ED-IPC1220

Datasheet

by EDA Technology Co., Ltd

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ED-IPC1220

Industrial Computer Based on Raspberry Pi CM0

- 1GHz quad-core 64-bit Arm Cortex-A53 processor
- 512MB SDRAM, 8GB or 16GB eMMC storage available
- 1 x USB 2.0, 1 x 100M Ethernet, 2 x RS485, 1 x RS232
- 8 x DI, 8 x DO, 2 x ADA, 2 x ADV
- Supports 2.4GHz Wi-Fi & Bluetooth and 4G CAT1
- 9V~28V wide-range power input with reverse connection protection
- Integrated RTC with a 1F supercapacitor as the RTC backup power supply
- Supports DIN Rail Mounting

Specifications

System	
CPU	1GHz quad-core 64-bit Arm Cortex-A53 processor
VPU	H.264/MPEG-4 video decoding, 1080p@30fps H.264 encoding, 1080p@30fps
GPU	OpenGL ES 1.1/2.0 graphics processing
Memory	512MB SDRAM
Storage	8GB or 16GB eMMC storage available

Software	
Operating System	Raspberry Pi OS (Desktop) 64-bit Raspberry Pi OS (Lite) 64-bit Raspberry Pi OS (Desktop) 32-bit Raspberry Pi OS (Lite) 32-bit

Front I/O	
RS485 Port	1 x RS485, 3-Pin 3.5mm Pitch Phoenix Terminal, Signal Definition: GND/A1/B1
DI Port	8 x DI, 2 x 5-Pin 3.5mm Pitch Phoenix Terminals • Sensor Type: Wet Contact (NPN) • Isolation Protection: 3.75kV • 4 DI share 1 common terminal COM: DI0~DI3 share common terminal COMA, DI4~DI7 share common terminal COMC. • DI to COM: ON State: 5~30 VDC or -30~-5 VDC OFF State: 0~2 VDC or -2~0 VDC

Front I/O	
DO Port	8 x DO, 2 x 5-Pin 3.5mm Pitch Phoenix Terminals • Sensor Type: Sink Type (NPN) • Sensor Type: NPN • Isolation Protection: 3.75kV • Output: 5~36 VDC (24 VDC is recommended), maximum current is 0.2A (per channel) • 4 DO share 1 common terminal COM: DO0~DO3 share common terminal COMB, DO4~DO7 share common terminal COMD.
ADV Port	2 x Analog voltage inputs, 3-Pin 3.5mm pitch phoenix terminal • Signal Type: Voltage input (differential) • Input Voltage range: 0-10V • Input Impedance: 10MΩ • Resolution: 12-bit • Accuracy: ±0.1% of full scale at 25°C; ±0.3% of full scale from -20°C to 60°C • Sampling Rate: 3kHz
ADA Port	2 x Analog current inputs, 3-Pin 3.5mm pitch phoenix terminal • Signal Type: current input (differential) • Input Current Range: 0-20mA • Sample resistor for Current：120Ω • Input Impedance: 10MΩ • Resolution: 12-bit • Accuracy: ±0.1% of full scale at 25°C; ±0.3% of full scale from -20°C to 60°C • Sampling Rate: 3kHz
100M Ethernet Port	1 x adaptive 10M/100M ethernet port, RJ45 connector. It can be used to access the network.

Rear I/O	
Nano SIM Card Slot	1 x Nano SIM card slot for installing a Nano SIM card to obtain 4G signal. Note: If the 4G function is not selected as an option, the Nano SIM card slot will not function.
Type-C USB Port	1 x Type-C USB Port, supports eMMC flashing via this port.

Side Panel I/O	
USB 2.0 Port	1 x USB 2.0, Type-A Connector, supports up to 480Mbps transfer rate.
RS485 Port	1 x RS485 Port, 3-Pin 3.5mm Pitch Phoenix Terminal, Signal Definition: GND/A2/B2.
RS232 Port	1 x RS232 Port, 3-Pin 3.5mm Pitch Phoenix Terminal, Signal Definition: GND/TX3/RX3.
Antenna Port (Optional)	2 x SMA Connectors, for connecting 4G and Wi-Fi/BT antennas.
Power Port	1 x DC Input, 2-Pin 3.5mm Pitch Phoenix Terminal with Screw Holes; Supports 9V~28V Input, Signal Definition: VIN+/GND.

Button	
RESET Button	1 x Reset Button, hidden button, press to reboot the device.
USER Button	1 x User Button, hidden button, user can define actions as needed.

Indicator	
PWR	1 x Power Indicator, Red, shows device power status.
ACT	1 x System Status Indicator, Green, shows device working status.
4GR	1 x 4G Registration Indicator, Red/Green Dual-color, shows 4G module registration status.
4GS	1 x 4G Signal Indicator, Red/Green Dual-color, shows 4G signal status.
USER	1 x User Indicator, Green, user can define status as needed.
COM1~COM3	3 x Serial Port Indicators, Green, show serial port communication status.
DI0~DI7	8 x DI Indicators, Green, show DI port input status.
DO0~DO7	8 x DO Indicators, Green, show DO port output status.

