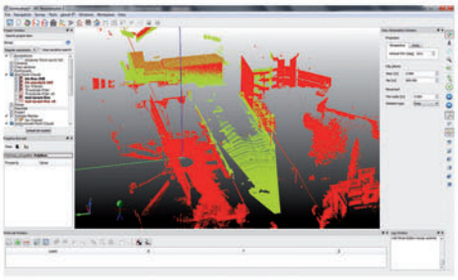
- Compact 3D scanning station: everything you need is carried in a handy suitcase;
- Solid and lightweight;
- Simple and intuitive interface for high productive fieldwork use;
- Working out of the box: ready to work in a few minutes, saving time and money;
- Ideal for medium-range outdoor applications;
- The most efficient and cost effective solution, with excellent price-performance ratio;
- Advanced Wi-Fi capabilities: operate the scanner directly from your smartphone (iOs, Android and Windows Mobile supported);
- Integrated real-time digital camera 10.7 Mpx.
- Compatibility with standard GPS surveying equipment;
- Fully encapsulated mirror: fully sealed case effective even in harsh environments;
- Safe and reliable laser pulse: class 1 eye safe, does not deteriorate over time;
- Repeatability of the vertical measurements: the only laser scanner able to repeat scans using the same grid of points;
- Count on the reliable Stonex worldwide sales network.

STONEX RECONSTRUCTOR,
powerful and ready to use 3D software

THE SOFTWARE

To make more effective the use of the X300, **Stonex has developed a powerful and flexible software** called **Stonex Reconstructor.**
The Stonex Reconstructor software is **based on the well known JRC 3D Reconstructor ® Technology**.
JRC 3D Reconstructor® is a software package worldwide appreciated for 3D laser scanner data processing in several application fields. The software – engineered and powered by **Gexcel srl**, under Stonex requirements - comes from the convergence of two experiences: the academic know-how of University studies and the applied research achievements of the European Joint Research Centre (JRC), located in Ispra (Italy).
The software aim is to turn the latest scientific achievements in the Geomatics field into an hi-tech software for wide application areas. Thanks to the high knowledge, the software solutions developed in collaboration with Gexcel are able to satisfy different customer's requirements, from the construction and infrastructure application, until cultural heritage, architectural and mining / tunneling surveys.
Stonex and Gexcel engineers have been working together to take advantage of the qualities of the X300 Stonex laser scanner.
The basic software provided is the survey module, which is **bundled with the X300**. Other plugin are provided for specific functions such as construction and mining.

1. SURVEY MODULE

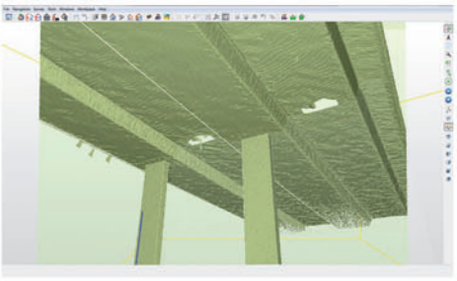


The fitting solution **to capture, process and analyze 3D data of artefacts acquired with X300 scanner.** Elevation, plans, and cross sections, can be extracted. Colored mesh models can be created and fly-through videos recorded.

Main Features:

- Stonex X300 Raw data import with reflectance or color;
- Scan alignment and geo-reference with total station points;
- Scans filtering and editing;
- Meshing tools;
- Measuring tool (point, distance, angles) Cross section;
- Orthographic, Cylindrical and spherical view extraction from point or meshes;
- Flythrough video creation;
- Easy exportation in CAD or 3D modeling software.

2. CONSTRUCTION MODULE

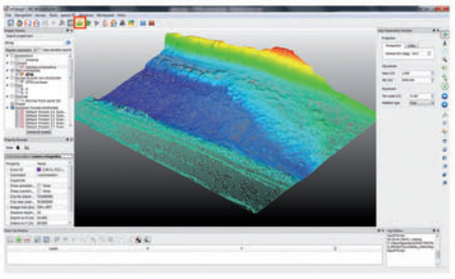


Specifically designed **for construction and civil engineering sector** the Construction package offer offers user friendly software solution to easily extract from 3D models to CAD features. It provides deformation and displacement maps, calculation of areas and volumes. Perfect for geo-referencing both in using large format East-North cartographic coordinates systems (i.e. UTM WGS84) and in accordance with external points or targets measured with total station or GNSS.

Main Features:

- Stonex X300 Raw data import with reflectance or color;
- Scan alignment and geo-reference with total station points;
- Scans filtering and editing;
- Multiple meshing tools;
- Measuring tool (point, distance, angles, areas and volumes);
- Cross section;
- Orthographic, Cylindrical and spherical view extraction from point or meshes;
- Deformation maps;
- Planarity and verticality maps;
- Flythrough video creation;
- Easy exportation in CAD or 3D modeling software.

3. MINING MODULE



Specifically designed **for open pit mine, landfill and in general landscape topographical application**, the Mining package offers a user friendly software solution for infrastructures and land surveys, mines, landfills, excavations and support to geological analysis and monitoring.

Main Features:

- Stonex X300 Raw data import with reflectance or color;
- Scan alignment and geo-reference with total station points;
- Scans filtering and editing;
- Meshing tools;
- Surfaces and DTM creation;
- Measuring tool (point, distance, angles, areas and volumes, cut & fill volumes);
- Cross section, crests & toes, isolines;
- Orthographic, Cylindrical and spherical view extraction from point or meshes;
- Deformation maps;
- Flythrough video creation;
- Easy exportation in CAD or 3D modeling software.

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TECHNICAL FEATURES

Performance	
Field of view	300 m
Horizontal	360° (full panoramic)
Vertical	90° (-25° to +65°)
Range	2 – 300 m 100% reflectivity (on white)
Scan rate	Up to 40.000 points/sec
Laser Beam Divergence	0.37 mrad (horizontal and vertical)
Resolution range	18,5 mm x 37 mm @ 100 m
Accuracy	< 6 mm @ 50 m – (1 sigma) < 40 mm @ 300 m
System	
Scanning optics	Vertically rotating mirror, horizontally rotating base
Laser class	class 1 eye safe
Integrated cameras	5+5 mpx
Resolution	(2560+2560) x1920 px
Data storage	Integrated 32Gb memory
Data transfer	Wi-Fi, USB device
Scanner control	Dedicated Wi-Fi web interface for smartphone/tablet (Android, iOS and Windows Mobile)

Physical	
Scanner (D x W x H)	215 mm x 170 mm x 430 mm
Weight	5.9 kg / 12.35 lbs (without battery)
Battery (D x W x H)	42 mm x 165 mm x 120 mm
Weight	0.9 kg / 1.76 lbs
AC Power Supply (D x W x H)	147 mm X 63 mm X 38 mm
Weight	200 g / 0.441 lbs
Electrical	
Power supply	12 V
Power consumption	40 W (on average)
Battery type	Li-Ion
Operation	> 3 h
Environmental	
Operating temp	-10°C to +50°C / 14°F to 122°F
Storage temp.	-25°C to +80°C / -13°F to 176°F
Humidity	Non-condensing
Protection class	IP65

Illustrations, descriptions and technical specifications are not binding and may change

STONEX

Stonex® Europe srl is a multinational company, based in Lissone (MB), designing and manufacturing surveying instruments for high precision applications in civil engineering, surveying, security, transport and mining. Stonex Europe is always characterized by its high standards of quality, precision, efficiency and reliability, allowing each project to become a landmark ageless. The company operates in over fifty countries, with a full range of products through a network of highly qualified distributors and resellers.

DEALER STONEX

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