

seed studio

INDUSTRIAL PRODUCT DATASHEET

Raspberry Pi AI HAT+ | Hailo-8L AI Accelerator 13TOPS

High-efficiency 13 TOPS AI accelerator HAT for Raspberry Pi 5, purpose-built for edge computer vision tasks.

SKU

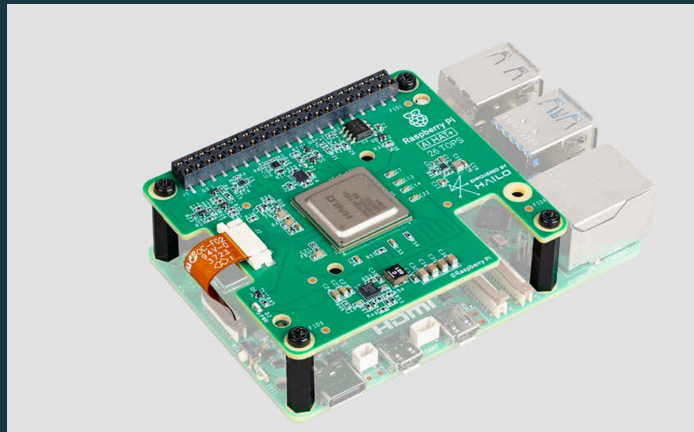
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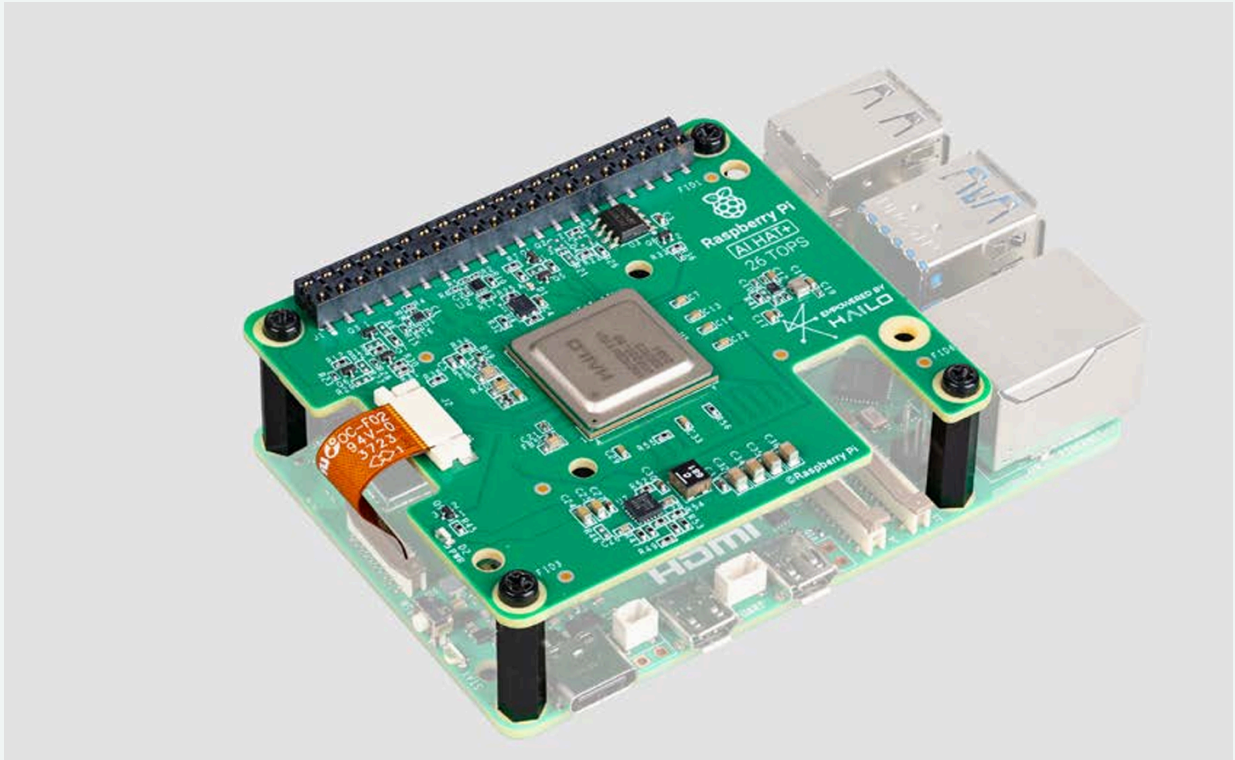
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PRICE

