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无穹创新
SKYLAND INNOVATION

SKYLAND

INNOVATION

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Bring 3D to Everyone

About Skyland Innovation

SKYLAND INNOVATION 无穹创新

Skyland Innovation holds a strong conviction that the FUTURE IS 3D and is committed to replicating the real world in its digital form. Through the seamless integration of cutting-edge robotics and advanced 3D reconstruction technologies, we offer highly efficient and mature solutions for the digitization of the physical world. Our aim is to facilitate seamless interaction between humans and spatial environments.

Skyland Innovation is the first team being invested in and incubated by HKCRC, led by Prof. Zexiang LI, who is also known as the godfather of DJI.

At Skyland Innovation, our experienced engineers excel in robotics and product engineering, with notable achievements in publications, inventions, patents, and open-source projects. Our service team is dedicated to providing device training, timely issue resolution, and customized solutions for maximum efficiency and client satisfaction.

We have established robust partnerships with universities and industry collaborators and actively engaged in over 40 benchmarking projects in Hong Kong and Mainland China. Notable examples include the Digital Twin of Hong Kong West Kowloon Palace Museum.

Despite industrial and business collaborations, we are directing our focus towards 3D content for consumers. We believe immersive and visually captivating experiences will revolutionize entertainment, gaming, education, and virtual reality. As pioneers in this field, we are committed to pushing boundaries and delivering exceptional 3D content solutions to consumers.
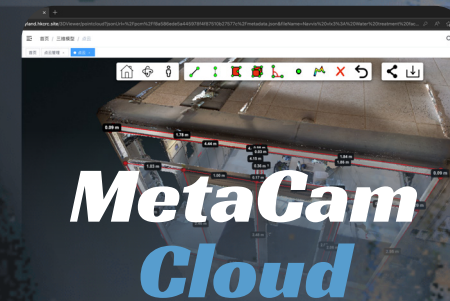
1 ST
to be invested
by HKCRC

SOUND
Engineers
& Service Team

40+
Benchmark
Projects

Future
is 3D

MetaCam APP Series
Not only harwares, we CARE about our users

MetaCam Mobile allows you to interact fluently with MetaCam. By using MetaCam Mobile, you can control MetaCam, preview scanned point clouds in real time in order to tune your scanning strategy and manage your MetaCam's data storage.

MetaCam Mobile

MetaCam Cloud targets users that do not have powerful computing units. You can export data from MetaCam and use Skyland's server to do post-processing on our Website. Integrated with *MetaCam Viewer*, you can view, edit, measure, and export your scanned point cloud however you wish.

MetaCam Cloud

MetaCam Studio targets users who have a data privacy concern. You can export data from MetaCam and do post-processing on your own PC. Integrated with *MetaCam Viewer*, you can view, edit, measure and export your scanned point cloud however you wish on your own computer.

MetaCam Studio

MetaCam Workflow

Use *MetaCam Mobile* and our hardware to do the scanning

MetaCam Mobile — **Scan**

Export data to appropriate software to do post-processing

MetaCam Studio
MetaCam Cloud — **Process**

MetaCam Viewer

Use the *MetaCam Viewer* embedded inside *Cloud* and *Studio* to use, view, edit, measure, and export your scanned point cloud.

Use

MetaCam *ORIGINAL ed.*

Current generation, light-weight, handheld, full-color 3D reality scanner

Highly Integrated
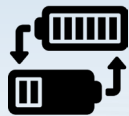
Real-time Preview

User Friendly

MetaCam is a highly integrated, lightweight handheld 3D real scene reconstruction scanning device. MetaCam adopts the 3D real-time reconstruction algorithm independently developed by Skyland Innovation to facilitate model acquisition, real-time preview, model generation, and data export. It can directly obtain the true-color point cloud model with high precision and a high degree of restoration, enabling you to quickly and accurately obtain the required 3D model data.

