

# ED-HMI2020-101C

## 10.1 inch Industrial Panel PC based on Raspberry Pi CM4

- ◆ 10.1" WSVGA TFT, resolution 1280x800, 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
- ◆ Lan supports up to 1Gbps
- ◆ 2.4GHz and 5GHz dual-band Wi-Fi and Bluetooth
- ◆ Support micro-SD Card; integrated RTC, EEPROM and encryption chip
- ◆ Wide voltage power input range of DC 9V~28V with reverse polarity protection, overvoltage protection, overcurrent protection and surge protection
- ◆ High-quality metal case, compatible with Embedded 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 8GB, 16GB, 32GB eMMC storage</li> <li>• Micro SD card (user storage expansion)</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>

Front I/O	
Camera	Built-in 800M front camera

Side I/O	
Power	1 x DC IN, DC Jack connector, supports 9V~28V input.
Audio	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> <li>When no headphone is connected, the audio output switches to the speaker.</li> </ul>
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.
SD Card Slot	1 x Micro-SD card slot, uses to install SD card for storing user data.
HDMI	1 x HDMI port, type A connector. It compatibles with HDMI2.1 standard and supports 4K 60Hz.
USB 2.0	2 x USB2.0 ports, type A connector, support up to 480Mbps.
Antenna	1 x SMA port, uses to connect Wi-Fi/BT antenna.
Speaker	1 x PA output, dual channel stereo audio output, built-in two 4 5W speakers.

Buttons and Indicators	
Reset	1 x Reset button, which can reset the device.
Rpiboot	1 x Rpiboot button, uses to flash eMMC for the system.
PWR	1 x red power indicator, uses to check the status of device power-on and power-off.
ACT	1 x green system indicator, uses to check the working status of device.

Expansion Performance	
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	Ensure that the system clock is not affected by device power-off. <b>Note: A CR1220 battery is provided by default in China.</b>
Buzzer	A tip or an abnormality can be configurated according to actual application, which realizes the alarm function.

Expansion I/O	
12V 1A	1 x DC OUT, 2-Pin 2.0mm spacing connector, support 12V 1A output. These pins are defined as GND/12V, reserve to provide power supply for extended LCD.
40-Pin GPIO	1 x GPIO, 2x20-Pin 2.54mm pitch header, uses 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>Compatibles with expansion modules, and reserves to connect expansion accessories.</li> </ul>
HDMI	1 x FPC HDMI, 40-pin 0.5mm spacing FPC connector, which can be reserved to connect extended LCD, supports USB/I2C touch screen and backlight adjustment.
USB	1 x USB 2.0, 5-pin 1.27mm spacing FPC connector, supports to expand the USB2.0 interface.

<b>LCD</b>	
LCD Size	10.1" WSVGA TFT
Resolution	1280x800
Colors	16.7MB
Active Area	135.36mm(H) x 216.576mm(V)
Backlight	LED
MTBF	>30000h
Pixel Pitch	0.169mm x 0.169mm
Luminance	350cd/m <sup>2</sup>
Contrast Ratio	1000:1
Response Time	30ms
Viewing Angle (H/V)	80°/80°

<b>Touch Screen</b>	
Type	Multi-point Capacitive Touch Screen
Transmittance	85%
Connection Method	COF
Controller Interface	I2C
Driver Support	Linux
Multi-touch	10 points
Surface Hardness	6H

