

INDUSTRIAL PRODUCT DATASHEET

# reComputer Industrial R2245-12 - The Most Reliable and Powerful Raspberry Pi Edge AI/IOT NVR with 26 TOPS

An industrial-grade AI-powered NVR built on Raspberry Pi CM 5 equipped with a Hailo-8 AI accelerator delivering up to 26 TOPS. Featuring 4 Gigabit Ethernet ports with Po E PSE support plus an additional Gigabit Ethernet port, it enables high-bandwidth video streaming and simplified Po E deployment for IP cameras. Offers rich industrial I/O, flexible wireless connectivity, fanless thermal

SKU

100077451

UPDATED

2026-04-30 09:01:09

PRICE

\$759.00(Excl. VAT)



# Overview



Figure 1. Recomputer Industrial R2200 11

An industrial-grade AI-powered NVR built on Raspberry Pi CM 5 equipped with a Hailo-8 AI accelerator delivering up to 26 TOPS. Featuring 4 Gigabit Ethernet ports with Po E PSE support plus an additional Gigabit Ethernet port, it enables high-bandwidth video streaming and simplified Po E deployment for IP cameras. Offers rich industrial I/O, flexible wireless connectivity, fanless thermal design, and a wide operating temperature range from -20 °C to 50 °C, ensuring reliable AI video analytics and continuous, stable operation in demanding scenarios.

## Key Features

01

### Powerful Performance Driven by Raspberry Pi CM5

Equipped with Broadcom BCM2711 quad-core Cortex-A72 (ARM v8) 64-bit SoC running at 1.5GHz, it supports up to 16GB RAM, ensuring smooth multitasking and efficient data processing for AI and NVR workloads.

02

### Robust Heat Dissipation

High-efficiency fanless cooling design is optimized to dissipate the heat generated by heavy AI computing tasks, enabling stable operation within a wide operating temperature range of -20°C to 50°C.

03

### Industrial-Grade Reliability

Integrated with high-accuracy RTC and hardware watchdog; supports optional UPS supercapacitor, TPM/ATECC608A security module. Boasts an IP40-rated aluminum alloy enclosure for enhanced protection against dust and mechanical damage. Compatible with DIN-rail and wall mounting for flexible installation. Guaranteed production support until at least January 2036.

04

**AI-Optimized Computing**

Features a standard Hailo-8 AI accelerator delivering up to 26 TOPS, enabling low-latency, high-performance real-time AI vision processing across multiple camera channels.

05

**Rich Industrial Connectivity**

2x RS485, 1x RS232, 4x DI/4x DO (all isolated), 1x CAN FD; 4x 1000M Ethernet ports (supporting PoE PSE, 12W max per port) + 1x additional 1000M Ethernet port, ideal for multi-camera NVR deployment with direct power supply; 2x HDMI 2.0, 4x Type-A USB3.0, 1x 3.5mm Audio Jack; 1x Nano SIM card slot for cellular network access.

06

**Versatile Wireless Connectivity**

On-chip Wi-Fi and BLE for basic wireless communication; Mini-PCIe slot for expansion of LTE, LoRa®, Zigbee modules; M.2 B-Key slot for 4G/5G modules to meet diverse wireless connectivity needs.





Figure 7. Recomputer Industrial R2000 2 4



Figure 8. Recomputer Industrial R2200

# Specification

## Parameter: Description

Parameter	Description
<b>Hardware Specification</b>	
<b>Product Series</b>	R22xx-12
<b>CPU</b>	Raspberry Pi Compute Module 5, 2.4GHz quad-core 64-bit Arm Cortex-A76
<b>AI Processor</b>	Pre-installed 1x Hailo-8 M.2 AI Acceleration 26TOPS
<b>Operating System</b>	Raspbian, Debian
<b>RAM</b>	8GB/16GB
<b>eMMC</b>	32GB
<b>System Specification</b>	
<b>Power Input</b>	DC 9V~36V, 2-pin Terminal Block
<b>PoE</b>	4 x PoE PSE
<b>Power Switch</b>	No

