



ED-IPC3200

Datasheet

by EDA Technology Co., Ltd

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ED-IPC3200

Industrial Computer Based on Raspberry Pi CM5

- Broadcom BCM2712 Quad-core Cortex-A76 (ARM v8) 64-bit 2.4GHz SoC
- Up to 16GB LPDDR4 RAM and 64GB eMMC storage
- Optional CODESYS Control for Raspberry Pi MC SL
- Supports mSATA SSD expansion storage
- 3 x Gigabit Ethernet Ports, 1 x USB 3.0, 2 x USB 2.0, 1 x HDMI
- 2.4GHz and 5GHz Wi-Fi, Bluetooth and 4G LTE
- Wide voltage power input range of DC 9V~36V with reverse polarity protection, overvoltage protection and overcurrent protection
- Integrated supercapacitor backup power (optional), RTC, Watch Dog, EEPROM and encryption chip
- Wide temperature range of -25°C~60°C for working environment
- High-quality metal case, compatible with DIN-rail installation



Specifications

System	
CPU	Broadcom BCM2712, quad core Arm Cortex-A76 (ARM v8) 64-bit SoC @ 2.4GHz
VPU	H.265 (HEVC), up to 4Kp60 decode
GPU	OpenGL ES 3.1 & Vulkan 1.2
Memory	Options for 2GB, 4GB, 8GB, 16GB LPDDR4-4267 SDRAM
Storage	Options for 16GB, 32GB, 64GB eMMC storage Optional mSATA SSD expansion storage

Software	
Operating System	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. Note: Only ED-IPC3220 contains this interface.
1000M Ethernet (ETH0)	1 x adaptive 10/100/1000M ethernet port, RJ45 connector. It can be used to access the network.

Front I/O	
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, supporting up to 5Gbps transmission rate.

Rear I/O	
SD Card Slot	1 x Micro SD card slot, functionally reserved only.
SIM Card Slot	1 x Nano SIM card slot, using to install Nano SIM card for getting 4G signal.
Micro USB	1 x Micro USB port, supporting 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, supporting up to 480Mbps transmission rate.
Antenna	2 x SMA ports (optional), using 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, using to check the status of device power-on and power-off.
4G	1 x green 4G indicator, using to check the status of 4G signal.
ACT	1 x green system indicator, using 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 Pin Header, 2x20-Pin 2.54mm pitch, using to lead out the GPIO ports of CM5.
mSATA	1 x mSATA, mini PCIe connector, which supports to connect 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.
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.

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

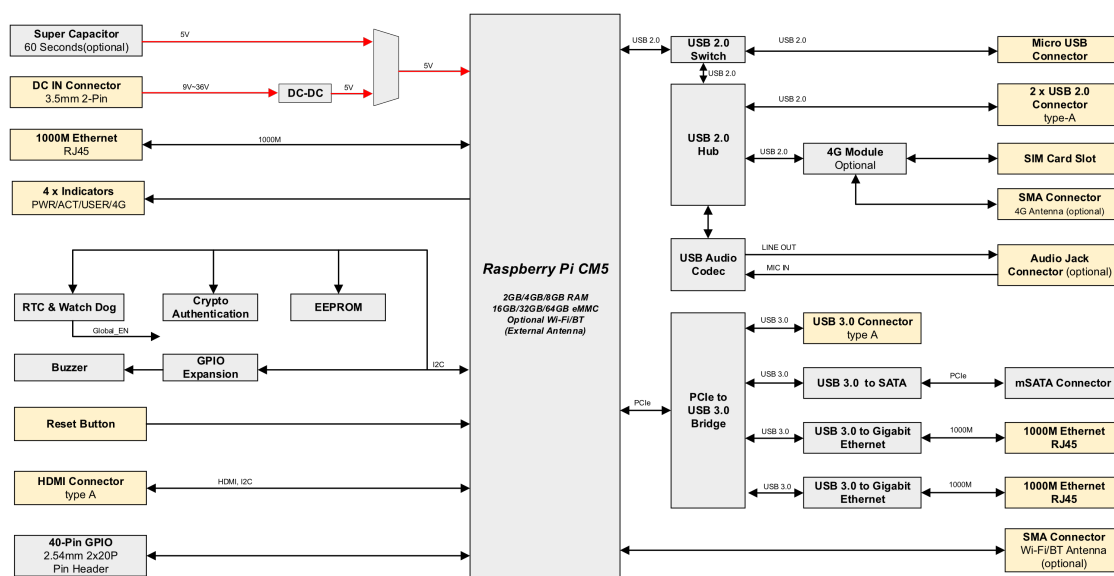
Electrical Characteristics	
Input Voltage	9V ~ 36V DC
Power Consumption	24W (Max)

Mechanical Characteristics	
Dimensions	143mm x 100mm x 34mm (WxDxH, DIN-rail bracket and antenna are not included.)
Weight	About 750g
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 ◦ GPS/GLONASS/BDS/Galileo/QZSS (optional) • EC25-AFX Module (North America) ◦ LTE-FDD: B2/B4/B5/B12/B13/B14/B66/B71 ◦ LTE-TDD ◦ WCDMA: B2/B4/B5 ◦ GSM/EDGE ◦ GPS/GLONASS/BDS/Galileo/QZSS • 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/B8GSM/EDGE: B2/B3/B5/B8 ◦ GPS/GLONASS/BDS/Galileo/QZSS • 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