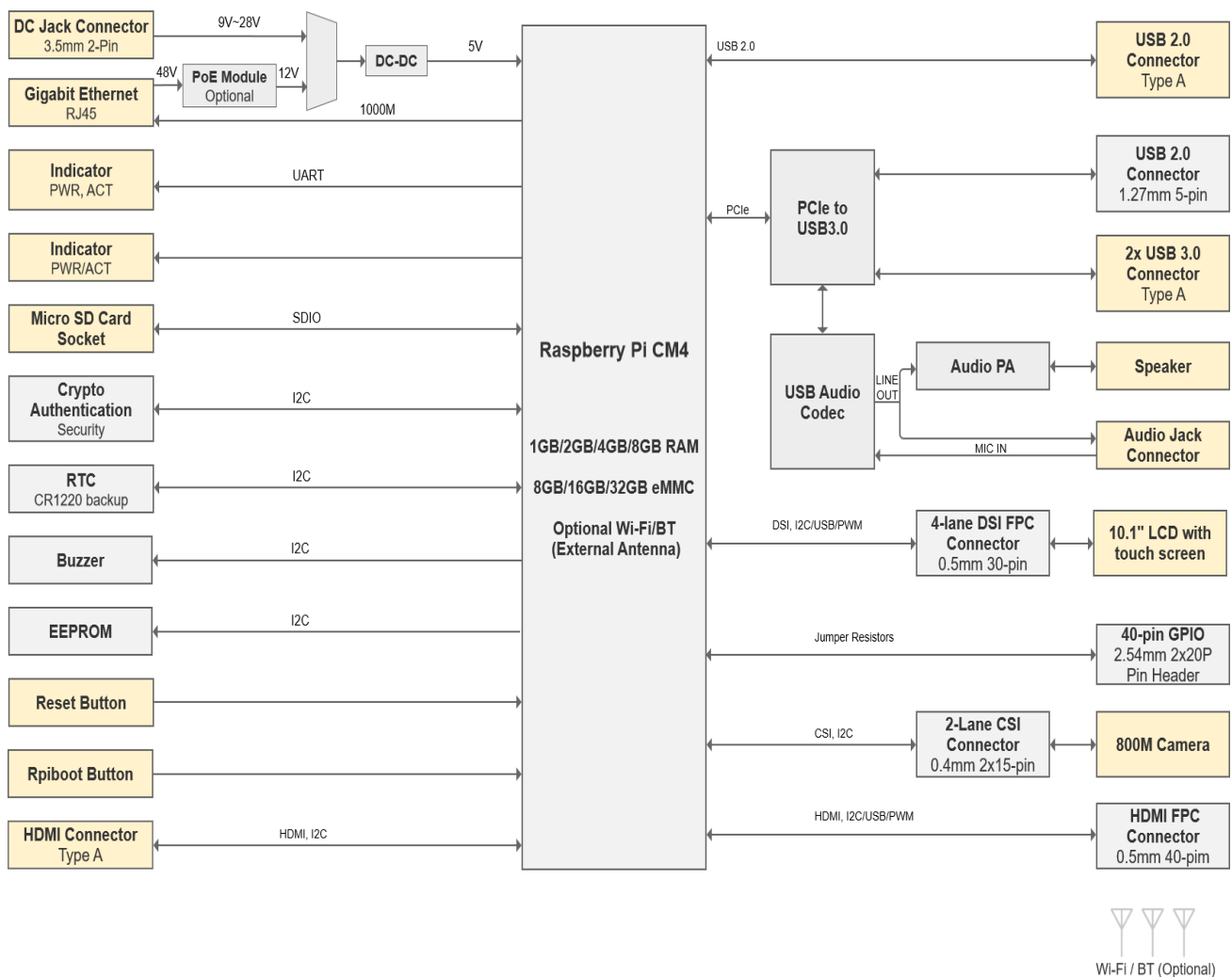
<b>Electrical Characteristics</b>	
Input Voltage	9V ~ 28V DC
Maximum Power Consumption	20W

<b>Mechanical Characteristics</b>	
Dimensions	263mm x 177mm x 40mm (WxDxH, antenna is not included.)
Weight	1.1Kg
Installation	Embedded installation, including front installation and rear installation.

