



reComputer Industrial R

The Most Reliable and Powerful
Raspberry Pi CM5 Edge AI/IoT Controller

Features



Powerful Performance with Raspberry Pi CM5
Features up to 16GB RAM and 64GB eMMC.



Robust Heat Dissipation
Fanless cooling, engineered for operation from -20°C to 65°C under heavy AI workloads.



Industrial-Grade Reliability
High Accuracy RTC, hardware watchdog, SuperCAP UPS*, TPM*/ATECC608A*, IP40.



AI-Optimized Computing
Hailo-8 AI accelerator (up to 26 TOPS) for real-time multi-channel AI vision processing.



Rich Industrial Connectivity
RS485, RS232, DI, DO, CAN, Ethernet (PoE), HDMI, USB, Nano SIM card slot.



Versatile Wireless Connectivity
On-chip Wi-Fi/BLE, Mini-PCIe for LTE/LoRa/Zigbee, and M.2 B-Key for 4G/5G.

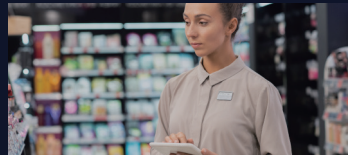
Applications



Energy Management



Smart Surveillance



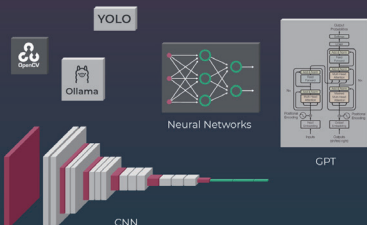
Smart Retail



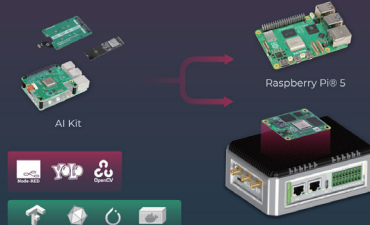
Smart Building

Raspberry Pi® AI from Zero to Hero - Learn with Seeed Github Course!

1 Introduction to AI



2 Set up your Raspberry Pi® and AI Kit



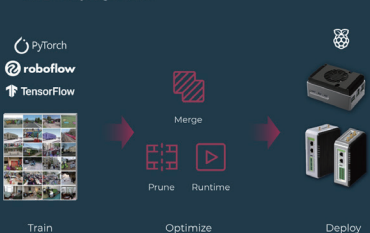
3 Computer Vision Projects and Practice



4 LLM



5 Custom Model Development and Deployment



6 Raspberry Pi® and AIoT



reComputer Industrial R Comparison

	Parameter	R20xx-12	R20xx-10	R21xx-12	R21xx-10
Hardware Specification	CPU	Raspberry Pi CM5, 2.4GHz quad-core 64-bit Arm Cortex-A76			
	AI Processor	Hailo-8 AI Acceleration 26TOPS	*	Hailo-8 M.2 AI Acceleration 26TOPS	*
	Operating System	Raspbian, Debian			
	Memory & Storage	2GB/4GB/8GB/16GB RAM; 16GB/32GB/64GB eMMC			
System Specification	Power Input	DC 9V~36V, 2-pin Terminal Block			
	PoE(as powered device)	IEEE 802.3at Standard 25.5W PoE			
	Switch	Power Switch: No; Reboot Switch: Yes			
	Ethernet	1x 10/100/1000 Mbps(supports PoE PD); 1x 10/100 Mbps IEEE 802.3/802.3u			
	USB	3x USB-A 3.0; 1 x USB-A 2.0; 1x USB-C 2.0 (For flashing OS & Debug)			
	RS485/RS232	3x RS485(Isolated); 1x RS232(Isolated)		2x RS485(Isolated); 2x RS232(Isolated)	
Interface	CAN	/		2x CAN FD(Isolated)	
	DI/DO	8x Isolated DI; 8x Isolated DO		4x Isolated DI; 4x Isolated DO	
	SIM Card	1x Nano SIM Card Slot			
	M.2 Slot	1x M.2 2280 Slot for NVMe SSD; 1x M.2 2280 Slot for AI Accelerator			
		1x Pre-installed Hailo-8 M.2 AI Acceleration	/	1x Pre-installed Hailo-8 M.2 AI Acceleration	/
		1x M.2 B-key 3042/3052 Slot for 5G/4G LTE			
	Mini-PCle	1x Mini-PCle for LoRa module			
	Control & Indication	4x LEDs; 1x Buzzer; 1x Reset Button			
	HDMI	2 x HDMI 2.0			
Wireless Communication	Wi-Fi & BLE	On-chip Wi-Fi 2.4/5.0 GHz; On-chip BLE 5.0			
	LoRa®	USB LoRa®*/ SPI LoRa®*			
	4G/5G Cellular	4G LTE/5G*			
	Zigbee	USB Zigbee*			
Standards	EMC	ESD: EN61000-4-2, Level 3; EFT: EN61000-4-4, Level 2; Surge: EN61000-4-5, Level 2			
	Certification	CE, FCC, TELEC, RoHS, REACH			
Ambient Conditions	Ingress Protection	IP40			
	Temperature	-20~65 °C(Operating)/ -40~85°C(Storage)			
	Operating Humidity	10~95% RH			
Others	Supercapacitor UPS	SuperCAP UPS LTC3350 Module*			
	Hardware Watchdog	1~255s			
	RTC	High Accuracy RTC			
	Security	Encryption Chip TPM 2.0*/ATECC608A*			
	Heat Dissipation	Fanless			
	Warranty	2 years			
	Production Lifetime	Until December 2036			
Statement	Options marked with * require additional purchase according to the accessories list.				

Contact

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Tech Support

Business Enquiry

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