LiDAR

Panoramic Color Imaging System

Quick Detachable Battery Module

Pose Orientation Reference System

High-Performance Edge Computing Module

Core scanning module

Quick-detachable battery module

Portable storage box

Specifications

Size	113mm x 122mm x 295mm
Weight	1.57 kg (include battery)
Storage Capacity	512 GB (scalable)
Operation Temprature	-20℃ ~ 50℃
Scanning Efficiency	>= 5000 square meters per hour
Operating Power	<= 50W
Number of Cameras	3
Camera Resolution	12.3 miilion pixels
Visual Localization	Supported
Laser	Class 1 eye-safe; 865nm
Scanning Rate	655,000 per second
FOV	45° x 360°
Range	1m ~ 120m
Accuracy	0.7cm ~ 5cm
Power Supply	fast-swappable battery / external
Single-Battery Capacity	13,600 mAh
Single-Battery Operation Time	1 hr
Colored Point Cloud	Supported

MetaCam *UNICORN ed.*

Next genetation, lighter and more compact, handheld, full-color 3D reality scanner

Lighter Weight
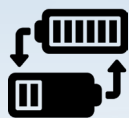
Longer Battery Life

More Versatility

MetaCam Unicorn edition is Skyland's new product. After getting feedback from original edition buyers and users, Skyland improved MetaCam to the next level with lighter weight, longer battery life, more stability, and better hardware design. Our refined algorithm makes the output point cloud more accurate and has a more realistic color. With a universal attachment mechanism, the Unicorn edition is more versatile and can cooperate with a wider range of mobility platforms.
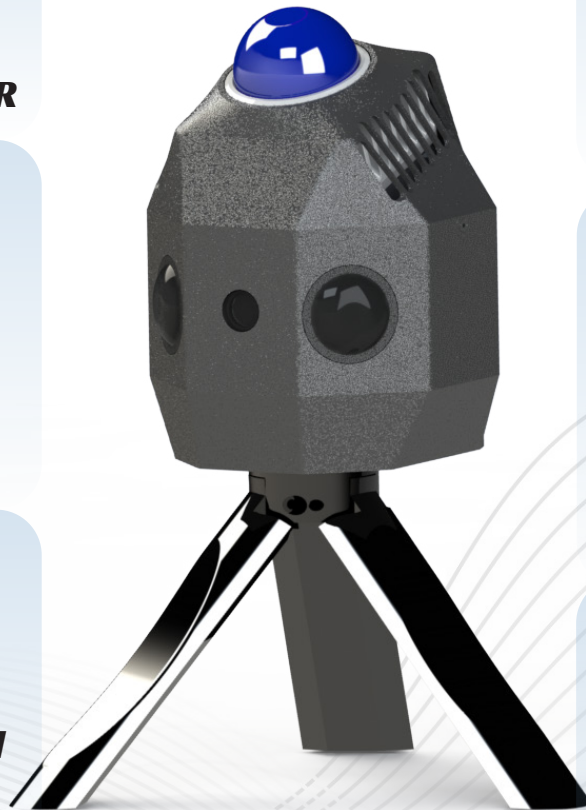
Ligher and Better LiDAR

Refined Panoramic Color Imaging System

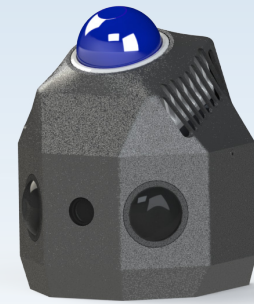**Swappable Battery and Battery Manager**

