

ED-IPC2500

5G Industrial Computer Based on Raspberry Pi CM4

- ◆ Broadcom BCM2711, quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
- ◆ Up to 8GB LPDDR4 RAM and 32GB eMMC storage
- ◆ Support micro-SD Card and mSATA SSD storage expansion
- ◆ 3 x Gigabit Ethernet ports, 2 x USB 2.0 ports
- ◆ 2.4GHz and 5GHz dual-band Wi-Fi, Bluetooth and 5G
- ◆ Wide voltage power input range of DC 9V~36V with reverse polarity protection, overvoltage protection and overcurrent protection
- ◆ Integrated supercapacitor (backup power supply, optional) , RTC, Watch Dog, EEPROM and crypto authentication
- ◆ Wide temperature range of -25°C~60°C for working environment
- ◆ High-quality metal case, compatible with desktop installation



Specifications

System	
CPU	Broadcom BCM2711, quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
VPU	H.265(HEVC), up to 4Kp60 decode H.264, up to 1080p60 decode, 1080p30 encode
GPU	OpenGL ES 3.1 & Vulkan 1.0
Memory	Options for 1GB, 2GB, 4GB, 8GB LPDDR4-3200 SDRAM
Storage	<ul style="list-style-type: none"> • Options for 0GB, 8GB, 16GB, 32GB eMMC storage • Micro SD card (support booting OS) • mSATA SSD (optional)

Software	
Operating System	<ul style="list-style-type: none"> • 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	
Power	1 x DC IN, 2-Pin 3.5mm spacing phoenix terminals with screw holes. It supports 9V~36V input, the signal is defined as VIN+/GND.
1000M Ethernet	3 x adaptive 10/100/1000M ethernet ports, RJ45 connector. It can be used to access the network.

Rear I/O	
SD Card Slot	1 x Micro-SD card slot, which is used to install SD card for booting the OS.
SIM Card Slot	1 x Nano SIM card slot, which is used to install SIM card for getting 5G signal.
Micro USB	1 x Micro USB port, which supports to flash eMMC for the system.
Antenna	3 x SMA ports(1 x WiFi/BT antenna port, 2 x 5G antenna ports), which is used to connect 5G antenna and WiFi/BT antenna.

Side I/O	
HDMI	1 x HDMI port, type A connector. It compatibles with HDMI2.1 standard and supports 4K 60Hz.
USB 2.0	2 x USB 2.0 ports, type A connector, which support up to 480Mbps.
Antenna	2 x SMA ports, which is used to connect 5G antenna.

Buttons and Indicators	
Reset	1 x Reset button, which can reset the device.
PWR	1 x red power indicator, which is used to check the status of device power-on and power-off.
5G	1 x green 5G indicator, which is used to check the status of 5G signal.
ACT	1 x green system indicator, which is used to check the working status of device.
USER	1 x green user indicator, which is used can customize a status according to actual application.

Expansion I/O	
12V 1A	3 x DC OUT, 2-Pin 2.0mm spacing WTB connector, supporting 12V 1A output. These pins are defined as GND/12V, reserving to provide power supply for extended LCD.
5V 1A	1 x DC OUT, 3-Pin 2.0mm spacing WTB connector, supporting 12V 1A output. These pins are defined as GND/5V/GND, reserving to provide power supply for extended LCD.
40-Pin GPIO	1 x GPIO, 2x20-Pin 2.54mm pitch header, using to lead out the GPIO ports of CM4. <ul style="list-style-type: none"> • These pins are defined as GPIO1~GPIO27/3V3/5V2/GND • Compatibles with expansion modules, which reserves to connect expansion accessories.
10-Pin GPIO	1 x GPIO Pin Header, 2x5-pin 2.54mm pitch header, using to lead out the expansion GPIO ports. User can customize the function according to actual application, these pins are defined as 8xGPIO/3V3/GND.
USB 2.0	2 x USB 2.0, 5-pin 1.5mm spacing WTB connector, which can be expanded USB 2.0 ports.
mSATA	1 x mSATA, Mini PCIe connector, which supports to connect mSATA SSD.

Expansion Performance	
EEPROM	Supports 4K byte storage and improves the ease of use of device.
Crypto Authentication	It can be matched to realize the required upper layer application and improves the security of device.
RTC	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 configured according to actual application, which realizes the alarm function.
Watch Dog	Realize the hardware Watch Dog based on the RTC alarm function to ensure the reliability of device.

