ED-CM4SEN

Datasheet

by EDA Technology Co., Ltd

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ED-CM4SEN

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 storage expansion
- 1 x Gigabit Ethernet, 1 x HDMI, 2 x USB 2.0
- 1 x RS232, 4 x RS485, 1 x CAN
- 2.4GHz and 5GHz dual-band Wi-Fi, Bluetooth and 4G LTE
- Wide voltage power input range of DC 8V~28V, built-in RTC and
  Buzzer
- Metal case, compatible with DIN-rail 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	Options for 8GB, 16GB, 32GB eMMC storage Micro SD card (user storage expansion)

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, DC Jack connector, supporting 8V~28V input.
RS232	1 x RS232 port, 3-Pin 2.5mm pitch phoenix terminals, the signal is defined as GND/TX/RX.
CAN	1 x CAN port, 3-Pin 2.5mm pitch phoenix terminals, the signal is defined as GND/CL/CH.
RS485	4 x RS485 ports, 12-Pin 2.5mm pitch phoenix terminals, the single signal is defined as GND/A/B.

Rear I/O	
SD Card Slot	1 x Micro SD card slot, using to install SD card for storing user data.
SIM Card Slot	1 x Nano SIM card slot, using to install SIM card for getting 4G signal.
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, supporting up to 480Mbps transmission rate.
1000M Ethernet	1 x adaptive 10/100/1000M ethernet port, RJ45 connector. It can be used to access the network

Side I/O	
Antenna	2 x SMA ports (optional), using to connect 4G antenna and Wi-Fi/BT antenna.

Buttons and Indicators	
Power	1 x red power indicator, which is used to check the status of device power-on and power-off.
Status	1 x green system indicator, which is used to check the working status of device.

Internal I/O	
Micro USB	1 x Micro USB port, supporting to flash to eMMC for the system.
5V 1A	1 x DC OUT, 2-Pin 1.0mm pitch connector, support 5V 1A output. These pins are defined as GND/5V.
HDMI	1x FPC HDMI, 40-Pin 0.5mm pitch FPC connector, which can be reserved to connect extended LCD, supports USB/I2C touch screen and backlight adjustment.
DSI	1 x FPC DSI, 30-Pin 0.5mm pitch FPC connector, which can be reserved to connect extended LCD, supports USB/I2C touch screen and backlight adjustment.

Expansion Performance	
RTC	RTC with CR1220 battery backup, which can 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 abnormity can be configured according to actual application, which realizes the alarm function.

Electrical Characteristics	
Input Voltage	8V ~ 28V DC
Power Consumption	18W (Max)

Mechanical Characteristics	
Dimensions	102mm x 73mm x 35.2mm (WxDxH, DIN-rail bracket and antenna are not included.)
Weight	500g
Installation	DIN-rail installation

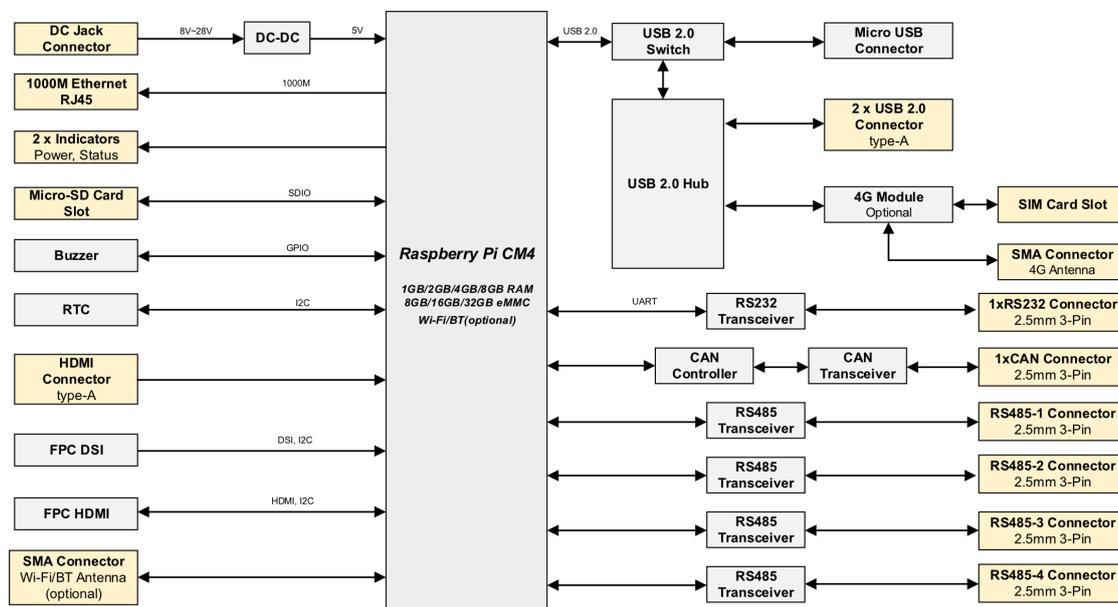| Wireless	
Wi-Fi/Bluetooth (optional)	2.4GHz & 5GHz dual-band Wi-Fi and Bluetooth with antenna. • 2.4GHz Wi-Fi: Compatible with IEEE 802.11 b/g/n • 5GHz Wi-Fi: Compatible with IEEE 802.11 a/n/ac • The Bluetooth supports 2402MHz ~ 2480MHz frequency

