



3D PRODUCTS CATALOG 2026

stonex.it

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 app. The desktop software 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 stations, 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 can also collect reference points, which can be matched with known control points to georeference or compensate the scans, or to check the final quality of your survey.



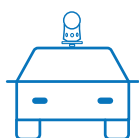
STRONG ALGORITHM, RELIABLE DELIVERABLE

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 available 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 effortlessly.



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 most demanding environments.

APPLICATIONS

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, using the panorama images, the X-Whizz mode or the geotag function with pictures of details or annotations.

HERITAGE AND DOCUMENTATION

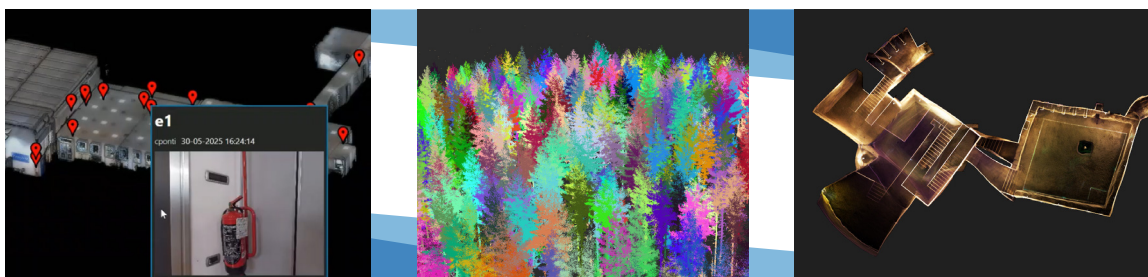
Capture heritage sites with SLAM, panoramic imagery and generate 3D gaussian splatting for immersive documentation.

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

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 the desktop software. The high precision IMU makes the product versatile, even for use on UAV drone.

X120^{GO}

The new X120GO 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.

X70^{GO}

It integrates a 360° rotating 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 the app. Mapping results are generated immediately inside the scanner, right after scanning: choose if you want to colour them and improve their accuracy, postprocessing with the desktop 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.



X70^{GO}, X120^{GO} and X200^{GO} models merge mobile and stationary surveying. X-WHIZZ is an advantageous SLAM solution that allows you to survey large areas in a short time and combine 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.

SLAM



ACCESSORIES

Expand the capabilities of our Slam Laser Scanners with dedicated accessories.

PLATFORM/EXTENSION	X40 ^{GO}	X70 ^{GO}	X120 ^{GO}	X200 ^{GO}
BACKPACK	n/a	√	√	√
RTK MODULE	n/a	√	Integrated	Integrated
360° CAMERA	Insta360 X4/ X4 Air/X5/DJI Osmo360	Insta360 X4/X4 Air/ X5/DJI Osmo360	Integrated + Insta360 X4/X4 Air/X5/ DJI Osmo360	Integrated + Insta360 X4/X4 Air/X5/ DJI Osmo360
VEHICLE MOUNT	n/a	n/a	√	√
UAV	n/a	n/a	DJI M300/350/400	DJI M300/350/400
RADIO MODEM	n/a	n/a	Stonex SR02	Stonex SR02
PHONE HOLDER	Magnetic system	Grip	Grip	Grip

PANO CAMERA

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

PANO CAMERA SPEC.		
Model	Insta360 X4/X4 Air/X5	DJI Osmo360
Resolution ¹	16.6 MPx	18MPx
Operating time	135/185 min	100/190 min
Weight	around 200 g	around 180 g

¹ After processing with desktop software



SLAM

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



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.

Complete your X70^{GO} with RTK module.



RECEIVER

Satellite Signals Tracked

Fixed RTK (RMS)

Data Update Rate

Time Accuracy

Speed Accuracy (RMS)

Modem

PHYSICAL SPECIFICATION

Weight

Size

Operating Temperature

Waterproof/Dustproof

ANTENNA

Size

Weight

Optional

POWER SUPPLY

Type-C USB

Aviation socket

GPS L1, L2

GLONASS L1, L2

GALILEO E1, E5b

BDS B1, B2

Horizontal: 1 cm + 1 ppm

Vertical: 1.5 cm + 1 ppm

20Hz

20ns

0.03 m/s

LTE FDD: B1/B3/B5/B8

LTE TDD: B34/B38/B39/B40/B41

GSM: 900/1800MHz

1.8 Kg

196 mm x 80 mm x 39 mm

-20°C to +50°C (-4°F to 122°F)

IP54

27.5 mm x 56 mm

15.3 g

SA85 for backpack/vehicle mount

20V

12V-20V

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)

CONFIGURATIONS

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 Drones.

