



ED-IPC2200

Datasheet

by EDA Technology Co., Ltd

built: 2024-11-20

ED-IPC2200 Series

Industrial Computer Based on Raspberry Pi CM4

- Broadcom BCM2711, quad core Arm 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, 1 x USB 3.0 port
- 2.4GHz and 5GHz dual-band Wi-Fi, Bluetooth and 4G
- 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 DIN-rail installation



Specifications

System	
CPU	Broadcom BCM2711, quad core Arm 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	Options for 0GB, 8GB, 16GB, 32GB eMMC storage Micro SD card, supporting to select the 00GB/32GB/64GB SD card mSATA SSD (optional)

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	
Power	1 x DC IN, 2-Pin 3.5mm pitch phoenix terminals with screw holes. It supports 9V~36V input, the signal is defined as VIN+/GND.
Audio (optional)	1 x Audio In/Stereo Out, 3.5mm audio jack connector. It can be used as MIC IN and LNE OUT. • When a headphone is connected, the audio output switches to the headphone.

Front I/O	
	<ul style="list-style-type: none"> When no headphone is connected, the audio output switches to the speaker. Note: Only ED-IPC2220 contains this interface.
1000M Ethernet(ETH0)	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.
1000M Ethernet(ETH1&2)	2 x adaptive 10/100/1000M ethernet ports, RJ45 connector. It can be used to access the network.
USB3.0	1 x USB 3.0 port, type A connector, which supports up to 5Gbps transmission rate.

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.
SIM Card Slot	1 x Nano SIM card slot, which is used to install SIM card for getting 4G signal.
Micro USB	1 x Micro USB port, which supports to flash to eMMC for the system.

Side I/O	
HDMI	1 x HDMI port, type A connector. It is compatible with HDMI 2.1 standard and supports 4K 60Hz.
USB 2.0	2 x USB 2.0 ports, type A connector, which support up to 480Mbps transmission rate.
Antenna	2 x SMA ports, which is used to connect 4G antenna and Wi-Fi/BT 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.
4G	1 x green 4G indicator, which is used to check the status of 4G signal.
ACT	1 x green system indicator, which is used to check the working status of device.
USER	1 x green user indicator, user can customize a status according to actual application.

Expansion I/O	
12V 1A	3 x DC OUT, 2-Pin 2.0mm pitch 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 pitch 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 It is Compatible with expansion modules, reserving to connect expansion accessories.
10-Pin GPIO	

Expansion I/O	
	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.
CSI (optional)	1 x Pin Header, 2x15-pin 0.4mm pitch connector, supporting 2-Lane CSI signal. It can be used to connect 8-megapixel CSI camera. Note: Only ED-IPC2220 contains this interface.
HDMI (optional)	1 x FPC HDMI, 40-pin 0.5mm pitch FPC connector, which can be reserved to connect extended LCD, supporting USB/I2C touch screen and backlight adjustment. Note: Only ED-IPC2220 contains this interface.
DSI (optional)	1 x FPC DSI, 30-pin 0.5mm pitch FPC connector, supporting 4-Lane DSI signal. It can be reserved to connect extended LCD, supporting USB/I2C touch screen and backlight adjustment. Note: Only ED-IPC2220 contains this interface.
USB2.0	2 x USB 2.0, 5-pin 1.5mm pitch WTB connector, which can be expanded USB 2.0 ports.
mSATA	2 x USB 2.0, 5-pin 1.5mm pitch WTB connector, which can be expanded USB 2.0 ports.
Speaker (optional)	1 x PA output, 4-pin 1.5mm pitch 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-. Note: Only ED-IPC2220 contains this interface.

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	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.
Watch Dog*	This function has been reserved on hardware. But we need additional software to support it, which is under development.

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

Mechanical Characteristics	
Dimensions	143mm x 100mm x 34mm (WxDxH, DIN-rail and antenna are not included)

