



X300

LASER SCANNER



The first rugged, compact and
lightweight Time Of Flight
LASER SCANNER

X300

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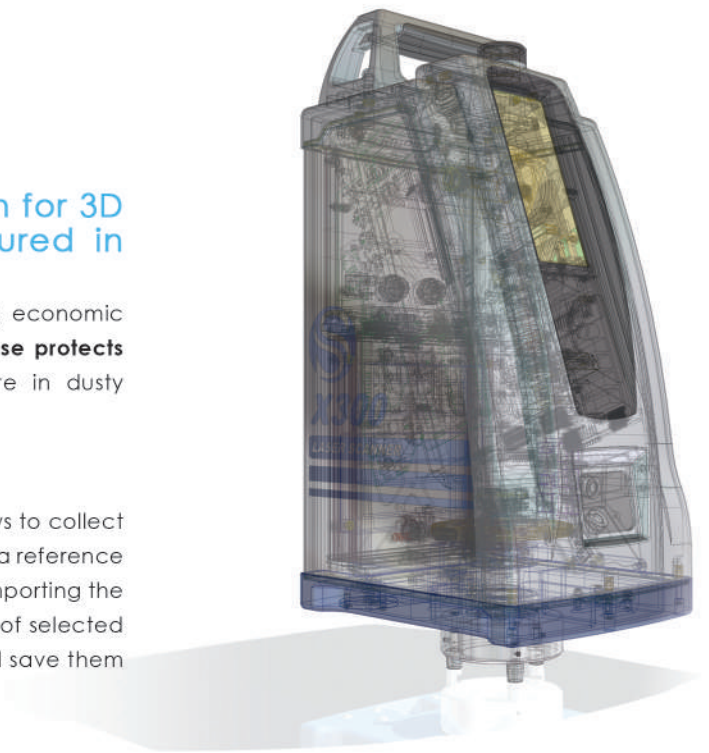
THE HARDWARE

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

Stonex X300 is the best solution **for any application**, balancing economic efficiency and highly accurate outputs. The **sealed external case protects optic and EDM components** allowing the scanner to operate in dusty and moist environments without risk of damaging sensitive parts.

Advanced scanning and measurement

In addition to perform single scans quickly, Stonex X300 also allows to collect multiple scans in sequence simply drawing rectangular frames on a reference point cloud. Directly from your smartphone/tablet, even before importing the datasets in Stonex Reconstructor, you can measure the distance of selected points from the scanner, or the distance between two points, and save them while on site.



EASY TO USE



Just a single multi-function button for easier 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 enabling all kinds of monitoring applications.

EASY STATUS CONTROL



The easy-to-read LED bar shows X300 operating status (i.e. battery charge status or scan progress).

KEY FEATURES

- Compact 3D scanning station: everything you need is carried in a handy suitcase;
- Solid and lightweight (only 7 kg battery included);
- 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);
- Two integrated real-time digital cameras 5 Mpx each;
- Integrated GNSS measurements 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;
- 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**.

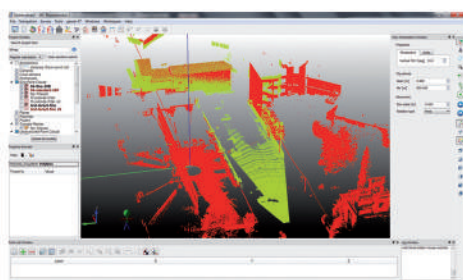
JRC 3D Reconstructor® is a software package worldwide appreciated for 3D laser scanner data processing in several application fields. The software – engineered and powered by **Gexcel srl** under Stonex requirements - comes from the convergence of two experiences: the academic know-how of University studies and the applied research achievements of the European Joint Research Centre (JRC), located in Ispra (Italy).

Stonex Reconstructor aim is to turn the latest scientific achievements in the Geomatics field into an hi-tech software for wide application areas. Thanks to the deep knowledge, the software solutions developed in collaboration with Gexcel are able to satisfy different customer's requirements, from the construction and infrastructure application to 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.

Stonex Reconstructor with Survey module is bundled with the X300. Optional modules are provided for specific functions such as **Construction and Mining**.

1. SURVEY MODULE

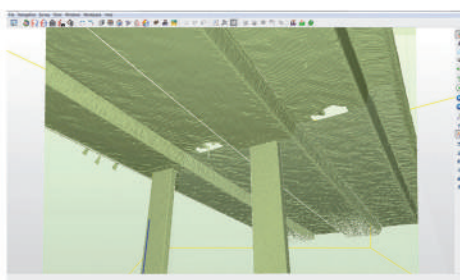


The fitting solution to **capture, process and analyze 3D data of artefacts acquired with X300 scanner**. Elevation, planes and cross sections can be extracted and exported.

