

# OFT-10WR1

10.1" Open Frame Tablet

## Quick Reference Guide

2<sup>nd</sup> Ed – 12 January, 2021

### Copyright Notice

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## **Federal Communication Commission Interference Statement**

**THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.**

**Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:**

- **Reorient or relocate the receiving antenna.**
- **Increase the separation between the equipment and receiver.**
- **Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.**
- **Consult the dealer or an experienced radio/TV technician for help.**

**Notice:**

- (1) A Unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.**
- (2) Use only shielded cables to connect I/O devices to this equipment.**
- (3) Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

## **FCC RF Radiation Exposure Statement**

This Wireless LAN radio device has been evaluated under FCC Bulletin OET 65 and found compliant to the requirements as set forth in CFR 47 Sections 2.1091, 2.1093, and 15.247 (b) (4) addressing RF Exposure from radio frequency devices. The radiated output power of this Wireless LAN device is far below the FCC radio frequency exposure limits. Nevertheless, this device shall be used in such a manner that the potential for human contact during normal operation is minimized. When nearby persons has to be kept to ensure RF exposure compliance, in order to comply with RF exposure limits established in the ANSI C95.1 standards, the distance between the antennas and the user should not be less than 20 cm.

**WARNING**

**“CAUTION – Use suitable mounting apparatus to avoid risk of injury.”**

**“CAUTION – This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures”**

**“CAUTION –Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.”**

**“CAUTION - Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country.”**

**“WARNING – To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.”**

# Content

|                                                     |           |
|-----------------------------------------------------|-----------|
| <b>1. Getting Started .....</b>                     | <b>7</b>  |
| 1.1 Safety Precautions .....                        | 7         |
| 1.2 Packing List .....                              | 7         |
| 1.3 System Specifications .....                     | 8         |
| 1.4 System Overview.....                            | 11        |
| 1.4.1 Top View .....                                | 11        |
| 1.4.2 Bottom View .....                             | 11        |
| 1.5 System Dimensions.....                          | 12        |
| 1.5.1 Front and Rear side .....                     | 12        |
| 1.5.2 Installing Extend Brackets.....               | 13        |
| 1.6 Flush Mounting Concept .....                    | 14        |
| 1.7 Panel Mounting .....                            | 15        |
| 1.8 Wall Mounting Concept.....                      | 23        |
| 1.9 Wall Mounting .....                             | 24        |
| <b>2. Hardware Configuration.....</b>               | <b>32</b> |
| 2.1 Architecture Overview—Block Diagram .....       | 33        |
| 2.2 ACP-RK3288 Overviews.....                       | 34        |
| 2.3 ACP-RK3288 Connector list.....                  | 36        |
| 2.4 Ethernet LED behavior.....                      | 37        |
| 2.5 Evaluation Cable Kit (Optional) .....           | 37        |
| 2.6 ACP-RK3288 Jumpers & Connectors settings.....   | 38        |
| 2.6.1 AT/ATX Input power select (JSATX1) .....      | 38        |
| 2.6.2 Touch button board connector (JTB1) .....     | 38        |
| 2.6.3 General purpose I/O connector (JGPIO1).....   | 39        |
| 2.6.4 RS-485 connector (J485_COM2).....             | 39        |
| 2.6.5 USB Camera connector (JCAM_DMIC1).....        | 40        |
| 2.6.6 A-MIC connector (JAMIC1) .....                | 40        |
| 2.6.7 DC Power-in connector (DCIN2) .....           | 41        |
| 2.6.8 Speaker connector (JSPK1).....                | 41        |
| 2.6.9 USB Touch connector (JUTP1).....              | 42        |
| 2.6.10 I2C connector (JSEN1) .....                  | 42        |
| 2.6.11 I2C Touch Panel connector (JITP1).....       | 43        |
| 2.6.12 Debug connector (JDBG1) .....                | 43        |
| 2.6.13 Serial port 1 connector (JCOM1) .....        | 44        |
| 2.6.14 MCU Firmware upgrade connector (JMCMU1)..... | 44        |

**OFT-10WR1**

2.6.15 RTC Battery connector (JBAT1) ..... 45

2.6.16 Battery connector (JBAT2)..... 45

2.6.17 LVDS connector (JLVDS1)..... 46

2.6.18 Power Button (PWRBTN1)..... 47

2.6.19 MIPI Port (JMIPI1)..... 48

# 1. Getting Started

## 1.1 Safety Precautions

### Warning!



Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

### Caution!



Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

## 1.2 Packing List

- 1 x OFT-10WR1 Open Frame Tablet
- Power cord / Power adapter (Optional)
- Screw M3-4mm x1pc, ziplock bag No.00 40x60mm x1pc



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If any of the above items is damaged or missing, contact your retailer.

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## 1.3 System Specifications

| Board Specification     |                                                                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mother Board            | ACP-RK3288                                                                                                                                                       |
| CPU                     | RockChip RK3288W Cortex-A17 Quad Core 1.6GHz                                                                                                                     |
| CPU Cooler (Type)       | NA                                                                                                                                                               |
| Memory                  | 2GB DDR3L                                                                                                                                                        |
| Storage                 | 16GB eMMC                                                                                                                                                        |
| Power Supply            | DC in 12V~24V<br>Or Powered LAN 802.3AT                                                                                                                          |
| Speaker                 | 1 x Speaker header, pitch 2.0mm                                                                                                                                  |
| Microphone              | 1 x A-MIC header, pitch 2.0mm<br>1 x D-MIC interface                                                                                                             |
| Sensor                  | 1 x I2C header, 5pinx2, pitch 2.0mm<br>1 x G sensor                                                                                                              |
| Operating System        | Android 8.1                                                                                                                                                      |
| Wifi                    | 1 x 802.11 b/g/n Wireless LAN                                                                                                                                    |
| Storage                 |                                                                                                                                                                  |
| eMMC                    | 16 GB                                                                                                                                                            |
| Panel & Touch           |                                                                                                                                                                  |
| LCD Panel               | 10" 1280 x 800                                                                                                                                                   |
| Luminance               | 350nits or 1000nits                                                                                                                                              |
| Touch Screen            | PCAP, 10 points touch                                                                                                                                            |
| Internal I/O Connectors |                                                                                                                                                                  |
| USB OTG                 | Micro USB x 1                                                                                                                                                    |
| USB                     | JCAM1 5P x 2, pitch 2.0mm                                                                                                                                        |
| USB Touch               | JUTP1 5P x 1, pitch 2.0mm                                                                                                                                        |
| Micro SD                | Micro SD x 1                                                                                                                                                     |
| M.2 Socket              | M.2 B-Key (3042) x 1                                                                                                                                             |
| Touch Button            | JTB1 6P x 2, pitch 2.0mm                                                                                                                                         |
| DC in 2                 | 4P x 1 (12 ~ 24V), pitch 2.0mm                                                                                                                                   |
| Battery 2               | 7P x 1, pitch 2.0mm<br>Note: You need a 19v or a 24v power adapter to fully charge the battery.<br>You cannot fully charge the battery with a 12v power adapter. |
| LVDS 1                  | 40P x1, pitch 0.5mm                                                                                                                                              |
| Analog MIC              | JAMIC1 3P x 1, pitch 2.0mm                                                                                                                                       |
| Speaker                 | JSPK1 4P x 1, pitch 2.0mm                                                                                                                                        |
| sensor                  | JSEN1 I2C x 2, 5P x 2, pitch 2.0mm                                                                                                                               |



|                                            |                                                                                                                                                                                                                        |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Touch Panel</b>                         | JITP1 6P x 1, pitch 0.5mm                                                                                                                                                                                              |
| <b>Console Debug</b>                       | JDBG1 3P x 1, pitch 2.0mm                                                                                                                                                                                              |
| <b>RS232</b>                               | JCOM1 5P x 1, pitch 2.0mm                                                                                                                                                                                              |
| <b>RS485</b>                               | JCOM2 5P x 2, pitch 2.0mm                                                                                                                                                                                              |
| <b>GPIO</b>                                | JGPIO1 10P x 2, 16bit, pitch 1.0mm                                                                                                                                                                                     |
| <b>RTC Battery</b>                         | JBAT1 2P, pitch 1.25mm                                                                                                                                                                                                 |
| <b>External I/O</b>                        |                                                                                                                                                                                                                        |
| <b>DC in Power jack</b>                    | 1 x Power Jack                                                                                                                                                                                                         |
| <b>USB Port</b>                            | 2 x USB Type A Host                                                                                                                                                                                                    |
| <b>Video Port</b>                          | 1 x HDMI                                                                                                                                                                                                               |
| <b>Audio Port</b>                          | 1 x Headphone Jack for Line out                                                                                                                                                                                        |
| <b>Expansion Slots</b>                     | 1 x Micro SD slot                                                                                                                                                                                                      |
| <b>Reset</b>                               | 1 x Reset                                                                                                                                                                                                              |
| <b>LAN</b>                                 | 1 x 10/100/1000 Ethernet                                                                                                                                                                                               |
| <b>Mechanical</b>                          |                                                                                                                                                                                                                        |
| <b>Power Type</b>                          | 12V ~ 24V wide voltage DC input                                                                                                                                                                                        |
| <b>Power Connector Type</b>                | DC jack<br>Or Powered LAN                                                                                                                                                                                              |
| <b>Dimension</b>                           | 252x165.87x32.65 (mm)                                                                                                                                                                                                  |
| <b>Weight</b>                              | 700g                                                                                                                                                                                                                   |
| <b>Color</b>                               | Metallic                                                                                                                                                                                                               |
| <b>Fanless</b>                             | Yes                                                                                                                                                                                                                    |
| <b>OS Support</b>                          | Android 8.1                                                                                                                                                                                                            |
| <b>Reliability</b>                         |                                                                                                                                                                                                                        |
| <b>EMI Test</b>                            | CE<br>FCC class A                                                                                                                                                                                                      |
| <b>Safety</b>                              | EN62368-1 (LVD)                                                                                                                                                                                                        |
| <b>Dust and Rain Test</b>                  | NA                                                                                                                                                                                                                     |
| <b>Random Vibration Operation</b>          | 1. PSD: 0.00454G <sup>2</sup> /Hz, 1.5 Grms<br>2. Operation mode<br>3. Test Frequency : 5-500Hz<br>4. Test Axis : X,Y and Z axis<br>5. 30 minutes per each axis<br>6. IEC 60068-2-64 Test:Fh<br>7. Storage : CF or SSD |
| <b>Sine Vibration test (Non-operation)</b> | 1 Test Acceleration : 2G<br>2 Test frequency : 5~500 Hz<br>3 Sweep : 1 Oct/ per one minute. (logarithmic)<br>4 Test Axis : X,Y and Z axis                                                                              |

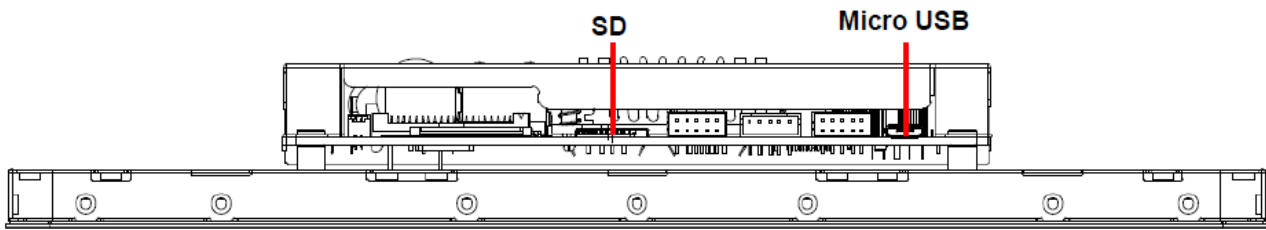
|                               |                                                                                                                                                                                                                                                                       |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | 5 Test time :30 min. each axis<br>6 System condition : Non-Operating mode<br>7. Reference IEC 60068-2-6 Testing procedures                                                                                                                                            |
| <b>Package vibration test</b> | 1. PSD: 0.026G <sup>2</sup> /Hz , 2.16 Grms<br>2. Non-operation mode<br>3. Test Frequency : 5-500Hz<br>4. Test Axis : X,Y and Z axis<br>5. 30 min. per each axis<br>6. IEC 60068-2-64 Test:Fh                                                                         |
| <b>Shock Test</b>             | 1. Wave form : Half Sine wave<br>2. Acceleration Rate : 10g for operation mode<br>3. Duration Time : 11ms<br>4. No. of Shock : Z axis 300 times<br>5. Test Axis: Z axis<br>6. Operation mode<br>7. Reference IEC 60068-2-29 Testing procedures<br>Test Eb : Bump Test |
| <b>Package drop test</b>      | 1 One corner , three edges, six faces<br>2 ISTA 2A, IEC-60068-2-32 Test:Ed                                                                                                                                                                                            |
| <b>Mechanical Shock Test</b>  | 10Grms, IEC 60068-2-27, Half Sine, 11ms                                                                                                                                                                                                                               |
| <b>Operating Temperature</b>  | 0°C ~ 40°C                                                                                                                                                                                                                                                            |
| <b>Operating Humidity</b>     | 40°C @ 95% Relative Humidity, Non-condensing                                                                                                                                                                                                                          |
| <b>Storage Temperature</b>    | -20°C ~ 60°C                                                                                                                                                                                                                                                          |



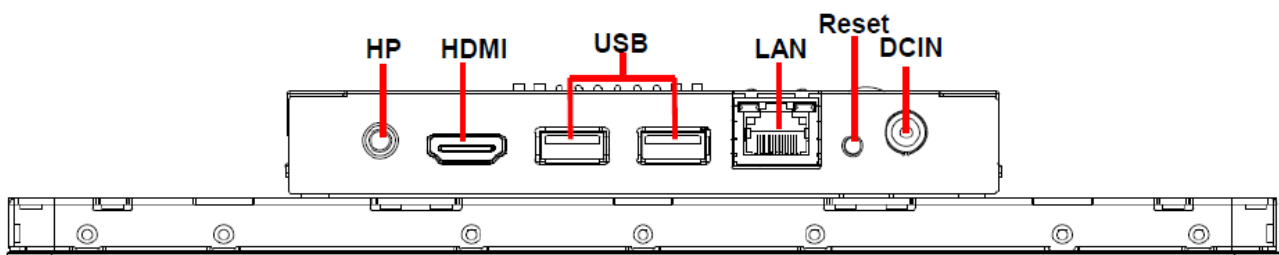
**Note:** Specifications are subject to change without notice.