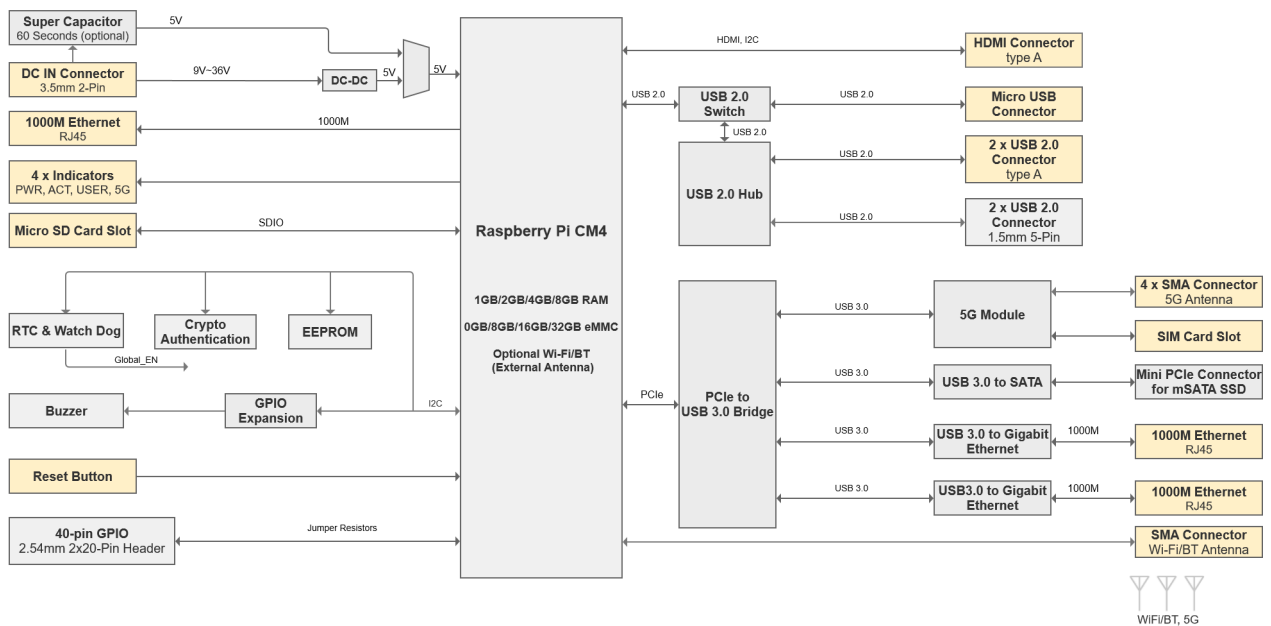
Electrical Characteristics	
Input Voltage	9V ~ 36V DC
Power Consumption	24W (Max)

Mechanical Characteristics	
Dimensions	143mm x 100mm x 34mm (WxDxH, antennas are not included.)
Weight	750g
Installation	Desktop Mounting

