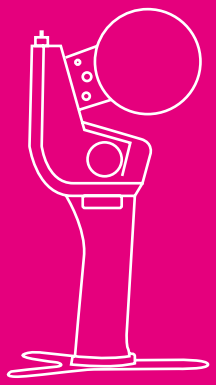
OPTOLINK



STONEX

SLAM LASER SCANNER
CATALOG 2025

stonex.it

PRODUCT FEATURES

SLAM

Stonex offers a wide range of SLAM products, capable of generating high-precision point cloud data. All the devices are equipped with LiDAR a camera for texture information along with an inertial navigation module.

The integrated structure includes storage system and built-in replaceable batteries. Mapping results are visible in real time from the GOapp. GOpost can perform post-processing of collected data, generate high precision colored point clouds, produce panoramic images and integrate GNSS data. The uniqueness of Stonex SLAMs is in the stability and strength of the algorithm, which is able to reconstruct complex scenarios that are not trivial for this type of technology.

RAPIDITY AND REDUCED WORKLOAD

No more multiple scan station, just move around the scene to collect the entire 3D point cloud, without time consuming cloud to cloud alignment.

REAL TIME PREVIEW

Track real-time LiDAR acquisition with colour-mapped coverage indicators via the dedicated Android app directly in the field.

AUTOMATIC CONTROL POINT MEASUREMENT

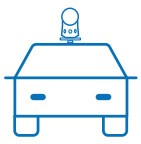
When capturing data, the device is able to collect reference points too. They can be matched with known control points to georeference or compensate the scans, or to check the final quality of your survey.

STRONG ALGORITHM, RELIABLE DELIVERABLE

Data processing can be done in a few clicks, obtaining the best result for the situation, even processing batches of scans. In the case of special environments, the processing parameters can be edited to maximise the quality.

GEOTAG COLLECTION

Directly in the field you have the possibility to take pictures or add notes related to your position. Those information will be availble and consultable inside the point cloud.



WIDE RANGE OF ACCESSORIES

Stonex SLAMs are equipped with a very interesting range of accessories, which facilitate its use in the field and cover different scenarios. Backpack, shoulders hook or vehicle mount platforms allow to cover long trajectory effortlessy.

X-WHIZZ MODE

X70^{GO},X120^{GO} and X200^{GO} models merge mobile and stationary surveying. The advantageous SLAM solution that allows you to survey large areas in a very short time, they combines a stationary mode to scan with higher resolution. Mount the device on a monopod and stand still in key areas for a few seconds. It is the perfect trade-off for those who need speed and detail in a mobile survey.

X200^{GO}

The rotating head has 32-channel sensor with 300 meters range and 3 returns. Embedded GNSS board and two 12 Mpx cameras, which provide texture information and panoramic images. Colour information is available in real-time and mapped results are generated immediately inside the scanner: choose if you want to improve their accuracy postprocessing with GOpost software. The high precisions IMU makes the product versatile, even for use on UAV drone.

X120^{GO}

The new X120^{GO} features a rotating LiDAR head with a 16- or 32-channel sensor. Aesthetically similar to the X200^{GO} model, with which it shares much of the same hardware, it stands out for its range of up to 120 meters, 360° x 290° coverage, and the ability to detect two returns instead of three.

X70^{GO}

It integrates a 360° rotation head with 70-meters range LiDAR , a 12 MPx visible-light camera which provides texture information, and a visual camera that guarantees stronger real time preview with GOapp. Mapping results are generated immediately inside the scanner, right after scanning: choose if you want to colour them and improve their accuracy, postprocessing with GOpost software.

X40^{GO}

Equipped with the same sensor as the X70^{GO}, the lidar does not have a rotating head but its orientation is designed to maximise coverage. The 12 Mpx camera has a wide FOV for point cloud colouring. An affordable and simple product, the ideal for interior surveys and layout generation.

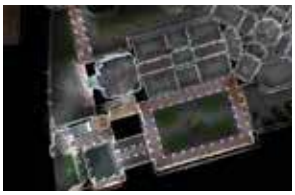
TECHNOLOGY APPLICATIONS

SLAM

SIMULTANEOUS LOCALIZATION AND MAPPING

STONEX SLAM technology delivers more range, more points per second and best in class on board processing algorithms to reach unmatched speed of capture and reliability even in the more demanding environments.