Expansion Functions	
RTC	Built-in RTC function with a 1F supercapacitor as the RTC backup power supply.

Electrical Characteristics	
Input Voltage	9V~28V DC
Power Consumption	About 5W

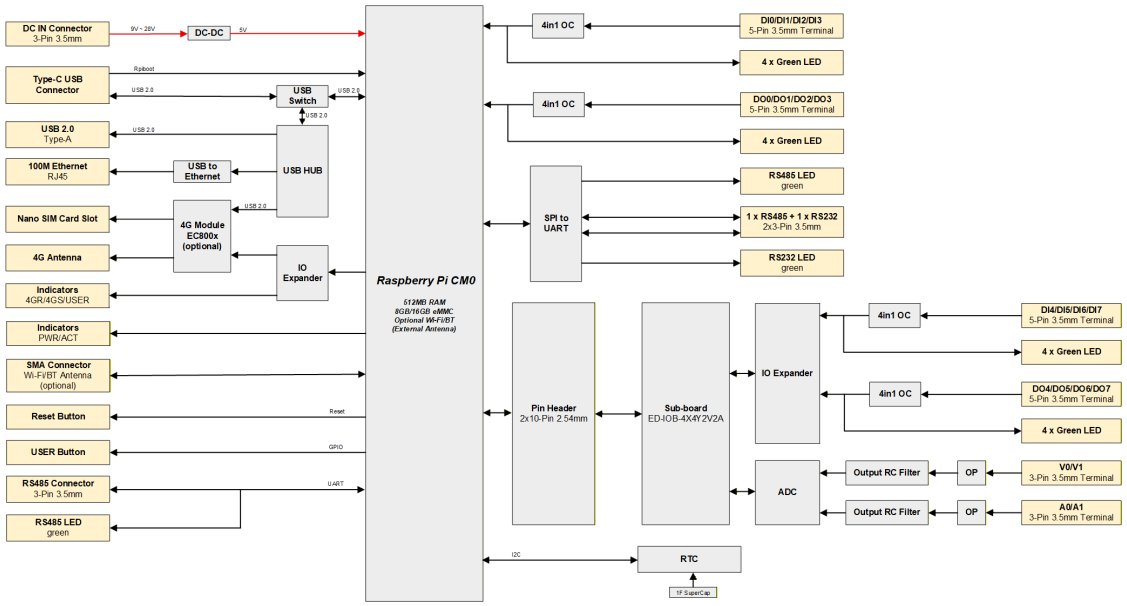
Mechanical Characteristics	
Dimensions	105mm x 86mm x 42mm (W x D x H, DIN-rail bracket and antenna are not included)
Weight	About 435g
Installation	DIN rail mounting

Wireless	
Wi-Fi/Bluetooth (Optional)	Supports 2.4GHz Wi-Fi and Bluetooth, with antenna • 2.4GHz Wi-Fi: Compliant with IEEE 802.11 b/g/n • Bluetooth 5.0: Compatible band 2402MHz ~ 2480MHz
4G (Optional)	Connects to various 4G modules via connector, with antenna • EC800M-CN Module (China) ◦ LTE FDD: B1/B3/B5/B8 ◦ LTE TDD: B34/B38/B39/B40/B41 • EC800K-EU Module (Europe) ◦ LTE-FDD: B1/B3/B5/B7/B8/B20/B28

