

INDUSTRIAL PRODUCT DATASHEET

XIAO Vision AI Camera

An AI-powered smart camera with Wi-Fi connectivity, no-code model deployment, and Home Assistant integration for local automated vision applications.

SKU

104990982

UPDATED

2026-07-30 08:34:22

PRICE

\$26.90(Excl. VAT)



Overview



The XIAO Vision AI Camera combines the Grove Vision AI Module V2's dual-core Arm Cortex-M55 processor with integrated Arm Ethos-U55 NPU for powerful AI processing, and features XIAO ESP32-C3 Wi-Fi for wireless streaming of detection results. With no-code model deployment via SenseCraft AI, seamless Home Assistant integration for local closed-loop automation, and a fully open-source design, it enables smart vision applications in industrial automation, smart cities, agriculture, and mobile IoT.

Key Features

Note:

Early Build provides beta products (featuring 3D-printed cases) and evolving software before final release. We welcome your feedback and suggestions to shape the product's evolution. Enjoy exploring!

ESPHome Ready-Made Project: Zero-Code Setup!

Seeed Studio is proud to have joined the ESPHome Ready-Made Project. No YAML or coding required—flash your firmware directly via web browser for instant integration.

Featured Devices:

- [XIAO Smart IR Mate](#): Your ultimate Home Assistant infrared hub.
- [XIAO W5500 Ethernet Adapter V1.2](#): Reliable PoE Bluetooth Proxy for Seamless Connectivity.

Experience seamless setup now at the [ESPHome Ready-Made Projects website](#)!

[Explore landing page](#) to discover more plug-and-play, Home Assistant-compatible devices designed for faster deployment and simplified integration.

- **Feature 1: Powerful AI Processing Capabilities**

As the core element of this gadget, the Grove Vision AI Module V2 utilizes **WiseEye2 HX6538 processor** with a dual-core Arm Cortex-M55 and integrated Arm Ethos-U55 neural network unit.

- **Feature 2: Versatile No-Code AI Model Deployment & Visualization**

Via the SenseCraft AI platform [SenseCraft AI](#), you can effortlessly choose from built-in models (Mobilenet V1/V2, EfficientNet-Lite, YOLO v5/v8, etc.) or upload custom datasets for “Quick Training” or “Image Collection Training”; once training is complete, models are deployed to the device with one click, and inference results are visualized in real time on the web—no coding required.

- **Feature 3: Wi-Fi Enabled Smart Vision**

Turn this gadget into an intelligent IP camera with built-in XIAO ESP32-C3's Wi-Fi capabilities. Stream detection results wirelessly and seamlessly integrate with platforms like Home Assistant, expanding its potential across diverse smart home scenarios. This wireless connectivity turns simple object detection into networked intelligent vision, enabling remote monitoring and smart automation applications.

- **Feature 4: Local Closed-Loop Automation with Home Assistant Integration**

After deploying a model via SenseCraft AI and flashing ESPHome, users can integrate the XIAO Vision AI Camera into Home Assistant; within the automation editor, they can trigger other devices or send notifications based on detection events (e.g., falls, object detection), enabling a fully local, closed-loop workflow from vision to action.

- **Feature 5: Fully Open Source**

All codes, design files, and schematics available for modification and use. And we can also help you customize the gadget to fit in your unique applications via our ODM services. Contact us at [iot\[at\]seeed.cc](mailto:iot[at]seeed.cc) if you're interested.

How's the performance of XIAO Vision AI Camera?

To have a quick evaluation of this board's performance, we compared it to Seeed's other MCU-based vision AI boards - **Grove - Vision AI Module, thumb-size, AI-powered camera, easy-to-use, customized sensor, ultra low power cost - Seeed Studio, Mini ESP-CAM Dev Board for Edge AI - XIAO ESP32S3 Sense** in four areas:

These results clearly demonstrate that the Grove Vision AI V2 in the XIAO Vision AI Camera is a premium choice for high-performance vision processing.

How XIAO Vision AI Camera Works?

Looking for a configurable MCU-based Vision AI kit? Check out **Grove Vision AI V2 Kit**. Already have your own XIAO board and camera? Choose **Grove Vision AI Module V2**. Need a more powerful standalone AI camera? Explore **reCamera Basic**.

