

High-Performance Motion Capture System

Skyed motion capture system is optimized for real-time 3D tracking applications such as robotics, animation, and virtual production. It integrates powerful edge processing, high-speed imaging, and seamless ROS2 compatibility in a compact form factor.



Low Cost
High Performance

Edge PC
Image Processing

ROS2
Compatible

📷 Camera Unit

Sensor	Sony IMX296 (1.6MP)
Shutter Type	Global Shutter
Resolution	1400x1050 @ 60FPS
	1400x480 @ 120FPS
Latency	< 1ms
Output	Real-time video stream 2D and 3D Data

🧠 Edge Processing

CPU	ARM Cortex-A76 (1.5GHz)
RAM	8GB
Video Out	Dual micro-HDMI 4K
Connectivity	Single Cable PoE
Form Factor	Compact / Efficient

Deployment Setup

- 📹 **Camera Count:** Min 4 / Max 8+
- 📐 **Typical Space:** ≥ 5m x 5m x 5m
- 🎯 **Calibration:** Auto Marker Calibration
- 🔧 **Mounting:** Tripod or Wall-mount

Applications

- 🤖 **Robotics Control**
Real-time feedback loops
- 🎬 **Virtual Production**
Camera tracking & Previz
- 👤 **Animation**
Character motion capture

SKYEDMOCAP

UI/UX

The screenshot displays the SKYEDMOCAP software interface. The central 3D View shows a scene with 16 markers (mocap00 to mocap07) and 8 cameras. The interface includes several panels:

- Tracking:** State (Tracking), Markers (16), Cameras (8), and a Stop Tracking button.
- Triangulation:** Reprojection Max (1.0 px).
- Tracking Parameters:** Max Lost Frames (60 frames).
- Marker Detection:** Min Radius (2.0 px), Max Radius (50.0 px).
- Connected Cameras:** A table listing 8 cameras (mocap00 to mocap07) with FPS (20.0) and Status (Online).
- Overlays:** Labels (User ids), Epipolar Lines (checked).
- Overview:** Markers (Assigned: 16, Unassigned: 0), Templates (example3), and a Markers table.
- Status:** State (Idle), Frames (0), Duration (0.00 s), Buffer (0.0%).
- Controls:** Start Recording and Clear Buffer buttons.
- Events:** Filter events, Auto-scroll, and Clear buttons.
- Log:** A log window showing events like "1 camera" and "[INFO] Marker 7 recovered".

At the bottom, a status bar shows: Tracking (green), UI, 54.0 fps Latency, 0.00 ms Markers, 16 Cameras, and 8.

Integration



Platform Support:

Linux (Docker supported)



SDK/API:

ROS2 compatible



Network:

Ethernet PoE Switch (Recommended)

Recommended System

Recommended:

CPU Intel Core i7 8700K or higher

GPU NVIDIA GTX 1070 or higher

RAM 8GB or higher

OS Linux with Docker compatible

Operating Conditions

Operating: 0°C to 72°C

Storage: 0°C to 55°C

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