PX-80™

v 1.3

HANDHELD LIDAR SCANNER

FEATURES
& TECHNICAL
SPECIFICATIONS

PARACOSM™

ABOUT

PX-80 is an innovative handheld 3D mapping solution that incorporates lidar, color imagery, and IMU data to generate high-quality, colorized point clouds for a wide range of applications. Its compact form factor and powerful 6-DoF spatial tracking enable accurate capture while you walk.

Handheld lidar scanning offers many advantages over conventional ground surveys, namely flexibility, simplified workflow, and faster data collection. This non-invasive survey method offers an efficient acquisition rate of 300,000 points per second, and is effective day or night, indoors or out, in virtually any environment.

ORDERS INCLUDE

PX-80 scanner & built-in processing software

Apple® iPad mini™ 5, 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 produces point clouds in full color and spherical images automatically. Data is transferred from PX-80 via USB 3.0, ethernet, or WiFi, to a workstation.

FILE FORMATS

Photosphere images (.JPEG)

RGB colorized point clouds (.LAS or .PLY)

Trajectory .TXT file

PARACOSM™

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 - 100 m
Relative accuracy	±1-3 cm
Global accuracy	±3-30 cm (10 min scan, 1 loop)
Environment	Indoor / outdoor

Color Camera

Resolution	2048 x 1536 px
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).

**CLASS 1
LASER PRODUCT**
Complies with IEC 60825-1. Maximum range: 910 nm

PARACOSM™

Internal Battery

Type	Lithium Ion
Capacity	36 Wh
Life	40 minute scan time

External Battery

Type	Lithium Ion
Capacity	98 Wh
Life	90 minute scan time

Computing

Processor	Intel Core i7-865OU
RAM	32 GB
Storage	1 TB
Data Capture Rate	0.75 GB / min
Total Data Storage	22 hours non-stop scanning
I / O	USB 3, Ethernet, WiFi

WATERPROOF IP67 RATED

NANUK LIFETIME WARRANTY

IMPACT RESISTANT

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"
Environmental rating	Water resistant (IP67)
Airline check-in	Yes
Airline cabin carry-on	Yes

PARACOSM™

PX-80™

INCLUDED SOFTWARE

CAPTURE™
Scanning Application

Capture is the user interface for PX-80. This intuitive app controls data collection, displays real-time scan feedback, and offers post-processing options to make your reality capture workflow easier than ever before. The app connects to PX-80 via a local wireless network and does not need internet access to operate.

RETRACE™
Imagery walkthrough

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

PARACOSM™

PRO KIT
Chest Harness & External Batteries

Use the harness to reduce fatigue during longer scans, without losing the flexibility of using the PX-80 handheld. The two external batteries extend the standard 2+ hours of scan time to 5+ hours.

BACKPACK KIT
Backpack + External Batteries

Use the backpack acts to mount the PX-80 and enable scanning over difficult terrain or very large distances. It offers adjustable mounting angles between 0-90 degrees. The two external batteries extend the standard 2+ hours of scan time to 5+ hours.

DASHBOARD
Desktop Software for Power Users

A Linux application that powers large scanning projects and provides data management solutions for PX-80 users. Instead of processing data on device, Dashboard moves the post-processing step to a computer, freeing up the PX-80 for continuous use. Dashboard allows users to scan more, process faster, and stay organized. (Windows version coming soon.)

PARACOSM™