APPLICATION



BIM & REAL ESTATE

Gather a complete 3D model of civil or industrial structures with a simple walk-through, from which your project deliverables will be effortlessly extracted.

FACILITY MANAGEMENT

Document any information, exploiting the panorama images, the X-Whizz mode or the geotag function with pictures of details or annotations.

TANK INSPECTION

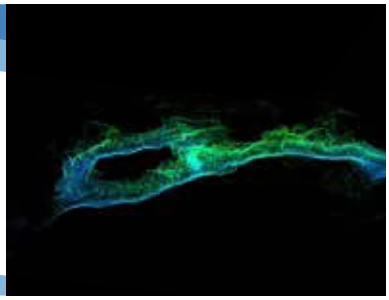
Quickly and safely generate data for tank analysis, documenting verticality, roundness, integrity and deformations.

FORESTRY

Document the state of forests to know the positions of trees, the size of trunks or to quantify the vegetation cover.

TUNNEL & CAVE

Even extreme environments underground can be detected, processing tunnel scans with a dedicated algorithm.



SLAM

PROCESS YOUR DATA AS YOU WISH

Collect and process your data thanks to Stonex solutions. Thanks to the bundled software it is possible to acquire data easily and carry out basic post-processing operations.
For those who need to carry out complex operations it is possible to use Cube-3d

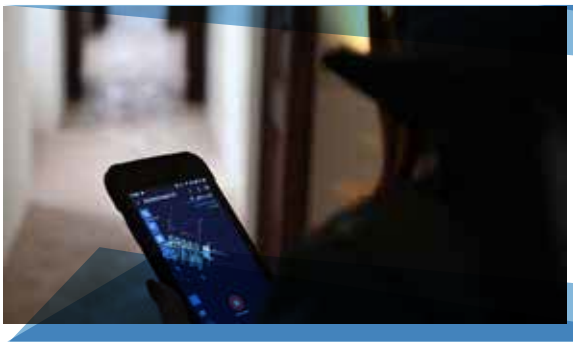
BUNDLED SOFTWARE

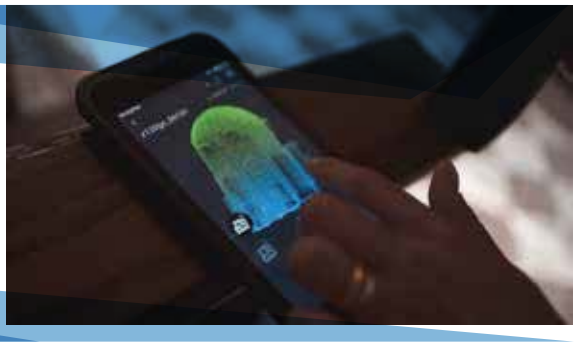
GOapp

GOapp is dedicate mobile application for Stonex SLAM scanners, to manage projects, real time point cloud display, image preview, firmware upgrade and other operations. The APP runs on Android and iOS operating system.

GOpost

Windows post processing software which performs optimization processing, colouring of point clouds and creation of panoramic images. You can also import control points to georeference the point cloud.





3D SOFTWARE

Cube-3d

Cube-3d is a complete software for 3D data management, built by two modules for photogrammetry and for scanner data. The former processes images (or videos) to generate accurate digital maps and 3D models with extreme precision; the latter provides tools to align point clouds.

PointCab

Thanks to the collaboration between Stonex and PointCab, you can manage your point clouds with it. PointCab Origins is your Swiss army knife when it comes to the evaluation of point cloud data – working with all laser scanners and compatible with all CAD and BIM systems.

Aplitop

Thanks to the collaboration between Stonex and aplitop, you can try this powerful software with our Laser Scanners.

- Imports clouds from standard formats and represents them by attributes such as color, intensity, category, etc.
- Import images from E57 and LGSx files. Easily and intuitively measure and draw on the cloud or 360° image.
- Create profiles in plan and elevation.
- Easily manage geotags.

And much more.

ACCESSORIES

Expand the capabilities of our SLAM lasers scanner with dedicated accessories.

