

INDUSTRIAL PRODUCT DATASHEET

reComputer AI Industrial R2146-12 - The World's Most Powerful Raspberry Pi AI Box

The reComputer AI Industrial R2146-12 is the world's most powerful Raspberry Pi AI box, combining Raspberry Pi CM5 with a 26 TOPS Hailo-8 accelerator for real-time industrial AI vision and edge applications.

SKU	UPDATED	PRICE
100081425	2026-09-23 08:34:48	\$593.50(Excl. VAT)



Overview



The reComputer AI Industrial R2146-12 combines Raspberry Pi CM5 (up to 16GB RAM, 2.4GHz quad-core Arm Cortex-A76) with a 26 TOPS Hailo-8 AI accelerator, enabling real-time multi-stream AI vision processing and industrial reliability features such as PoE, 4G/LoRa, TPM, and RTC. It supports surveillance & security, smart retail, smart transportation, digital signage & audience engagement, and smart building applications through a ready-to-use model zoo and tool chain.

Key Features

Note: The reComputer AI R series features a commercial version with [Raspberry Pi 5](#) and an industrial version with [Raspberry Pi CM5](#), both equipped with a 26 TOPS Hailo-8 acceleration module, and a ready-to-use model zoo and tool chain.

Price Increase Announcement

Date: March 2, 2026

Due to increased demand for modules and SSDs, reComputer' pricing is expected to rise by approximately \$20–\$80 in the coming weeks. Please confirm your orders and requirements accordingly to help secure availability.

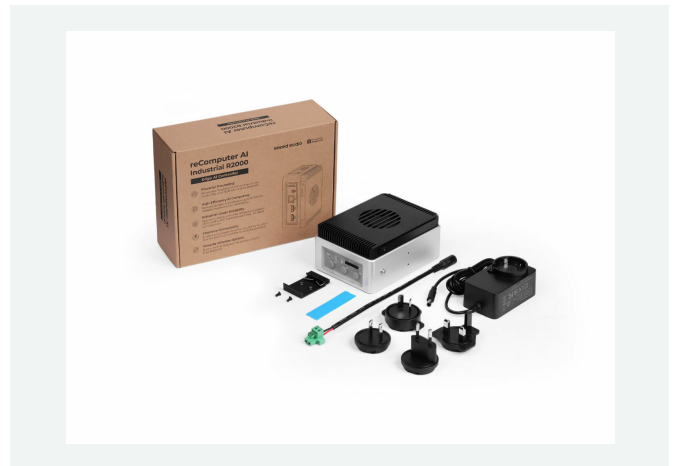
- **Powerful Performance with Raspberry Pi CM5 Module:** 2.4GHz quad-core 64-bit Arm Cortex-A76 & VideoCore VII GPU. Features up to 16GB RAM.
- **AI-Optimized Computing:** With the Hailo-8 AI accelerator, it delivers up to 26 TOPS, enabling real-time, high-performance AI vision processing across multiple channels.
- **Rich Connectivity:** 2 x HDMI, 1 x Gigabit Ethernet, 2 x USB 3.2 Type-A, 1 x USB 2.0 Type-C. 2 Slot for SSD storage and AI acceleration.
- **Advanced Video Processing:** 4k 60fps H.265 decoder supporting 2-8 real-time (720p) multi-stream inferences for object detection and tracking.
- **Enhanced Industrial Reliability:** Includes additional PoE, 4G/Lora, TPM, and RTC.

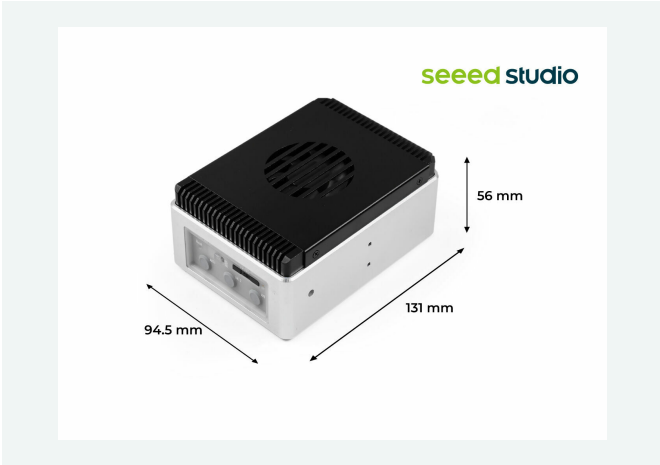
Seeed Studio Tutorial of AI Kit with Raspberry Pi: From Zero to Hero

