

# 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	<ul style="list-style-type: none"> <li>• Micro SD Card Slot, supporting to select the 00GB/32GB/64GB SD card</li> <li>• M.2 NVMe SSD, supporting to select the 00GB/128GB/256GB SSD</li> </ul>

Software	
Operating System	<ul style="list-style-type: none"> <li>• Raspberry Pi OS(Desktop) 32-bit</li> <li>• Raspberry Pi OS(Lite) 32-bit</li> <li>• Raspberry Pi OS(Desktop) 64-bit</li> <li>• Raspberry Pi OS(Lite) 64-bit</li> </ul>

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. <b>Note: A CR1220 battery is provided by default in China.</b>
Buzzer	A tip or an abnormality can be configured 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

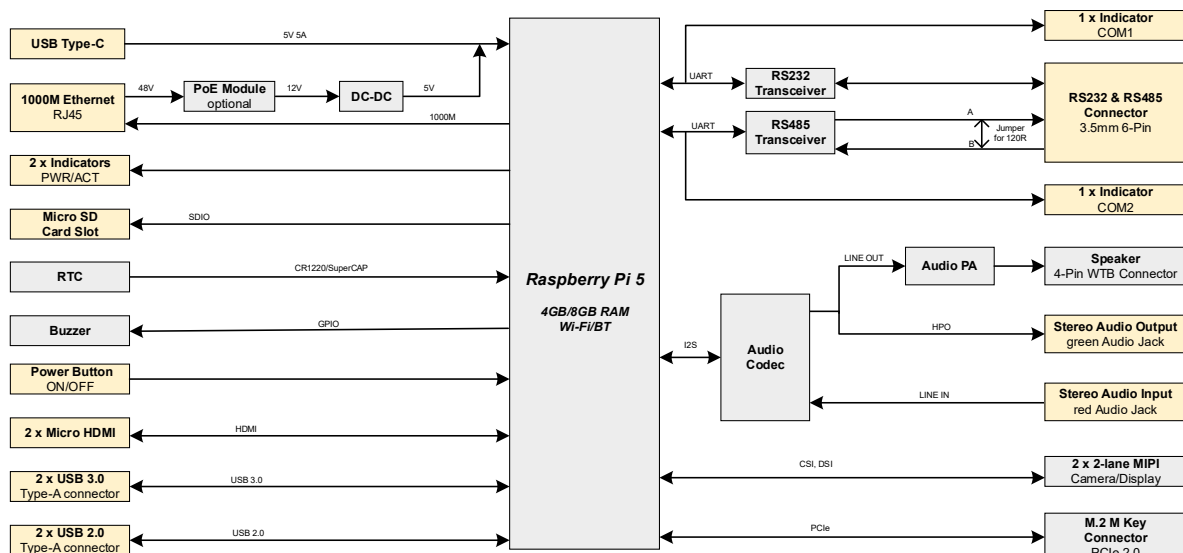
## Wireless

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

## Environmental & Regulatory

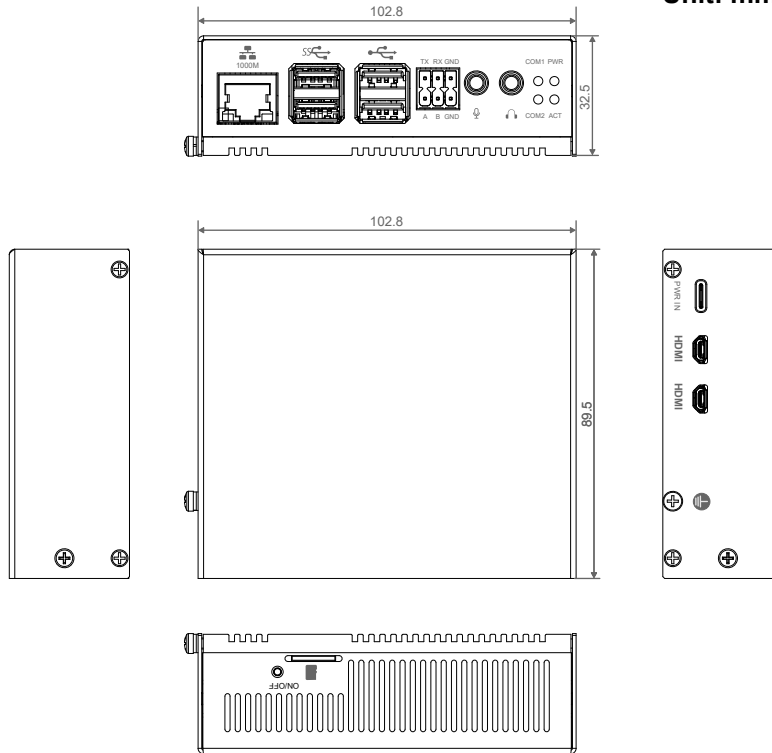
Operating Temperature	-25°C ~ 60°C
Storage Temperature	-25°C ~ 60°C
Ambient Humidity	5% ~ 95%(non-condensing)
Certifications	<ul style="list-style-type: none"> <li>• <b>FCC</b> FCC 47 CFR Part 15 Subpart B</li> <li>• <b>CE</b> EN IEC 62368-1/EN IEC 62311/EN IEC 61000-3-2/EN IEC 61000-3-3 EN 55032/EN 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</li> </ul>

## System Diagram

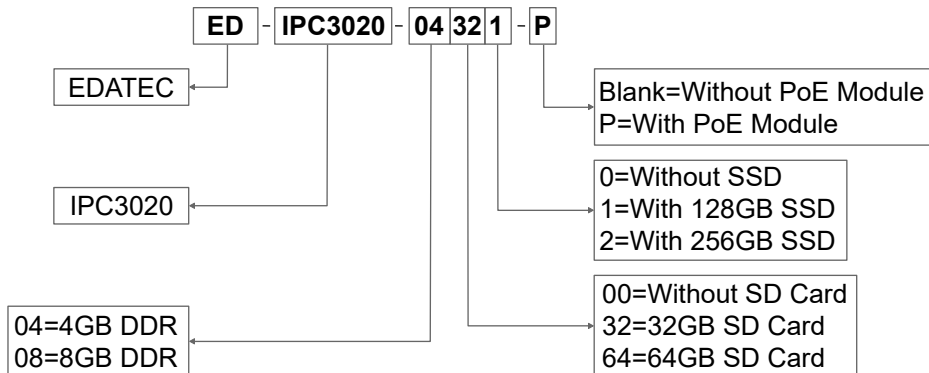


## Dimensions

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)