PLATFORM/EXTENSION

	X40GO	X70GO	X120GO	X200GO
BACKPACK	n/a	√	√	√
RTK MODULE	n/a	√	Integrated	Integrated
360° CAMERA	√	Insta360 X4/X5/ DJI Osmo360	Integrated Insta360 X4/X5/ DJI Osmo360	Integrated Insta360 X4/X5/ DJI Osmo360
VEHICLE	n/a	n/a	√	√
UAV	n/a	n/a	DJI M300/M350	DJI M300/M350
RADIO MODEM	n/a	n/a	Stonex SR02	Stonex SR02

RTK MODULE

There are several reasons why the RTK module is worth using. First, it places your point cloud in a global coordinate system, but it can also be useful in large surveys to improve the composition of the final 3D model. Indeed, RTK module can help the system, adding GNSS info to LIDAR and IMU. If the GPS does not have a satellite connection, such as indoors, the system will rely on LIDAR and IMU to locate itself.

RECEIVER	
Satellite Signals Tracked	GPS L1, L2
	GLONASS L1, L2
	GALILEO E1, E5b
	BDS B1, B2
Fixed RTK (RMS)	Horizontal: 1 cm + 1 ppm
	Vertical: 1.5 cm + 1 ppm
Data Update Rate	20Hz
Time Accuracy	20ns
Speed Accuracy (RMS)	0.03 m/s
Modem	LTE FDD: B1/B3/B5/B8
	LTE TDD: B34/B38/B39/B40/B41
	GSM: 900/1800MHz

PHYSICAL SPECIFICATION	
Weight	1.8 Kg
Size	196 mm × 80 mm × 39 mm
Operating Temperature	-20°C to +50°C (-4°F to 122°F)
Waterproof/Dustproof	IP54

ANTENNA	
Size	27.5 mm × 56 mm
Weight	15.3 g
Optional	SA85 for backpack/vehicle mount

POWER SUPPLY	
Type-C USB	20V
Aviation socket	12V-20V

ACCESSORIES

SLAM

TABLET HOLDER

You can use your tablet docket to the device to have one to have one hand free while surveying. The tablet mounted on the back of the scanner allows you to always have eyes-on scan real time preview.

PHYSICAL SPECIFICATIONS	
Min Width	1,75" (4,44 cm)
Max Width	4,5" (11,43 cm)

BACKPACK

A solution to mount the device on your back and to combine it with the geodetic antenna. Extended surveys will become a simple walk.

PHYSICAL SPECIFICATIONS	
Material	Nylon, aluminum
Size	250x 250x 1000mm
Weight	1,7kg (frame only)

CONFIGURATION
X70^{GO} - RTK module - SA85
X120^{GO} - SA85
X200^{GO} - SA85

UAV MOUNT

Complete the survey from any viewpoint mounting the X120^{GO} and X200^{GO} on DJI M350.

COMMUNICATION
Power and RTK supplied by DJI

VEHICLE MOUNT

Securely mount your X120^{GO} or X200^{GO} on a vehicle to collect data on urban environments. Choose between suction cups or magnets and drive up to 20 km/h.

PHYSICAL SPECIFICATIONS	
Frame material	Aluminum
Weight	6.3 kg
Size (docking excluded)	250mm×180mm×660mm
Docking mode	Suction cups or magnets
Suction cups load	Horizontal: 60 kg
	Vertical: 40 kg
Suction cups operating temperature	-20°C to +70°C

POWER	
Operating time	4h
Capacity	3 Ah
Voltage	20V-30V

CONFIGURATIONS
X120^{GO} - SA85
X200^{GO} - SA85

TELESCOPIC POLE

Hold the device on the monopod for a stationary survey in key areas with the X-Whizz mode. The quick-lock swivel system makes the pole quick and easy to extend to different heights, up to a maximum of 1,60 meters. Its handle ensures a firm, ergonomic grip during use: maximum efficiency and comfort are guaranteed.

PANO CAMERA

Enhance your SLAM survey by adding important properties such as the 360° panoramic photography.

