



ED-IPC3020E

Datasheet

by EDA Technology Co., Ltd

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ED-IPC3020E

Industrial Computer Based on Raspberry Pi 5 with PoE, SSD & External Antenna support

- Broadcom BCM2712 2.4GHz quad-core 64-bit Arm Cortex-A76 CPU
- Up to 16GB LPDDR4X RAM
- Support Micro SD Card and M.2 NVMe SSD storage expansion
- 2 x USB 3.0, 2 x USB 2.0, 1 x RS232, 1 x RS485 and 1 x Buzzer
- 1 x Gigabit ethernet port with optional PoE
- 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
- Integrated RTC with supercapacitor backup power
- Fanless design with a high-quality metal case and heatsink for efficient thermal performance



Specifications

System	
CPU	Broadcom BCM2712 2.4GHz quad-core 64-bit Arm Cortex-A76 CPU
VPU	H.265 (HEVC) up to 4Kp60 decoding
GPU	OpenGL ES 3.1 & Vulkan 1.2
Memory	Supports optional 1GB/2GB/4GB/8GB/16GB LPDDR4X-4267 SDRAM
Storage	Micro SD card slot (supports optional 32GB/64GB SD card) M.2 NVMe SSD (supports optional 128GB/256GB SSD)

Software	
Operating System	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 pitch phoenix terminals with 120Ω terminal resistor. The signal is defined as GND/A/B.
RS232	1 x RS232 port, 3-Pin 3.5mm pitch phoenix terminals, the signal is defined RS232 as GND/TX/RX.
USB 2.0	2 x USB 2.0, stacked Type-A connector, each channel supports up to 480Mbps transfer rate.
USB 3.0	2 x USB 3.0, stacked Type-A connector, each channel supports up to 5Gbps transfer rate.

Front I/O	
1000M Ethernet	1 x adaptive 10/100/1000M ethernet port, RJ45 connector. It can be used to access the network, supporting optional PoE.

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* ¹	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.
Antenna	1 x SMA port, using to connect Wi-Fi/BT antenna.
*1: Some Micro HDMI cables have shorter Micro HDMI connectors, which may result in abnormal HDMI connections, so it is recommended to use Raspberry Pi's official Micro HDMI to standard HDMI cable, which can be purchased in the "Optional Accessory" section.	

Buttons and Indicators	
ON/OFF Button	1 x power button, which is used to turn on and turn off the device.
PWR	1 x red power indicator, using to check the status of device power-on and power-off.
ACT	1 x green system indicator, using 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.

Internal I/O	
M.2 M Key	1 x M.2 M Key connector for external SSDs and high-speed devices; compatible with M.2 2230, 2242, and 2260 form factors; supports booting from SSD.

Expansion Functions	
RTC	RTC with 1F SuperCAP backup, which can ensure that the system clock is not affected by device power-off. We also provide a battery base, and you can buy a CR1220 battery backup for RTC.
Buzzer	A tip or an abnormality can be configured according to actual application, which realizes the alarm function.

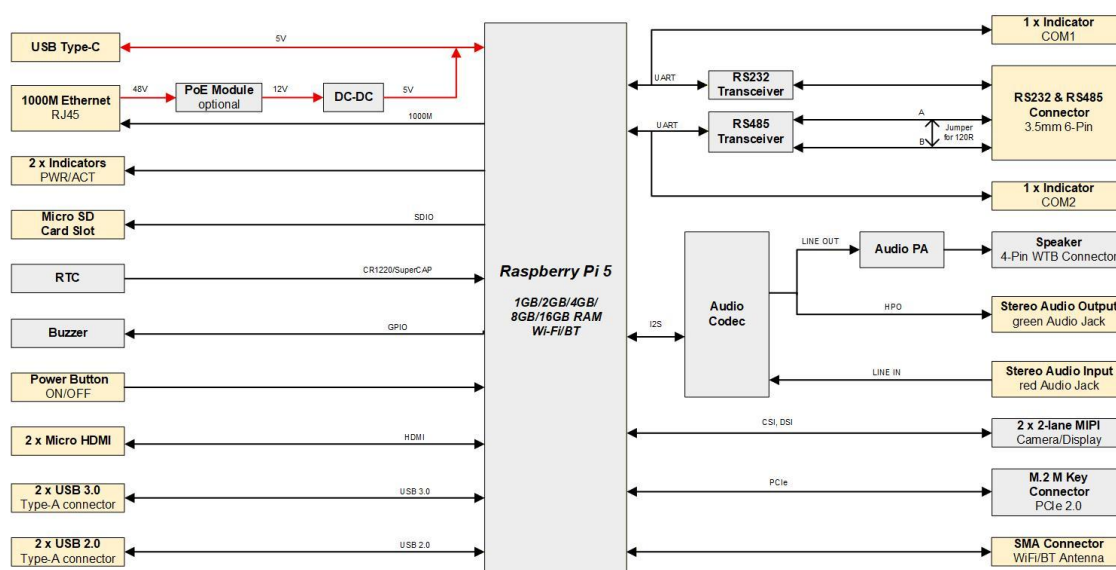
Electrical Characteristics	
Input Voltage	4.75V~5.25V DC
Power Consumption	25W (Max)

Mechanical Characteristics	
Dimensions	102.8mm x 89.5mm x 32.5mm (WxDxH, antenna is not included.)
Weight	About 300g
Installation	Placing on the desk and wall mounting