# Visual Reference

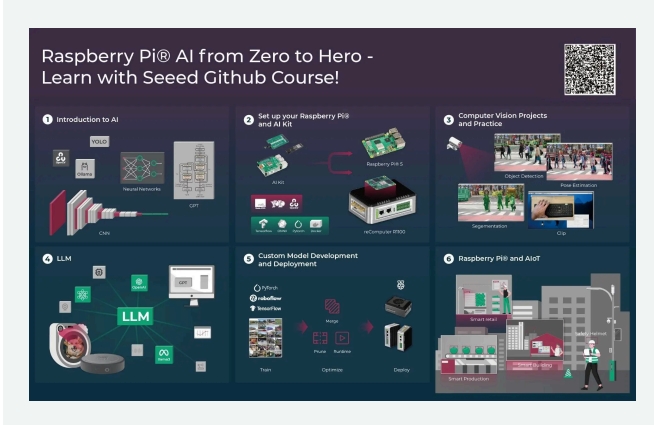


Figure 1. 12.1

# Hardware Overview



Figure 1. 12.2

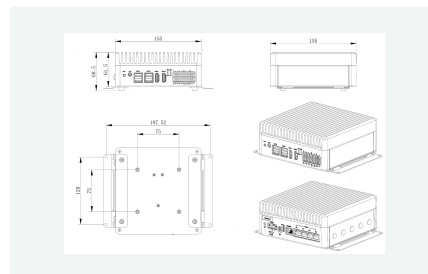


Figure 2. 12.3

# Applications

Equipped with advanced AI capabilities including object detection, recognition, tracking, OCR, and abnormal event detection with real-time alert triggers, this industrial-grade AI-powered NVR delivers exceptional performance for edge computing scenarios even in resource-constrained environments.

**Smart Transportation**

Serves as an edge AI gateway to process visual data from multi-channel cameras and sensors in real time. Enables intelligent traffic flow analysis, vehicle identification, and smart parking management. Its industrial-grade stability (-20°C to 50°C operating temperature) and rich connectivity ensure reliable operation in outdoor and roadside environments, enhancing overall transportation monitoring capabilities.

**Manufacturing & Industrial Automation**

Leveraging rich industrial interfaces (2x RS485, 1x RS232, 4x DI/4x DO, 1x CAN FD), it seamlessly integrates with various sensors, PLCs, and industrial machinery, enabling efficient process monitoring and automated control. Supporting multiple industrial communication protocols, it facilitates real-time data acquisition and remote equipment management, paving the way for smarter, more efficient factory operations.

**Smart Building**

Integrates with building sensors and IoT devices to monitor and optimize core systems such as lighting, HVAC, and access control. Utilizes AI algorithms for energy consumption optimization, predictive maintenance of equipment, and occupant comfort adjustment. The DIN-rail and wall-mounting design supports flexible deployment in building control cabinets, streamlining building management workflows.

**AI-Powered Video Analytics & Surveillance**

As a dedicated AI-NVR, it excels in real-time multi-channel video analytics—covering anomaly detection, object identification, crowd density monitoring, and behavior analysis. With 4x PoE PSE Gigabit Ethernet ports (12W max per port), it directly powers and connects IP cameras, delivering instant alerts for security incidents and significantly improving situational awareness and response efficiency.

**Smart Retail**

Powers innovative retail solutions with AI-driven visual analytics: real-time product recognition, customer flow statistics, and shopper behavior analysis. Enables personalized in-store promotions and optimized shelf layout planning. Its multi-interface expansion capability supports seamless integration with POS systems and digital signage, boosting overall store operational efficiency.

# Part List

reComputer Industrial R22xx	x 1
Mounting Bracket	x 2
Bracket Screw	x 4
DIN-rail Clip	x 1
DC Power Female Jack to Screw Terminal Adapter	x 1
19V/4.7A Power Adapter (with 1x US AC plugs + 1x EU plugs ) x1	x 1
11*2-pin Terminal Block Connector (Male) x1	x 1
120Ω Resistor	x 5
Wi-Fi/BLE Antenna	x 1
User Manual	x 1

# Compliance & Logistics

<b>HSCODE</b>	8471504090
<b>USHSCODE</b>	8517180050
<b>UPC</b>	
<b>EUHSCODE</b>	8471707000
<b>COO</b>	CHINA

Logistics	Value
ECCN	EAR99
HSCODE	8471504090
USHSCODE	8517180050
EUHSCODE	8471707000
COO	CHINA

## Resource Links

- <https://www.seeedstudio.com/reComputer-Industrial-R2245-12-p-6653.html>
- [Seeed Raspberry Pi Flyer](#)
- [reComputer Industrial R20/R21/R22 Flyer](#)
- [reComputer Industrial R22XX 3D File](#)
- [reComputer Industrial R22XX Schematic](#)

**Seeed Technology Co.,Ltd.**  
9F, Building G3, International E City,  
Zhongshanyuan Road, Nanshan, Shenzhen, China

**Tel:** +86 0755-80695676  
**Web:** [www.seeed.cc](http://www.seeed.cc)  
**Shop:** [www.seeedstudio.com](http://www.seeedstudio.com)