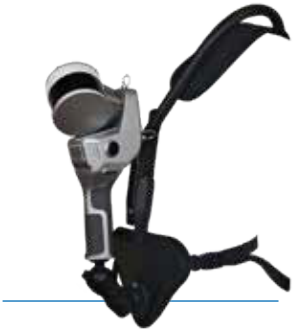
PANO CAMERA SPECIFICATIONS	
Model	Insta360 X4/X5 DJI Osmo360
Resolution[1]	16.6 MPx
Operating time	135/185 min
Weight	around 200 g

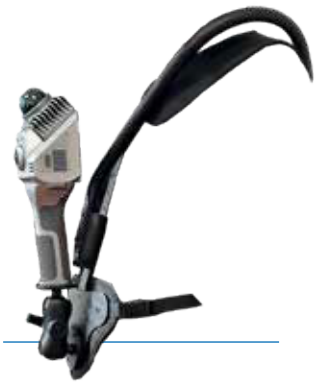
[1] After processing with GOpost

SHOULDERS HOOK

Distribute weight of the device over both shoulders, freeing your hands. Adjustable in both height and angle, it is easy to put on and take off.

PHYSICAL SPECIFICATIONS	
System Weight	3.2 kg
Size	300mm x 300mm x 640mm





SLAM
PRODUCT COMPARISON




	X40[GO]	X70[GO]	X120[GO]	X200[GO]
LIDAR				
Sensor		Livox Mid-360	Hesai XT16 | XT32	Hesai XT32M2X
Min-Max range	0.1-70 m @80%	0.1-70 m @80%	0.5-120 m	0.5-300 m
Relative accuracy[1]	up to 6mm			
Global accuracy[1]	up to 2cm			
Scanning Point Frequency	200,000 pts/s	200,000 pts/s	320,000 pts/s * 640.000 pts/s	640.000 pts/s * *
Returns number	1	1	2	3
FOV	360°H, -7~52°V	360°H, 360°V	360°H x 290°V	360°H x 290°V
CAMERA				
N° of pixels	12 Mpx	12 Mpx, RGB camera 12 Mpx, Visual camera	24 Mpx (2 cameras, 12 MPx each)	24 Mpx (2 cameras, 12 MPx each)
Diagonal FOV	210°	210°	210°	210°
Focal length	1.26 mm	1.26 mm	1.26 mm	1.26 mm
Resolution	2704X2288 px	4000X3000 px	8000x3000 px	8000x3000 px
SYSTEM				
Data storage	512GB SSD	512GB SSD	512GB SSD	512GB SSD
Communication	Wi-fi, USB type-c	Wi-fi, USB type-c, Lemo	Wi-fi, Bluetooth, USB type-c, Lemo	Wi-fi, Bluetooth, USB type-c, Lemo
ELECTRICAL SPECIFICATION				
Power consumption	18W	20W	26W	26W
System supply voltage	20V	20V	20V	20V
Operating time[2]	1.7 h (single battery)	1.5 h (single battery)	1.2 h (single battery)	1.2 h (single battery)
External power		USB type-c		
Battery capacity	3000mAh	3000mAh	3000mAh	3000mAh
PHYSICAL SPECIFICATION				
Weight	650 g (without battery) 1.16 kg (with battery)	925 g (without battery) 1.45 kg (with battery)	1.6 kg (without battery) 2.1 kg (with battery)	1.2 kg (without battery) 1.8 kg (with battery)
Size [mm]	283.8 x 173.8 x 170	364.5 x 173.8 x 170	404 x 170 x 188	403.6 x 173.8 x 170
Operating temperature	-20°C to +50°C (-4°F to 122°F)	-20°C to +50°C (-4°F to 122°F)	-20°C to +50°C (-4°F to 122°F)	-20°C to +50°C (-4°F to 122°F)
Operating humidity	<95%	<95%	<95%	<95%
Waterproof/Dustproof	IP54			

1 In controlled environment
2 SLAM only, no external platforms

* X120GO - 16:
320.000 pts/s (single return)
640.000 pts/s (dual return)
* X120GO - 32:
640.000 pts/s (single return)
1.280.000 pts/s (dual return)

** X200GO
640.000 pts/s (single return)
1.280.000 pts/s (dual return)
1.920.000 pts/s (triple return)

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STONEX

홈페이지 바로가기

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