Main Features:

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

2. CONSTRUCTION MODULE

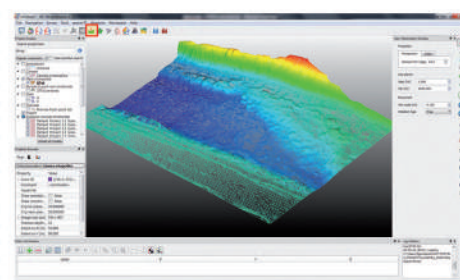


Specifically designed for **construction and civil engineering fields**, the Construction package offers user friendly software solution to easily extract data from 3D models to CAD applications. It provides deformation and displacement maps, calculation of areas and volumes. Perfect for geo-referencing 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 and color;
- Scan alignment and geo-reference with total station and GPS points;
- Scans filtering and editing;
- Multiple meshing tools;
- Measuring tool (point, distance, angles, areas and volumes);
- Cross sections;
- 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 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 and color;
- Scan alignment and geo-reference with total station and GPS points;
- Scans filtering and editing;
- Meshing tools;
- Surfaces and DTM creation;
- Measuring tool (point, distance, angles, areas and volumes, cut & fill volumes);
- Cross sections, 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.

CAMERA CAPTURE

(Available for all modules)

With the X300 digital cameras, you can easily add high-resolution pictures to the dataset. Then Stonex Reconstructor will take care of the rest: import the colored point clouds thus allowing to build high-resolution texturing for 3D surfaces, designs and orthophotos.

TECHNICAL FEATURES

PERFORMANCE

Range	1.6 – 300 m, 100% reflectivity (on white)
Field of view	
Horizontal	360° (full panoramic)
Vertical	90° (-25° to +65°)
Scan rate	Up to 40000 points/sec
Laser Beam Divergence	0.37 mrad
Grid spacing	39 mm x 39 mm @ 100 m
Angular resolution	1.35' (H) x 1.35' (V) (at max resolution)
Range accuracy	< 6 mm @ 50 m – (1 sigma) < 40 mm @ 300 m

SYSTEM

Scanning optics	Vertically rotating mirror, horizontally rotating base
Laser Class	Class 1M (IEC 60825-1)
Laser wavelength	905 nm (invisible)
Dual-axis compensator	Accuracy 0.08°, Range +/- 20°
Integrated cameras	5 + 5 megapixels
Resolution	1944 x 2592 x 2 px
Data storage	Integrated 32Gb memory
Data transfer	Wi-Fi, USB device, Ethernet

Scanner control	Dedicated Wi-Fi web interface for smartphone/tablet (Android, iOS and Windows Mobile)
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PHYSICAL

Scanner	
Size (D x W x H)	215 mm x 170 mm x 430 mm
Weight	6.15 kg/12.35 lbs (without battery)
Battery	
Size (D x W x H)	42 mm x 165 mm x 120 mm
Weight	0.85 kg / 1.76 lbs
AC Power Supply	
Size (D x W x H)	147 mm x 63 mm x 38 mm
Weight	200 g / 0.441 lbs

ELECTRICAL

Power supply	12 V (battery or external power unit)
Power consumption	40 W (on average)
Battery type	Li-Poly
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

ACCESSORIES

MONITORING KIT

External Power Supply with Ethernet cable control. Kit designed for all kind of monitoring applications. With just one cable plug, you can provide external power supply to the X300, control the scanner remotely and download scan data via Ethernet connection.

The kit includes:

- Hard plastic carrying case
- Shielded cable (10 m)
- AC/DC adapter power supply
- Smart box
- Ethernet cable



GPS KIT

Kit designed to connect the GNSS receiver to the X300 Laser Scanner. For outdoor use, the easiest way to georeference your 3D data.

The kit includes:

- Hard plastic carrying case
- Shielded cable (0,5 m)
- Tnc angle adapter (m-f) 50 ohm
- 5/8 unc adapter
- GPRS folding antenna



X300 FRAMEWORK

X300 Framework allows the scanner to perform a full scan of coverings executing a rotation of 240° (the scan also covers the surrounding walls and part of the underlying surface). Thanks to this accessory it is possible now to shorten both time of work in the field and the time of post-processing, because the number of scans required is reduced. The accessory is sold bundled with the trolley for storing even the laser scanner, the battery, the charger and the tribrach.



PRECISE SYSTEMS Ltd.
Supplier & Service Provider Rugged PDAs, GNSS, INS, OEM & Sensors

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