ED-IPC3020

Datasheet

by EDA Technology Co., Ltd

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ED-IPC3020

Industrial Computer Based on Raspberry Pi 5

- 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
- 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 with SuperCAP 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, 8GB and 16GB 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	

Software	
	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 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, 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	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.
*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	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	1 x M.2 M port, M.2 M Key connector, using to connect SSD and other fast peripherals. It is compatibles with M.2 2230, M.2 2242 and M.2 2260, supporting to boot the OS 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 abnormity can be configurated according to actual application, which realizes the alarm function.

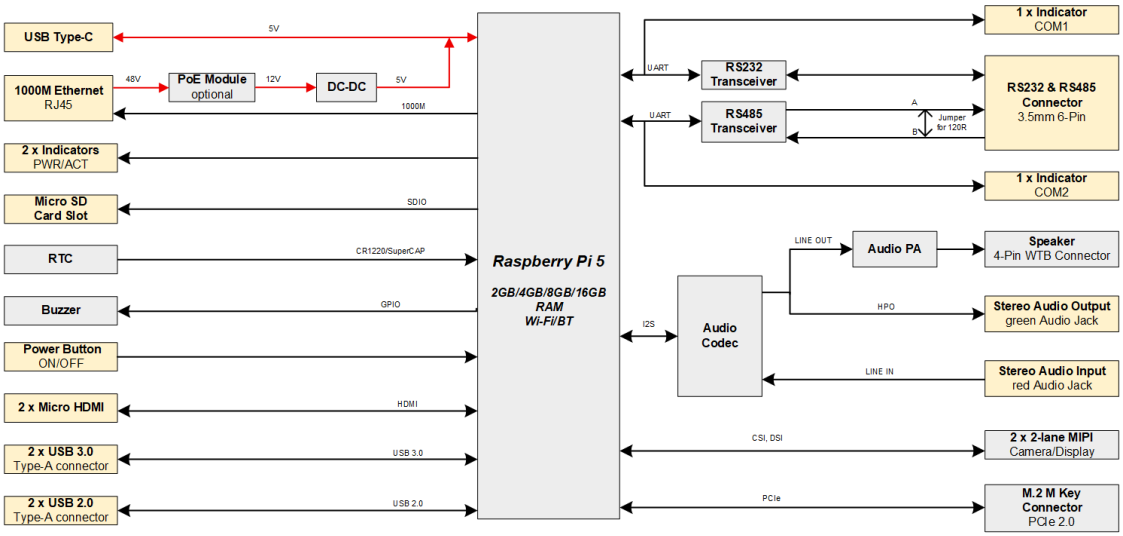
Electrical Characteristics	
Input Voltage	5V DC
Power Consumption	25W (Max)