## 1.4 System Overview

### 1.4.1 Top View



### 1.4.2 Bottom View

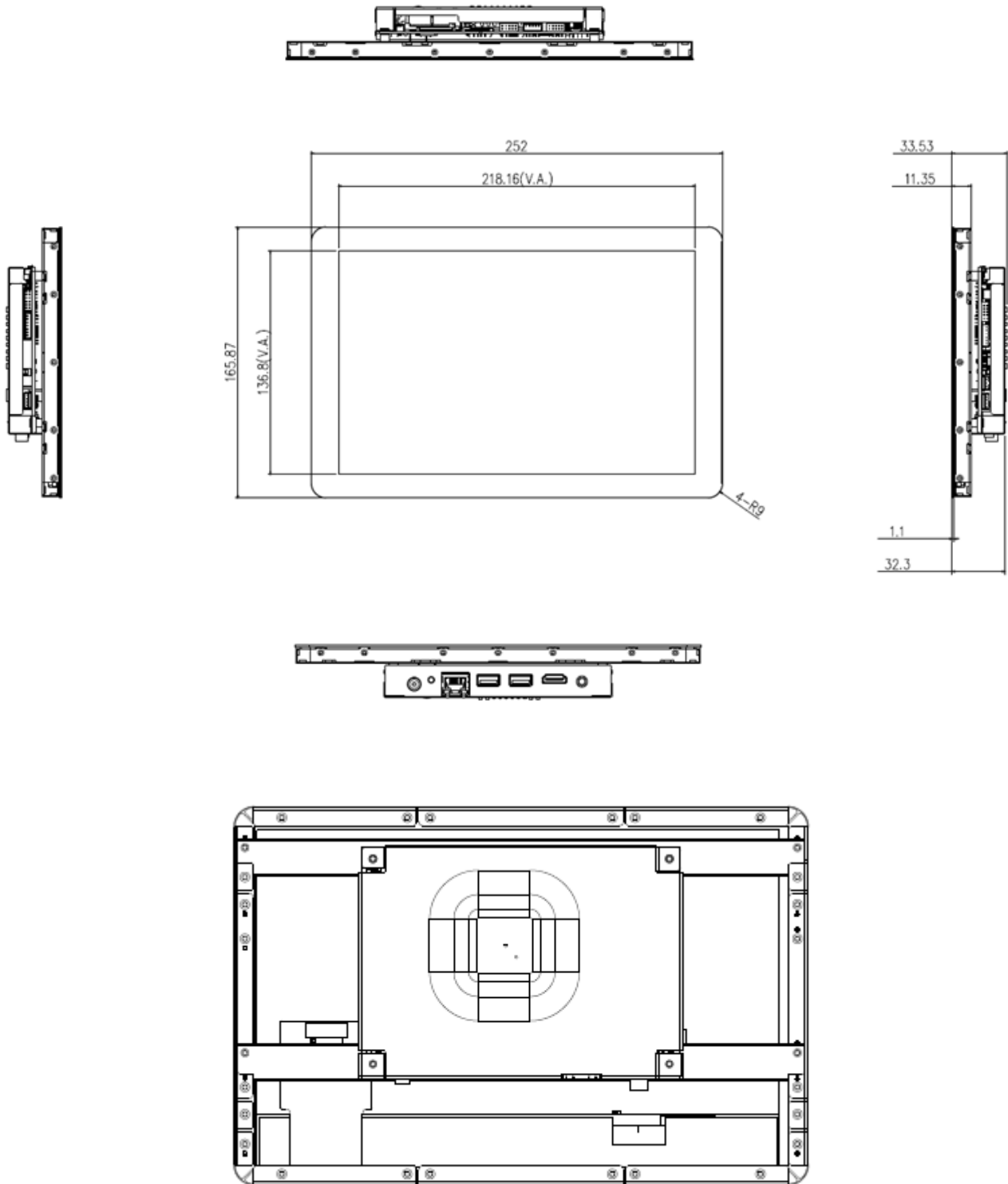


## Connectors

| Label     | Function                 | Note |
|-----------|--------------------------|------|
| SD        | Micro SD card slot       |      |
| Micro USB | Micro USB connector      |      |
| HP        | Audio line-out connector |      |
| HDMI      | HDMI connector           |      |
| USB       | 2 x USB 2.0 connector    |      |
| LAN       | RJ-45 Ethernet           |      |
| Reset     | Reset button             |      |
| DCIN      | DC power-in connector    |      |

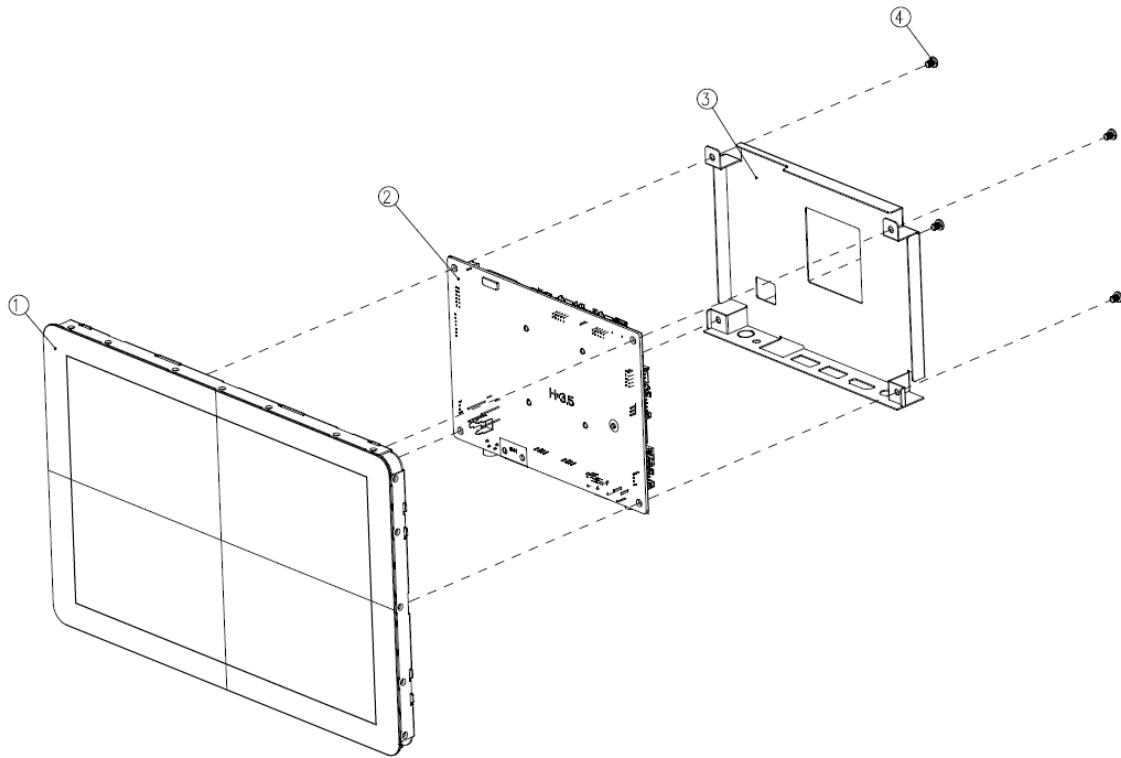
## 1.5 System Dimensions

### 1.5.1 Front and Rear side



(Unit: mm)

### 1.5.2 Installing Extend Brackets

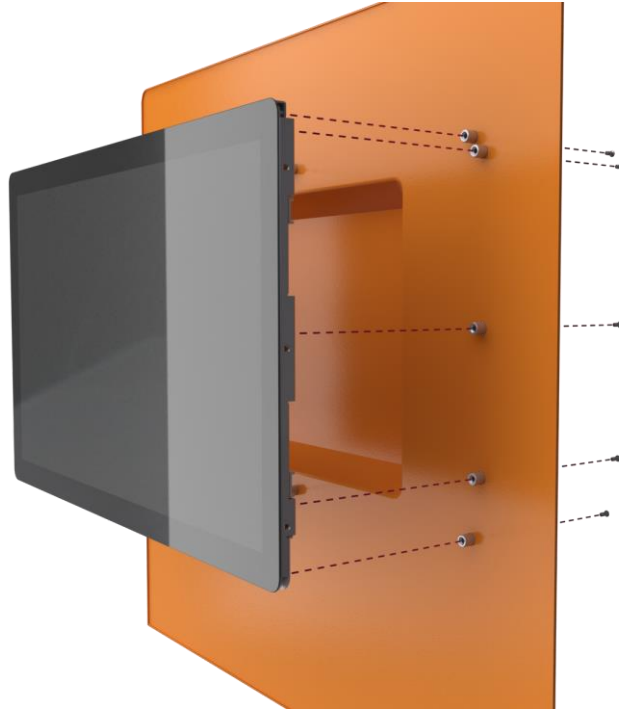


**Step1.** Locate brackets on both sides, matching the holes on the monitor.

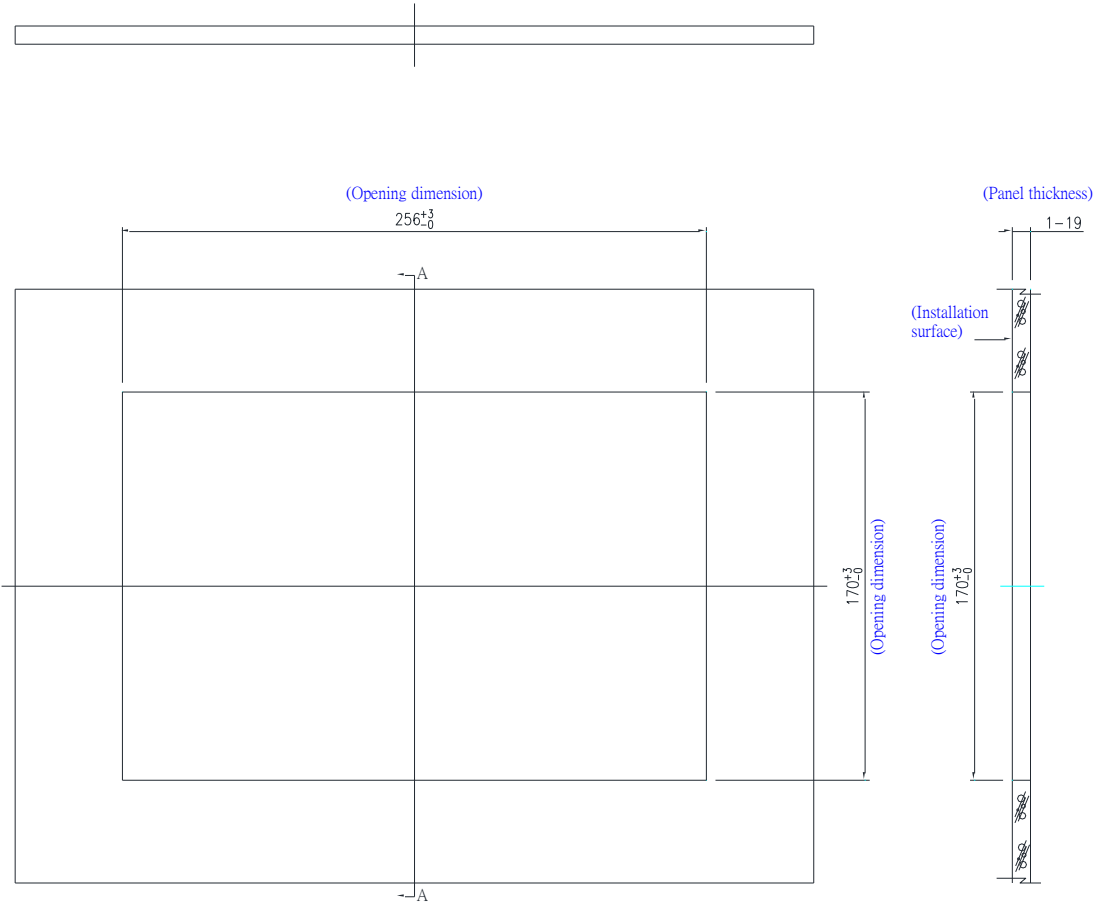
**Step2.** Insert and fasten 4 screws on each side of the monitor to secure Mounting brackets.

**Note:** Brackets sold separately.

## 1.6 Flush Mounting Concept

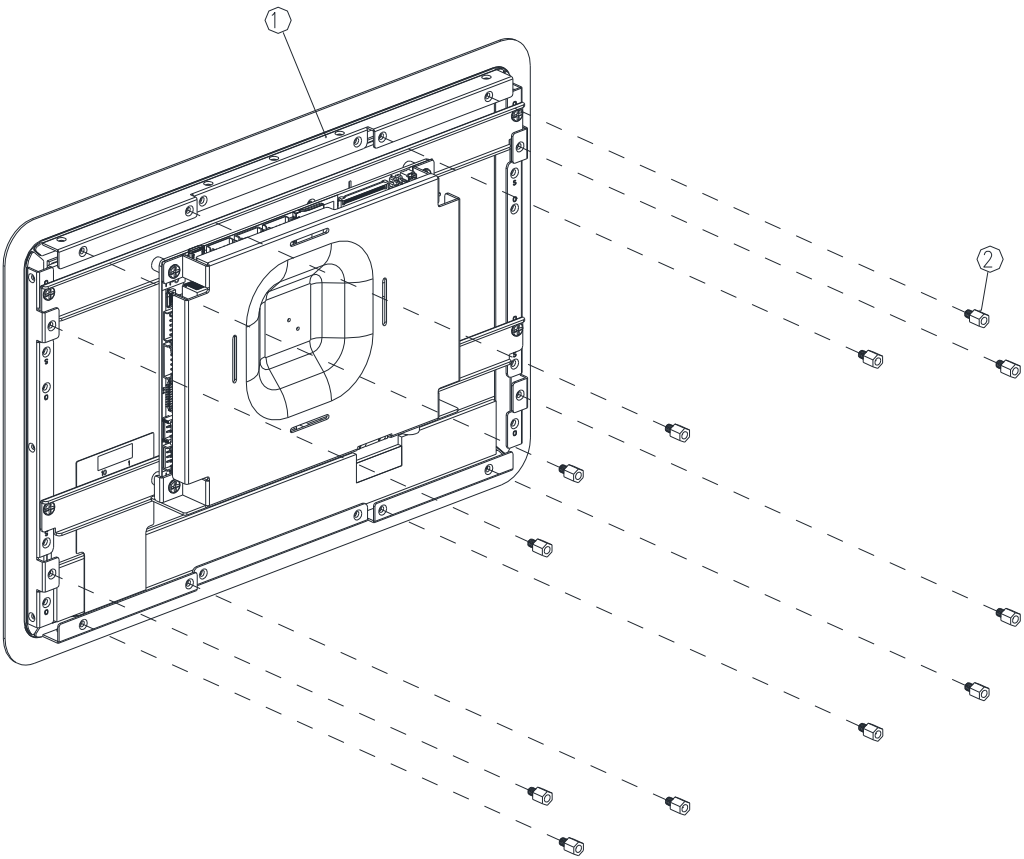


1.7 Panel Mounting



(Unit: mm)