This course is designed to teach you how to harness the power of AI on the Raspberry Pi, with a focus on using an AI kit to perform computer vision tasks. You'll learn how to integrate AI into real-world IoT applications, from object detection and image classification to more complex visual recognition tasks.

We will guide you step-by-step through setting up your Raspberry Pi, using AI frameworks, and deploying these models in various practical scenarios.

Product Gallery





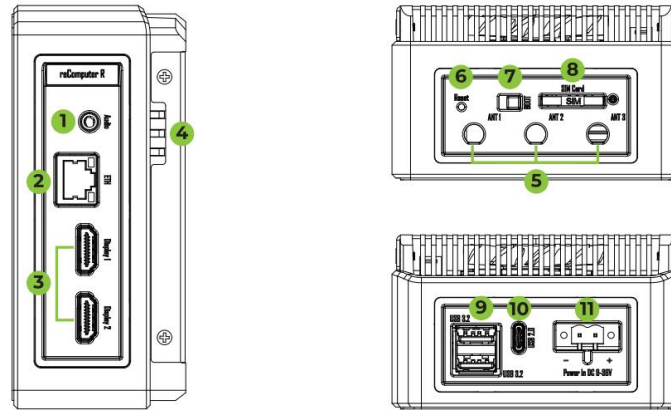
Specification

Basic Information	
CPU & GPU	Raspberry Pi Compute Module 5, 2.4GHz quad-core 64-bit Arm Cortex-A76 & VideoCore VII GPU
AI Processor	Hailo-8 M.2 Acceleration Stick, 26 Tera-Operations Per Second
Memory & Storage	16GB RAM, 64GB eMMC
Operating System	Raspbian, Debian

Interfaces	
Ethernet & USB	1x 10/100/1000 Mbps Ethernet (RJ45); 2x USB 3.2 (USB-A), 1x USB 2.0 (USB-C for debug/OS updates)
Display & Audio	2x HDMI 2.0 Ports (Standard); 1x 3.5mm Audio Jack
Expansion Slots	1x PCIe 3.0 to M.2 slot (M-key 2242, occupied by Hailo-8 AI accelerator); 1x Mini-PCIe for 4G, 1x SIM Card Slot
LED & Buttons	3x LEDs (Power/ACT/4G); 1x Reset Button, 1x Boot Switch
Wireless Communication	2.4/5.0 GHz Wi-Fi (On-chip Wi-Fi 5), BLE 5.0 (On-chip BLE 5.0), 4G LTE (Optional), 3x Antenna Holes

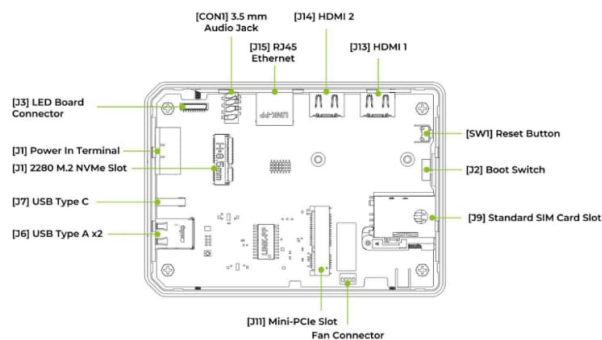
Device Specification	
Ingress Protection	IP40
Operating Temperature	-20~65 °C
Heat Dissipation	Heatsink with Fan
Operating Humidity	10~95% RH
Reliability	Hardware Watchdog, High Accuracy RTC
Security	Encryption Chip TPM2.0/ATECC608A (Optional)
Warranty & Lifetime	2-year warranty, Production Lifetime until December 2036
Certification	CE, FCC, Telec, RoHS, REACH
Physical Specifications	130mm * 93mm * 55.5mm (W x H x D) 688g Net weight
Enclosure	Aluminum Alloy Casing with PC Side Panels
Mounting	Din-rail/Wall mounting