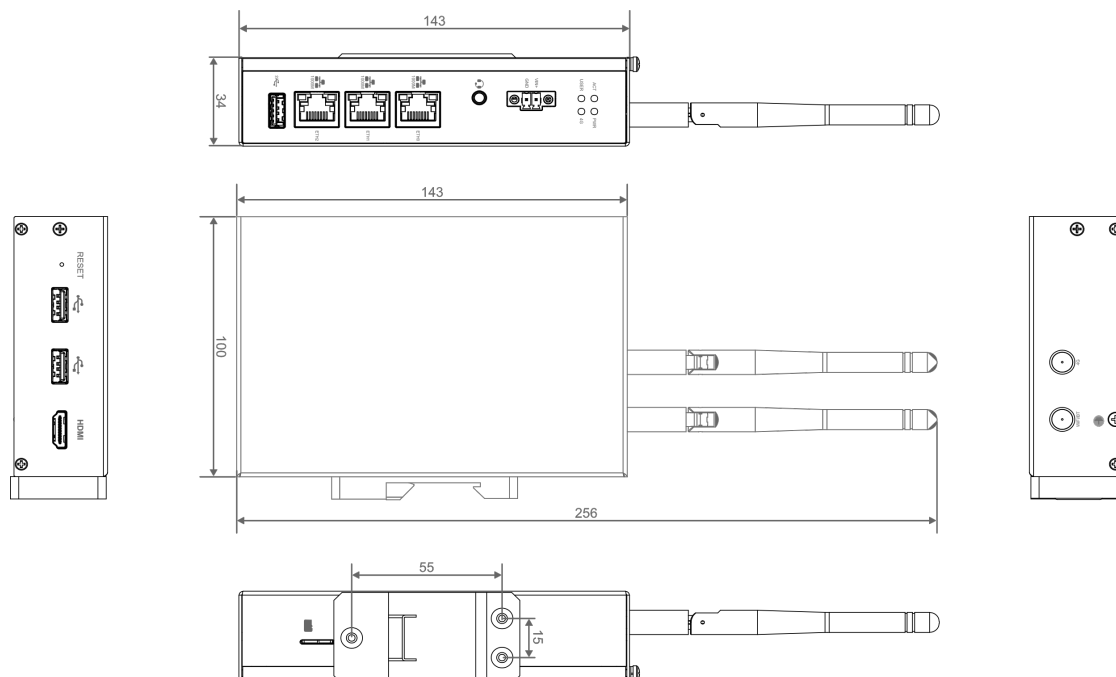
Wireless	
	◦ GPS/GLONASS/BDS/Galileo/QZSS • EC25-EFA Module (Europe/Middle East/Africa/South-East Asia) ◦ LTE-FDD: B1/B3/B7/B8/B20/B28 ◦ LTE-TDD: B38/B40/B41 ◦ WCDMA: B1/B5/B8 ◦ GSM/EDGE: B3/B8 ◦ GPS/GLONASS/BDS/Galileo/QZSS
Environmental	
Operating Temperature	-25°C ~ 60°C
Storage Temperature	-25°C ~ 60°C
Ambient humidity	5% ~ 95% (non-condensing)

System Diagram

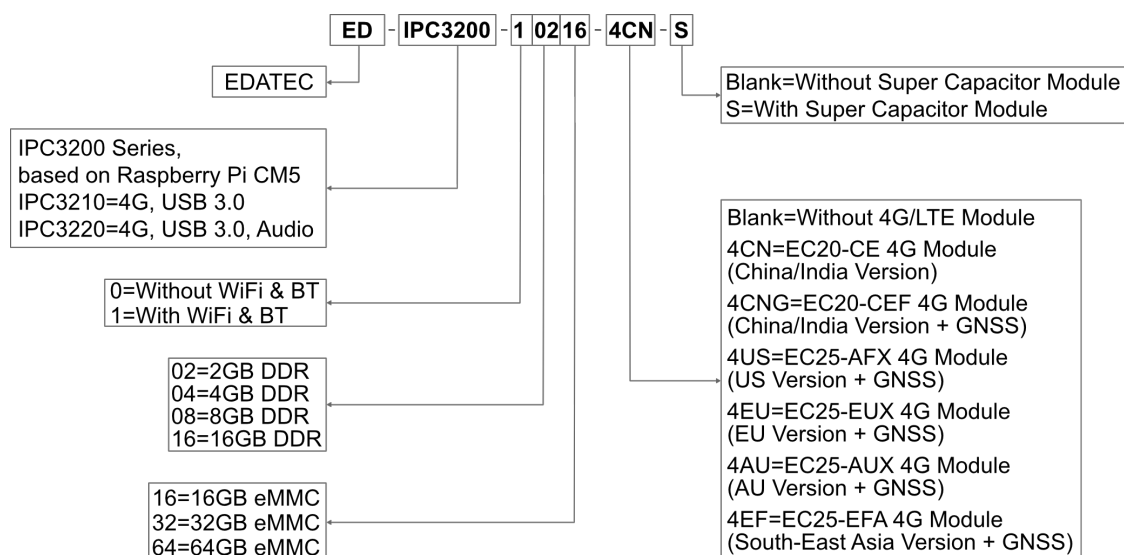


Dimensions

Unit: mm



Ordering Code



Example

P/N: **ED-IPC3210-10216-4CN-S**

Configuration: Industrial Computer Based on Raspberry Pi CM5, 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	

Model	Description	Picture
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-IPC3200 Unit
- [WiFi/BT Version - optional] 1 x 2.4GHz/5GHz Wi-Fi/BT Antenna
- [4G Version - optional] 1 x 4G/LTE Antenna