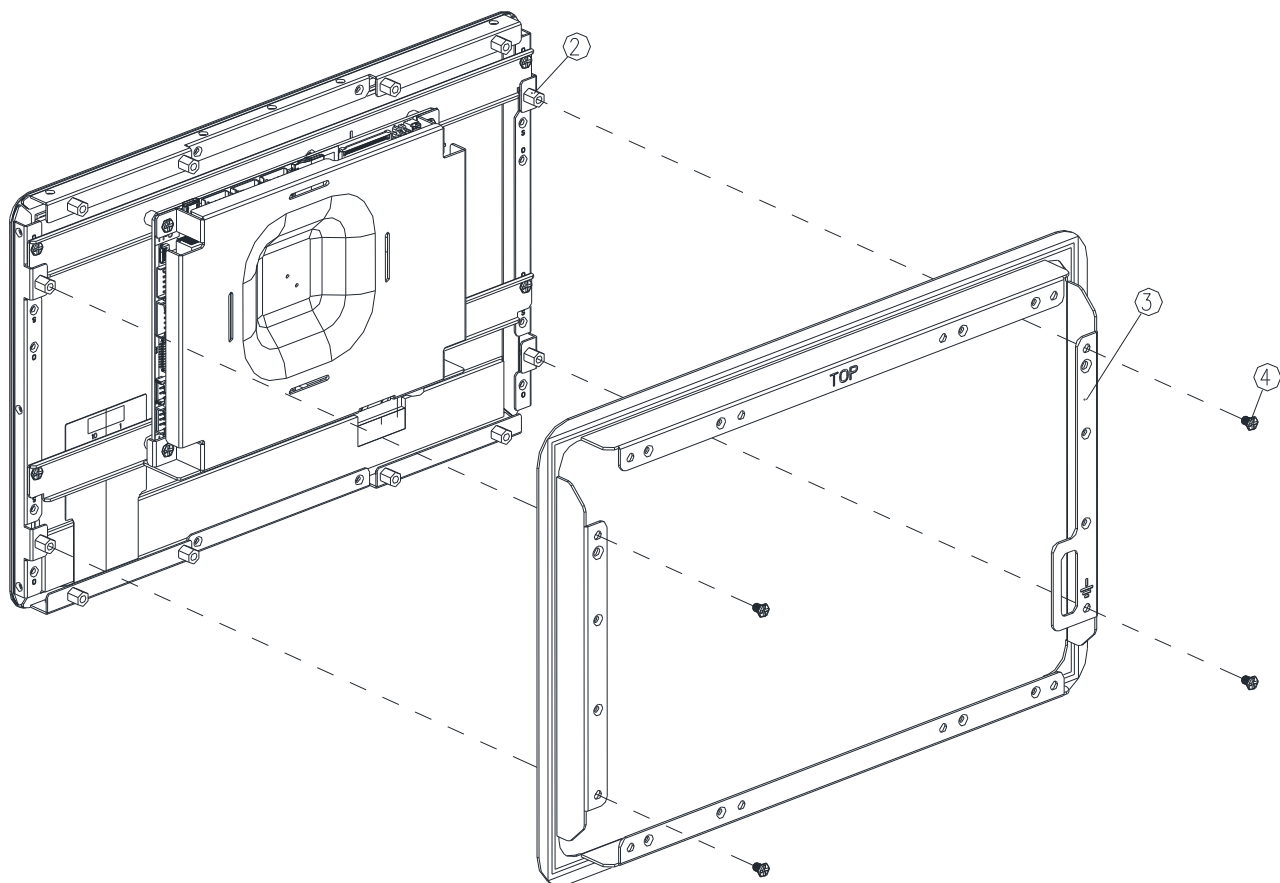
OFT-10WR1



- Step1-1.** Locate brackets on both sides, matching the holes on the monitor.
- Step1-2.** Insert and fasten 12 screws on each side of the monitor to secure Mounting brackets.

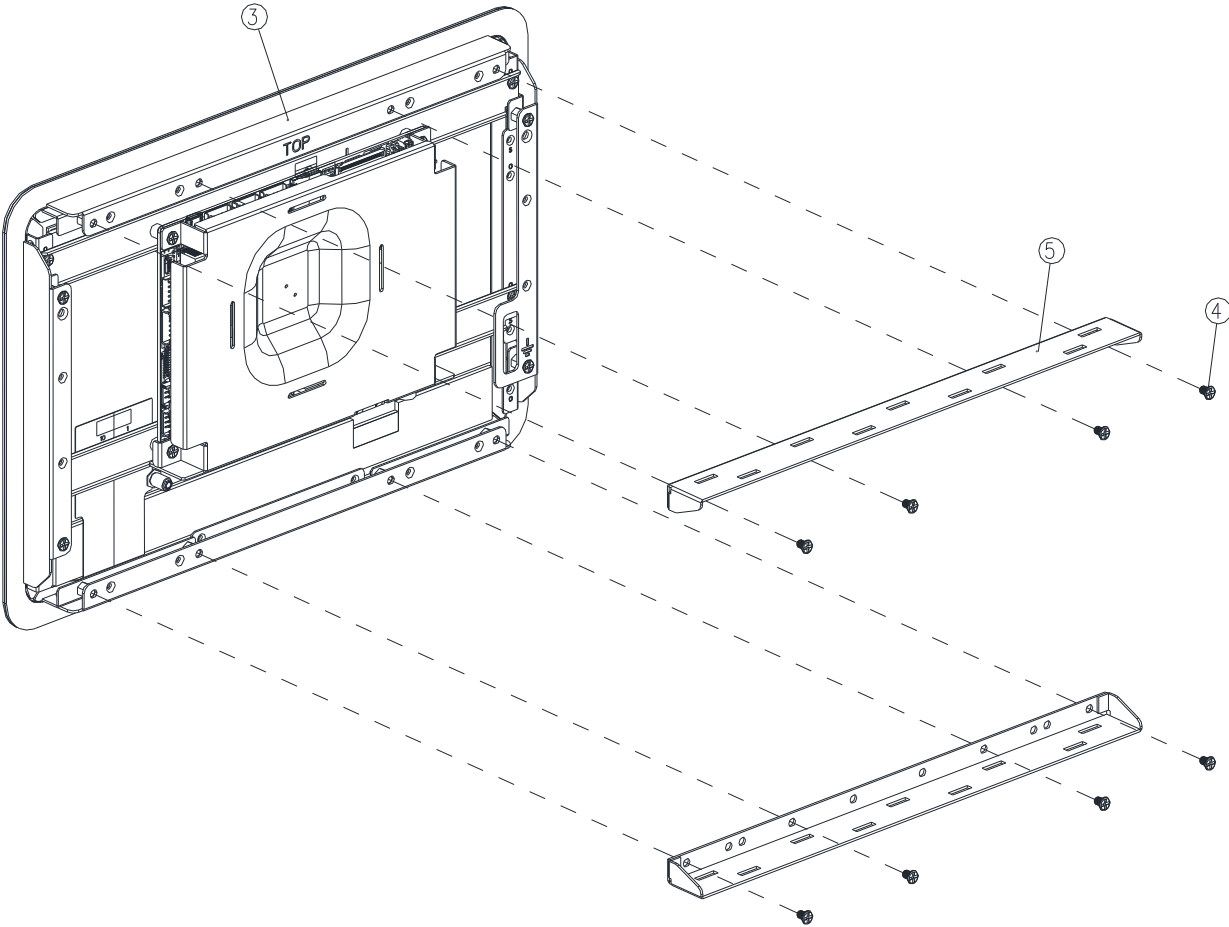
|      |              |          |
|------|--------------|----------|
| 2    | Hexagon Stud | 12       |
| 1    | OFT-10WR1    | 1        |
| Item | Part Name    | Quantity |





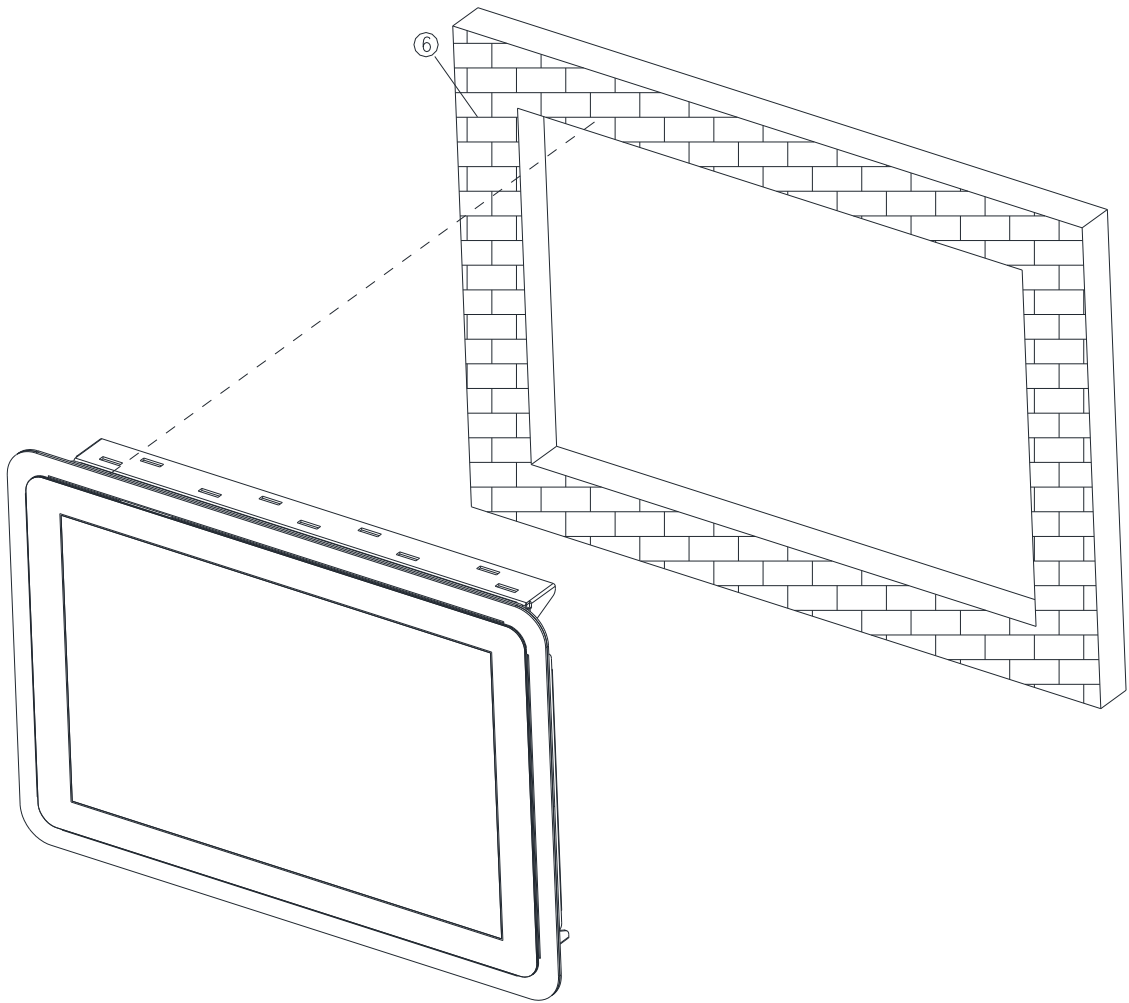
**Step2.** Insert and fasten 4 screws on each side of the monitor to secure Front bracket.

|      |               |          |
|------|---------------|----------|
| 4    | Screw         | 4        |
| 3    | Front Bracket | 1        |
| 2    | Hexagon Stud  | 4        |
| Item | Part Name     | Quantity |



**Step3.** Insert and fasten 8 screws to secure Bracket T/B.

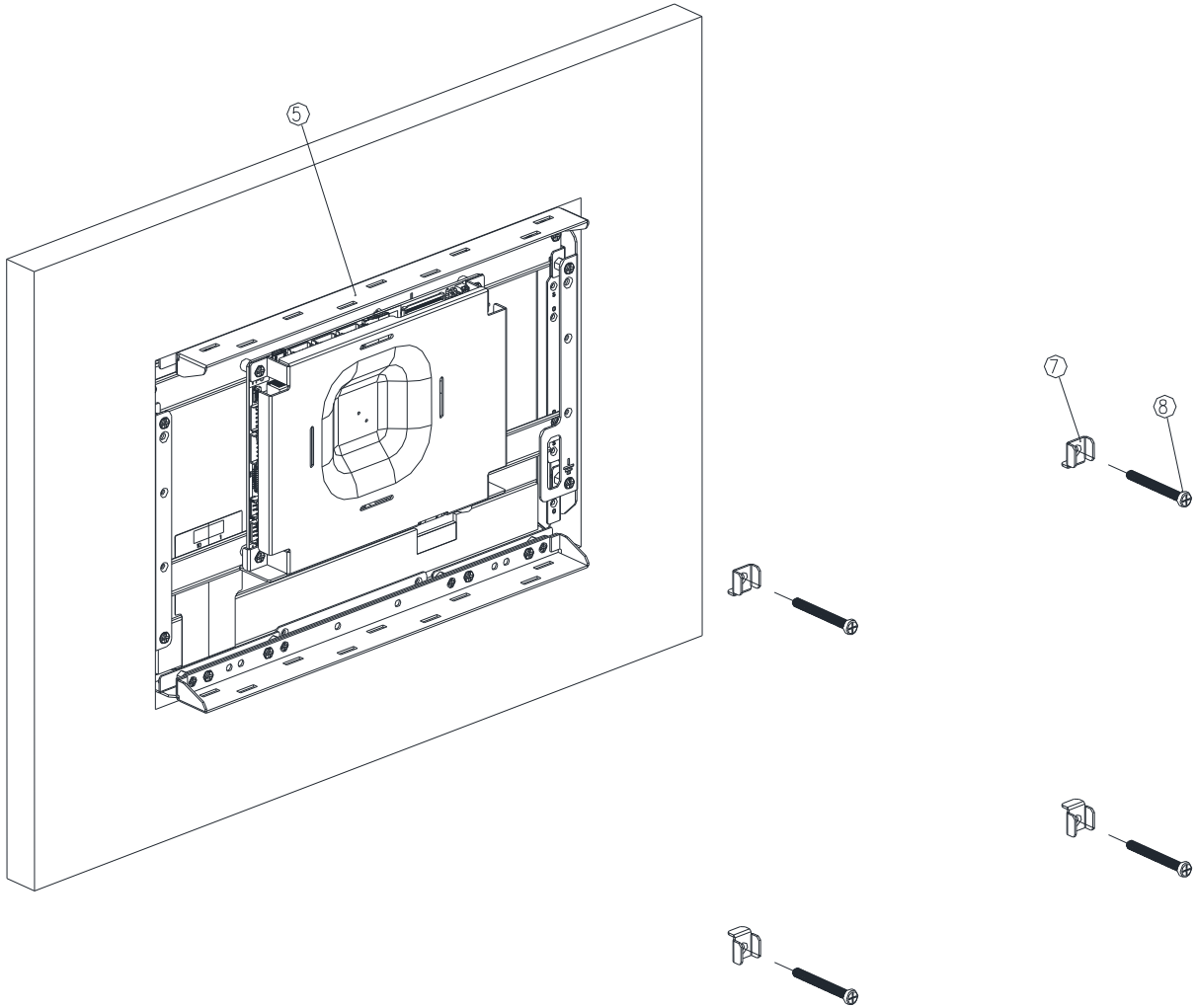
|      |               |          |
|------|---------------|----------|
| 5    | Bracket T/B   | 2        |
| 4    | Screw         | 8        |
| 3    | Front Bracket | 1        |
| Item | Part Name     | Quantity |



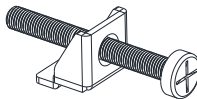
(Outside of the wall)

**Step4.** Insert OFT-10WR1 into the wall.

|      |           |          |
|------|-----------|----------|
| 6    | Wall      | 1        |
| Item | Part Name | Quantity |