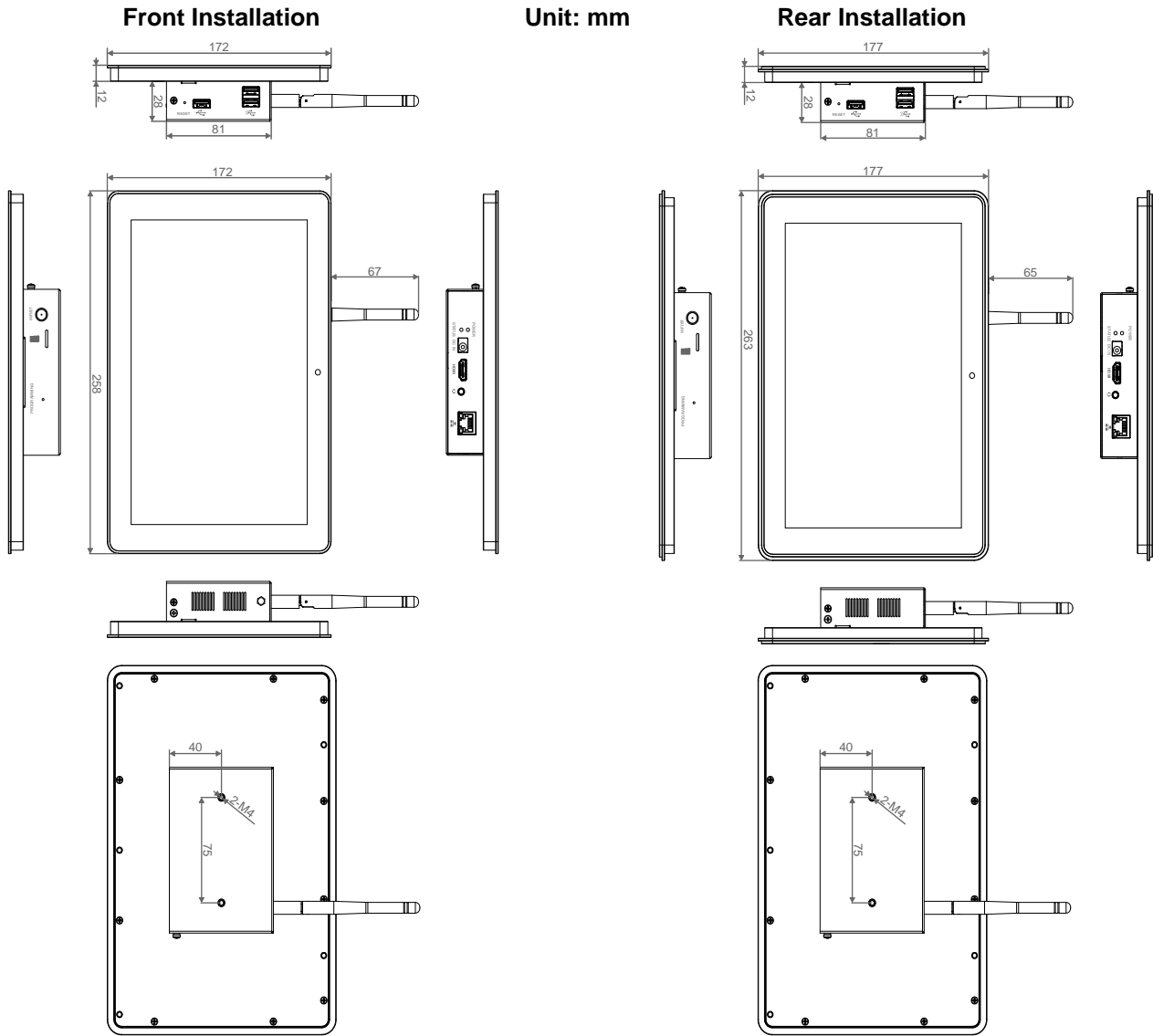
<b>Wireless</b>	
Wi-Fi (optional)	2.4GHz and 5GHz dual-band Wi-Fi with antenna. <ul style="list-style-type: none"> <li>• 2.4GHz Wi-Fi: Compatible with IEEE 802.11 b/g/n</li> <li>• 5GHz Wi-Fi: Compatible with IEEE 802.11 a/n/ac</li> </ul>
Bluetooth (optional)	Bluetooth 5.0 with antenna, compatible with 2402MHz ~ 2480MHz frequency.

Environmental & Regulatory	
Operating Temperature	0°C ~ 50°C
Storage Temperature	-10°C ~ 60°C
Ambient Humidity	20% ~ 90% (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

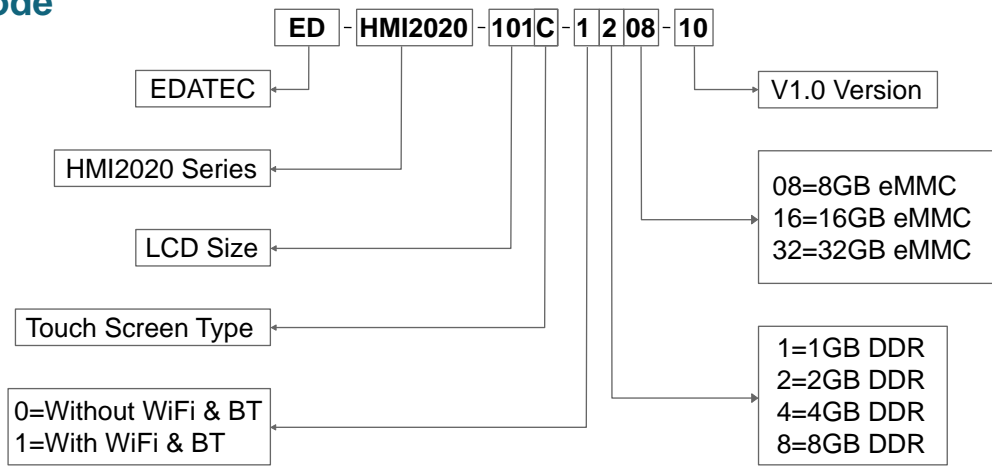


# Dimensions



Unit: mm

# Order Code



### Example

P/N : **ED-HMI2020-101C-1208-10**  
 Configuration : 10.1 inch Industrial Panel Computer based on Raspberry Pi CM4, with Wi-Fi & Bluetooth, 2GB DDR, 8GB eMMC.

## Packing List

- 1 x ED-HMI2020-101C
- **[WiFi/BT Version - optional]** 1 x 2.4GHz/5GHz WiFi/BT Antenna