Mechanical Characteristics	
Weight	750g
Installation	DIN-rail mounting

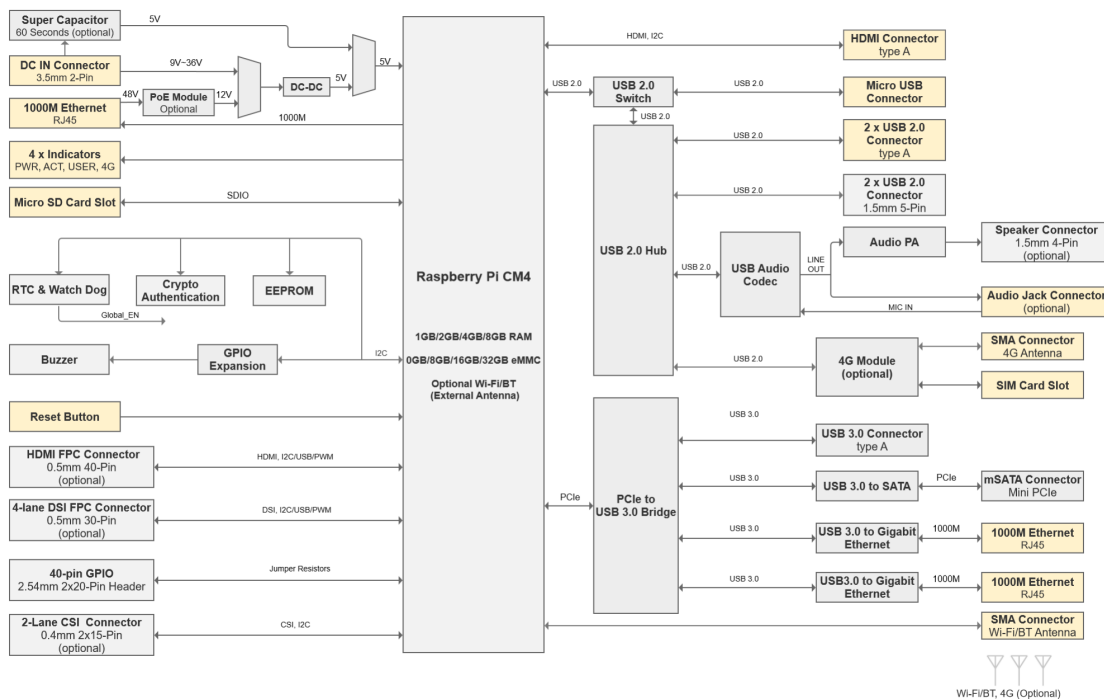
Wireless	
Wi-Fi/Bluetooth (optional)	<p>2.4GHz & 5GHz dual-band Wi-Fi and Bluetooth with antenna.</p> <ul style="list-style-type: none"> • 2.4GHz Wi-Fi: Compatible with IEEE 802.11 b/g/n • 5GHz Wi-Fi: Compatible with IEEE 802.11 a/n/ac • The Bluetooth supports 2402MHz ~ 2480MHz frequency
4G (optional)	<p>Connect with various 4G LTE modules through the Mini PCIe interface, with antenna.</p> <ul style="list-style-type: none"> • EC20-CE Module (China/India) <ul style="list-style-type: none"> ◦ LTE FDD: B1/B3 ◦ LTE TDD: B38/B39/B40/B41 ◦ TDSCDMA: B34/B39 ◦ WCDMA: B1 ◦ CDMA 1x/EVDO: BC0 ◦ GSM: 900/1800MH • EC25-AFX Module (North America) <ul style="list-style-type: none"> ◦ LTE-FDD: B2/B4/B5/B12/B13/B14/B66/B71 ◦ LTE-TDD ◦ WCDMA: B2/B4/B5 ◦ GSM/EDGE • EC25-AUX Module (Latin America/Australia/New Zealand) <ul style="list-style-type: none"> ◦ LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28 ◦ LTE-TDD: B40 ◦ WCDMA: B1/B2/B4/B5/B8 ◦ GSM/EDGE: B2/B3/B5/B8 • EC25-EUX Module (Europe/Middle East/Africa/Thailand) <ul style="list-style-type: none"> ◦ LTE-FDD: B1/B3/B7/B8/B20/B28A ◦ LTE-TDD: B38/B40/B41 ◦ WCDMA: B1/B8 ◦ GSM/EDGE: B3/B8

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 <ul style="list-style-type: none"> ◦ 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