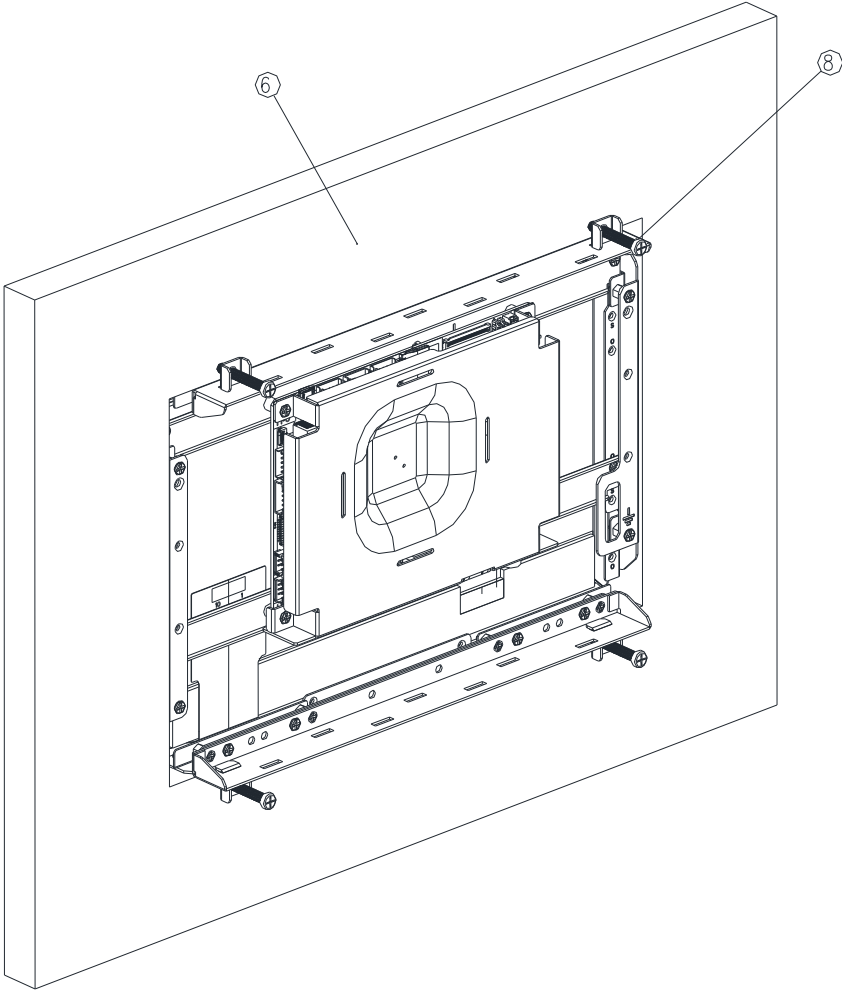


**Step5.** Fasten 4 screws to secure Panel mount brackets and insert it into Bracket/TB.



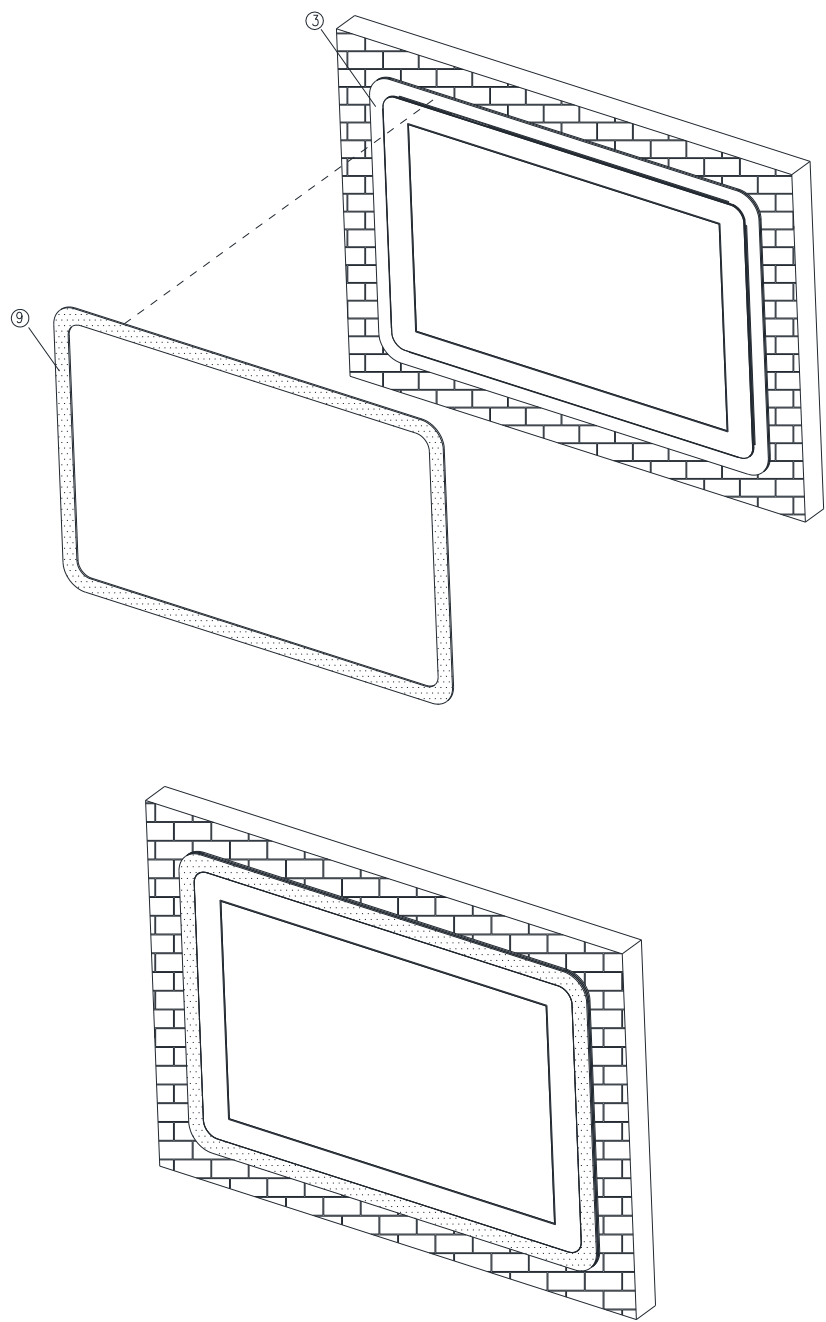
5-1

|      |                     |          |
|------|---------------------|----------|
| 8    | Panel mount Screw   | 4        |
| 7    | Panel mount Bracket | 4        |
| 5    | Bracket T/B         | 2        |
| Item | Part Name           | Quantity |



**Step6.** Insert and fasten 4 Panel mount screws to secure the module.

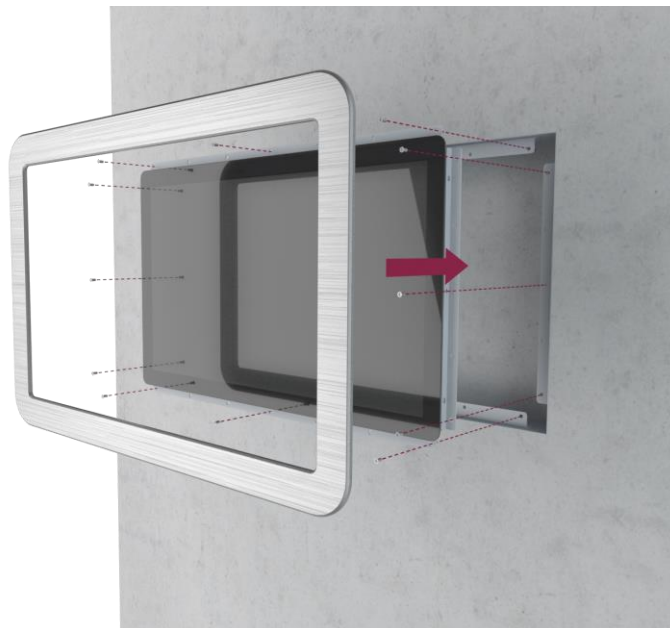
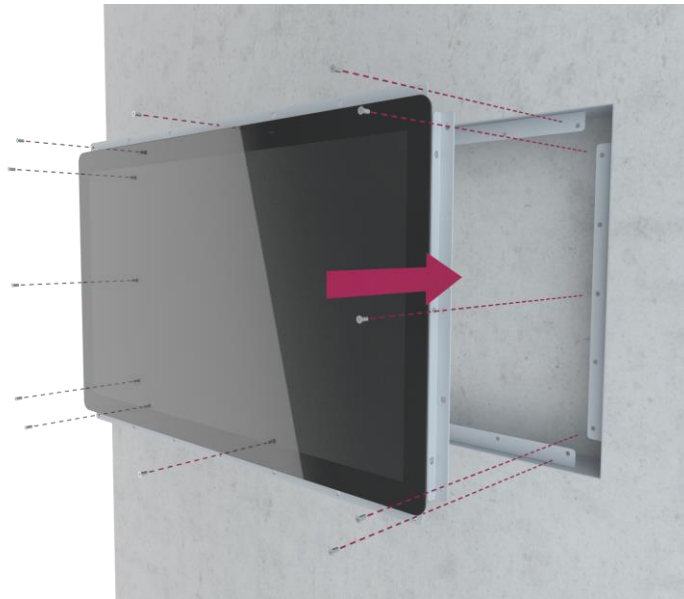
|      |                   |          |
|------|-------------------|----------|
| 8    | Panel mount Screw | 4        |
| 6    | Wall              | 1        |
| Item | Part Name         | Quantity |



**Step7.** Paste the Decoration Plate on the Front bracket to complete installation.

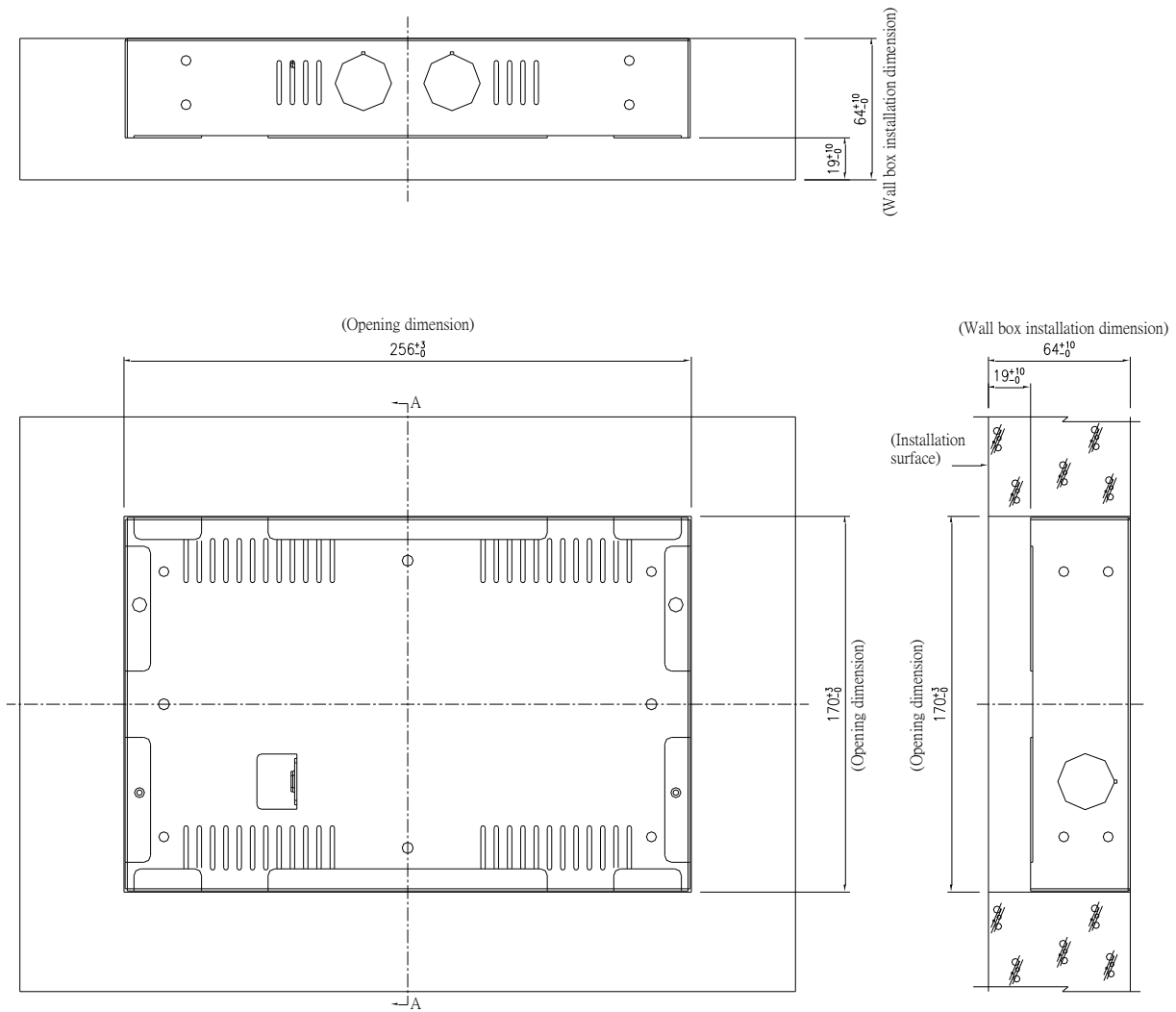
|      |                  |          |
|------|------------------|----------|
| 9    | Decoration Plate | 1        |
| 3    | Front Bracket    | 1        |
| Item | Part Name        | Quantity |

