

# ED-HMI2320-156C

## 15.6-inch Industrial Panel PC Based on Raspberry Pi CM4

- ◆ 15.6" TFT, resolution 1920x1080, multi-point capacitive touch screen
- ◆ Broadcom BCM2711, quad core 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
- ◆ Support HDMI+LVDS touchscreen dual displays, HDMI supports up to 4Kp60
- ◆ 1 x Gigabit Lan (dual Lans are optional)
- ◆ 2 x USB 3.0, 2 x USB 2.0(optional) & 3 x RS232
- ◆ 2.4GHz and 5GHz dual-band 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 supply, optional), RTC, Watch Dog, EEPROM and crypto authentication
- ◆ High-quality metal case, compatible with desktop 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	<ul style="list-style-type: none"> <li>• Options for 0GB, 8GB, 16GB, 32GB eMMC storage</li> <li>• Micro SD card (user storage expansion)</li> <li>• Options for 128G and 256G mSATA SSD</li> </ul>

Software	
Operating System	<ul style="list-style-type: none"> <li>• Raspberry Pi OS(Desktop) 32-bit</li> <li>• Raspberry Pi OS(Lite) 32-bit</li> <li>• Raspberry Pi OS(Desktop) 64-bit</li> <li>• Raspberry Pi OS(Lite) 64-bit</li> </ul>

Side I/O	
Power	1 x DC IN, DC Jack connector, with reverse polarity protection, overvoltage protection, and overcurrent protection. It supports 9V~36V input.
HDMI	1 x HDMI port, type A connector, which compatibles with HDMI 2.1 standard and supports 4K 60Hz.
COM	3 x RS232 port, DB9 male connector, using the 2, 3 and 5 pins, the corresponding signal is defined as RX/TX/GND.
USB 3.0	2 x USB 3.0 ports, type A connector, support up to 5Gbps.
1000M Ethernet	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.
USB 2.0	2 x USB 2.0 ports, type A connector, which support up to 480Mbps.
MIC IN	1 x MIC Input, 3.5mm audio jack connector(red), which can connect to microphone.
LINE OUT	1 x Audio Output, 3.5mm audio jack connector(green), stereo audio output.
Antenna (optional)	2 x SMA ports, use to connect 4G antenna and Wi-Fi/BT antennas.

Buttons and Indicators	
Power Switch	<p>1 x Power button, with led indicator</p> <ul style="list-style-type: none"> <li>• Press the button for a short time to start up the device and the indicator will light up.</li> <li>• Press the button for a long time to shut down the device forcibly, then the indicator will be off.</li> </ul>

Internal I/O	
Speaker	1 x PA output, built-in two 8Ω 2W stereo speakers.
SD Card Slot	1 x Micro SD card slot, which is used to install SD card for storing user data.
SIM Card Slot	1 x Standard SIM card slot, which is used to install SIM card for getting 4G signal.
mSATA	2 x mSATA ports, Mini PCIe connector, which is used to connect 4G Module and mSATA SSD. The user can select 128G or 256G mSATA SSD.

Expansion Performance	
Auto-boot	It supports automatic power-on function by default.
EEPROM	It 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	Ensure that the system clock is not affected by device power-off. <b>Note: A CR2032 battery is provided by default in China.</b>
Buzzer	A tip or an abnormality can be configured according to actual application, which realizes the alarm function.
Watch Dog	Realize the hardware Watch Dog based on the RTC alarm function to ensure the reliability of device.

<b>LCD</b>	
LCD Size	15.6" TFT
Resolution	1920 x 1080
Screen Ratio	16:9
Display Colors	16.7MB
Active Area	344.16mm(H) x 193.59mm(V)
Backlight	E-LED
MTBF	50000h
Pixel Pitch	0.05975mm x 0.17925mm
Contrast Ratio	3000:1
Response Time	5ms
Viewing Angle (CR≥10)	89°(L)/89°(R)/89°(U)/89°(D)
Input Type	LVDS

<b>Touch Screen</b>	
Type	Multi-point Capacitive Touch Screen
Multi-touch	10 points
Transmittance	85%±5%
Communication Interface	USB
Touches	More than 50 million times
Resolution	4096 x 4096
Surface Hardness	Not less than 6H