WORKING MODE

RTK	DJI M300/M350
PPK	DJI M400



VEHICLE MOUNT

Securely mount your X120^{GO} or X200^{GO} on a vehicle to collect data on urban environments, driving up to 20 km/h.



PHYSICAL SPECIFICATIONS

Frame material	Aluminum
Weight	6.3 kg
Size (docking excluded)	250mm×180mm×660mm
Docking mode	Self-vacuuming suction cups
Suction cups operating time	8-12 hours

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.



SLAM

PRODUCT COMPARISON



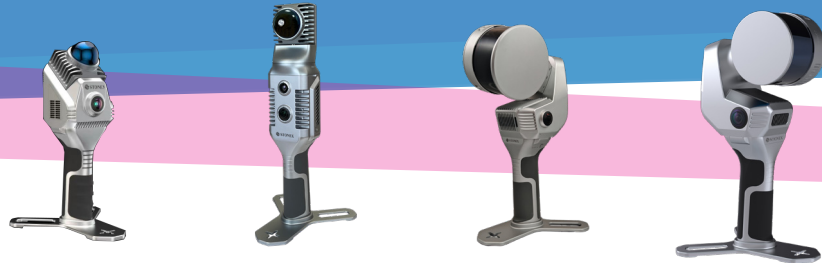
	X40 ^{GO}	X70 ^{GO}	X120 ^{GO}	X200 ^{GO}
LIDAR				
Sensor	Livox Mid-360	Livox Mid-360	Hesai XT16 XT32	Hesai XT32M2X
Max Range	70 m @80% reflectivity	70 m @80% reflectivity	120 m	300 m
Min Range	0.1 m	0.1 m	0.05 m	0.5 m
Scanning Point Frequency	200.000 pts/s	200.000 pts/s	320.000 640.000 pts/s ¹	640.000 pts/s ²
Returns number	1	1	2	3
Field of view	360°H, -7~52°V	360° x 360°	360° x 290°	360° x 290°
Laser Class		Class 1 eye-safe per IEC/EN 60825-1:2014		
RGB CAMERA				
N° of pixels	12 Mpx	12 Mpx	24 Mpx (2 cameras, 12 MPx each)	24 Mpx (2 cameras, 12 MPx each)
FOV	143°x131°	143°x131°	360°x130°	360°x130°
Focal length	1.26 mm	1.26 mm	1.26 mm	1.26 mm
Resolution	4000x3000 px	4000x3000 px	8000x3000 px	8000x3000 px
Sensor size	1/2.3inch	1/2.3inch	1/2.3inch	1/2.3inch
Pixel size	1.55 µm	1.55 µm	1.55 µm	1.55 µm
SYSTEM				
Relative accuracy ³	Up to 6mm			
Global accuracy ³	Up to 2cm			
Control point support	Ground & wall			
Capture App	Android & iOS			
Storage	512 GB SSD	512 GB SSD	512 GB SSD	512 GB SSD
Operating mode	SLAM mode	SLAM & X-Whizz modes	SLAM & X-Whizz modes	SLAM & X-Whizz modes