## 1.8 Wall Mounting Concept



1.9 Wall Mounting

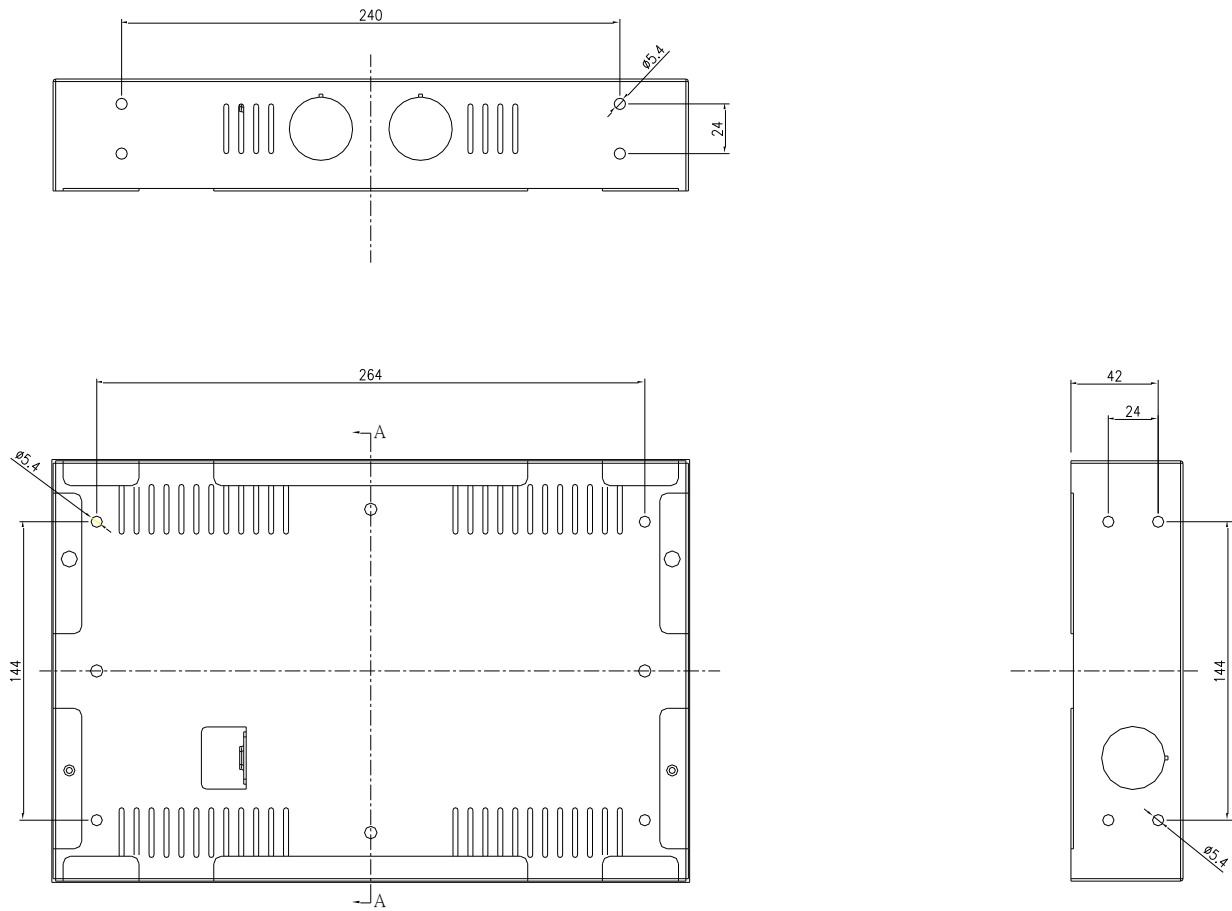
Size of the opening



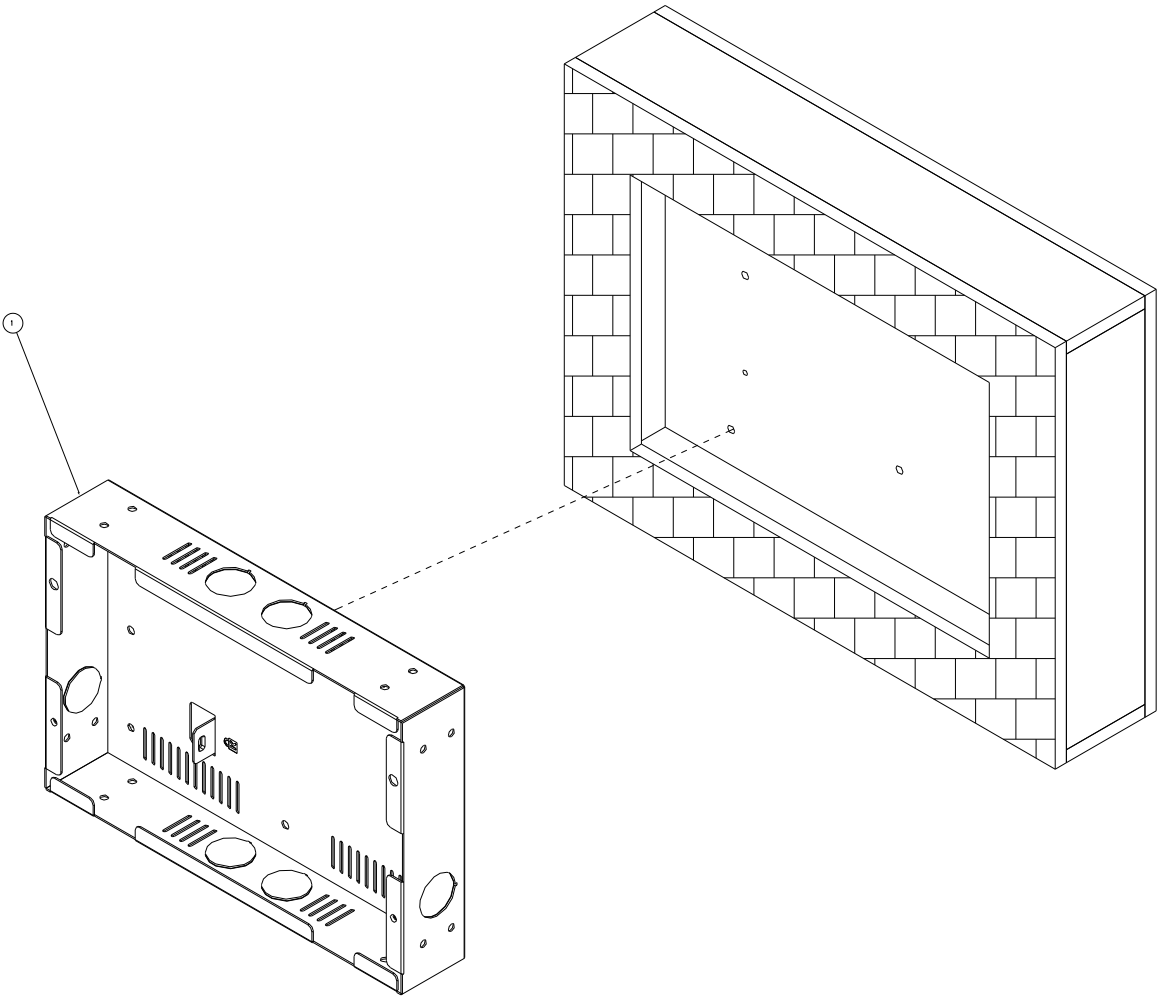
(Unit: mm)



Screw hole location

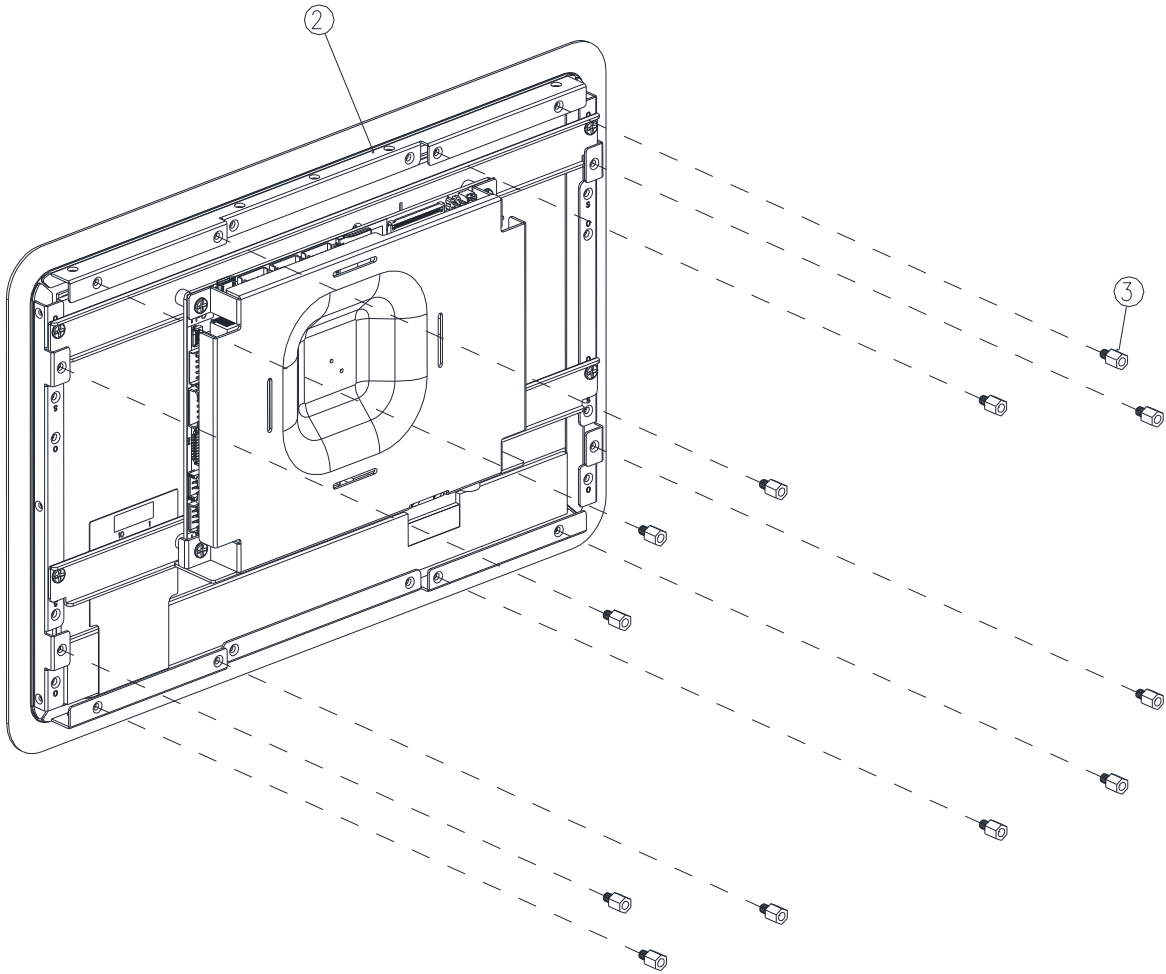


(Unit: mm)



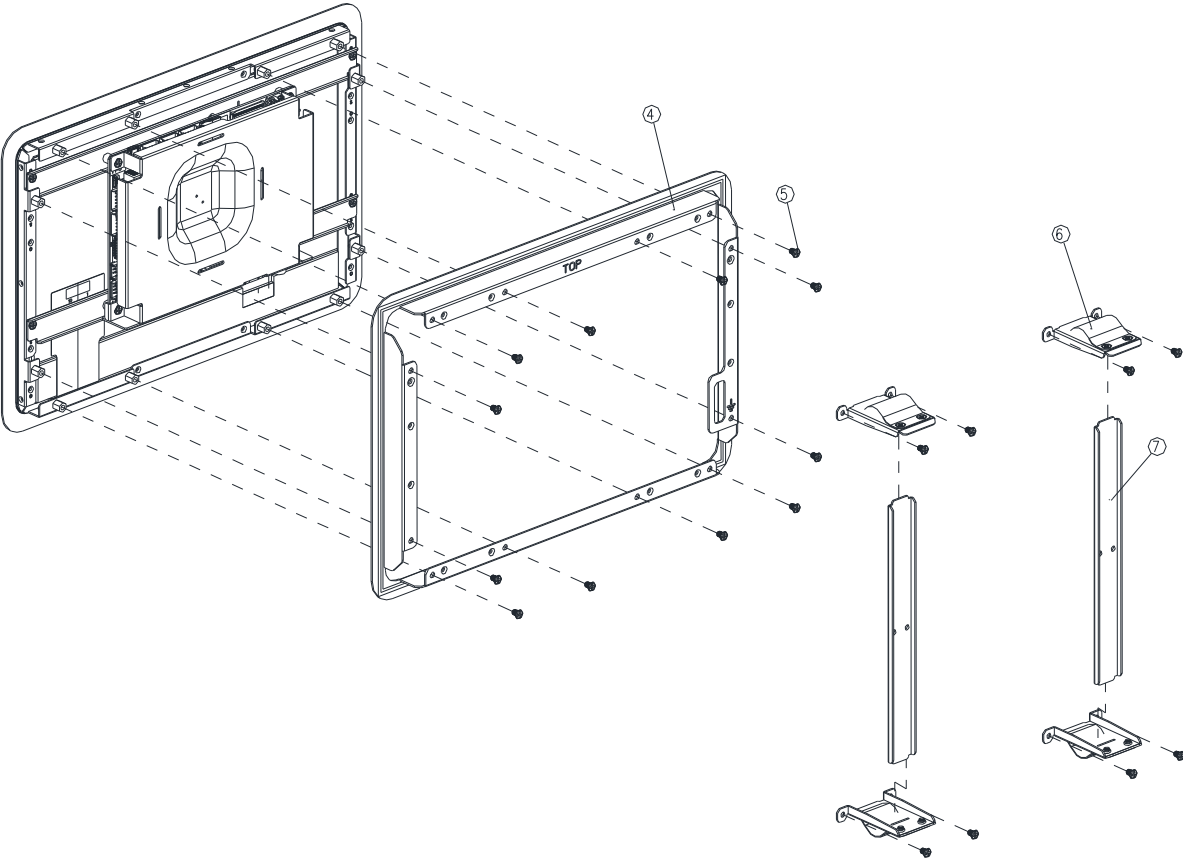
**Step1.** Fasten the screw on the wall.

|      |           |          |
|------|-----------|----------|
| 1    | Wall box  | 1        |
| Item | Part Name | Quantity |



**Step2.** Insert and fasten 12 screws on each side of the monitor to secure brackets.

|      |              |          |
|------|--------------|----------|
| 3    | Hexagon Stud | 12       |
| 2    | OFT-10WR1    | 1        |
| Item | Part Name    | Quantity |