4G (optional)	Connect with various 4G LTE modules through the Mini PCIe interface, with antenna.
	• EC20-CE Module (China/India)
	  ◦ 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)
	  ◦ 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)
	  ◦ 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)
	  ◦ LTE-FDD: B1/B3/B7/B8/B20/B28A
	  ◦ LTE-TDD: B38/B40/B41
	  ◦ WCDMA: B1/B8
	  ◦ GSM/EDGE: B3/B8

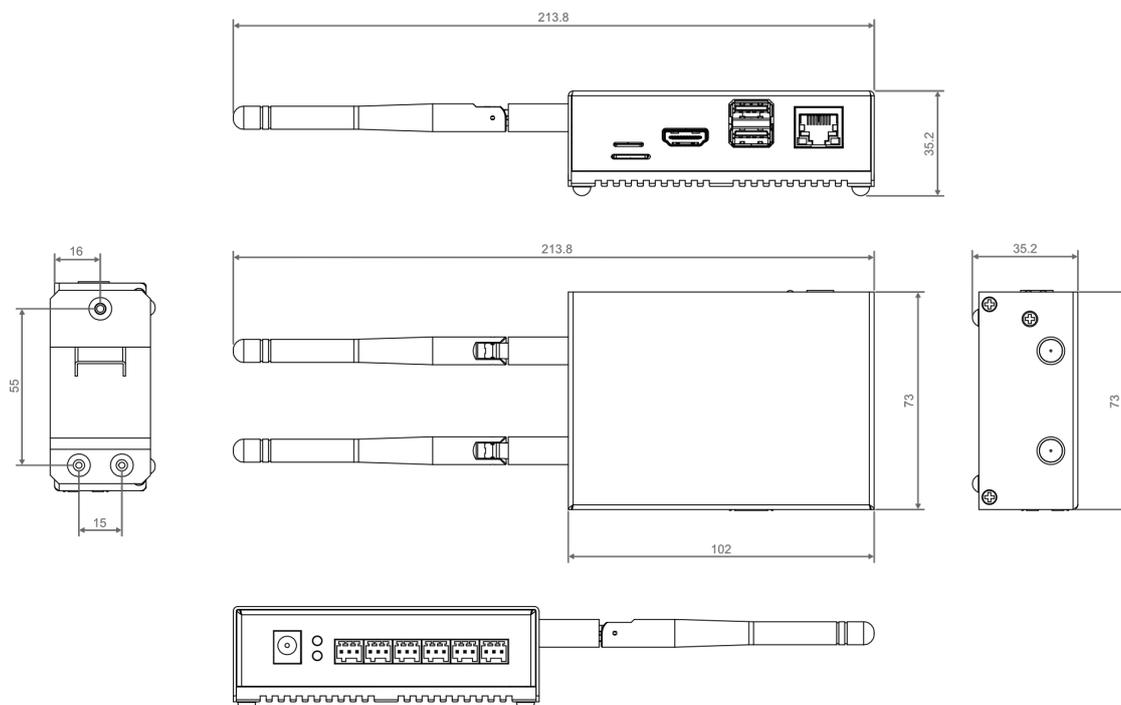| Environmental & Regulatory	
Operating Temperature	-25°C ~ 60°C
Storage Temperature	-25°C ~ 60°C
Ambient humidity	5% ~ 95% (non-condensing)