Hardware Overview

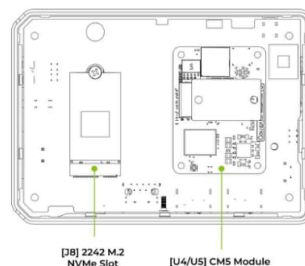


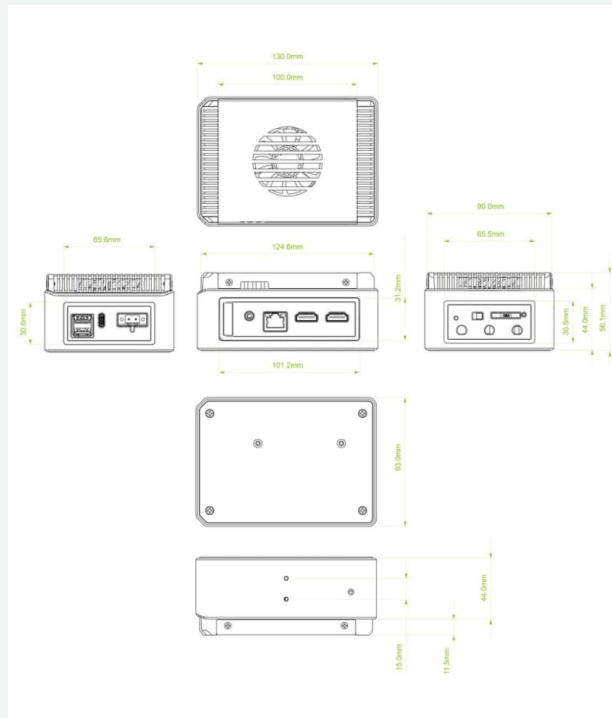
- | | | |
|--------------------|---|----------------------------|
| ① 3.5mm Audio Jack | ⑤ 3 x Reserved Antenna Ports for Wireless | ⑨ 2 x USB-A 3.2 Host Ports |
| ② 1000M Ethernet | ⑥ Reset Hole | ⑩ Serial Console |
| ③ 2x Standard HDMI | ⑦ Boot Switch | ⑪ Power In |
| ④ LED | ⑧ Standard SIM Card Slot | |

Top View



Bottom View





Applications

- **Surveillance & Security:** Integrated into NVR systems for real-time video analytics, including object detection (e.g., intruders, abandoned items) and anomaly detection, enhancing situational awareness and security efficiency.
- **Smart Retail:** Create innovative Smart Retail solutions using AI-driven features like real-time visual product recognition, personalized shopping experiences, and advanced customer behavior analytics for optimized store operations.
- **Smart Transportation:** Processes traffic and parking data from cameras/sensors at the edge, enabling intelligent traffic flow analysis and smart parking guidance to reduce congestion.
- **Digital Signage & Audience Engagement:** Links to cameras and content servers for dynamic content adaptation based on facial recognition and audience demographics, improving engagement in public spaces or retail environments.
- **Smart Building:** Integrates sensors and IoT devices to monitor and optimize building systems such as lighting, HVAC, and security. Uses AI for energy efficiency, predictive maintenance, and occupant comfort, enhancing building management.

Part List

reComputer AI Industrial R2000	x1
DIN-rail clip	x1
Screw Pack	x1
DC Power Female Jack to Screw Terminal Adapter	x1
12V/3A Power Adapter (with 4 interchangeable adapter plugs)	x1
User Manual	x1

Compliance & Logistics



HSCODE	8471504090
USHSCODE	8517180050
UPC	
EUHSCODE	8471707000
COO	

FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

15.21

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy.

If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Resource Links

- <https://www.seeedstudio.com/reComputer-AI-Industrial-R2146-12-p-6955.html>
- [reComputer User Manual](#)
- [SeeedreComputerAIRSeriesFlyer](#)
- [Seeed Raspberry Pi Flyer](#)
- [SeeedreComputerAIRSeriesFlyer-CN](#)
- [Seeed Raspberry Pi Flyer-CN](#)

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