



# ED-IPC2200

## Datasheet

by EDA Technology Co., Ltd

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# 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 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<br>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<br>Micro SD card, supporting to select the 00GB/32GB/64GB SD card<br>mSATA SSD (optional) |

| Software         |  |
|------------------|--|
| Operating System | Raspberry Pi OS (Desktop) 32-bit<br>Raspberry Pi OS (Lite) 32-bit<br>Raspberry Pi OS (Desktop) 64-bit<br>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. <ul style="list-style-type: none"> <li>• When a headphone is connected, the audio output switches to the headphone.</li> </ul> |

| Front I/O                    |  |
|------------------------------|--|
|                              | <ul style="list-style-type: none"> <li>When no headphone is connected, the audio output switches to the speaker.</li> </ul> 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.   |
| 1000M Ethernet (ETH1 & ETH2) | 2 x adaptive 10/100/1000M ethernet ports, RJ45 connector. It can be used to access the network.  |
| USB 3.0                      | 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 2.0 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.       |

| Internal I/O |  |
|--------------|--|
| 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"> <li>These pins are defined as GPIO1~GPIO27/3V3/5V2/GND.</li> <li>It is compatible with expansion modules, reserving to connect expansion accessories.</li> </ul> |
| mSATA        | 1 x mSATA port, Mini PCIe connector, which can be used to connect external mSATA SSD.  |

| Expansion Functions   |  |
|-----------------------|--|
| 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. |

| 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.   |
| 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)   |

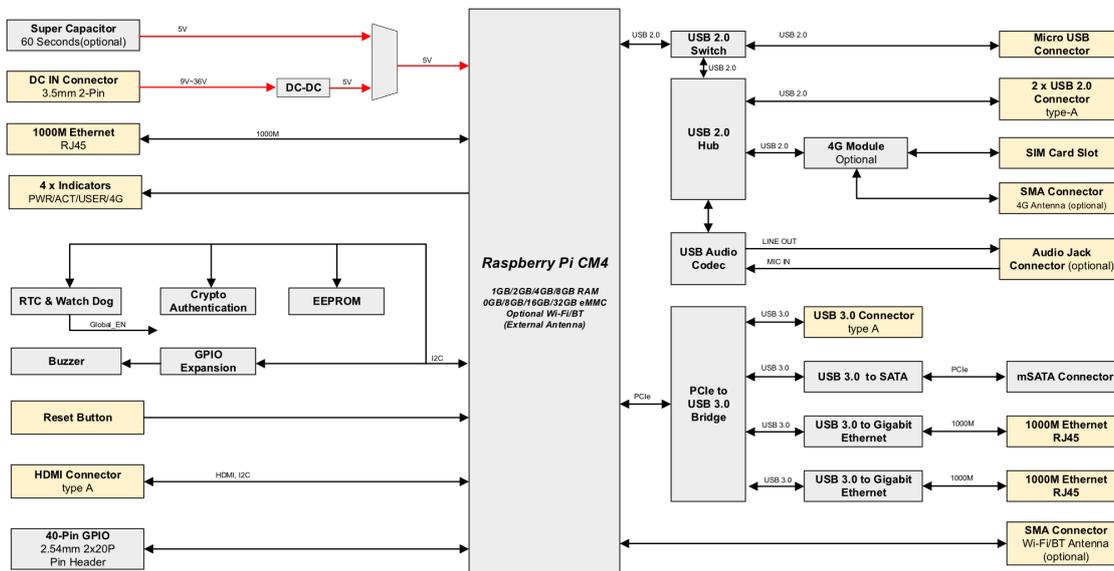
| Mechanical Characteristics |   |
|----------------------------|---|
| Dimensions                 | 143mm x 100mm x 34mm (WxDxH, DIN-rail and antenna are not included) |
| Weight                     | 750g  |
| Installation               | DIN-rail mounting   |

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

| Wireless |  |
|----------|--|
|          | <ul style="list-style-type: none"> <li>◦ GSM/EDGE: B2/B3/B5/B8</li> <li>◦ GPS/GLONASS/BDS/Galileo/QZSS</li> <li>• EC25-EUX Module (Europe/Middle East/Africa/Thailand)                             <ul style="list-style-type: none"> <li>◦ LTE FDD: B1/B3/B7/B8/B20/B28A</li> <li>◦ LTE TDD: B38/B40/B41</li> <li>◦ WCDMA: B1/B8</li> <li>◦ GSM/EDGE: B3/B8</li> <li>◦ GPS/GLONASS/BDS/Galileo/QZSS</li> </ul> </li> <li>• EC25-EFA Module (Europe/Middle East/Africa/South-East Asia)                             <ul style="list-style-type: none"> <li>◦ LTE FDD: B1/B3/B7/B8/B20/B28</li> <li>◦ LTE TDD: B38/B40/B41</li> <li>◦ WCDMA: B1/B5/B8</li> <li>◦ GSM/EDGE: B3/B8</li> <li>◦ GPS/GLONASS/BDS/Galileo/QZSS</li> </ul> </li> </ul> |