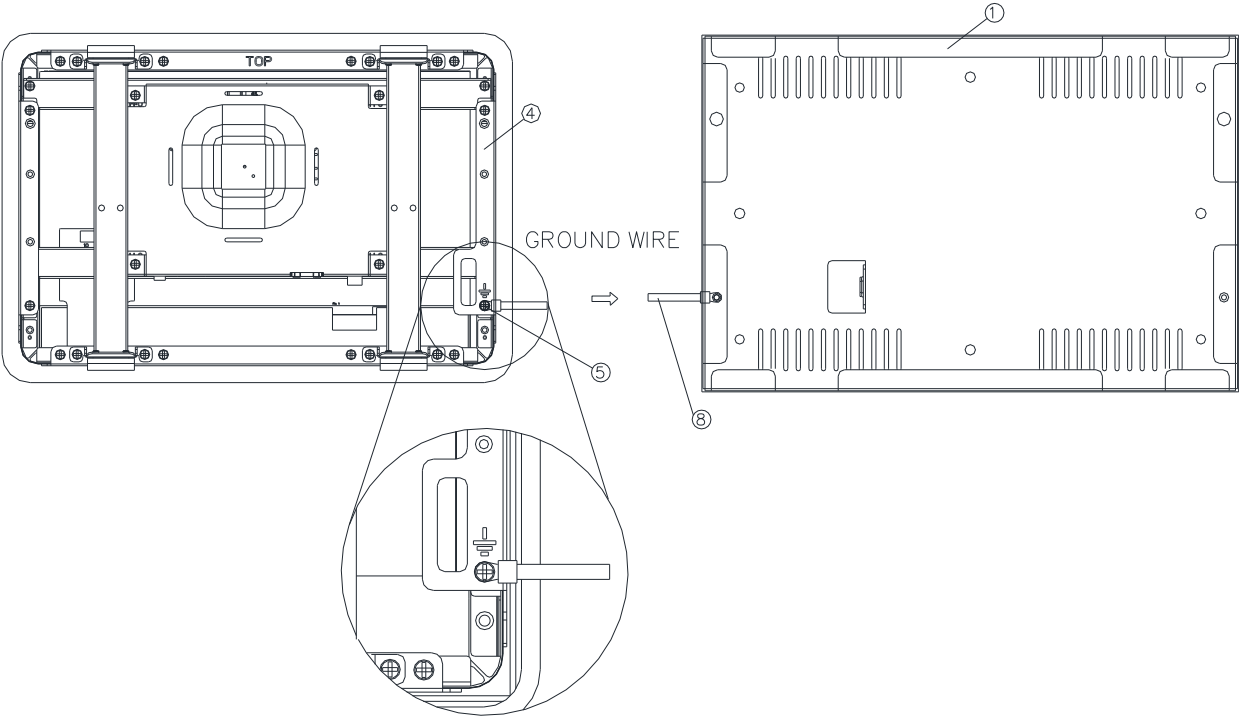


**Step3-1.** Insert and fasten 12 screws on each side of the monitor to secure Front bracket.

**Step3-2.** Fasten 4 screws on Front bracket of the monitor to secure Wall mount kit.

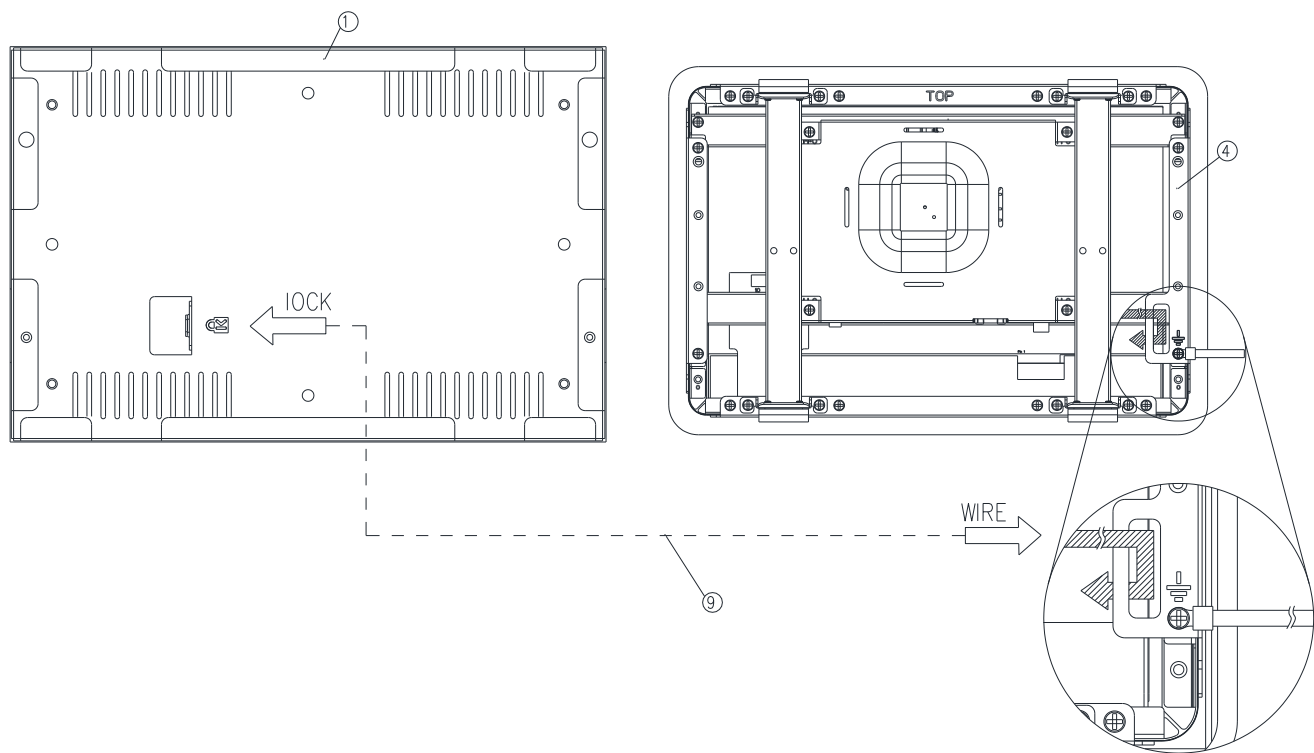
**Step3-3.** Insert and fasten 4 screws to secure Bracket L/R.

|      |                |          |
|------|----------------|----------|
| 7    | Bracket L/R    | 2        |
| 6    | Wall mount kit | 4        |
| 5    | Screw          | 20       |
| 4    | Front bracket  | 1        |
| Item | Part Name      | Quantity |



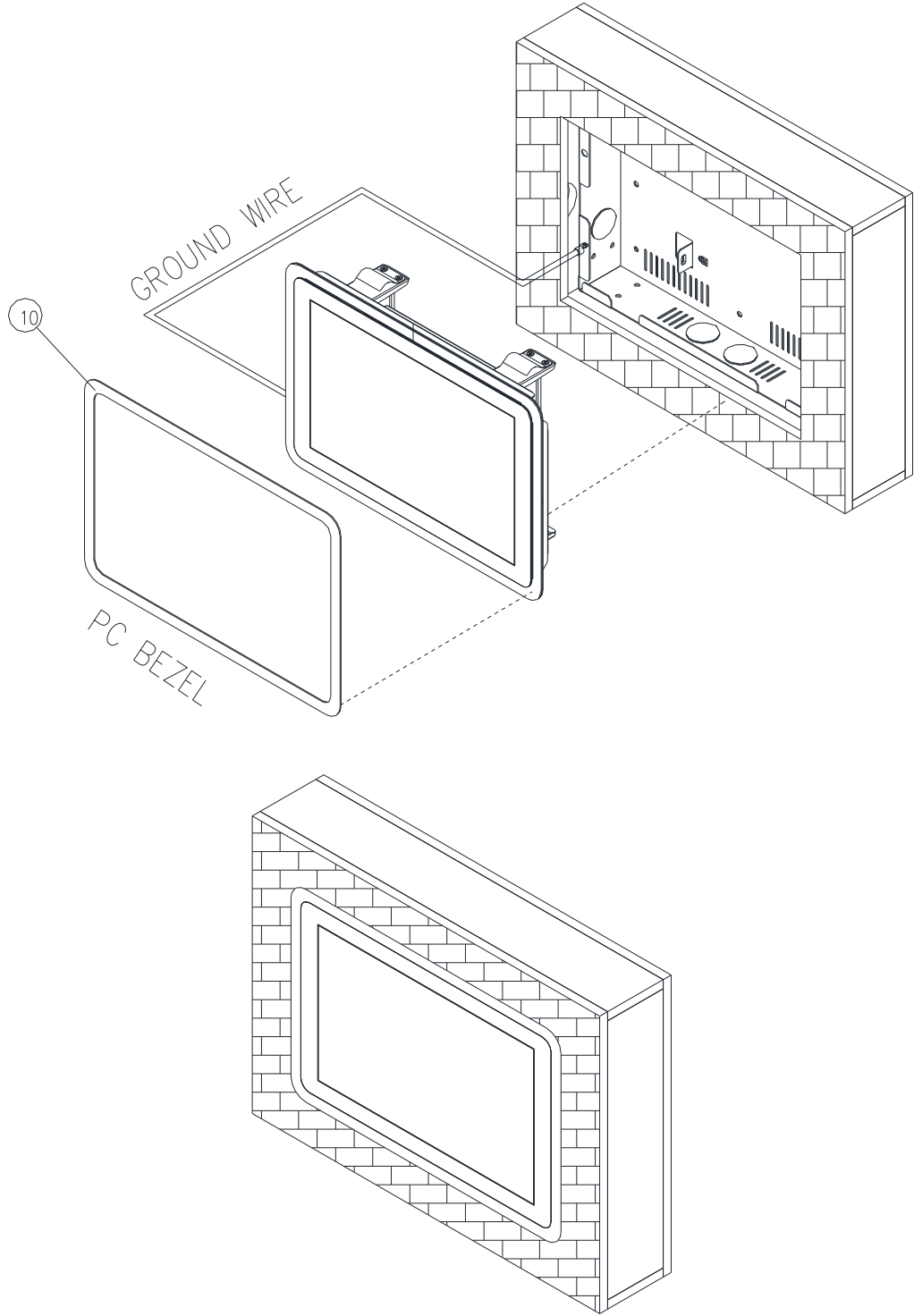
**Step4.** Insert and fasten 2 screws on Front bracket and Wall box of the monitor to secure Ground wire.

|      |               |          |
|------|---------------|----------|
| 8    | Ground wire   | 1        |
| 5    | Screw         | 2        |
| 4    | Front bracket | 1        |
| 1    | Wall box      | 1        |
| Item | Part Name     | Quantity |



**Step5.** Wrap the Kensington lock (option) around the hole in the front bracket and attach the lock to the keyhole in the Wall box.

|      |                 |          |
|------|-----------------|----------|
| 9    | Kensington lock | 1        |
| 4    | Front bracket   | 1        |
| 1    | Wall box        | 1        |
| Item | Part Name       | Quantity |



- Step6-1.** Insert the Ground wire and Kensington lock in the Wall box and Insert OFT-10WR1 into the wall.  
**Step6-2.** Paste the Decoration Plate on the Front bracket to complete installation.

|      |           |          |
|------|-----------|----------|
| 10   | PC bezel  | 1        |
| Item | Part Name | Quantity |

## 2. Hardware Configuration

For advanced information, please refer to:

- 1- ACP-RK3288 included in this manual.



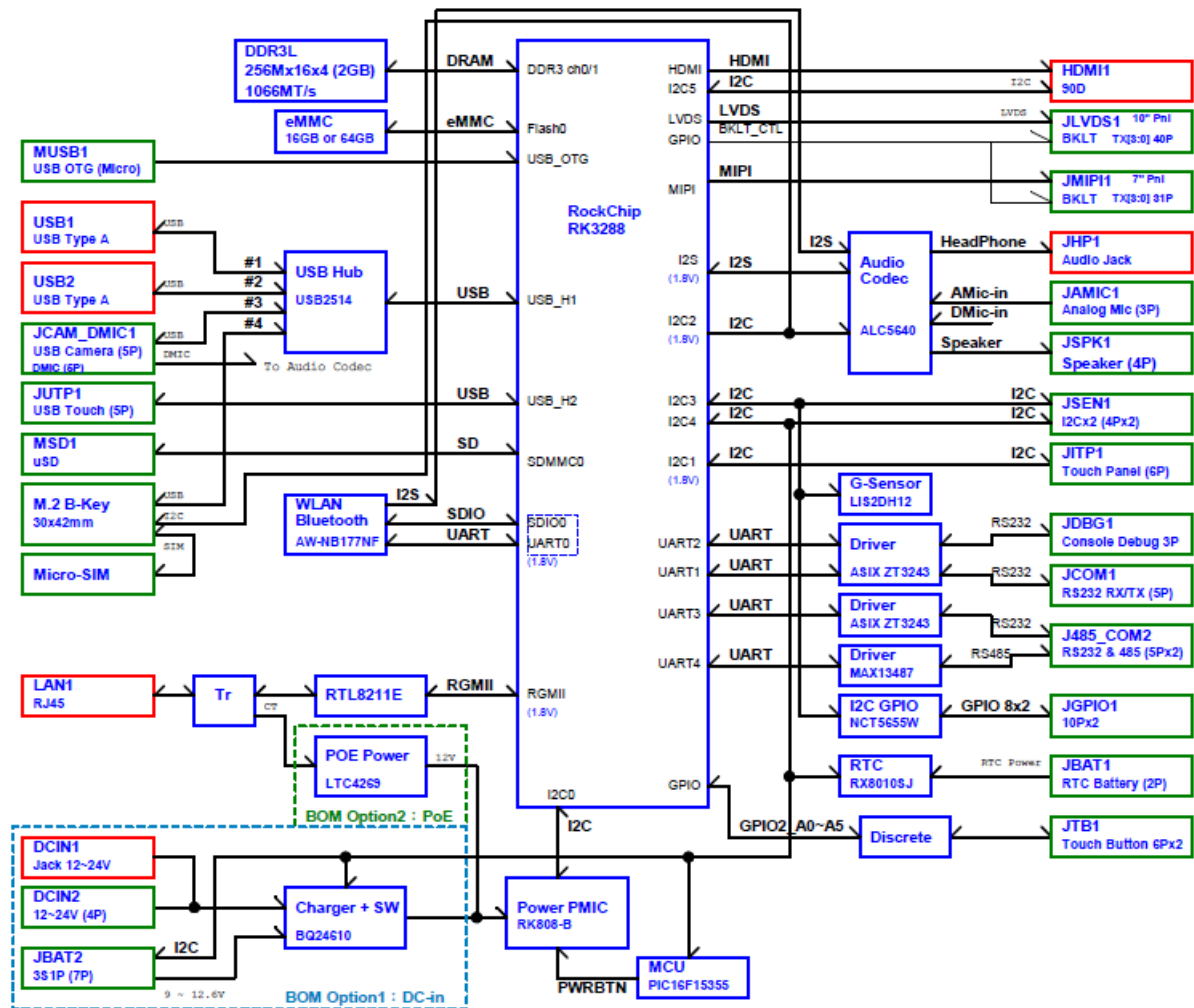
**Note:** If you need more information, please visit our website:

<http://www.avalue.com.tw>



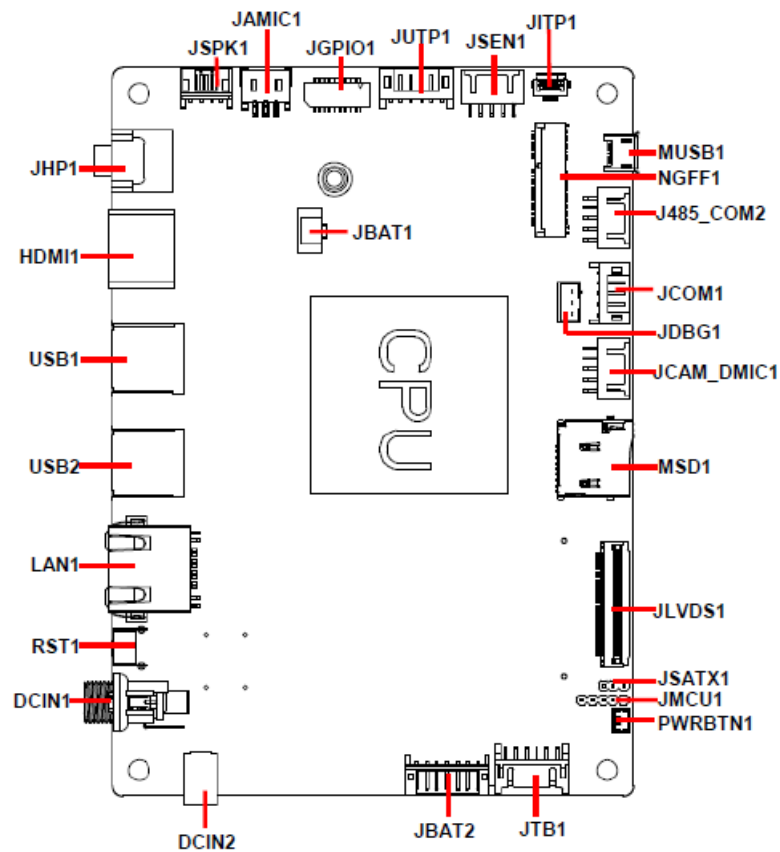
## 2.1 Architecture Overview—Block Diagram

The following block diagram shows the architecture and main components of ACP-RK3288.

