

ED-CM0NANO Single-Board Computer Launched, Empowering Industrial and Maker Sectors

On October 27, 2025, EDATEC released the ED-CM0NANO single-board computer based on Raspberry Pi CM0. Integrating a core computing unit and a wealth of peripheral interfaces, it has become a cost-effective option for scenarios such as IoT gateways, industrial data acquisition, and maker prototype development, thanks to its ultra-low cost, industrial-grade reliability, and flexible expandability.



Balanced Performance for Both Computing and Graphics Processing

The ED-CM0NANO is equipped with Raspberry Pi's latest Compute Module CM0, featuring a 4-core 64-bit Arm Cortex-A53 processor with a maximum clock speed of 1GHz. It also comes with a VideoCore IV GPU that supports OpenGL ES 1.1 and 2.0, as well as 1080p30 H.264 and MPEG-4 decoding, and 1080p30 H.264 encoding.

In terms of storage, it has built-in 512MB LPDDR2 memory and optional 8GB/16GB eMMC, which meets lightweight computing needs and serves as an ideal low-cost solution for low-computing-power embedded systems.

Lightweight Performance

1GHz 4-core 64-bit Arm Cortex-A53 processor

RP3A0

SIP, integrates CPU & 512MB LPDDR2 SDRAM, smaller PCB footprint

eMMC : Lite Optional

8GB
16GB

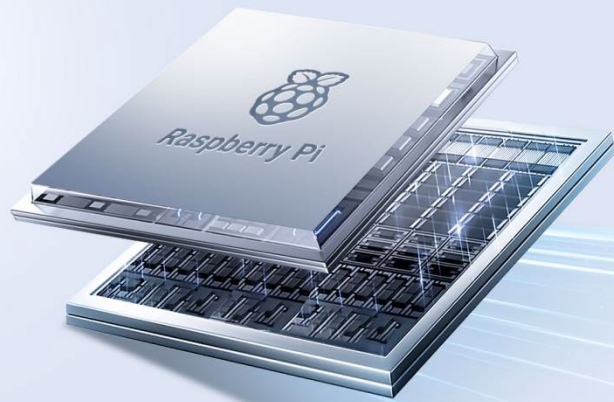
VideoCore IV GPU
Supports OpenGL ES 1.1, 2.0

VPU
Supports 1080p30 H.264,
MPEG-4 decoding;
1080p30 H.264 encoding

Supports
HDMI, DSI, CSI



WiFi & BT Module
Optional certified WiFi & BT module;
supports external antenna



Enhanced Industrial-Grade Configuration for Stable Operation in Complex Scenarios

As an industrial-grade single-board computer, the ED-CM0NANO supports a wide operating temperature range of -20°C to 60°C , enabling stable operation in extreme environments such as high-temperature workshops and low-temperature outdoor areas. It adopts a low-power design with a maximum power consumption of only 10W. In addition, the core board of the ED-CM0NANO uses a stamp hole soldering process to connect integrally with the baseboard, avoiding contact failure risks caused by vibration and dust accumulation in traditional plug-in interfaces. It has a built-in RTC (Real-Time Clock) and hardware watchdog function; when paired with a CR2032 battery, it can achieve long-term storage of clock data and automatically trigger a restart in case of system abnormalities, ensuring the continuous operation of critical tasks such as industrial production and data acquisition.

Industrial Enhancement

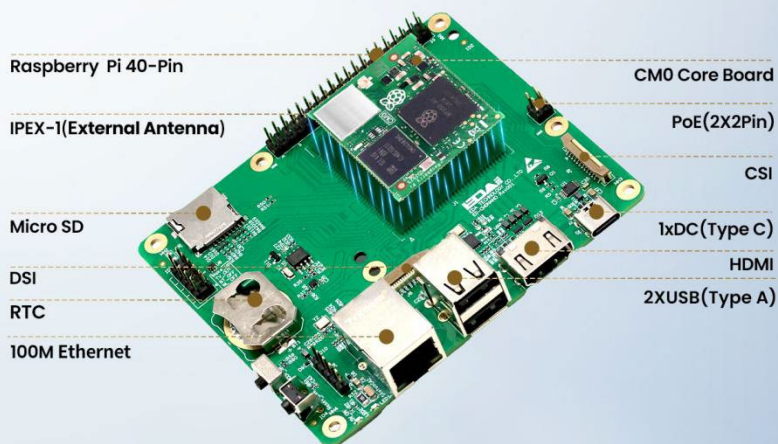
Integrated RTC and Watch Dog,
supports CR2032 battery as RTC backup power



Rich Interface Configuration, 40-Pin for Rapid Prototype Building

In terms of interface configuration, it includes 1x HDMI display interface, 2x USB 2.0 Type-A ports, 1x 100M Ethernet port, optional certified 2.4GHz Wi-Fi/Bluetooth 4.2, 1x MIPI DSI, and 1x MIPI CSI. These interfaces can flexibly realize data transmission and image acquisition in both wireless and wired scenarios, adapting to the diverse application needs of industrial and maker scenarios.