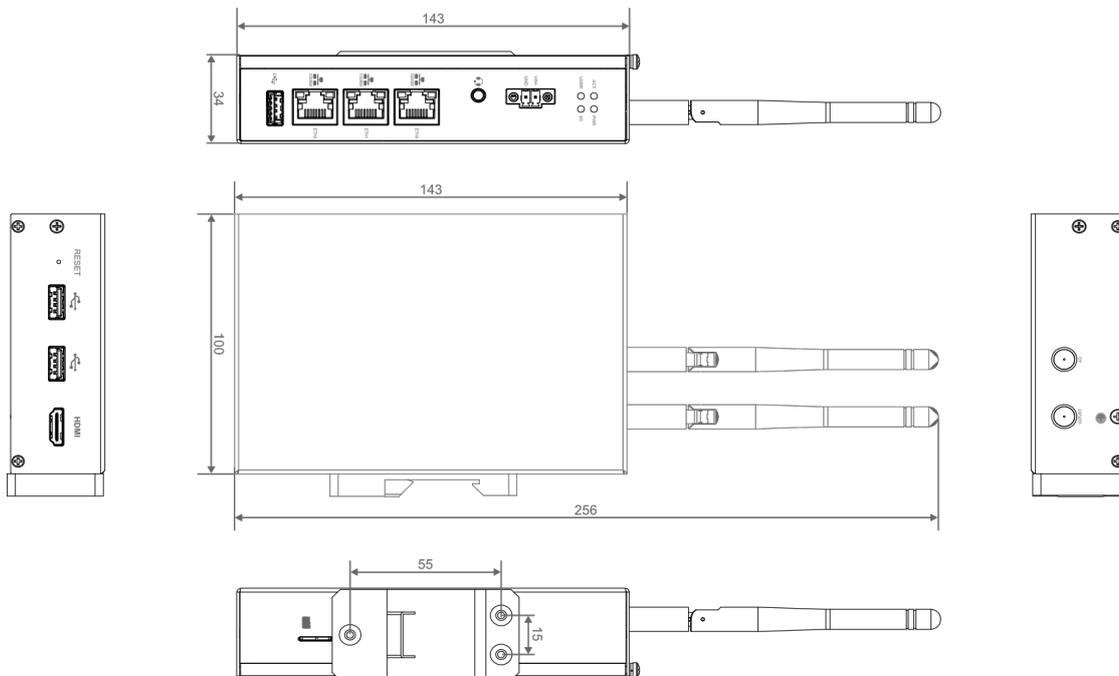
| Environmental & Regulatory |                           |
|----------------------------|---------------------------|
| Operating Temperature      | -25°C ~ 60°C              |
| Storage Temperature        | -25°C ~ 60°C              |
| Ambient humidity           | 5% ~ 95% (non-condensing) |

## System Diagram

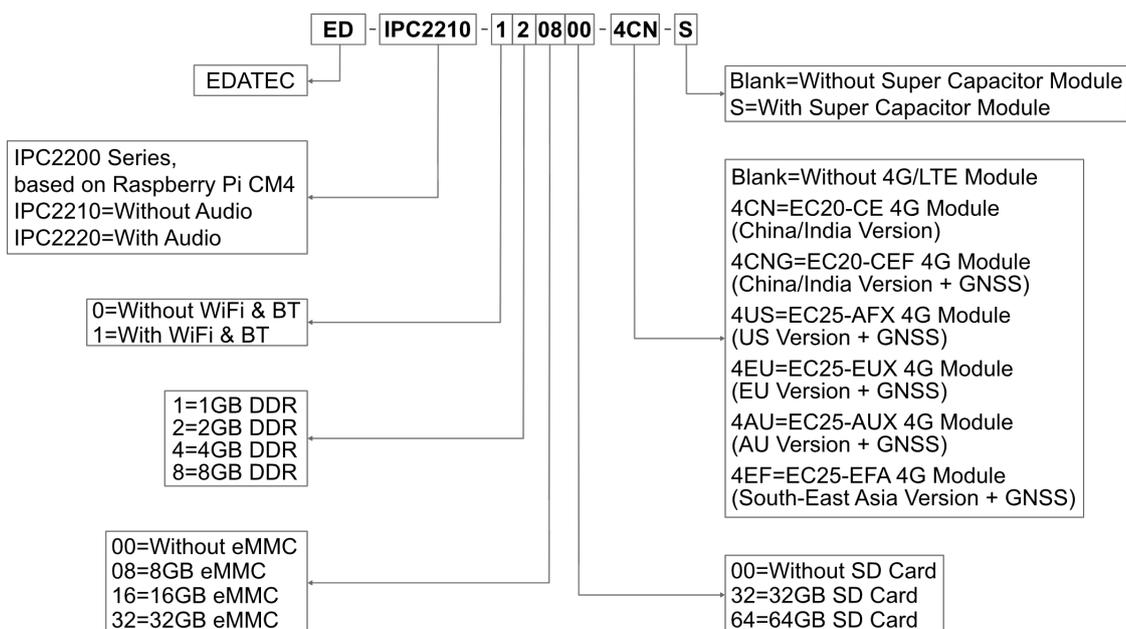


## Dimensions

Unit: mm



## Ordering Code



**Note:**

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

**Example**  
**P/N: ED-IPC2210-121600-4CN-S**  
 Configuration: Industrial Computer Based on Raspberry Pi CM4, with Wi-Fi & Bluetooth, 4G (EC20-CE Module), 2GB DDR, 16GB eMMC and Super Capacitor Module.

## 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