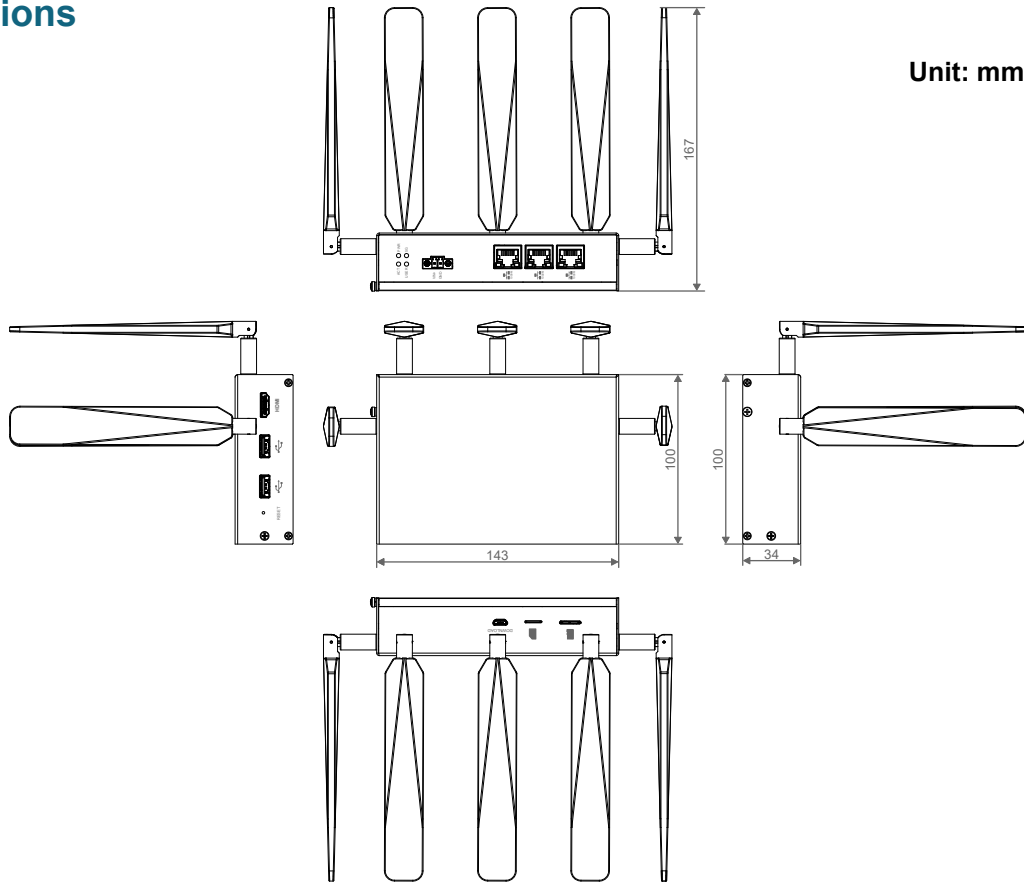
Wireless	
Wi-Fi/BT (optional)	2.4GHz and 5GHz dual-band Wi-Fi with antenna <ul style="list-style-type: none"> 2.4GHz Wi-Fi: Compatible with IEEE 802.11 b/g/n 5GHz Wi-Fi: Compatible with IEEE 802.11 a/n/ac Bluetooth 5.0 with antenna, compatible with 2402MHz ~ 2480MHz frequency.
5G	Connect with various 5G module(RM500U-CNV) through the M.2 B Key interface, with 4 antennas. 5G NR: 3GPP Release 15/Release 16 NSA/SA operation, Sub-6 GHz 5G NR NSA: n41/78/79 5G NR SA: n1/28/41/77/78/79 Downlink 4 x 4 MIMO: n1/41/77/78/79 LTE Category: Downlink Cat 12, Uplink Cat 13 LTE-FDD: B1/2/3/5/7/8/20/28 LTE-TDD: B34/38/39/40/41 Downlink 2 x 2 MIMO: B1/2/3/5/7/8/20/28/34/38/39/40/41 WCDMA: B1/2/5/8

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"> • 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

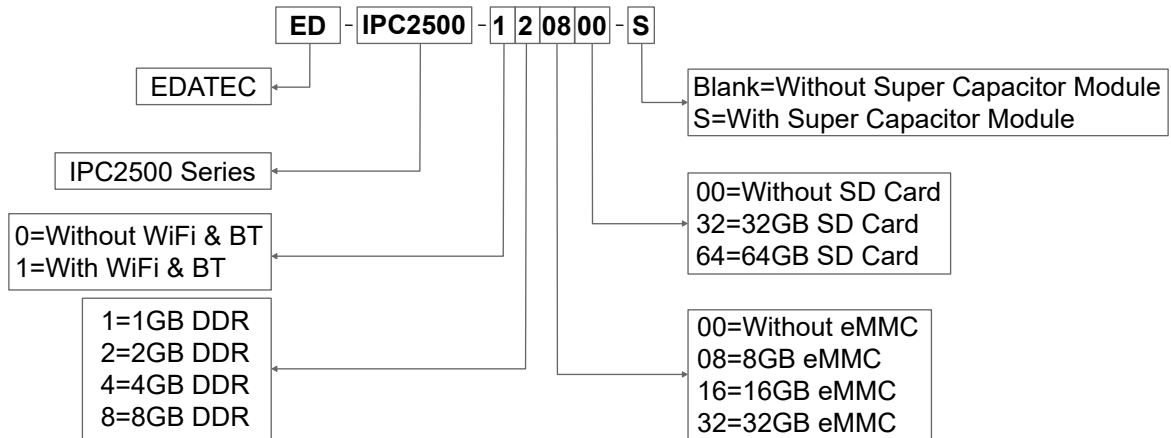
System Diagram



Dimensions



Ordering Code



Note:

You need choose one of SD card and eMMC, not both at the same time.

Example

P/N: **ED-IPC2500-120800-S**

Configuration: 5G Industrial Computer Based on Raspberry Pi CM4 with Wi-Fi & Bluetooth, Super Capacitor Module, 2GB DDR and 8GB eMMC.

Packing List

- 1 x ED-IPC2500 Unit
- [WiFi/BT Version - optional] 1 x 2.4GHz/5GHz WiFi/BT Antenna