Rich Interfaces



Besides the above conventional interfaces, the ED-CM0NANO also has a Raspberry Pi 40-Pin standard GPIO interface, which is fully compatible with the Raspberry Pi HAT expansion ecosystem. Users do not need to conduct interface adaptation development and can directly

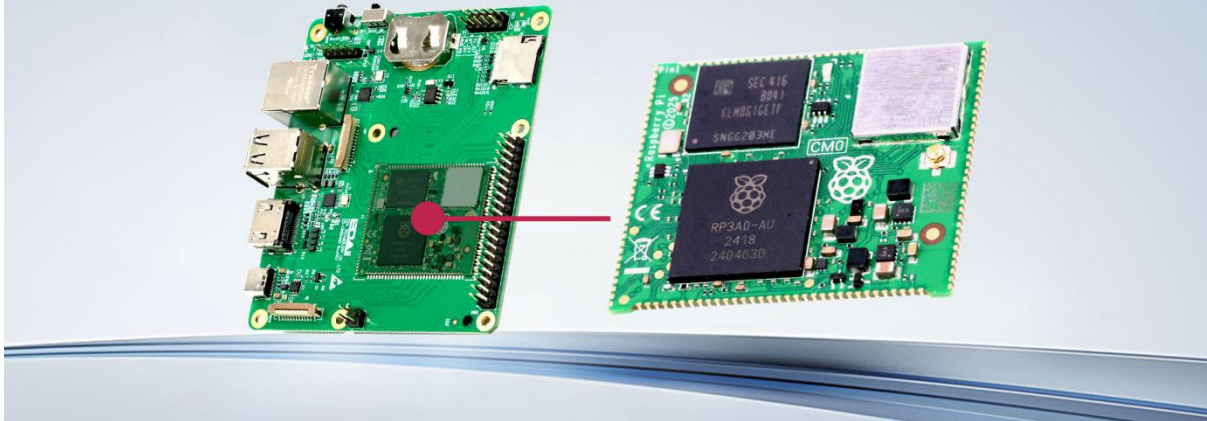
connect various standardized HAT expansion boards in the Raspberry Pi ecosystem to the ED-CM0NANO to quickly expand device functions—such as connecting temperature and humidity acquisition modules and relay control modules. This "plug-and-play" feature allows the ED-CM0NANO to quickly build prototypes.



Based on the above interface characteristics, the ED-CM0NANO and the CM0 Dev Board complement each other. Both rely on the Raspberry Pi CM0 core, but their interface designs focus on different scenario needs: the CM0 Dev Board is more oriented towards basic function verification and flexible expansion, while the ED-CM0NANO, through optimized interface integration and industrial-grade design, focuses on the direct application of mass-produced products.

ED-CM0NANO

Based on Raspberry Pi CM0

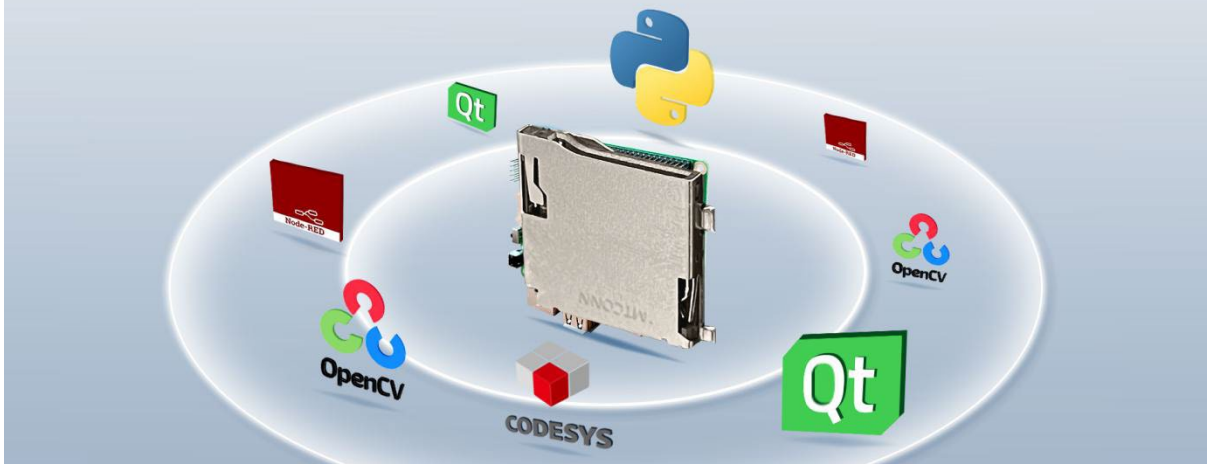


Reusing the Raspberry Pi Ecosystem to Lower Development Thresholds

The ED-CM0NANO is compatible with the full range of Raspberry Pi software and hardware ecosystems. It can directly use the official Raspberry Pi OS (Raspberry Pi OS) as well as a large number of open-source projects and development tool libraries. Whether it is Python libraries commonly used for industrial data acquisition or popular graphical programming tools in maker projects, developers can directly reuse them, allowing developers with different technical backgrounds to get started quickly.

Software Ecosystem

Reuses Raspberry Pi software ecosystem, ready to use;
consistent processor architecture, software compatibility,
open source ecosystem, official support for third-party OS & middleware



Application Scenarios:

- CM0 chip evaluation and development platform, providing a low-cost testing carrier for developers;
- IoT gateway, enabling interconnection and transfer of multi-terminal data;
- Data acquisition, undertaking data collection tasks in industrial scenarios;
- Lightweight thin client, meeting the needs of office terminals;
- Adapting to power-sensitive mobile devices;
- HMI (Human-Machine Interface) pages.

Product Applications



IoT
Gateway



Data
Acquisition



Lightweight
thin client



Mobile
Application



HMI