ROCK robotic

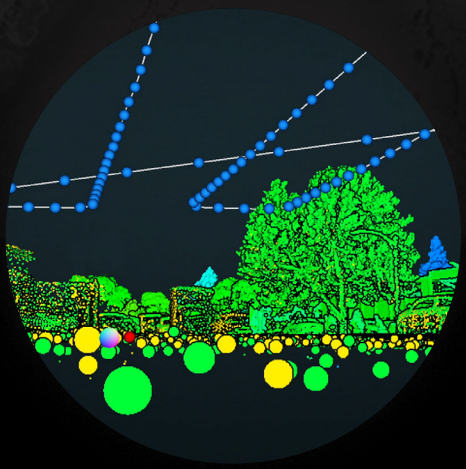
Introducing the New Standard

R3 PRO V2

Experience unmatched accuracy & efficiency in mapping technology.

The **ROCK R3 Pro V2 LiDAR** advances mapping and surveying with improved precision and functionality, building on its predecessor's achievements. Enhanced features include better inertial measurement, satellite navigation, computational power, and overall accuracy. Alongside the introduction of orthomosaic support with **ROCK Photogrammetry.**

New additions including improved corner accuracy, data colorization, and the new **ROCK Inspect** feature utilizing high-quality 360° photo spheres for efficient inspection work. Updated firmware and algorithms boost data integrity, making the R3 Pro V2 a top choice for construction, GIS, environmental studies, and surveying professionals.



NEW

Improved Accuracy

Enhancements in the accuracy of point clouds generated from the R3 Pro hardware due to updates in the IMU, GNSS, on-board computer, and LiDAR. The firmware and algorithms have been overhauled to achieve superior data quality.

NEW

ROCK Photogrammetry

Introduction of a powerful new photogrammetry technique exclusively unique to the R3 Pro V2 LiDAR, allowing for precise capturing of building / object corners and object locations in datasets — quickly and accurately.

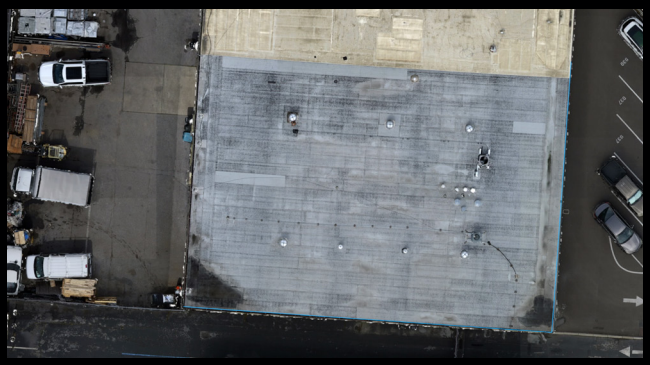
NEW

ROCK Inspect

A new feature across the platform that integrates photo spheres from SLAM (Simultaneous Localization and Mapping) with LiDAR data for visual inspection, seamlessly integrated with the ROCK Cloud processing platform.

ENHANCED FEATURES

Enhanced Corner Accuracy

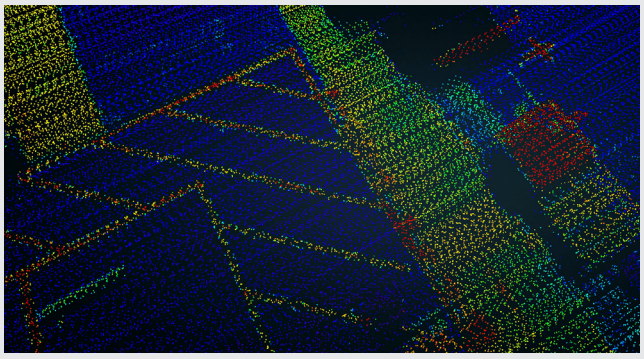


Improvements in capturing high dynamic corners without the need for manual corrections, thanks to advancements in IMU algorithms and firmware.