Wireless	
	• EC800Q-NA Module (America) ◦ LTE-FDD: B2/B4/B5/B12/B13/B66

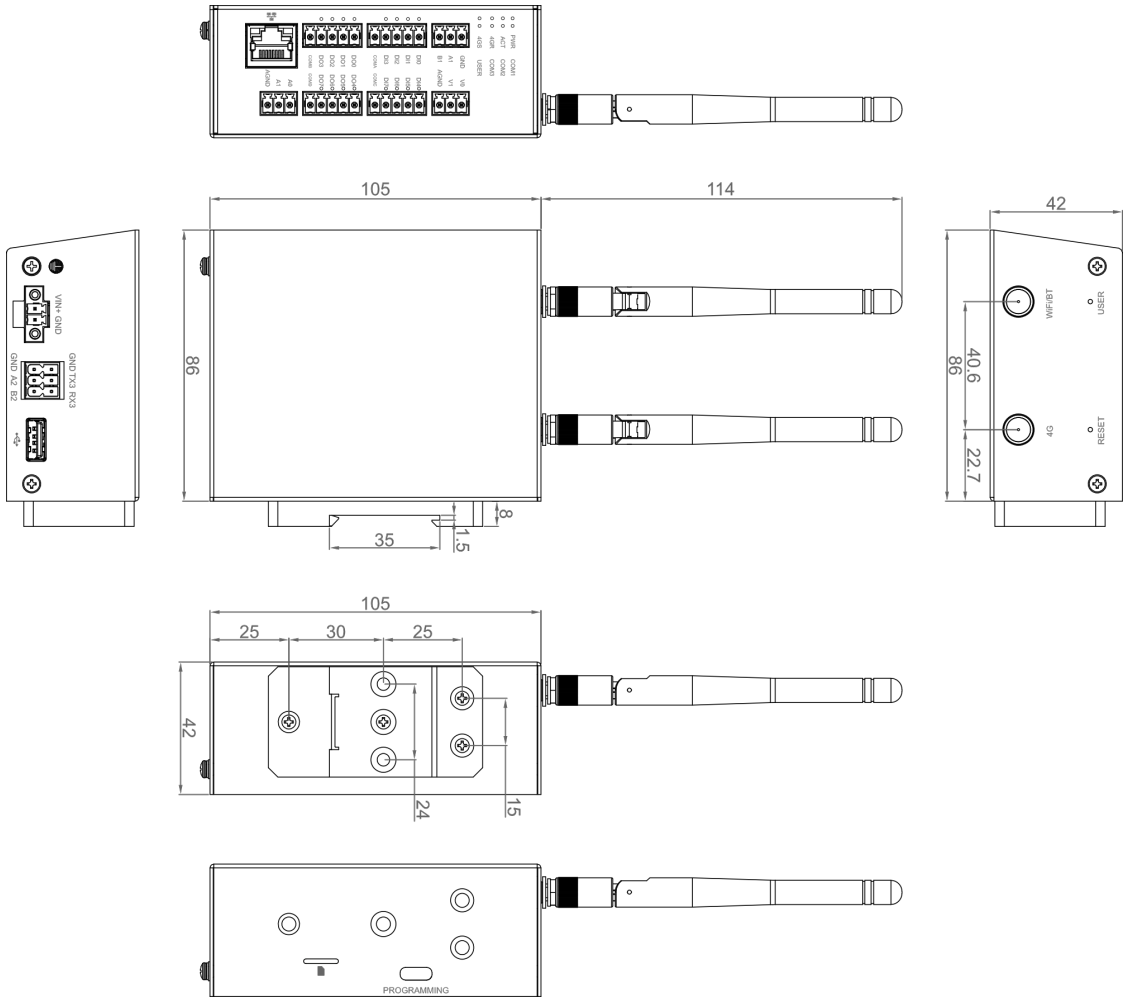
Environmental & Regulatory	
Operating Temperature	-20°C ~ 60°C
Storage Temperature	-20°C ~ 60°C
Ambient humidity	5% ~ 95% (non-condensing)

System Diagram



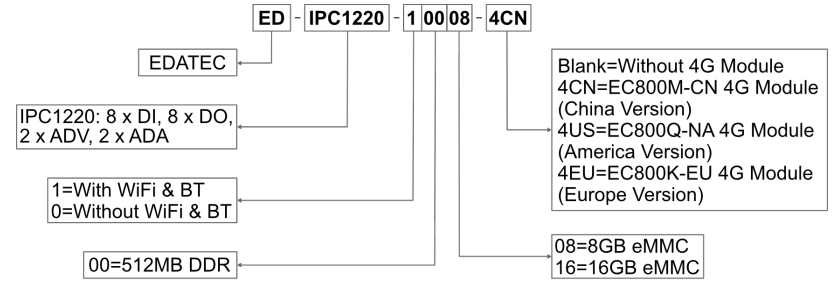
Dimensions

Unit: mm



Ordering Information

Coding Rules



Example

P/N: **ED-IPC1220-10008-4CN**
Configuration: Industrial Computer Based on Raspberry Pi CM0, with 512MB DDR, 8GB eMMC, Wi-Fi & Bluetooth, 8 x DI, 8 x DO, 2 x ADV, 2 x ADA and 4G Module (China Version).

Ordering Code

Model	Description	Stocking Level
ED-IPC1220-10008-4CN	Wi-Fi/BT, 8GB eMMC, China Version 4G Module, 8 x DI, 8 x DO, 2 x ADV, 2 x ADA	Standard Stock
ED-IPC1220-10008-4EU		Standard Stock

Model	Description	Stocking Level
	Wi-Fi/BT, 8GB eMMC, Europe Version 4G Module, 8 x DI, 8 x DO, 2 x ADV, 2 x ADA	
ED-IPC1220-10008-4US	Wi-Fi/BT, 8GB eMMC, USA Version 4G Module, 8 x DI, 8 x DO, 2 x ADV, 2 x ADA	Standard Stock

> 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
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 includes only one type of AC plug among UK, US, AU, and EU.		

Packing List

- 1 x ED-IPC1220 Unit
- [WiFi/BT Version - optional] 1 x 2.4GHz Wi-Fi/BT Antenna
- [4G Version - optional] 1 x 4G Antenna
- 3 x 3-Pin Phoenix Terminals
- 1 x 2-Pin Phoenix Terminal with lock
- 1 x 6-Pin Phoenix Terminal
- 4 x 5-Pin Phoenix Terminals