Better Pose Orientation Reference System

Higher Performance Edge Computing Module

DSLR Hand Held Tripod

Core scanning module

Swappable battery and battery manager

Smaller portable storage box

Specifications

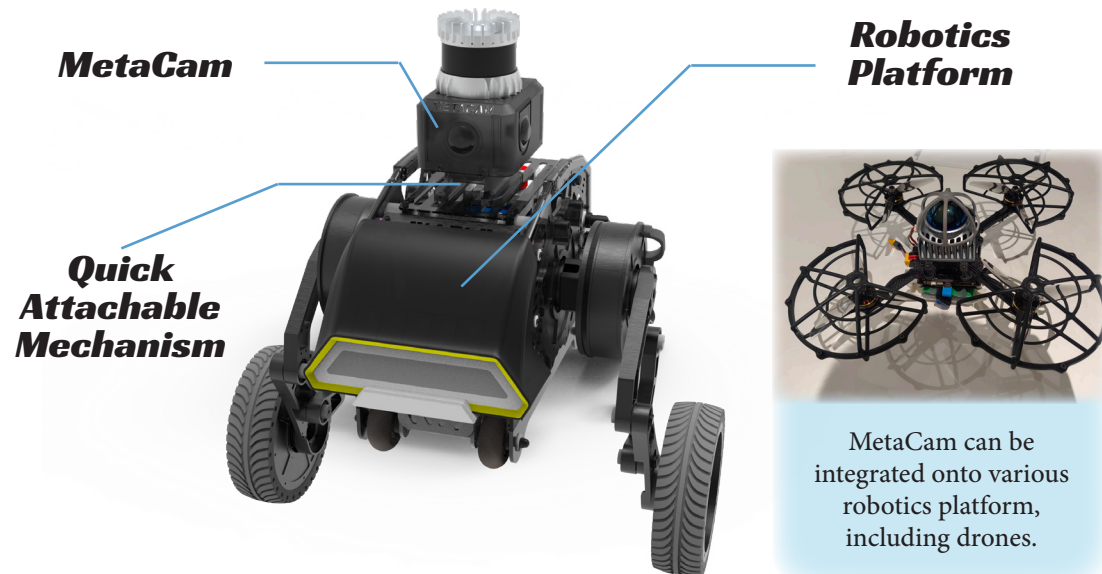|	
Size	112 x 100 x 157 mm
Weight	1.00 kg (include battery)
Storage Capacity	512 GB (scalable)
Operation Temprature	-20°C ~ 50°C
Scanning Efficiency	>= 5,000 square meters per hour
Operating Power	<= 35W
Number of Cameras	3
Camera Resolution	10.2 & 12.3 million pixels
Visual Localization	Supported
Laser	Class 1 eye-safe; 865nm
Scanning Rate	200,000 per second
FOV	59° x 360°
Range	1m ~ 40m
Accuracy	0.7cm ~ 5cm
Power Supply	fast-swappable battery / external
Single-Battery Capacity	10,200 mAh
Single-Battery Operation Time	1.5 hrs
Colored Point Cloud	Supported

MetaCam *GO*

Autonomous 3D reconstruction robot

Modular Design

flexible Mobility

Autonomous Scanning

MetaCam adopts a modular design. Therefore, it can be attached to and cooperate with various mobility platforms and vehicles. Skyland Innovation specifically cooperates with Direct Drive Tech and launched MetaCam GO, a highly flexible, versatile, two-wheel self-balanced robot scanner. MetaCam, serving as the EYE of the robot platform, enabled it to complete automatic scanning on its own. MetaCam GO is the future scanning solution that reduces manpower and cuts costs.

MetaCam

Robotics Platform

Quick Attachable Mechanism

MetaCam can be integrated onto various robotics platform, including drones.

Specifications

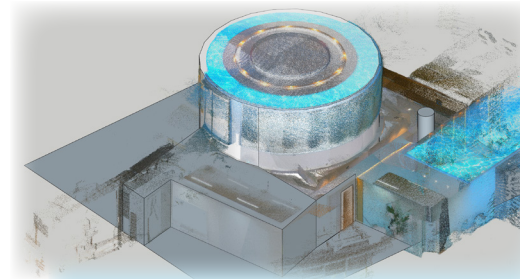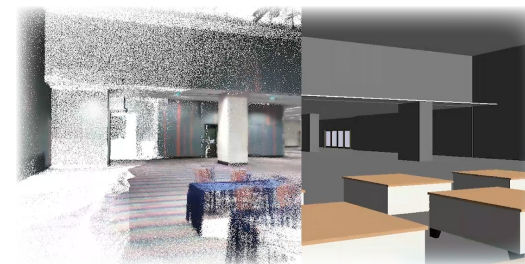| Size (when fully standing)	540 x 371 x 550 mm
Weight	24 kg
Operation Temprature	-20°C ~ 35°C
Scanning Efficiency	>= 8000 square meters per hour
Battery Capacity	170 Wh
Battery Operation Time	30 ~ 60 mins
Battery Charging Time	1 ~ 2 hrs

Applications

Smart Construction

The point clouds generated by MetaCam can be imported into SketchUp, Blender, Rhino...... to *assist with modeling*.