Improved Colorization

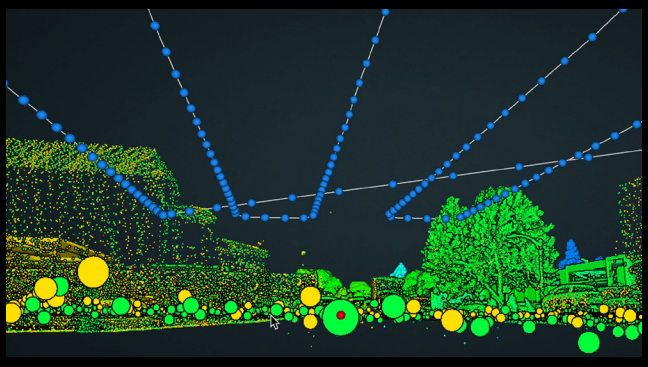
Improved accuracy has led to better colorization of the data, making details like building walls meeting the ground more precise and visually cleaner.

Repeatability & Overlap



The system demonstrates high repeatability and accurate data overlap in sequential flight paths, enhancing the consistency of the data collected.

Better Data Quality



The overall data quality, including the accuracy and alignment of scans, has improved, allowing for more precise results.

KEY FEATURES

High Accuracy
±3cm

Lightweight
1260g±10g

Points Per Second
1.28 Million*

Returns
2 Returns

Multi-Capture
Aerial, SLAM, Mobile, Photogrammetry, 360 Photo Spheres

High Resolution
26MP

*640k pulses per second with up to 2 returns for a total of 1.28 million measurements capable per second.

TECHNICAL SPECIFICATIONS

SYSTEM PARAMETERS

Weight[1]	1260g ± 10g
Dimension	159mm x 118mm x 127mm (LxWxD)
Power Consumption	25W
Power Supply	10 ~ 30V DC
Device Interface	DJI SKYPORT / Universal Mount
Data Storage	USB - disk 256GB
Operating Temperature	-10°C ~ 50°C
System Accuracy[2]	0.1 ft (3cm)

LASER UNIT

Laser Class	Class I
Wavelength	905nm
Measurement	120m@60% reflectivity
Range Precision	5mm
Horizontal FoV	360°
Vertical FoV	31°
Number of Returns	2
Measurement Rate	640,000/s (single return) 1,280,000/s (dual return)

IMU/GNSS

GNSS Signal Tracking	BDS, GPS, GLONASS,GALILEO
Operating Mode	PPK
Pitch/Roll Accuracy[3]	0.006° PPK
Heading Accuracy[4]	0.03° PPK

AERIAL METRIC CAMERA

Effective Pixels	26 MP
Sensor Dimension	23.5 x 15.7mm
Image Resolution	6252 x 4168
Image Width FoV	73°
GSD	2.3cm@100m Flight Height

INTEGRATED SOFTWARE

Field Checking	Off-line/ROCK Desktop
Output Colorized LAZ	Off-line/ROCK Desktop
Post Processing Deliverables	Online/ROCK Cloud
3rd Party Post Processing Support	Yes

ROCK CLOUD ROCK DESKTOP

COLORIZED ROCK SLAM DOCK V2

Camera	Insta360 ONE RS
Sensor Size	1-inch
GNSS Enabled	Integrated Antenna
Dimensions	136mm x 149mm x 108mm (L x W x D)
Mounting	M5 Screws (x4) Central 3/8" Screw
Scanning Modes	GNSS Denied GPS-Enabled SLAM
Battery Life	4 hours (Single)
Accuracy	Relative - 2cm Absolute - 5cm

Contact ROCK Sales to get started.

ROCK Sales # +1 (720) 706-8648
Email Address sales@rockrobotic.com

LEARN MORE »

TALK TO SALES ›

ROCK robotic

R3 PRO V2