seeed studio

INDUSTRIAL PRODUCT DATASHEET

reComputer RK3576 Module 8GB RAM/64GB eMMC | Rockchip Compute Module for Industrial Edge AI

High-performance Rockchip RK3576 compute module for industrial edge AI, powered by an octa-core CPU and 6 TOPS NPU.

SKU	UPDATED	PRICE
100076682	2026-11-17 09:22:47	$170.00(Excl. VAT)



Overview



High-performance Rockchip RK3576 compute module for industrial edge AI, powered by an octa-core CPU and 6 TOPS NPU. With a 200-pin B2B connector, rich I/O, up to 16GB LPDDR5 RAM and 128GB eMMC, and 8K video decoding, it accelerates AI vision, robotics, and intelligent edge devices.

Key Features

01 **Advanced Processing Subsystem**

Octa-core CPU architecture featuring 4× Cortex-A72 @ 2.2GHz + 4× Cortex-A53 @ 2.0GHz, paired with an ARM Mali-G52 MC3 GPU to handle demanding multi-threaded industrial control and automation tasks.

02 **Flexible Hardware Configurations (Optional)**

Available in multiple memory and storage combinations to perfectly align with your specific edge workload requirements:

03 **Memory**

4GB / 8GB LPDDR5 (Scalable up to 16GB).

04 **Storage**

32GB / 64GB eMMC(Scalable up to 128GB).

05 **6 TOPS NPU Acceleration**

Integrated hardware AI accelerator supporting INT4/INT8/INT16/FP16/BF16/TF32 mixed quantization operations. This powerful core enables efficient on-device AI inference, eliminating cloud dependencies while ensuring data privacy and low-latency responses.

06 **reComputer AI Lab Supported (One-Command Deployment)**

Streamline your entire development pipeline from PyTorch or TensorFlow to RKNN via Seeed's optimized toolchain. Skip tedious build environments and achieve one-command or no-code Docker deployments in minutes.

07 **Multimodal AI Workload Support**

Pre-optimized and validated for modern multimodal Edge AI workloads

08 **Computer Vision (CV)**

Deep integration with YOLOv11, achieving real-time high-frame-rate low-latency inference at up to 77.9 FPS (640×640), perfect for object detection, segmentation, defect detection, and intelligent video analytics.

09 **Large Language Models (LLM)**

Fully capable of running optimized lightweight local language models, including DeepSeek-R1-Distill-Qwen (1.5B/7B) for offline industrial copilots, AI assistants, and knowledge retrieval.

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Vision-Language Models (VLM)

Supports next-gen multimodal models like Qwen2-VL for complex visual reasoning and intelligent tracking.

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Speech AI

Enables completely offline voice interaction, automated speech recognition (ASR), and Text-to-Speech (TTS) using advanced frameworks like Whisper.

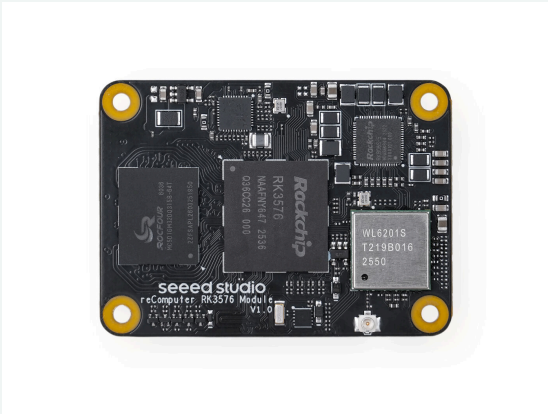
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Optimized for Carrier Board Integration

Tailored specifically for direct physical embedding into proprietary B2B custom carrier boards, moving past mere generic development and validation hardware.