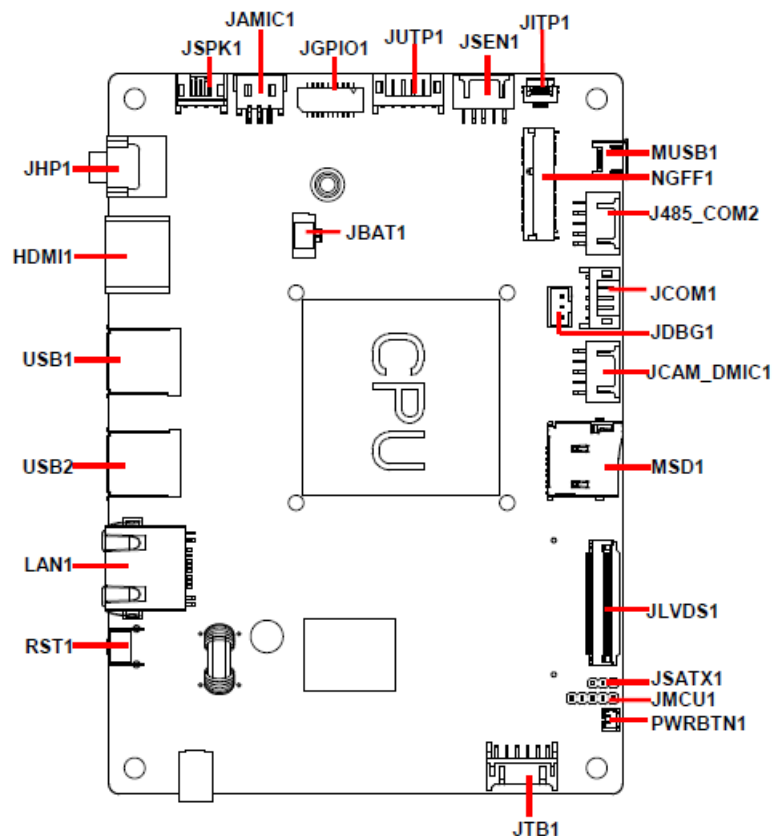


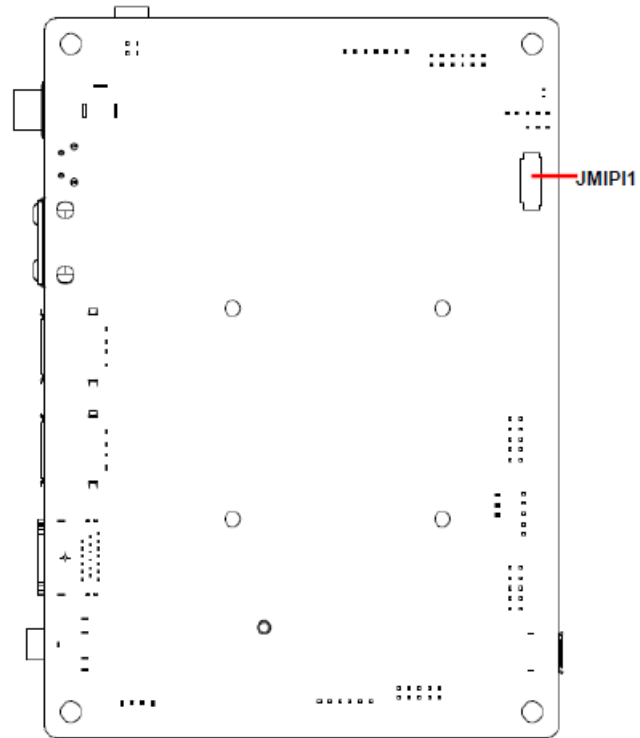
## 2.2 ACP-RK3288 Overviews

**ACP-RK3288(DCIN)**



**ACP-RK3288(Powered LAN)**





## 2.3 ACP-RK3288 Connector list

### Jumpers

| Label  | Function                  | Note                        |
|--------|---------------------------|-----------------------------|
| JSATX1 | AT/ATX Input power select | 3 x 1 header, pitch 2.00 mm |

### Connectors

| Label      | Function                       | Note                        |
|------------|--------------------------------|-----------------------------|
| JHP1       | Audio line-out connector       |                             |
| HDMI1      | HDMI connector                 |                             |
| USB1/2     | 2 x USB 2.0 connector          |                             |
| LAN1       | RJ-45 Ethernet connector       |                             |
| DCIN1      | DC Power-in connector          |                             |
| DCIN2      | DC Power-in connector          | 2 x 2 wafer, pitch 2.00 mm  |
| JITP1      | I2C Touch Panel connector      | 6 x 1 FPC, pitch 0.50 mm    |
| JSPK1      | Speaker connector              | 4 x 1 wafer, pitch 2.00 mm  |
| JUTP1      | USB Touch connector            | 6 x 1 wafer, pitch 2.00 mm  |
| RST1       | Reset Button                   |                             |
| NGFF1      | M.2 B-Key                      |                             |
| JMCU1      | MCU Firmware upgrade connector | 5 x 1 header, pitch 2.00 mm |
| PWRBTN1    | Power Button                   | 2 x 1 wafer, pitch 1.25 mm  |
| MSD1       | Micro SD card slot             |                             |
| JBAT1      | RTC Battery connector          | 2 x 1 wafer, pitch 1.25 mm  |
| JBAT2      | Battery connector              | 7 x 1 wafer, pitch 2.00 mm  |
| JSEN1      | I2C connector                  | 5 x 2 wafer, pitch 2.00 mm  |
| MUSB1      | Micro USB2.0 connector         |                             |
| JGPIO1     | General purpose I/O connector  | 10 x 2 wafer, pitch 1.00 mm |
| JCAM_DMIC1 | USB Camera connector           | 5 x 2 wafer, pitch 2.00 mm  |
| JCOM1      | Serial port 1 connector        | 5 x 1 wafer, pitch 2.00 mm  |
| J485_COM2  | RS-485 connector               | 5 x 2 wafer, pitch 2.00 mm  |
| JTB1       | Touch button board connector   | 6 x 2 wafer, pitch 2.00 mm  |
| JAMIC1     | A-MIC connector                | 3 x 1 wafer, pitch 2.00 mm  |
| JDBG1      | Debug connector                | 3 x 1 wafer, pitch 2.00 mm  |
| JLVDS1     | LVDS connector                 | 40 x 1 FPC, pitch 0.50 mm   |
| JMIPI1     | MIPI Port                      | 31 x 1 FPC, pitch 0.30 mm   |

## 2.4 Ethernet LED behavior

| Label            | LED color | Indication   | Meaning                             |
|------------------|-----------|--------------|-------------------------------------|
| <b>Data Rate</b> | Yellow    | LED off      | 10 Mbits/sec data rate is selected  |
|                  |           | LED on       | 100 Mbits/sec data rate is selected |
| <b>Link/ACT</b>  | Green     | off          | LAN link is not established         |
|                  |           | LED on       | LAN link is established             |
|                  |           | LED Blinking | LAN active is occurring             |

## 2.5 Evaluation Cable Kit (Optional)

**Part Number: BCC-OFT-CABLE-02R**

### Cable List

| Cable Function              | Spec. Description                          | Q'ty |
|-----------------------------|--------------------------------------------|------|
| <b>RS-232</b>               | RS-232 Cable DB-9(M)- 5P/2.0 20cm          | 1    |
| <b>Debug</b>                | Debug cable DB-9(M)-3P/2.0 15cm            | 1    |
| <b>RS232/RS485</b>          | RS232/ RS-485 Cable DB-9(M)- 2x5P/2.0 28cm | 1    |
| <b>Switch</b>               | Switch/2P/1.25 15cm                        | 1    |
| <b>DC In</b>                | Power cable DC JACK4P/2.0 15cm             | 1    |
| <b>USB<br/>Camera/D-MIC</b> | USB Cable 2x5P/2.0 to 8P/0.8 10cm          | 1    |
| <b>Speaker</b>              | 2P 4ohm 3W 28*28*13.6 16cm                 | 1    |
| <b>MIC</b>                  | 2P/2.0 , 42db 10cm                         | 1    |
| <b>Keypad</b>               | 2x6P/2.0                                   | 1    |

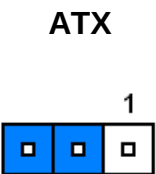
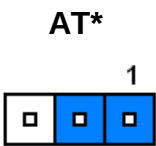
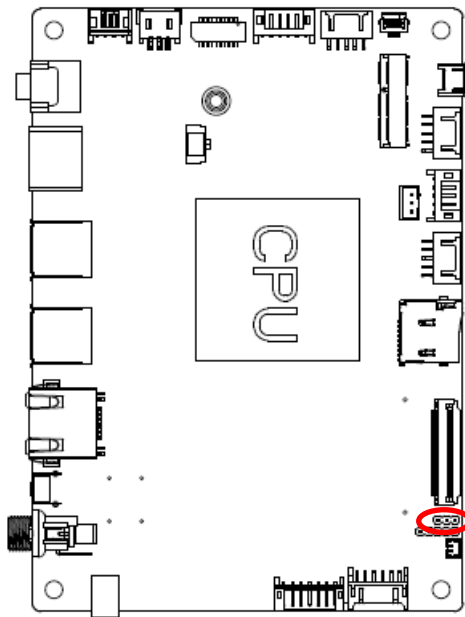
### \*RTC Battery

Warning: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions."

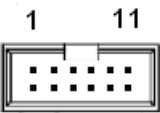
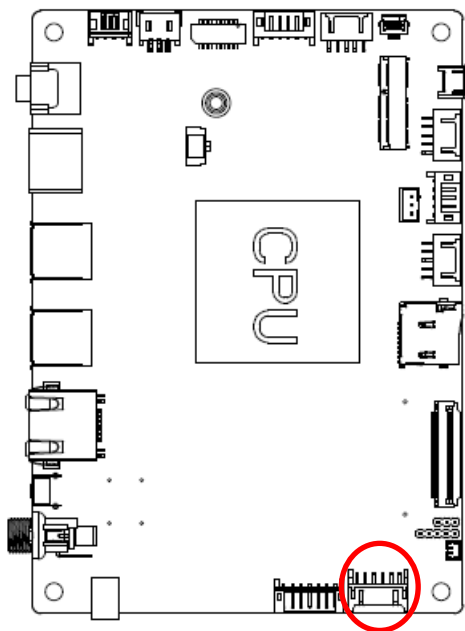
Attention: Risque d'explosion si la batterie est remplacée par un type incorrect. Jetez les piles usagées selon les instructions.

2.6 ACP-RK3288 Jumpers & Connectors settings

2.6.1 AT/ATX Input power select (JSATX1)

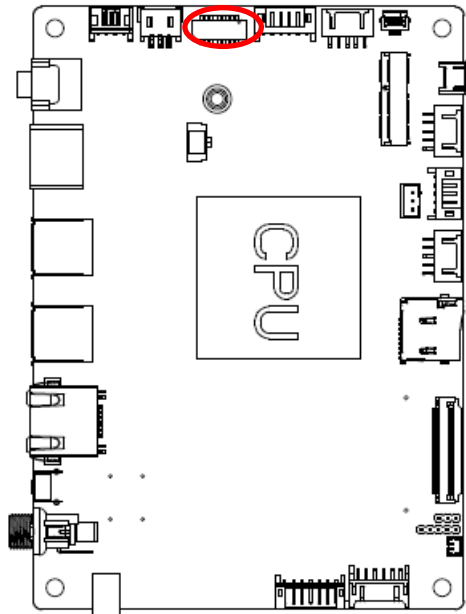


2.6.2 Touch button board connector (JTB1)



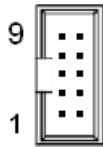
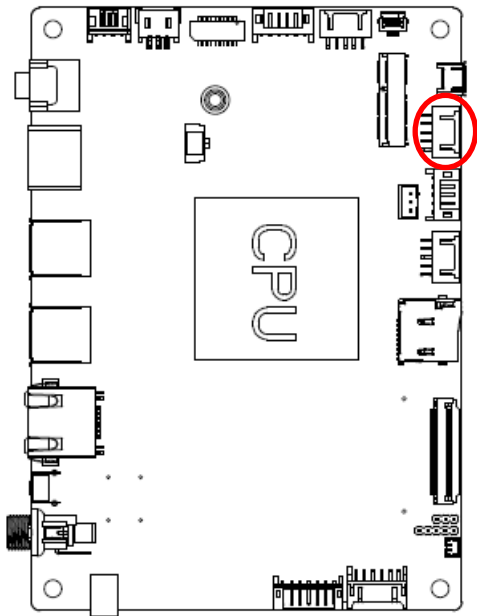
| Signal   | PIN | PIN | Signal  |
|----------|-----|-----|---------|
| PWR_TB   | 1   | 2   | GND     |
| LINUX-SW | 3   | 4   | BU1     |
| VOL_UP   | 5   | 6   | VOL_DN  |
| ONOFF    | 7   | 8   | BR_UP   |
| BR_DN    | 9   | 10  | BU7     |
| LED_GRN  | 11  | 12  | LED_ORG |

2.6.3 General purpose I/O connector (JGPIO1)



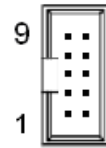
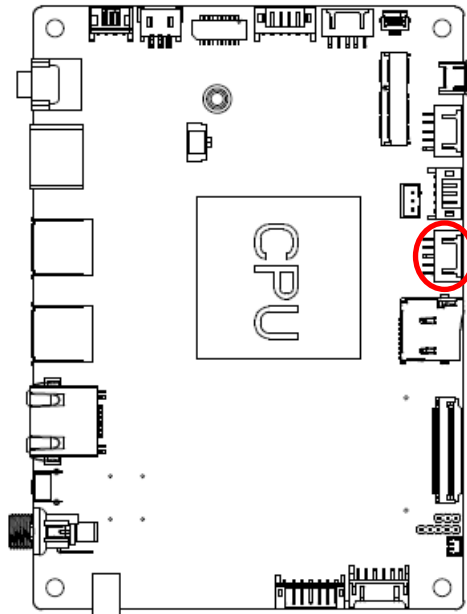
| Signal     | PIN | PIN | Signal     |
|------------|-----|-----|------------|
| DIO_GP20   | 1   | 2   | DIO_GP10   |
| DIO_GP21   | 3   | 4   | DIO_GP11   |
| DIO_GP22   | 5   | 6   | DIO_GP12   |
| DIO_GP23   | 7   | 8   | DIO_GP13   |
| DIO_GP24   | 9   | 10  | DIO_GP14   |
| DIO_GP25   | 11  | 12  | DIO_GP15   |
| DIO_GP26   | 13  | 14  | DIO_GP16   |
| DIO_GP27   | 15  | 16  | DIO_GP17   |
| DIO_SDA_5V | 17  | 18  | DIO_SCL_5V |
| +V5S_DIOP  | 19  | 20  | GND        |

2.6.4 RS-485 connector (J485\_COM2)



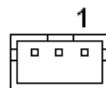
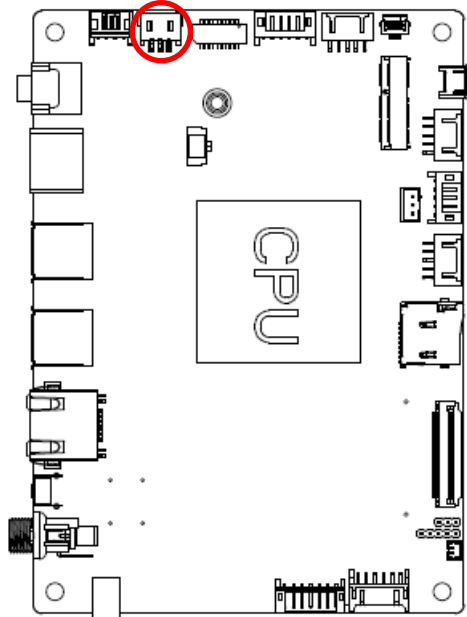
| Signal   | PIN | PIN | Signal  |
|----------|-----|-----|---------|
| COM2_TX  | 1   | 2   | +5V     |
| COM2_RX  | 3   | 4   | NC      |
| COM2_RTS | 5   | 6   | 485TX1- |
| COM2_CTS | 7   | 8   | 485TX1+ |
| GND      | 9   | 10  | GND     |

2.6.5 USB Camera connector (JCAM\_DMIC1)



| Signal    | PIN | PIN | Signal  |
|-----------|-----|-----|---------|
| +VDD_DMIC | 1   | 2   | +5V     |
| DMIC_CLK  | 3   | 4   | USB3_NP |
| DMIC_DATA | 5   | 6   | USB3_PP |
| GND       | 7   | 8   | GND     |
| GND       | 9   | 10  | GND     |