1. X120^{GO} - 16:
320.000 pts/s (single return)
640.000 pts/s (dual return)

1. X120^{GO} - 32:
640.000 pts/s (single return)
1.280.000 pts/s (dual return)

2. X200^{GO}
640.000 pts/s (single return)
1.280.000 pts/s (dual return)
1.920.000 pts/s (triple return)

3. In controlled environment



	X40 ^{GO}	X70 ^{GO}	X120 ^{GO}	X200 ^{GO}
ELECTRICAL SPECIFICATION				
Power consumption	18W	20W	26W	26W
System supply voltage	20V	20V	20V	20V
Operating time ⁴	1.7 h (single battery)	1.5 h (single battery)	1.2 h (single battery)	1.2 h (single battery)
Battery input voltage	5-20V	5-20V	5-20V	5-20V
Battery output voltage	10.8V	10.8V	10.8V	10.8V
Battery capacity	3000mAh	3000mAh	3000mAh	3000mAh
Weight battery	400 g	400 g	400 g	400 g
PHYSICAL SPECIFICATION				
Weight	650 g (without battery)	925 g (without battery)	1.6 kg (without battery)	1.26 kg (without battery)
Size	283.8 mm x 173.8 mm x 170 mm	364.5 mm x 173.8 mm x 170 mm	404 mm x 170 mm x 188 mm	403.6 mm x 173.8 mm x 170 mm
Operating temperature	-20°C to +50°C (-4°F to 122°F)			
Waterproof/Dustproof	IP54	IP54	IP64	IP64
GNSS RECEIVER				
Satellites Signal	-	External (RTK module)	GPS L1 C/A/L2P(Y)/ L2C/L5 GLONASS L1/L2 Galileo E1/E5a/E5b BDS B1I/B2I/B3 QZSS L1/L2/L5	GPS L1 C/A/L2P(Y)/ L2C/L5 GLONASS L1/L2 Galileo E1/E5a/E5b BDS B1I/B2I/B3I QZSS L1/L2/L5
RTK (RMS)	-	External (RTK module)	H 0.8 cm + 1 ppm V 1.5 cm + 1 ppm	H 0.8 cm + 1 ppm V 1.5 cm + 1 ppm

4. SLAM only, no external platforms



From Stonex Scans to Production-Ready Point Clouds

Streamline complex processing workflows and dramatically reduce processing time with an intuitive, optimized user experience—without compromising quality, accuracy, or configuration flexibility.

In addition to SLAM trajectory processing, the software enables GNSS-based georeferencing of point clouds, panoramic image generation, and the creation of highly realistic 3D models using Gaussian Splatting technology.



PROCESS - SLAM Engine

Generate reliable, survey-grade point clouds using an advanced **SLAM engine** designed to deliver outstanding performance, even in challenging, confined, or feature-poor environments.



GEOREFERENCE RTK - PPK & GCPs

Accurately georeference point clouds using **RTK, PPK, or Ground Control Points (GCPs)**. Align multiple scanning sessions within local or global coordinate systems while ensuring consistent spatial accuracy across the entire project.



VALIDATE - Quality Control

Generate comprehensive **quality reports** to assess processing performance and survey accuracy. Assign control points for adjustment or use them independently as checkpoints to validate the final results



ENRICH - Panoramas & 3DGS

Enhance your point clouds by generating high-resolution **panoramic imagery** and ultra-realistic **Gaussian Splatting (3DGS)** models, creating richer datasets for visualisation, communication, and downstream workflows.



DELIVER - Export

Export high-quality point clouds together with panoramic imagery, ready to be opened in Cube-3d Scanner for editing, analysis, and project delivery.

Cube-3d is your all-in-one solution for 3D data management.

Expand your Cube-3d ecosystem with the Photo and Scanner modules to complete your 3D surveying workflow.

Process images or videos with advanced photogrammetric algorithms to generate accurate 3D reconstructions, or merge point clouds from multiple projects and sensors into a single, unified dataset.

Take advantage of powerful CAD tools and advanced features such as automatic classification, orthophoto generation, cross-sections, volume calculations, and much more—everything you need to analyze, manage, and deliver professional survey results.

The integrated cloud viewer seamlessly connects with Cube-3d, making it easy to share projects with clients through a simple web link and enabling efficient collaboration from anywhere.

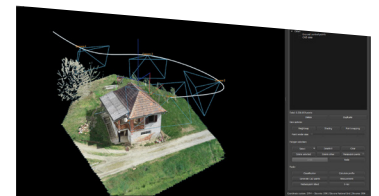
Choose the licensing model that best fits your business: perpetual licenses for long-term ownership or flexible subscription plans tailored to evolving professional needs.