Certifications	• 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

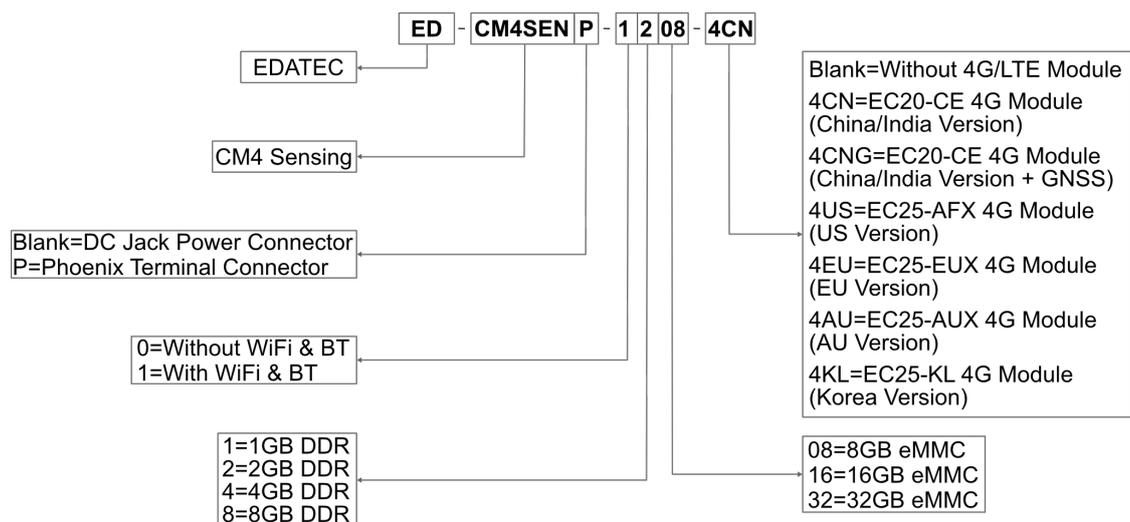| Environmental & Regulatory	
	◦ EN 55032/EN 55035
	◦ EN 301 489-1/EN 301 489-3/EN 301 489-17/EN 301 489-52
	◦ EN 301 328/EN 301 440/EN 301 511/EN 301 908-1/EN 301 908-2

System Diagram

Dimensions

Unit: mm

Ordering Code

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ED - CM4SEN P - 1 2 08 - 4CN
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EDATEC

CM4 Sensing

Blank=DC Jack Power Connector
P=Phoenix Terminal Connector

0=Without WiFi & BT
1=With WiFi & BT

1=1GB DDR
2=2GB DDR
4=4GB DDR
8=8GB DDR

Blank=Without 4G/LTE Module
4CN=EC20-CE 4G Module
(China/India Version)
4CNG=EC20-CE 4G Module
(China/India Version + GNSS)
4US=EC25-AFX 4G Module
(US Version)
4EU=EC25-EUX 4G Module
(EU Version)
4AU=EC25-AUX 4G Module
(AU Version)
4KL=EC25-KL 4G Module
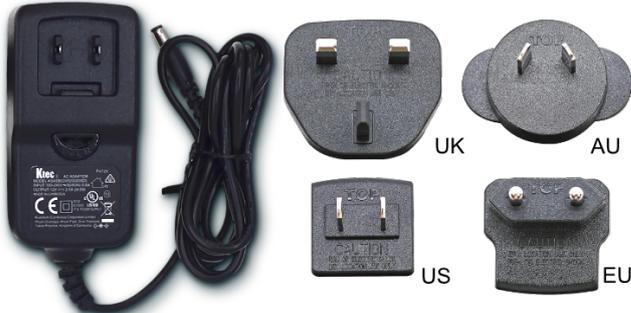(Korea Version)

08=8GB eMMC
16=16GB eMMC
32=32GB eMMC

Example
P/N: **ED-CM4SEN-1208-4CN**
Configuration: Industrial Computer Based on Raspberry Pi CM4, with DC jack power connector,
Wi-Fi & Bluetooth, 4G (EC20-CE Module), 2GB DDR, 8GB eMMC, 4 x RS485, 1 x CAN and 1 x RS232.

Optional Accessory

You can choose a power adapter according to actual needs.

Model	Description	Picture
ED-PSU1202-UK	100~240VAC to12VDC/2A Adapter, with UK AC plug, 5.5mm DC plug	
ED-PSU1202-US	100~240VAC to 12VDC/2A Adapter, with US AC plug, 5.5mm DC plug	UK AU US EU
ED-PSU1202-AU	100~240VAC to 12VDC/2A Adapter, with AU AC plug, 5.5mm DC plug	
ED-PSU1202-EU	100~240VAC to 12VDC/2A Adapter, with EU AC plug, 5.5mm DC plug	
ED-PSU1202-UK-2.5P	100~240VAC to12VDC/2A Adapter, with UK AC plug, 2.5mm Pitch Phoenix	UK AU US EU
ED-PSU1202-US-2.5P	100~240VAC to 12VDC/2A Adapter, with US AC plug, 2.5mm Pitch Phoenix	

Model	Description	Picture
ED-PSU1202-AU-2.5P	100~240VAC to 12VDC/2A Adapter, with AU AC plug, 2.5mm Pitch Phoenix	
ED-PSU1202-EU-2.5P	100~240VAC to 12VDC/2A Adapter, with EU AC plug, 2.5mm Pitch Phoenix	
NOTE: Each model contains only one of the UK, US, AU and EU plugs.		

Packing List

- 1 x ED-CM4SEN Unit
- [WiFi/BT Version - optional] 1 x 2.4GHz/5GHz WiFi/BT Antenna
- [4G Version - optional] 1 x 4G/LTE Antenna