

PX-80

MOBILE LiDAR SCANNER

FEATURES & TECHNICAL SPECIFICATIONS



PARACOSM

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ABOUT

Paracosm's PX-80 scanner is an innovative SLAM-based 3D mapping solution that incorporates LiDAR, color imagery, and IMU data to collect survey-quality point clouds quickly and accurately for a wide range of applications. PX-80 is compact, completely mobile, and capable of full 6-DoF positional tracking.

Mobile LiDAR scanning offers many advantages over aerial and conventional ground surveys, namely its flexibility, simplified workflow, and rapid data collection. This non-invasive survey method may be used day or night, indoor, outdoor, with an efficient acquisition rate of 300,000 points per second.

ORDERS INCLUDE

PX-80 LiDAR scanner & built-in processing software
Apple® iPad mini™ 4, protective case, & mount
1 hardshell storage case
1 extension pole
1 external battery, holster, & case

1 dual charger & power supply
1 power adaptor cable
1 international power adaptor
1 128 GB 3.0 USB

RESULTS

PX-80 automatically produces point clouds in full color and generates spherical images. Data is transferred via USB 3.0 from PX-80 to a workstation.

FILE FORMATS

Photosphere images (.JPEG)

RGB colorized point clouds (.LAS or .PLY)

SPECIFICATIONS

PX-80

Weight	6.4 lbs / 2.9 kg
Height	26.7 cm
Diameter	16.2 cm
Extension rod	43-67 cm

LiDAR

Velodyne LiDAR®

Laser type	VLP-16, Class 1 (Eye Safe)
FOV horizontal / vertical	360° x 30° (±15°)
Acquisition rate	300,000 pts/sec
Range	0.5 m - 80 m
Relative accuracy	2-3 cm
Global accuracy	3-30 cm (10 min scan, 1 loop)
Environment	Indoor / outdoor



Color Camera

Resolution	1024p x 768p
Megapixels	3.2 MP
Maximum frame rate	50 fps
FOV horizontal / vertical	360° x 250°

Note: Accurate scans are captured by using a steady and smooth walking pace. A variety of factors can negatively influence tracking, including: rotating 6-DoF very quickly (fast 180° turns), extreme motion in the environment (a few people or vehicles in an open space are not a problem, however, scanning in a narrow hallway with multiple people is not recommended).

Internal Battery

Type	Lithium Ion
Battery Capacity	36 Wh
Battery Life	40 min scan time



External Battery

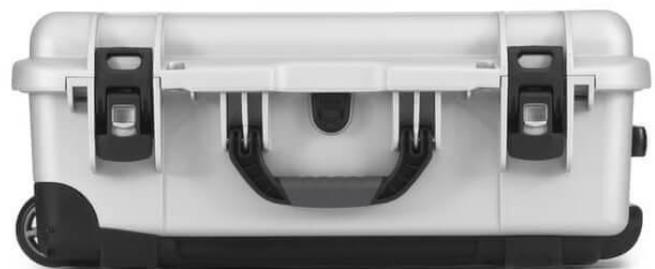
Type	Lithium Ion
Battery Capacity	98 Wh
Battery Life	90 min scan time

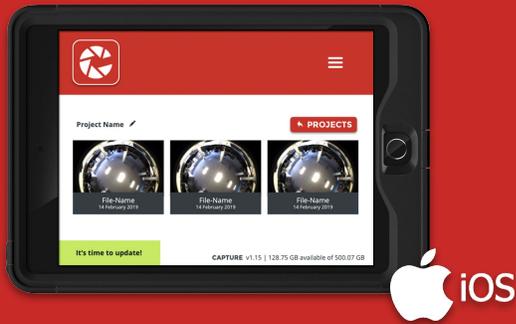


Carrying Case

NANUK™

Interior dimensions (L x W x H)	20.5" x 11.3" x 7.5" 521 mm x 287 mm x 191 mm
Exterior dimensions (L x W x H)	22.0" x 14.0" x 9.0" 559 mm x 356 mm x 229 mm
Weight	11.6 lb 5.2 kg
Material	Lightweight NK-7 resin
Temperature range	Min -20°F (-29°C) Max 140°F (60°C)
Padlock holes diameter	0.340"
Water resistant (IP67)	Yes
Airline check-in	Yes
Airline cabin carry-on	Yes





APTURE

iOS Scanning App

Capture is the user interface for PX-80 which controls data collection, provides real-time scanning feedback, and post-processing options. The app connects to PX-80 via a local wireless network and does not need internet access to operate.

RETRACE

Windows Project Viewer

Explore scans in street-view style through high resolution spherical imagery. Visit your site remotely, record progress, and organize scans by date + location.



PX-80

Internal Processing Software

PX-80 has its own internal processing software which runs our proprietary SLAM algorithms on the camera, IMU, and LiDAR data and stores the captured point clouds on device.