Wireless	
Wi-Fi/BT	Dual-band Wi-Fi and Bluetooth 5.0 with external antenna • Dual-band 802.11ac Wi-Fi • Bluetooth 5.0 / Bluetooth Low Energy (BLE)

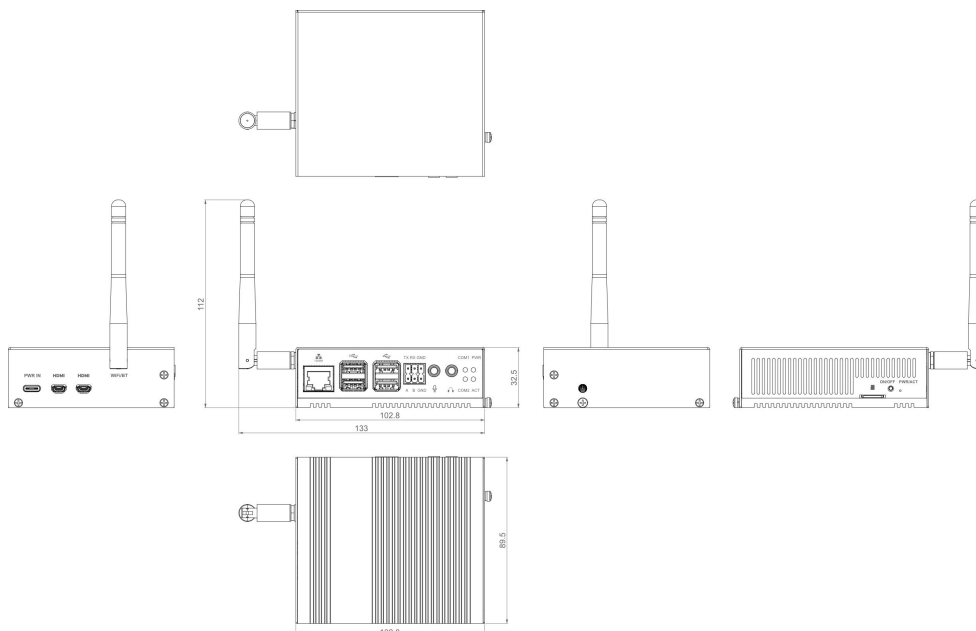
Environmental & Regulatory	
Operating Temperature	-20°C ~ 55°C
Storage Temperature	-25°C ~ 60°C
Ambient humidity	5% ~ 95% (non-condensing)

System Diagram



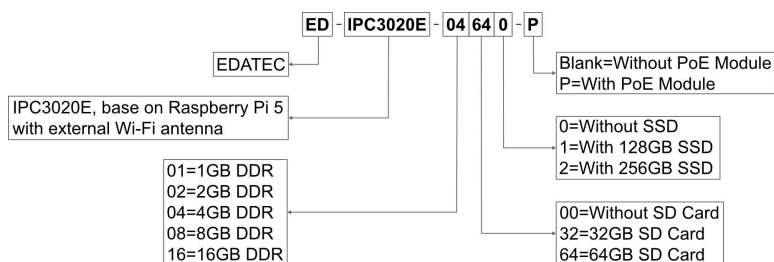
Dimensions

Unit: mm



Ordering Information

Coding Rules



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-IPC3020E-04640-P**

Configuration: Industrial Computer Based on Raspberry Pi 5, with 4GB DDR, 64GB SD Card, PoE Module and external Wi-Fi antenna.

Ordering Code

Model	Description	Stocking Level
ED-IPC3020E-02320	Wi-Fi/BT, 2GB DDR, 32GB SD Card	Preview
ED-IPC3020E-04640-P	Wi-Fi/BT, 4GB DDR, 64GB SD Card, PoE	Preview
ED-IPC3020E-08001-P	Wi-Fi/BT, 8GB DDR, 128GB SSD, PoE	Preview

TIP

If you require products with other configurations, please contact our sales team separately.

Optional Accessory

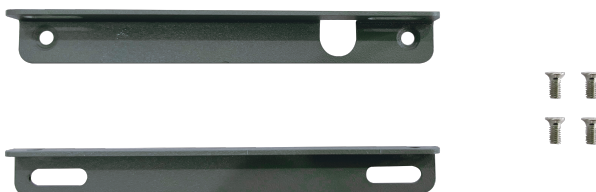
You can choose a power adapter according to actual needs.

Model	Description	Picture
SC1149	Raspberry Pi 27W USB-C Power Supply White UK	
SC1153	Raspberry Pi 27W USB-C Power Supply White US	
SC1154	Raspberry Pi 27W USB-C Power Supply Black UK	
SC1155	Raspberry Pi 27W USB-C Power Supply Black AU	
SC1157	Raspberry Pi 27W USB-C Power Supply Black EU	
SC1407	Raspberry Pi 27W USB-C Power Supply White EU	
SC1158	Raspberry Pi 27W USB-C Power Supply Black US	

It is recommended to choose the official Raspberry Pi Micro-HDMI to standard HDMI cable.

Model	Description	Picture
SC0358	Raspberry Pi Micro-HDMI to Standard HDMI (A/M), 1m cable	

An optional wall-mounted bracket is available for installation as needed.

Model	Description	Picture
ED-ACCBKT-L3020	Wall-mounted bracket for ED-IPC3020 and ED-PAC3020	

Package Contents

- 1 x ED-IPC3020E Unit
- 1 x Wi-Fi/BT antenna
- 1 x 6-Pin Phoenix Terminal
- 1 x Tweezers (for SD card handling)