Environmental & Regulatory

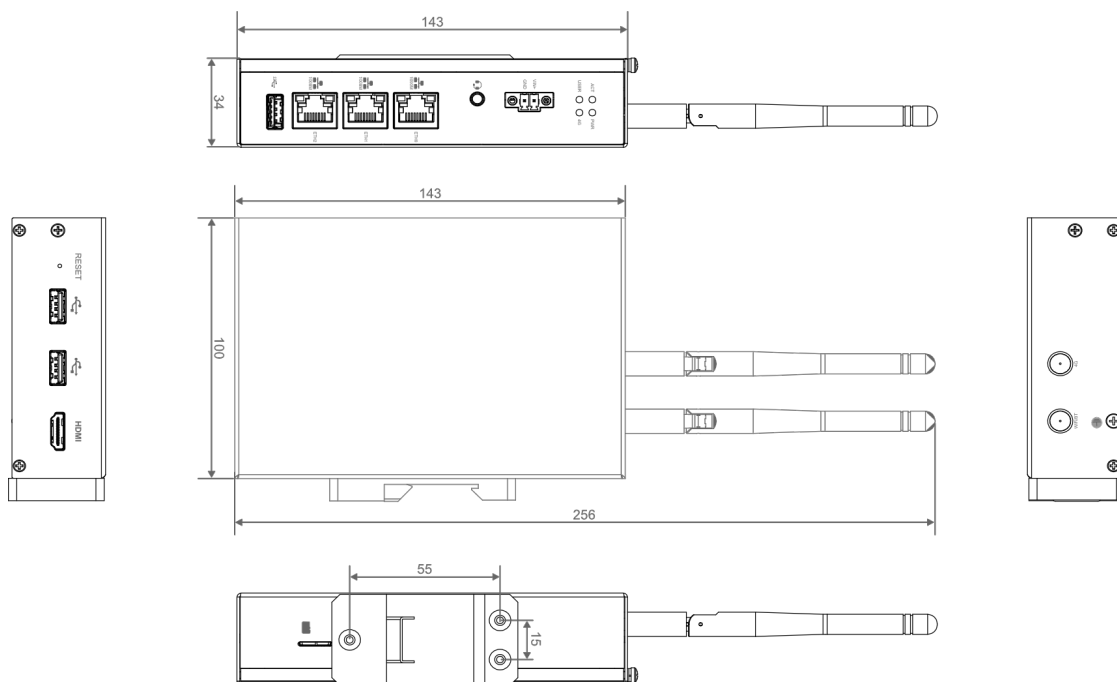
◦ EN 301 328/EN 301 440/EN 301 511/EN 301 908-1/EN 301 908-2

System Diagram

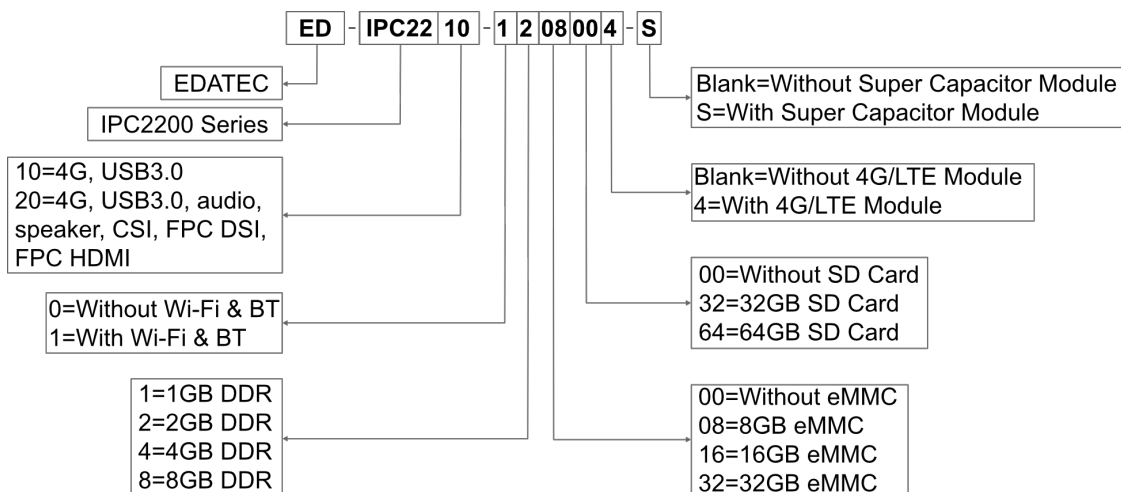


Dimensions

Unit: mm



Ordering Code



Note:

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

Example

P/N: **ED-IPC2210-1208004-S**

Configuration: Industrial Computer Based on Raspberry Pi CM4, with Wi-Fi & Bluetooth, Super Capacitor Module, 4G, 2GB DDR and 8GB eMMC.

Optional Accessory

You can choose a power adapter according to actual needs.

Model	Description	Picture
ED-PSU1202-UK-3.5PL	100~240VAC to 12VDC/2A Adapter, with UK AC plug, 3.5mm pitch phoenix plug with lock	
ED-PSU1202-US-3.5PL	100~240VAC to 12VDC/2A Adapter, with US AC plug, 3.5mm pitch phoenix plug with lock	
ED-PSU1202-AU-3.5PL	100~240VAC to 12VDC/2A Adapter, with AU AC plug, 3.5mm pitch phoenix plug with lock	
ED-PSU1202-EU-3.5PL	100~240VAC to 12VDC/2A Adapter, with EU AC plug, 3.5mm pitch phoenix plug with lock	

NOTE: Each model contains only one of the UK, US, AU and EU plugs.

Packing List

- 1 x ED-IPC2200 Unit
- [Wi-Fi/BT Version - optional] 1 x 2.4GHz/5GHz Wi-Fi/BT Antenna
- [4G Version - optional] 1 x 4G/LTE Antenna