

ED-IPC3020

High Performance Industrial Computer Based on Raspberry Pi 5

- ◆ Broadcom BCM2712 2.4GHz quad-core 64-bit Arm Cortex-A76 CPU
- ◆ Up to 8GB LPDDR4X RAM
- ◆ Support Micro SD Card and M.2 NVMe SSD storage expansion
- ◆ 1 x Gigabit ethernet port with optional PoE
- ◆ 2 x USB 3.0, 2 x USB 2.0, 1 x RS232, 1 x RS485 and 1 x Buzzer
- ◆ Dual 4Kp60 HDMI display output
- ◆ Stereo audio input and output with separately 3.5mm audio jack
- ◆ 5V DC power input via USB-C, support ON/OFF power button
- ◆ Built-in RTC, support SuperCAP and CR1220 battery backup
- ◆ Fanless design with high-quality metal case and big heatsink, providing excellent cooling performance



Specifications

System	
CPU	Broadcom BCM2712 2.4GHz quad-core 64-bit Arm Cortex-A76
VPU	4Kp60 HEVC decoder
GPU	OpenGL ES 3.1 & Vulkan 1.2
Memory	4GB and 8GB LPDDR4X-4267 SDRAM are optional
Storage	• Micro SD Card Slot, supporting to select the 00GB/32GB/64GB SD card • M.2 NVMe SSD, supporting to select the 00GB/128GB/256GB SSD

Software	
Operating System	• Raspberry Pi OS(Desktop) 32-bit • Raspberry Pi OS(Lite) 32-bit • Raspberry Pi OS(Desktop) 64-bit • Raspberry Pi OS(Lite) 64-bit

Front I/O	
Audio OUT	1 x Audio Output(HPO), 3.5mm audio jack connector(green), stereo audio output.
Audio IN	1 x Audio Input(LINE IN), 3.5mm audio jack connector(red), supporting stereo audio input.
RS485	1 x RS485 port, 3-Pin 3.5mm spacing phoenix terminals with 120Ω terminal resistor. The signal is defined as GND/A/B.
RS232	1 x RS232 port, 3-Pin 3.5mm spacing phoenix terminals, the signal is defined as GND/TX/RX.
USB 2.0	2 x USB 2.0 ports, dual layer type A connector, each channel supports up to 480Mbps.
USB 3.0	2 x USB 3.0 ports, dual layer type A connector, each channel supports up to 5Gbps.
1000M Ethernet	1 x adaptive 10/100/1000M ethernet port, RJ45 connector. It can be used to access the network. PoE can be supported through expansion module.

Rear I/O	
SD Card Slot	1 x Micro SD card slot, which is used to install SD card. It supports booting the OS from SD card.

Side I/O	
HDMI	2 x HDMI ports, Micro HDMI connector, supporting 4K 60Hz
Power	1 x power in port, USB Type-C connector, supporting 5V/5A DC power input.

Buttons and Indicators	
ON/OFF	1 x power button, which is used to turn on and turn off the device.
PWR	1 x red power indicator, which is used to check the status of device power-on and power-off.
ACT	1 x green system indicator, which is used to check the working status of device.
COM1~COM2	2 x green UART indicators, which is used to check the communication status of UART port.

Expansion I/O	
5V 1A	1 x DC OUT, 3-Pin 2.0mm spacing WTB connector, supporting 5V 1A output. These pins are defined as GND/5V/GND, reserving to provide power supply for extended LCD.
Speaker	1 x PA output, 4-Pin 1.5mm spacing WTB connector, dual channel stereo audio output. It can be extended to connect two 4Ω 3W stereo speakers, these pins are defined as R+/R-/L+/L-.
MIPI CSI/DSI	2 x MIPI CSI/DSI ports, 2-Lane CSI/DSI signal. They are reserved for connecting extended LCD screen, supporting I2C touchscreen and backlight adjustment.
M.2 M	1 x M.2 M port, M.2 M Key connector, using to connect SSD and other fast peripherals. It compatibles with M.2 2230, M.2 2242 and M.2 2260, supporting to boot the OS from SSD.

Expansion Performance

RTC	RTC with SuperCAP and CR1220 battery backup, which can ensure that the system clock is not affected by device power-off. Note: A CR1220 battery is provided by default in China.
Buzzer	A tip or an abnormality can be configurated according to actual application, which realizes the alarm function.

Electrical Characteristics

Input Voltage	5V DC
Power Consumption	25W(Max)

Mechanical Characteristics

Dimensions	102.8mm x 89.5mm x 32.5mm (WxDxH)
Weight	300g
Installation	Placing on the desk