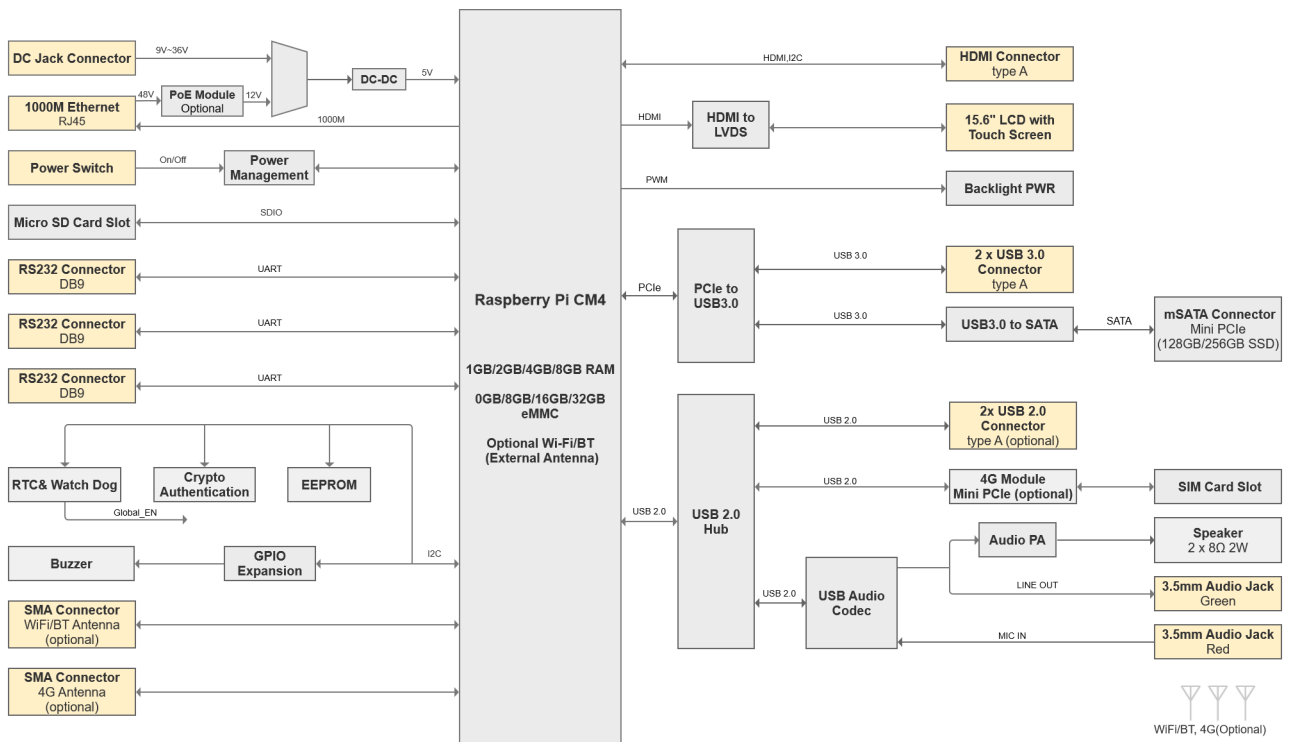
<b>Electrical Characteristics</b>	
Input Voltage	9V ~ 36V DC
Power Consumption	60W(Max)

<b>Mechanical Characteristics</b>	
Dimensions	417mm x 266.8mm x 56.3mm (W x H x D, mounting bracket is not included.)
Weight	4.05Kg
Installation	Desktop installation

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>• <b>EC20-CN Module (China/India)</b>            LTE FDD: B1/B3            LTE TDD: B38/B39/B40/B41            TDSCDMA: B34/B39            WCDMA: B1            CDMA 1x/EVDO: BC0            GSM: 900/1800MH</li> <li>• <b>EC25-AFX Module (North America)</b>            LTE-FDD: B2/B4/B5/B12/B13/B14/B66/B71            LTE-TDD            WCDMA: B2/B4/B5            GSM/EDGE</li> <li>• <b>EC25-AUX Module (Latin America/Australia/New Zealand)</b>            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</li> <li>• <b>EC25-EUX Module (Europe/Middle East/Africa/Thailand)</b>            LTE-FDD: B1/B3/B7/B8/B20/B28A            LTE-TDD: B38/B40/B41            WCDMA: B1/B8            GSM/EDGE: B3/B8</li> </ul>