Product Gallery

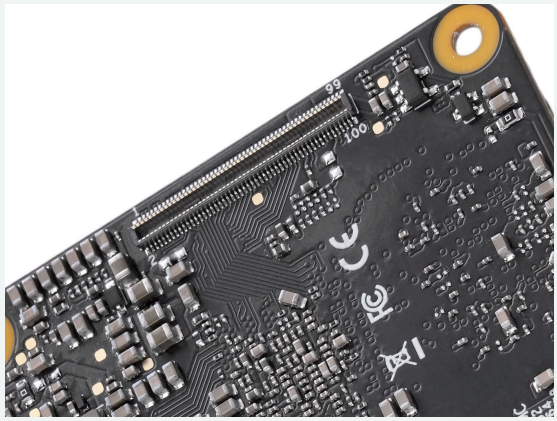


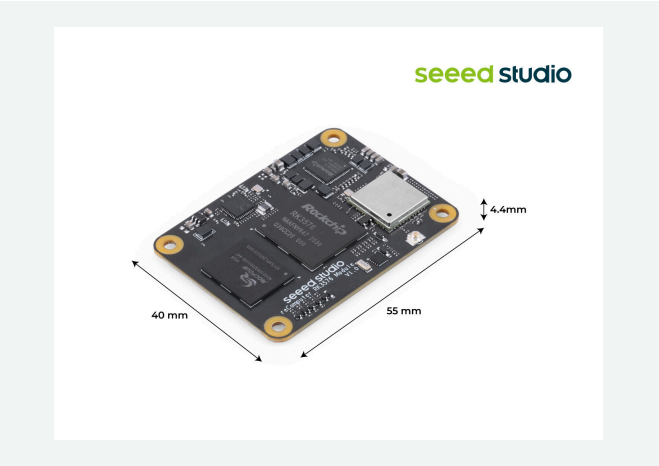




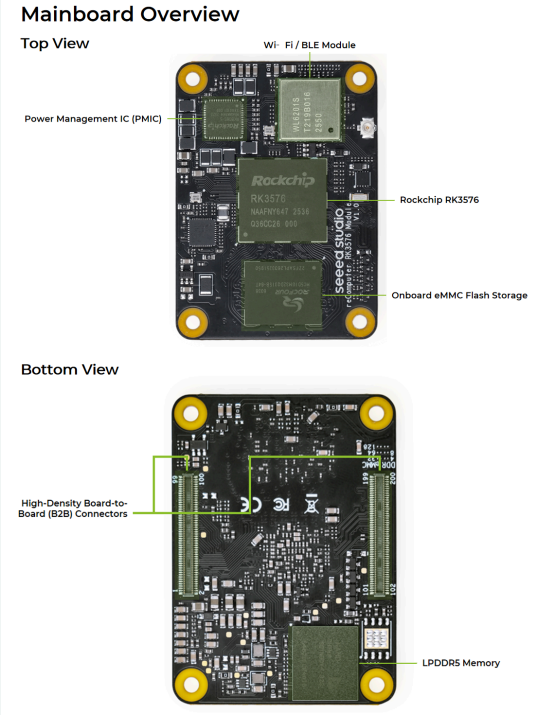








Hardware Overview



Applications

- **Smart Security & Video Analytics: Multi-channel Network Video Recorders (NVR), intelligent video security boxes, AI-powered crowd analytics, and perimeter intrusion detection.**
- **Industrial IoT & Automation: Industrial PCs (IPC), Protocol Gateways, Programmable Logic Controller (PLC) data aggregators, HMI touch panels, and predictive maintenance nodes.**
- **Robotics & Physical AI: Autonomous inspection drones/rovers, voice-controlled robots, visual navigation, and AI agents with physical interaction.**
- **Smart Retail & Commercial Terminals: AI interactive kiosks, self-service vending terminals, smart digital signage with audience analytics, and POS edge intelligence.**
- **Energy & Smart Infrastructure: Smart grid monitoring units, EV charging station controllers, environmental monitoring stations, and intelligent traffic telemetry gateways.**
- **Medical & Healthcare: Medical image display assist terminals, health monitoring data aggregators, and laboratory automation control modules.**

Resource Links

- https://www.seeedstudio.com/reComputer-RK3576-Module-0864-p-6950.html
- reComputer RK3576 Module Schematic
- Rockchip RK3576 Datasheet

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