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

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

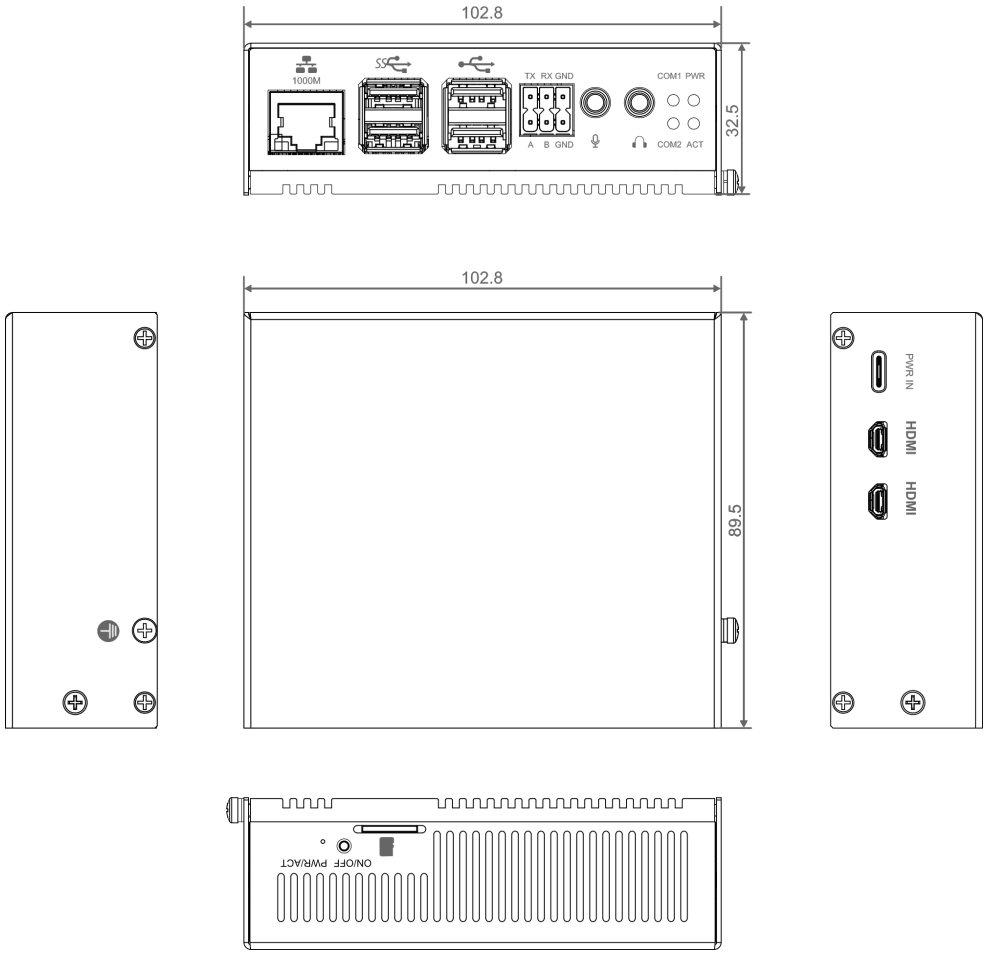
Environmental & Regulatory	
Operating Temperature	-25°C ~ 60°C
Storage Temperature	-25°C ~ 60°C
Ambient humidity	5% ~ 95% (non-condensing)
Certifications	• FCC ◦ FCC 47 CFR Part 15 Subpart B • CE ◦ EN IEC 62368-1:2020 + A11:2020 ◦ EN IEC 62311:2020 ◦ ETSI EN 301 489-1 V2.2.3 (2019-11)/ETSI EN 301 489-3 V2.3.2 (2023-01) Draft ETSI EN 301 489-17 V3.2.6 (2023-06)/EN 55032:2015 + A1:2020 + A11:2020 EN 55035:2017 + A11:2020/EN IEC 61000-3-2:2019 + A1:2021 EN 61000-3-3:2013 + A1:2019 + A2:2021 ◦ ETSI EN 300 328 V2.2.2 (2019-07)/ETSI EN 301 893 V2.1.1 (2017-05) ETSI EN 300 440 V2.2.1 (2018-07)

System Diagram

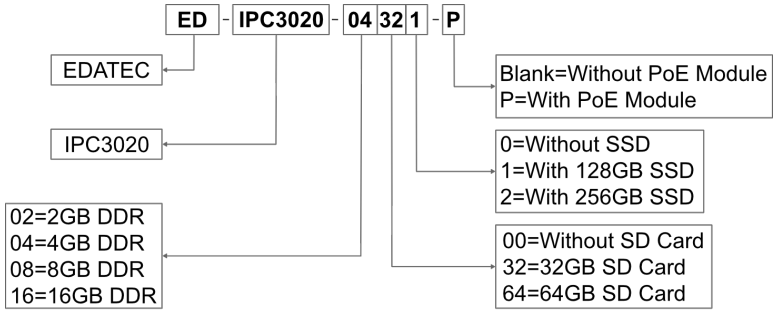


Dimensions

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

Optional Accessory

You can choose a power adapter according to actual needs.

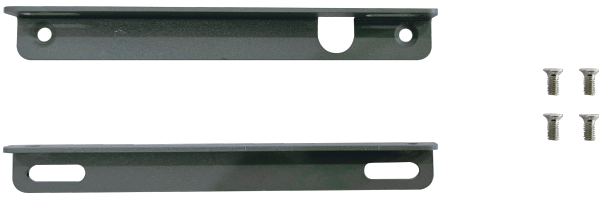
Model	Description	Picture
SC1149	Raspberry Pi 27W USB-C Power Supply White UK	
SC1150	Raspberry Pi 27W USB-C Power Supply White AU	
SC1151	Raspberry Pi 27W USB-C Power Supply White IN	
SC1152	Raspberry Pi 27W USB-C Power Supply White EU	
SC1153	Raspberry Pi 27W USB-C Power Supply White US	
SC1154	Raspberry Pi 27W USB-C Power Supply Black UK	
SC1155	Raspberry Pi 27W USB-C Power Supply Black AU	
SC1156	Raspberry Pi 27W USB-C Power Supply Black IN	
SC1157	Raspberry Pi 27W USB-C Power Supply Black EU	
SC1158		

Model	Description	Picture
	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	

Packing List

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