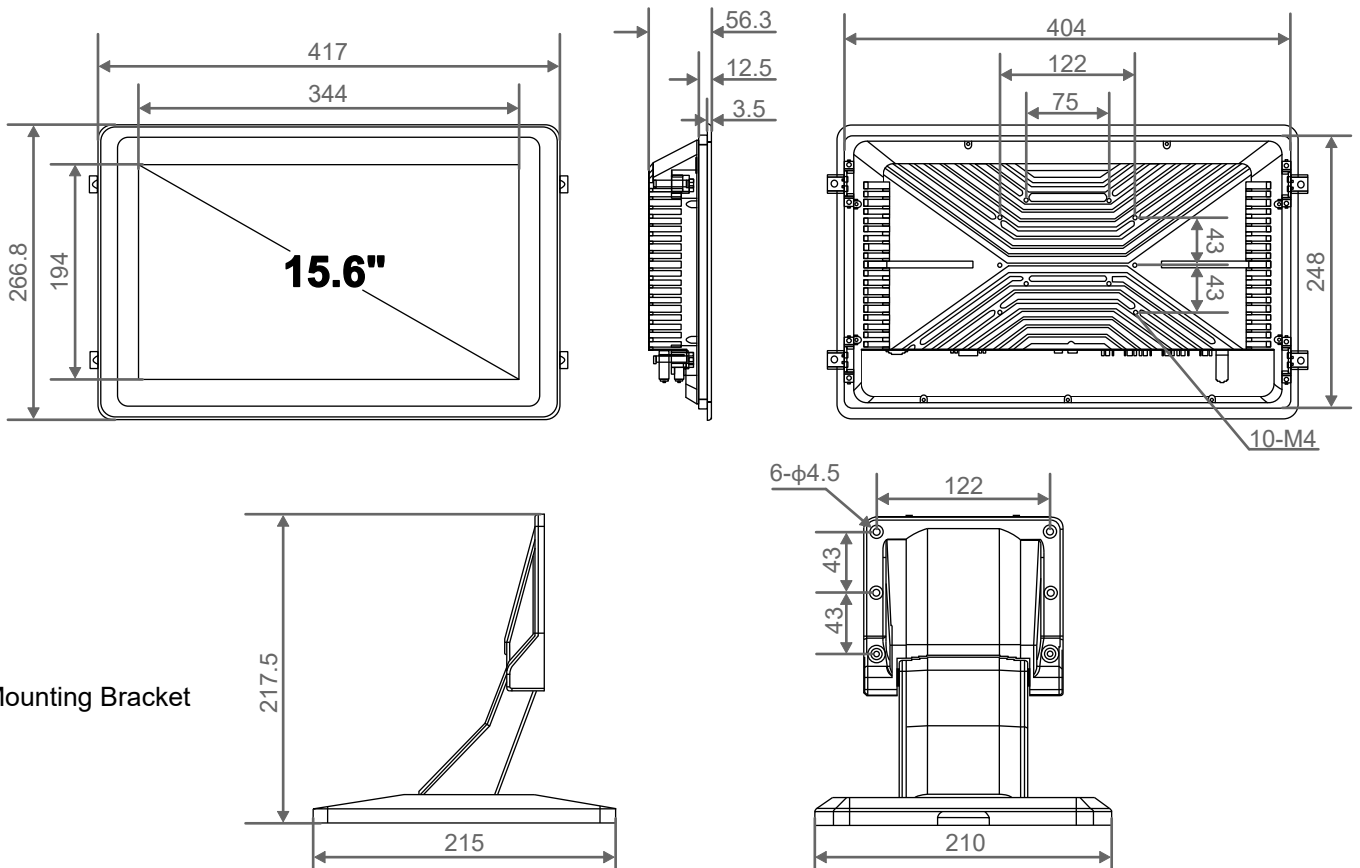
Environmental & Regulatory	
Operating Temperature	-25°C ~ 60°C
Storage Temperature	-25°C ~ 60°C
Ambient Humidity	5% ~ 95%(non-condensing)
Certifications	<ul style="list-style-type: none"> <li>• <b>FCC</b> FCC 47 CFR Part 15 Subpart B</li> <li>• <b>CE</b> EN IEC 62368-1/EN IEC 62311/EN IEC 61000-3-2/EN IEC 61000-3-3 EN 55032/EN 55035/ EN 301 489-1/EN 301 489-3/EN 301 489-17/EN 301 489-52 EN 301 328/EN 301 440/EN 301 511/EN 301 908-1/EN 301 908-2</li> </ul>

