seeed studio

INDUSTRIAL PRODUCT DATASHEET

reCamera Gimbal 2002w （8G） - AI Camera with adjustable Yaw & Pitch

reCamera Gimbal is a fully open-source, modular AI camerawith brushless pan-tilt motors that provide 360° yaw and 180° pitch motion.It runs Linux on an embedded AI SoC with 1 TOPS @ INT8 performance and includes built-in YOLO...

SKU	UPDATED	PRICE
108990119	2026-11-11 09:35:38	$209.90(Excl. VAT)



Overview



reCamera Gimbal is a fully open-source, modular AI camerawith brushless pan-tilt motors that provide 360° yaw and 180° pitch motion.It runs Linux on an embedded AI SoC with 1 TOPS @ INT8 performance and includes built-in YOLO models and Node-RED for low-code AI development. itisamotion-enabled smart eye for any system. reCamera is the go-to AI camera for YOLO at the edge.

Key Features

01 **Active Human Tracking and Counting**

reCamera Gimbal follows people in the scene while simultaneously counting the number of people.

02 **Gesture Control**

reCamera Gimbal recognizes the gestures for “rock,” “paper,” and “scissors,” and rotates to a designated angle accordingly

03 **Car Tracking**

reCamera Gimbal tracks a red car

04 **Object Classification**

05 **Objection Detection**

06 **Pose Detection**

07 **Instance Segmentation**

08 **Sensor Board features a swappable and interchangeable camera module design. The current version comes with the OV5647 sensor. If you need higher imaging performance, we also offer a version with an sensor board with GC2053 reCamera 2002 Sensor Board GC2053 which has 1/2.9'' CMOS sensor and supports changing lenses. We also offer M12 lens options for different FOV requirements. More sensor boards are on the way - feel free to share your needs at GitHub · Where software is built**

09 **Core Board provides system control and computing power. It has a RISC-V SoC and a 1Tops@Int8 NPU. Also, the Core Board provides Wifi capability. We offer individual Core Boards, allowing users to purchase the core board separately and build their own custom reCamera**

10 **Base Board provides connectivity. It offers interfaces including USB, Ethernet and debug serial ports enabling easy integration with external devices and systems.**

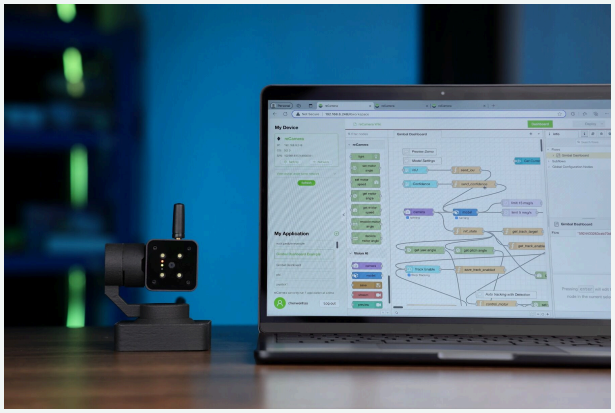
11 **Hardware**

module board documentation is fully open, including 3D files, schematic, PCB files

12 **AI Functions**

inference pipeline, NPU runtime integration, YOLO11n models, and Node-RED AI nodes are fully open.

Product Gallery
















reCamera Gimbal
User Manual

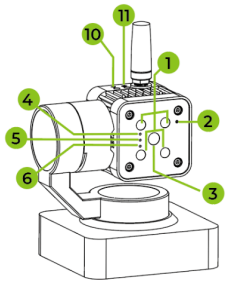

User Manual

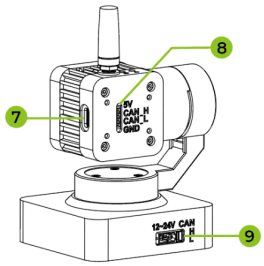



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112 mm
68 mm
71 mm

Hardware Overview

Interface





1. Fill LEDs
2. Mic
3. Camera
4. User(R)
5. Power(G)
6. Disk(B)
7. USB Type-C
8. 2.54mm Female Pin Header
   - 5V
   - CAN_HIGH
   - CAN_LOW
   - GND
9. XT30(2+2) Header (For 12V DC)
10. ▲ User Button(For Factory Reset)
11. ↻ Reboot Button

Applications

- **Integration of Real-time Heatmap with Grafana Data Dashboard:** The project conducts target detection using the YOLO11n model built into reCamera. It performs fuzzy processing on personnel targets and displays a heat map effect. All of this is handled locally within reCamera! And reCamera will send the detected data to the locally running Influxdb database. Then, Grafana reads the data from the Influxdb database to display real-time data dashboards.
- **AI Remote Wireless Monitoring System Based on reCamera and Wifi Halow:** An AI-based remote wireless monitoring system using Wi-Fi HaLow. It combines edge AI vision with long-range, low-power wireless communication to enable real-time detection, data transmission, and monitoring in remote or infrastructure-limited environments such as farms, factories, and outdoor sites.
- **Video link: https://www.linkedin.com/posts/seeedstudio_howtobuildanaicamera-outdoor-wifi-activity-7401880305940553729-R57w?utm_source=share&utm_medium=member_desktop&rcm=ACoAAGCDEqUBKdDsqK6EqGXClNocxAAtw3IA_T0**
- **Tutorial: AI Remote Wireless Monitor System with Wifi HaLow | Seeed Studio Wiki**
- **AI Parking Management with reCamera:** This project uses Seeed's reCamera to detect parking slot occupancy in real-time. It features multi-frame stabilization to avoid flickering and displays results (free/occupied counts) directly on the video stream. The entire workflow runs automatically on the device via a pre-configured Node-RED setup.
- **Tutorial: AI Parking Slot Monitoring Demo with reCamera | Seeed Studio Wiki**
- **Play Subway Surfers with reCamera HQ PoE:** Using its built-in pose detection model, reCamera can recognize your hand and body movements in real time and convert them into game actions, no controllers, no wearables, just pure gesture play. Wave your hand to jump, raise your arm to attack, or lean left and right to dodge obstacles.
- **Video link: https://www.linkedin.com/posts/seeedstudio_howtobuildanaicamera-recamera-yolo11n-activity-7399730949401526272-UdZ4?utm_source=share&utm_medium=member_desktop&rcm=ACoAAGCDEqUBKdDsqK6EqGXClNocxAAtw3IA_T0**
- **Tutorial: Play Subway Surfers with body sensor control | Seeed Studio Wiki**

Resource Links

- https://www.seeedstudio.com/reCamera-Gimbal-2002w-8GB-p-6402.html
- User Manual
- Motor CANBus Protocol in English
- Motor CANBus Protocol in Chinese
- reCamera Flyer
- reCamera Flyer - CN

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