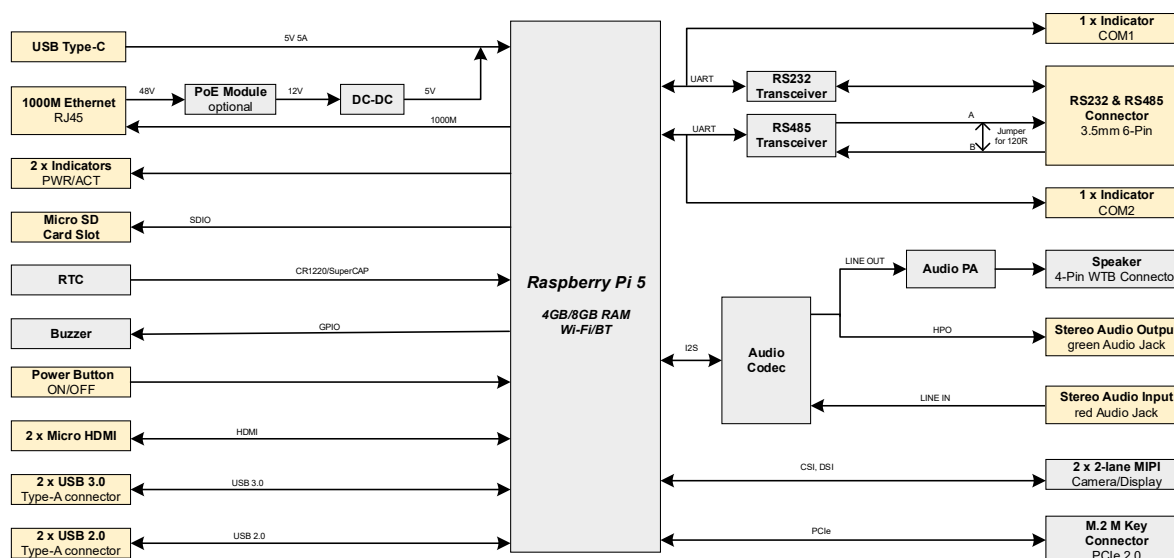
Wireless

Wi-Fi	Dual-band 802.11ac Wi-Fi
Bluetooth	Bluetooth 5.0 / Bluetooth Low Energy (BLE)

Environmental & Regulatory

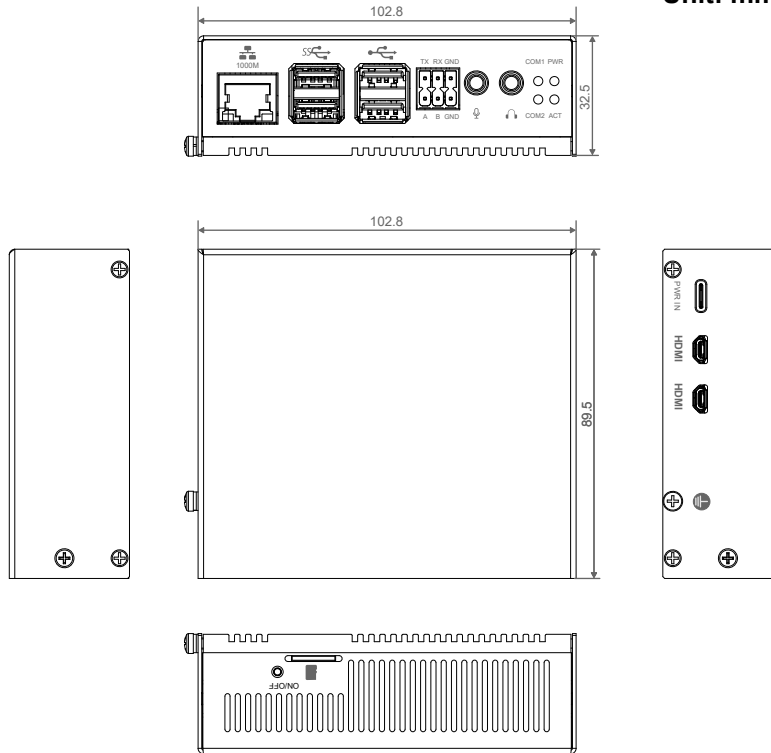
Operating Temperature	-25°C ~ 60°C
Storage Temperature	-25°C ~ 60°C
Ambient Humidity	5% ~ 95%(non-condensing)
Certifications	• FCC FCC 47 CFR Part 15 Subpart B • CE EN IEC 62368-1/EN IEC 62311/EN IEC 61000-3-2/EN IEC 61000-3-3 EN 55032/EN 55035/ EN 301 489-1/EN 301 489-3/EN 301 489-17/EN 301 489-52 EN 301 328/EN 301 440/EN 301 511/EN 301 908-1/EN 301 908-2

System Diagram

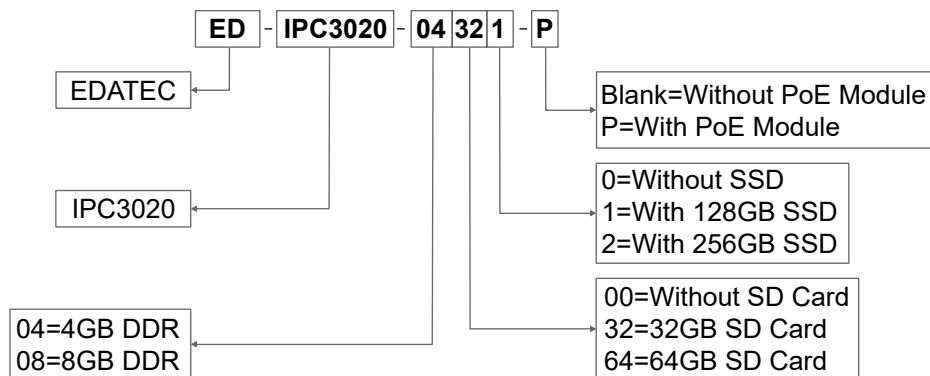


Dimensions

Unit: mm



Ordering Code



Note:

Because Raspberry Pi 5 does not have eMMC, so when you select a product model, you need choose at least one of SD card and SSD.

Example

P/N : **ED-IPC3020-04321-P**

Configuration : High Performance Industrial Computer Based on Raspberry Pi 5, with 4GB DDR , 32GB SD Card, 128GB SSD and PoE Module.

Packing List

- 1 x ED-IPC3020 Unit
- 4 x Pads
- 1 x Tweezers (using to insert/remove SD card)

Mouser Electronics

Authorized Distributor

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