## System Diagram



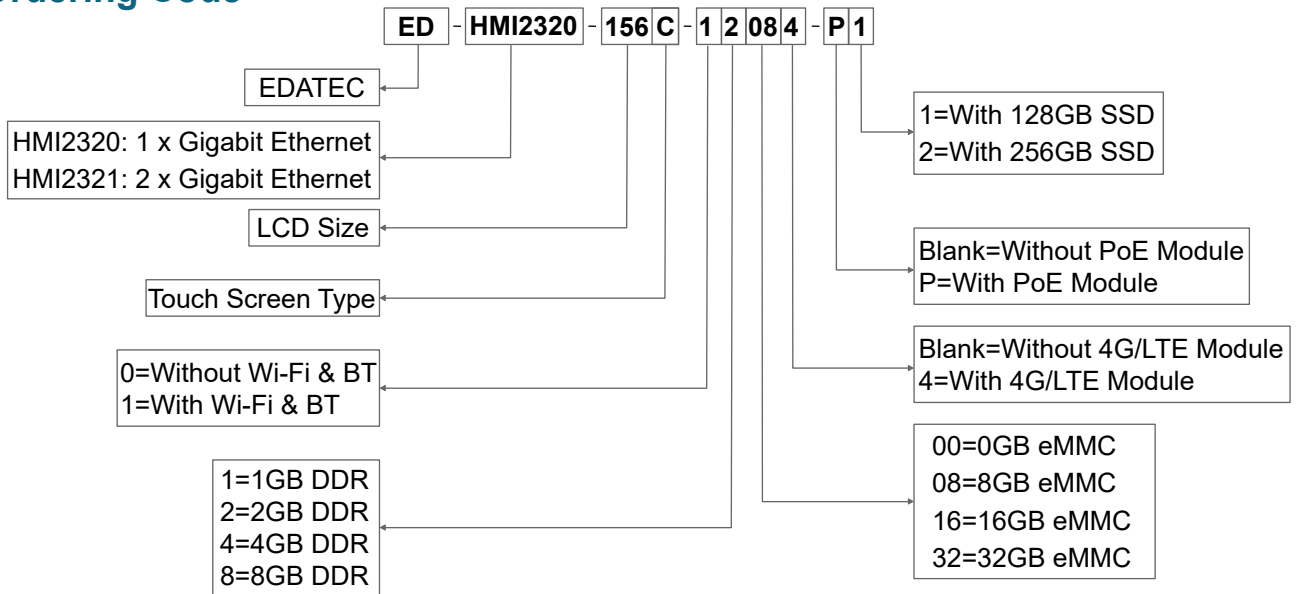
## Dimensions

Unit: mm



Mounting Bracket

## Ordering Code



### Example

P/N: **ED-HMI2320-156C-12084-P1**

Configuration: 15.6-inch Industrial Panel PC Based on Raspberry Pi CM4, with Wi-Fi & Bluetooth, 4G, 2GB DDR, 8GB eMMC, 1 x Gigabit Ethernet, PoE Module and 128GB SSD.

## Packing List

- 1 x ED-HMI2320-156C Unit
- 1 x Mounting Bracket (including 6xM4 screws)
- **[Wi-Fi/BT Version - optional]** 1 x 2.4GHz/5GHz Wi-Fi/BT Antenna
- **[4G Version - optional]** 1 x 4G/LTE Antenna