PHOTOGRAMMETRY MODULE

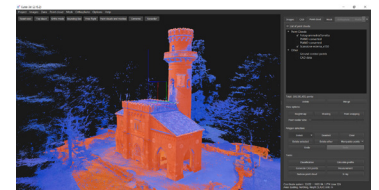
Process all your imagery in one project - whether from handheld cameras, UAVs, or multi-camera setups - and create high-definition 3D models with exceptional accuracy. Generate a fully geo-referenced, spatially oriented overview of your site in minutes.

Cube-3d **automatically detects GCPs** and detail points during orientation, allowing quick verification. With Stonex targets, centering is immediate, saving even more time. Coded targets are also supported for fully automated workflows. And if you're using RTK drones, achieving centimeter-level accuracy is effortless - even without GCPs.



SCANNER MODULE

Import clouds from Lidar, Laser Scanners, and without limitation from any tool capable of generating them. Full support for Stonex Scanners and a wide range of import formats. **Register point clouds** in cube-3d and take advantage of all the excellent tools it provides.



CLOUD VIEWER

Upload your results to **Cube-3D Cloud** and access your projects anytime, anywhere. View point clouds, meshes, orthophotos, and CAD data directly from any device. Simply share a link - your clients can explore detailed views and perform in-depth analyses without installing specialized software. Empower them with tools for precise measurements, annotations, and even comparisons across different project phases.

MAIN FUNCTIONALITIES

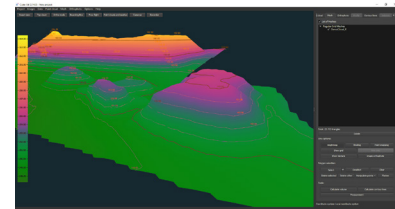
ORTHOPHOTO AND X-RAY

It allows to calculate high-resolution, traditional and true, digital orthophotos with cm-grade precision in perfect geo-referenced details. The X-ray feature helps to see through the rooftops, so drawing building walls and similar features on a survey map will be much easier. From 2D X-ray views, generate layouts customising their dimension and position.



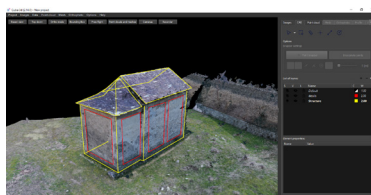
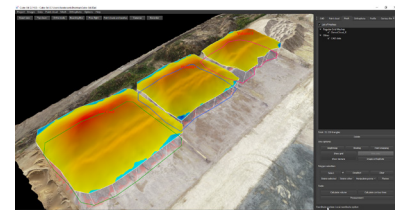
CROSS SECTIONS, PROFILES AND CONTOUR LINES

From point cloud data, it will draw a definition line and calculate single vertical cross-sections or multiple transverse profiles with user-defined intervals. Or it can instantly create topographic maps, and freely explore terrain elevation data in 2D or 3D, thanks to the automated contour lines calculation.



VOLUMES

Calculate volumes, comparing different models for cut&fill. Dedicated tools to move points, increase/decrease heights, flatten, etc... permit the prediction of future surfaces/results of the area.



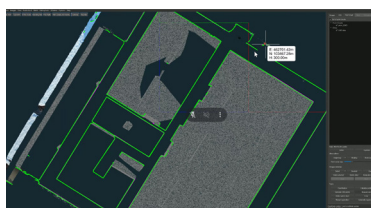
CAD ENGINE

Integrated CAD functions give you the power to work on your project with a complete layer system, snapping tools, drawing options and measurements. No need of any further third-party CAD software.



MEASURE ON PANO IMAGE

Import e57 point cloud with panoramic images and switch among them to measure. The use of the panoramic camera will give you a clearer idea of the environment and you will be able to take measurements more easily.



VECTORIALIZATION

In few clicks, extract lines from plans of your point cloud. Edit the result of the vectorizer, snapping lines, if needed. CAD results will be exported effortlessly.