\$70.00(Excl. VAT)



Overview



The Raspberry Pi AI HAT+ featuring the Hailo-8L accelerator delivers 13 TOPS of high-performance AI inference via native M.2 PCIe Gen 3.0 integration with Raspberry Pi 5. It enables real-time computer vision applications such as object detection, defect inspection, and people counting with out-of-the-box software support and efficient thermal design.

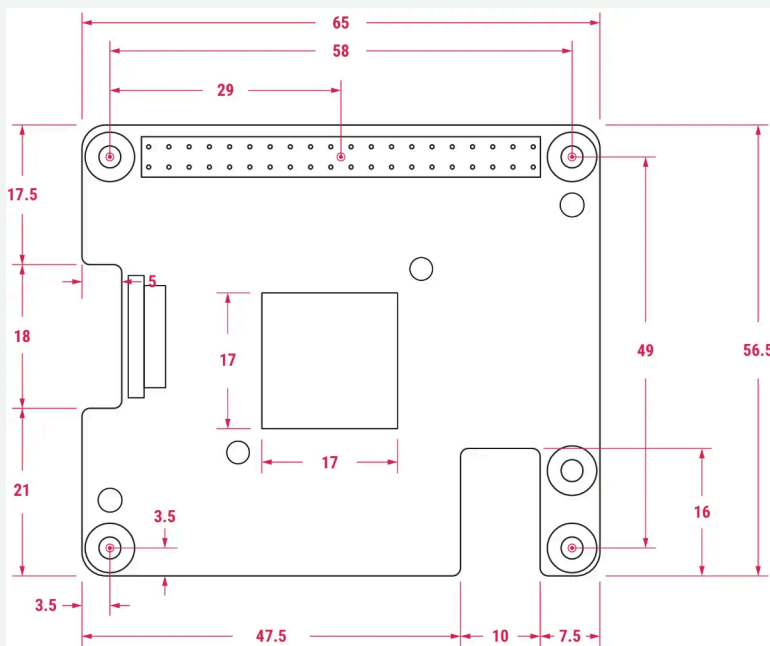
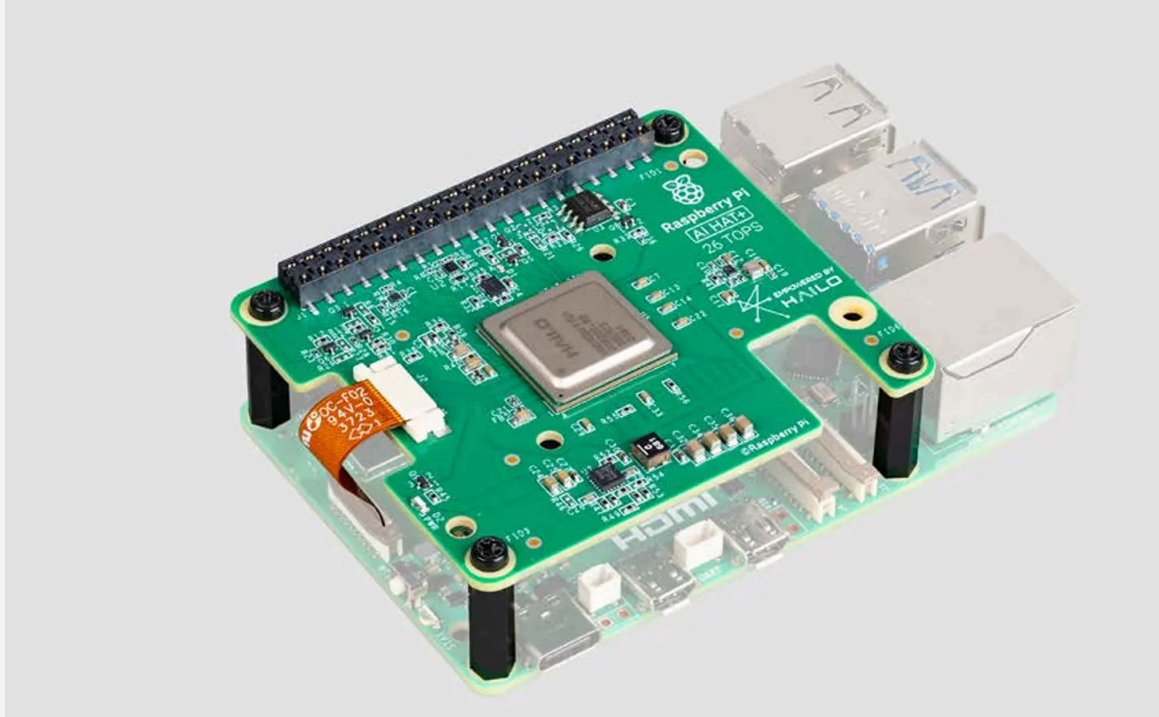
Key Features