Product Gallery



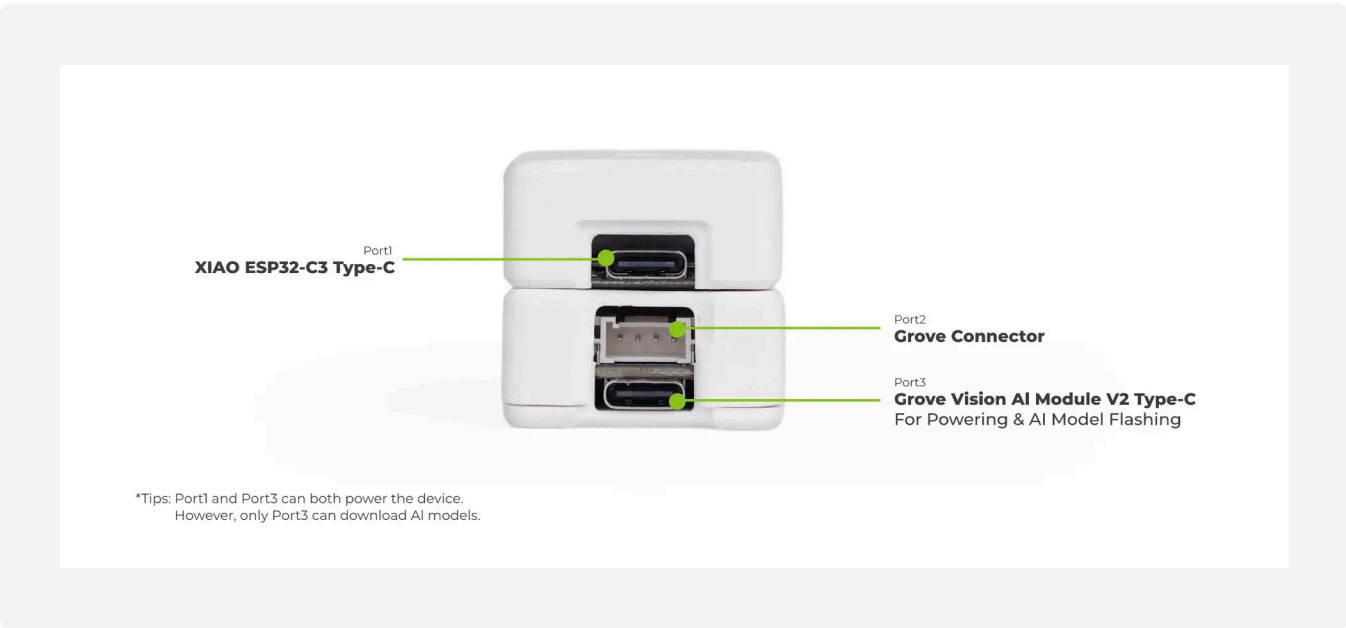


Specification

Parameter	Description	
Camera	Sensor	OmniVision OV5647
	Still Image Resolution	2592 × 1944 (5 MP)
	Field of View	62°
	Video Modes	1080p @ 30 fps; 720p @ 60 fps
	Pixel Size	1.4 μm × 1.4 μm
	Focal Length	3.4 mm (adjustable)
	Aperture (F-Stop)	F/2.8
	CMOS Size	1/4"
Microcontrollers	Master Controller XIAO ESP32-C3	• 2.4GHz Wi-Fi/Bluetooth 5.0 • RISC-V single-core 32-bit chip processor with a four-stage pipeline that operates at up to 160 MHz • 400KB SRAM & 4MB Flash
	Imaging Processing Unit GroveVision AI Module V2, powered by Himax WiseEye2 HX6538	• dual-core Arm Cortex-M55 @ 400 MHz & @ 150 MHz • Ethos-U55 microNPU @ 400 MHz • Configurable SRAM up to 2432 KB; 64 KB Boot ROM • CSI camera connector • Grove I²C/UART/SPI • Micro SD card slot (DS mode, up to 25 MHz SDIO) • PDM microphone; micro SD card slot
Power Supply	5 V via USB Type-C (XIAO ESP32-C3)	
Baud Rate	115200 bps	

Operating Temperature	-20 °C to 70 °C
Enclosure	Dimension: 31 x 49 x 32 mm Material: PLA Color: White Fabrication: 3D Printing Also open sourced for remix on Thingiverse.

Hardware Overview



Applications

- **Industrial automation:** quality inspection, predictive maintenance, voice control, etc.
- **Smart city:** equipment monitoring, energy management, etc.
- **Transportation:** status monitoring, location tracking, etc.
- **Intelligent agriculture:** environmental monitoring, etc.
- **Mobile IoT devices:** wearable devices, handheld devices, etc.

Part List

XIAO Vision AI Camera	x1
-----------------------	----

Compliance & Logistics

HSCODE	9031809090
USHSCODE	9031808085
UPC	
EUHSCODE	9013101000
COO	CHINA

Resource Links

- <https://www.seeedstudio.com/XIAO-Vision-AI-Camera-p-6450.html>
- [3D Printed Foldable Holder for Grove Vision AI Module V2 Kit \(Grove Vision AI Module V2 + OV5647 Camera + XIAO\)](#)
- [HX6538 Datasheet](#)
- [Himax examples for Seeed Grove Vision AI Module V2](#)

Seeed Technology Co.,Ltd.

9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676

Web: www.seeed.cc

Shop: www.seeedstudio.com