MetaCam is being used for the *progress management* project for an interior renovation scenario.

MetaCam is used to *compare BIM and scanning results* in an interior design scenario.

Digital Cultural Heritage

MetaCam scanning result of the *Nine-Dragon Wall* in the Forbidden City, Beijing

MetaCam scanning result of Ruins in *Old Summer Palace* in Beijing

Digital Factory

MetaCam is used in a lubricating oil factory. Barrels, tanks, and structures are clearly seen in the point cloud scanning result. Scanning result is used for *inventory management*.

MetaCam is used in a factory to create digital twins. All the equipment, structures, and pipelines can be seen clearly. Scanning result is used for *production line planning*.
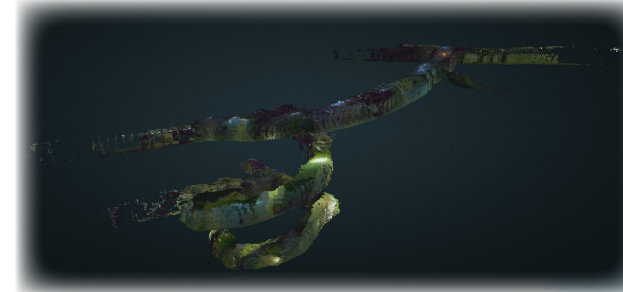

Forestry and Agricultrual

MetaCam is used in a park with trees and grass. Trees and grasses can be distinguished clearly in the scanning result. Scanning result can be used for *Ecological environment construction, tree protection and landscape design*.

MetaCam is used in a vineyard in China. Grape details can be clearly seen and distinguished. Scanning result used for *cultivation yield estimation and forecasting*.
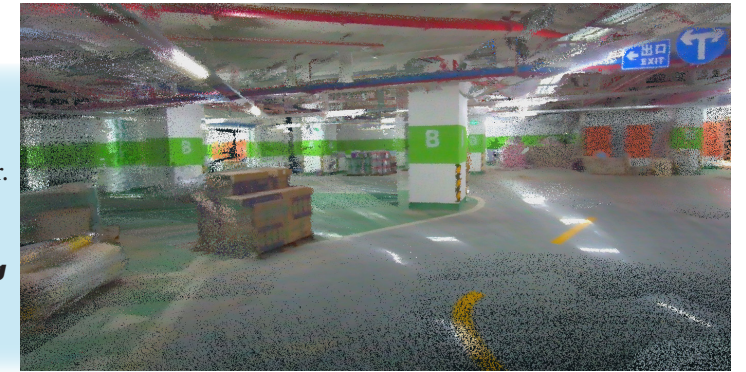

Hermetic Space

MetaCam is being used in an underground mine located in Sichuan, China. The scanning result is used for *mineral exploration.*

MetaCam scanned the underground car park with precision and fascinating color. The signs and structures are all well preserved. Scanning result can be used for *parking facility planning and vacancy detection*.

Record Your Memory (Extended Reality)

MetaCam is used in an old community, recording and preserving the *memories* of a granny. Details of walls, furniture, and light can be seen clearly.

MetaCam is used in an old country, recording and preserving details of walls, bricks, couplets, and plants. This is the a piece of *memory* of a young boy, hoping to preserve his childhood.

Cooperative Partners

清華大学 Tsinghua University

香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

復旦大學 FUDAN UNIVERSITY

浙江大学 ZHEJIANG UNIVERSITY

DJI

OUSTER™

中國建築 CHINA STATE CONSTRUCTION

HKSTP 香港科技園

CONSTRUCTION INDUSTRY COUNCIL 建造業議會

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