- **Native Raspberry Pi 5 Integration:** Connects via the dedicated M.2 interface using the PCIe Gen 3.0 protocol. This ensures significantly higher bandwidth and lower latency compared to traditional USB-based AI sticks.
- **Optimized AI Performance:** Delivers 13 TOPS. While positioned as the entry model, its architecture is highly optimized for Convolutional Neural Networks (CNNs). It runs popular models like YOLOv8 at frame rates that far exceed CPU-only processing.
- **Thermal & Mechanical Design:**
 - Adheres to the **HAT+ mechanical standard** with ventilation cutouts.
 - **Fully compatible with the Official Active Cooler;** the HAT sits above the cooler, ensuring the system remains thermally stable even under heavy inference loads.
- **"Out-of-the-Box" Software Support:**
 - **rpicom-apps Integration:** The official camera stack already includes a Hailo post-processing stage. Users can run object detection or face recognition with simple command-line tools.
 - **Pre-installed Drivers:** Automatically recognized by the latest Raspberry Pi OS, eliminating the need for manual kernel driver compilation.
- **Power Efficiency:** Offers high-performance inference with a very small power footprint, making it ideal for battery-powered mobile projects or always-on monitoring nodes.

Specification

Operating Temperature	0°C to 50°C (ambient)
Performance	13 TOPS (INT8) for high-performance AI tasks
Compliance	For a full list of local and regional product approvals, visit Documents - Product Information Portal - Raspberry Pi

Hardware Overview



Note:

All dimensions in mm

All dimensions are approximate and for reference purposes only. The dimensions shown should not be used for producing production data

The dimensions are subject to part and manufacturing tolerances

Dimensions may be subject to change

Applications

- **Human, Pet, and Vehicle Detection:** Local human, pet, and vehicle detection to filter out false alarms (like moving trees or shadows).
- **Package Detection:** Identifying when a courier leaves a delivery at the door.
- **Part Sorting:** Identifying different components on a conveyor belt in real-time.
- **Defect Inspection:** Detecting surface scratches or assembly errors on production lines.
- **People Counting:** Analyzing foot traffic and creating heatmaps for retail stores.
- **License Plate Recognition (ANPR):** Automating entry/exit for private garages or small parking lots.
- **Gesture Control:** Using a camera to interpret hand signals for smart home or media control.
- **Robotic Navigation:** Providing real-time scene parsing for obstacle avoidance in wheeled robots.

Part List

Raspberry Pi AI HAT + 13TOPS	X1
16mm GPIO Stacking Header	X1
Screw set	X1

Compliance & Logistics

HSCODE	8473309000
USHSCODE	8473309100
UPC	
EUHSCODE	8471707000
COO	TW

Resource Links

- <https://www.seeedstudio.com/Raspberry-Pi-AI-HAT-13TOPS-p-6716.html>

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