	GENESYS module	PHOTO module	SCANNER module
SLAM DATA PROCESSING	√*	-	-
3D MODEL GENERATION FROM IMAGE/VIDEO	-	√	Upgrade to PRO
MESH GENERATION	-	√	√
GCP ORIENTATION	√*	√	√
MANUAL REGISTRATION	-	Upgrade to PRO	√
2D VIEWS & LAYOUTS GENERATION	-	Upgrade to PRO	√
VECTORIZER ON LAYOUTS	-	Upgrade to PRO	√
CAD TOOLS ON MESH/POINT CLOUD	-	√	√
CAD TOOLS ON ORIENTED IMAGES	-	√	Upgrade to PRO
MEASURE ON PANO IMAGES	√	Upgrade to PRO	√
CLASSIFICATION	-	√	√
VOLUME	-	√	√
ORTHOPHOTO	-	√	√
CROSS SECTION & PROFILE	-	√	√
CONTOUR LINE	-	√	√
FLYTHROUGH VIDEO RECORDER	-	√	√
3D GAUSSIAN SPLATTING	√*	-	-
CLOUD VIEWER	-	√ with Maintenance plan active	√ with Maintenance plan active

* From Stonex SLAM device

XVS



The system uses a technology based on the integration of high-resolution images, inertial systems and a complex algorithm: capturing a scenario with XVS, 3D model will be generated through photogrammetric techniques. Walking and capturing the scene in motion, a real-time interface will guide you in the data collection, suggesting the speed of your movement and if necessary returning to an area to have enough image overlapping.



ACCURATE

Smart algorithm makes it possible to choose the best images and increase the accuracy of the derived model. If the capture is very close to the element (around 1 m) and closing where you started-loop closure-the accuracy is 2-3 mm.



HD TEXTURES

Based on advanced high-resolution images, it allows reconstructing the texture of the scanned material with great clarity and realism.



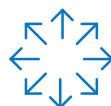
EASY TO USE

Because of its practicality and ease of use, it can be used by multiple people within a company or institution, without the need for prior knowledge of 3D scanners. The field application will guide in through the data collection.



SCALED AND LEVELLED RESULTS

Through the automatic detection of targets and the use of inertial systems, scaled and levelled results can be obtained.



VERSATILE

A variety of urban scenarios can be documented using XVS scanner, as infrastructures, accident reconstructions, gas/water connection works, building faces and others. The geometric accuracy and colour realism in the results, make it a companion also for archaeological, architectural and geological work.

APPLICATIONS

URBANISM

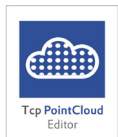
INFRASTRUCTURE

GEOLOGY

ARCHAEOLOGY

RESTORATION

SOFTWARE SOLUTIONS FROM OUR PARTNERS



by
aplitop

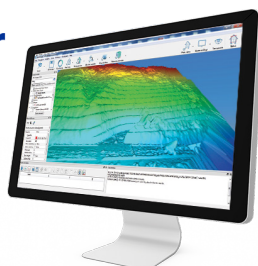


TCP PointCloud Editor

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.
 - Easily and intuitively measure and draw on the cloud or 360° image.
- Create profiles in plan and elevation.
- Easily manage geotags.

And much more.



Reconstructor

A multi-sensor and multi-resolution software used worldwide to manage 3D point clouds and images coming from different lidar and imaging platforms. Reconstructor will guide you through a complete and clear workflow with expandable modules suited to your needs.



by
PointCab



PointCab Origins

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.



Edgewise Lite

ClearEdge3D solutions are designed to transform large volumes of raw 3D data, acquired through laser scanners, into structured information that can be seamlessly integrated into BIM and CAD workflows.

For Stonex, a dedicated version called EdgeWise Lite has been developed, specifically tailored to optimize the modeling of point clouds generated by SLAM systems.

EUROPE HQ

Stonex is an Italian company, based near Milan. With over 200 qualified distributors worldwide, it is one of the world's leading companies in measurement and survey.

Stonex products combine the most advanced technologies with a practical design to simplify your daily work. Everyone's needs are met thanks to a team that is able to handle any pre- and post-sales request.

USA HQ

The Stonex Headquarters in North America is located in Concord, New Hampshire.

With the USA Headquarters as a base, Stonex has the opportunity to be closer to the needs of its American customers through greater territorial coverage and strengthening of global business.



DISCOVER MORE



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