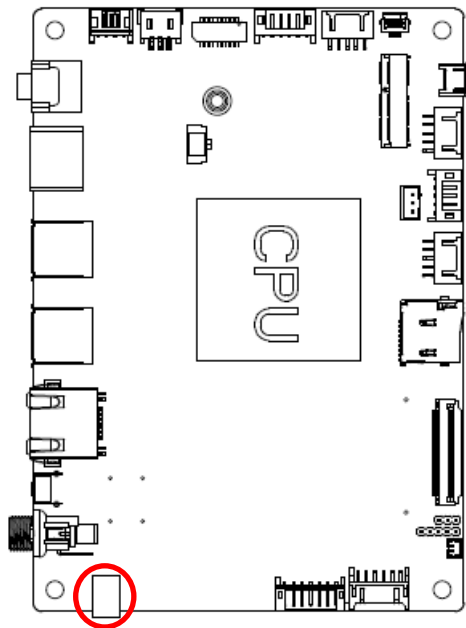
2.6.6 A-MIC connector (JAMIC1)



| Signal    | PIN |
|-----------|-----|
| MIC_JDET# | 1   |
| MIC_INR   | 2   |
| GND       | 3   |

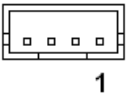
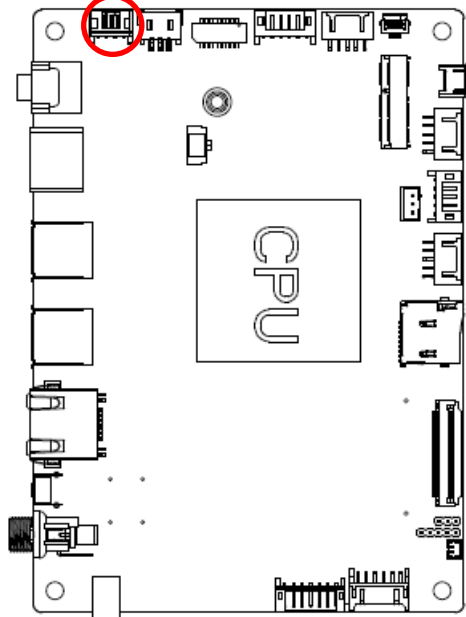


2.6.7 DC Power-in connector (DCIN2)



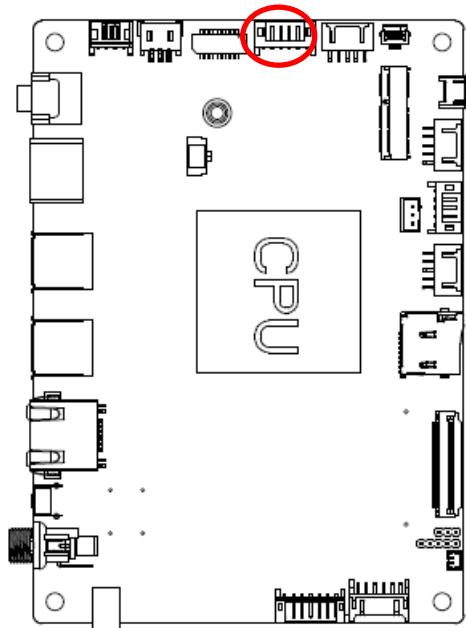
| Signal | PIN | PIN | Signal |
|--------|-----|-----|--------|
| +VIN   | 3   | 4   | GND    |
| +VIN   | 1   | 2   | GND    |

2.6.8 Speaker connector (JSPK1)



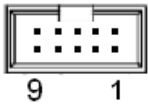
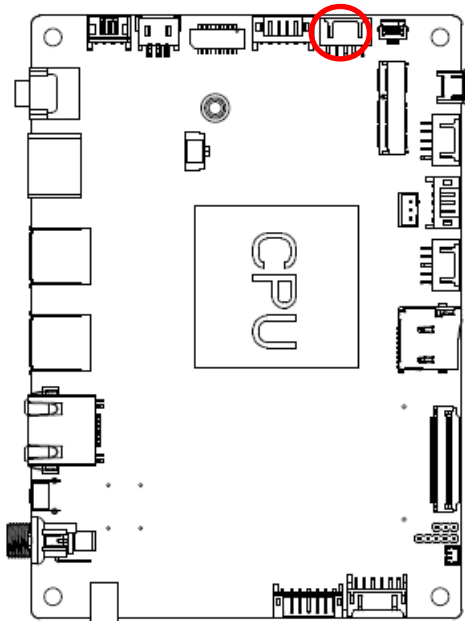
| Signal | PIN |
|--------|-----|
| SPK_L+ | 1   |
| SPK_L- | 2   |
| SPK_R+ | 3   |
| SPK_R- | 4   |

2.6.9 USB Touch connector (JUTP1)



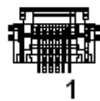
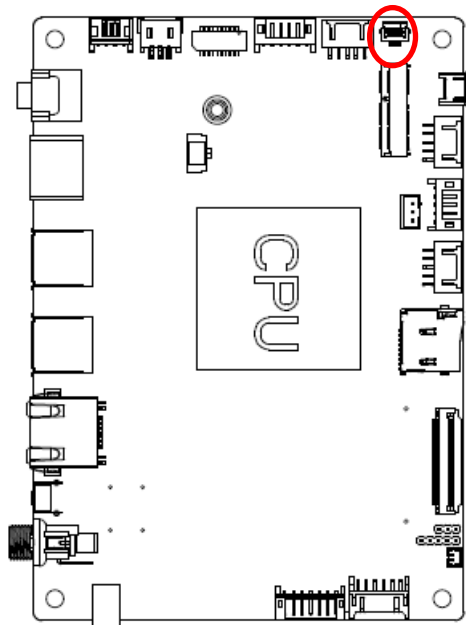
| Signal    | PIN |
|-----------|-----|
| +5V       | 1   |
| USBTP_PP  | 2   |
| USBTP_NP  | 3   |
| NC        | 4   |
| USB_RST_P | 5   |
| GND       | 6   |

2.6.10 I2C connector (JSEN1)



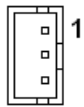
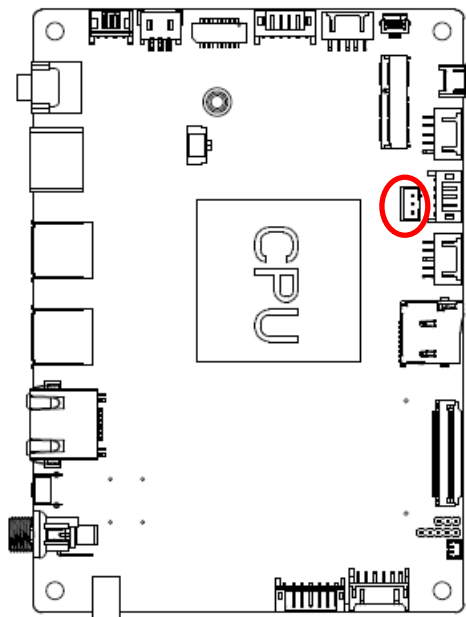
| Signal     | PIN | PIN | Signal     |
|------------|-----|-----|------------|
| +3.3V      | 1   | 2   | +3.3V      |
| SEN1_SCL   | 3   | 4   | SEN2_SCL   |
| SEN1_SDA   | 5   | 6   | SEN2_SDA   |
| SEN1_IRQP# | 7   | 8   | SEN2_IRQP# |
| GND        | 9   | 10  | GND        |

2.6.11 I2C Touch Panel connector (JITP1)



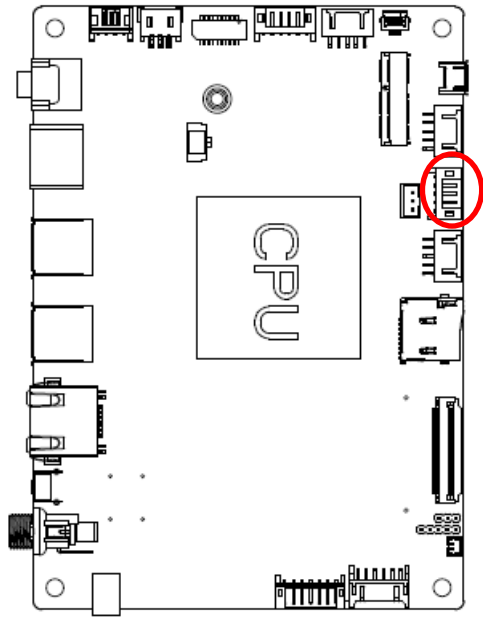
| Signal       | PIN |
|--------------|-----|
| TOUCH_RST#_R | 6   |
| TOUCH_SDA    | 5   |
| TOUCH_SCL    | 4   |
| TOUCH_IRQP#  | 3   |
| GND          | 2   |
| +3.3V        | 1   |

2.6.12 Debug connector (JDBG1)



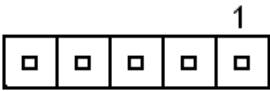
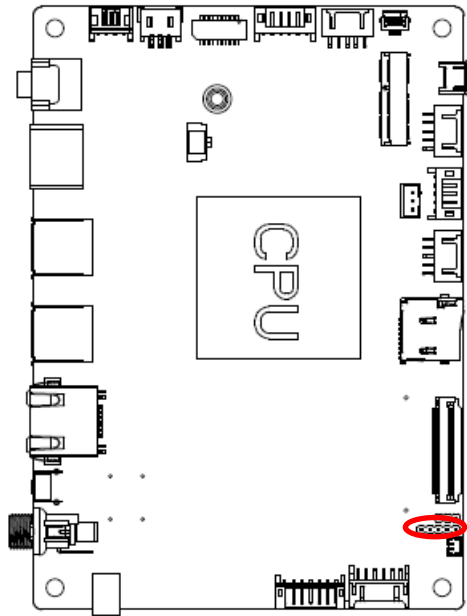
| Signal  | PIN |
|---------|-----|
| CNSL_TX | 1   |
| CNSL_RX | 2   |
| GND     | 3   |

2.6.13 Serial port 1 connector (JCOM1)



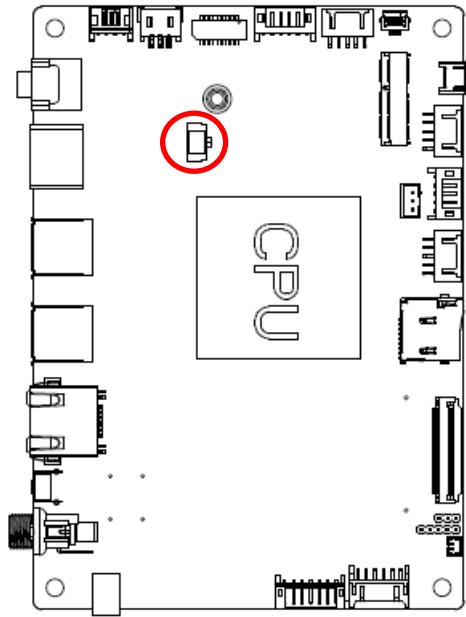
| Signal   | PIN |
|----------|-----|
| GND      | 5   |
| COM1_CTS | 4   |
| COM1_RTS | 3   |
| COM1_RX  | 2   |
| COM1_TX  | 1   |

2.6.14 MCU Firmware upgrade connector (JMCU1)



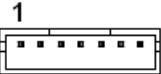
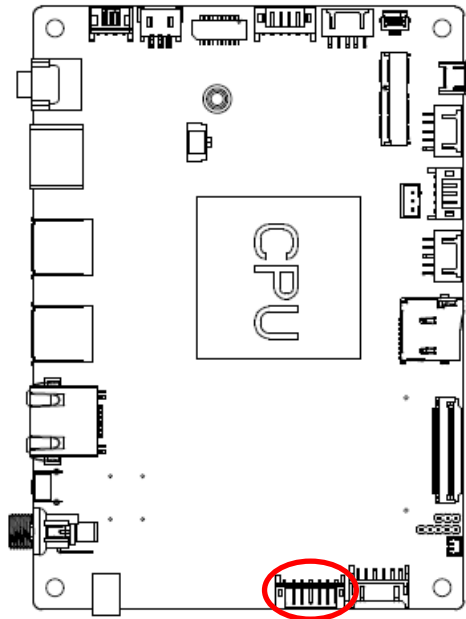
| Signal      | PIN |
|-------------|-----|
| +V5MCU      | 1   |
| MCU_MCLR    | 2   |
| MCU_ICSPCLK | 3   |
| MCU_ICSPDAT | 4   |
| GND         | 5   |

2.6.15 RTC Battery connector (JBAT1)



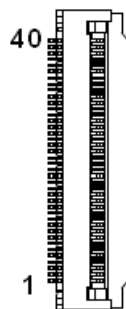
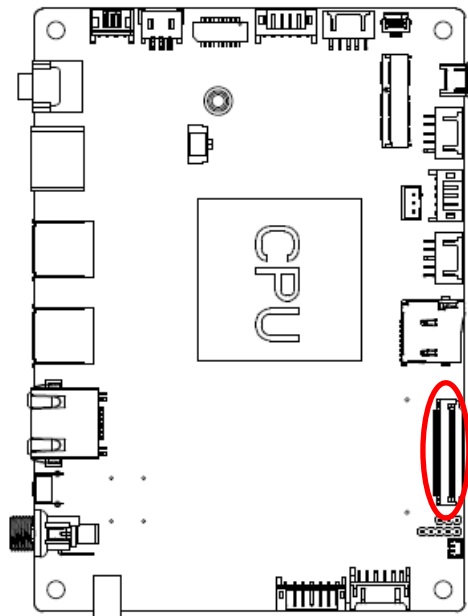
| Signal | PIN |
|--------|-----|
| +V_BAT | 1   |
| GND    | 2   |

2.6.16 Battery connector (JBAT2)



| Signal  | PIN |
|---------|-----|
| +V_BATP | 1   |
| +V_BATP | 2   |
| BAT_SCL | 3   |
| BAT_SDA | 4   |
| BAT_TS  | 5   |
| GND     | 6   |
| GND     | 7   |

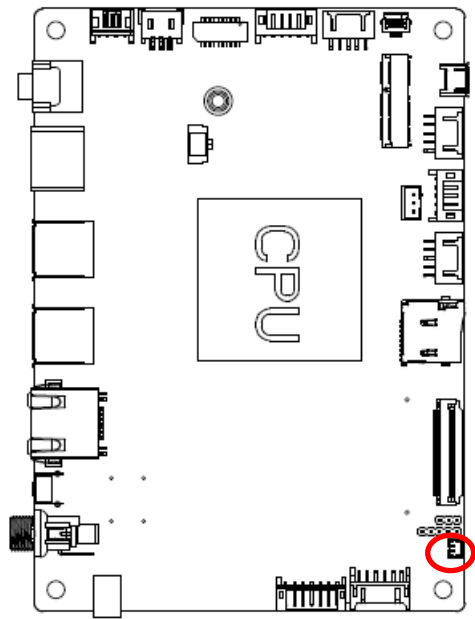
2.6.17 LVDS connector (JLVDS1)



| Signal      | PIN |
|-------------|-----|
| NC          | 40  |
| +3.3V       | 39  |
| +3.3V       | 38  |
| NC          | 37  |
| NC          | 36  |
| NC          | 35  |
| NC          | 34  |
| LVDS0_TX0_N | 33  |
| LVDS0_TX0_P | 32  |
| GND         | 31  |

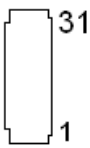
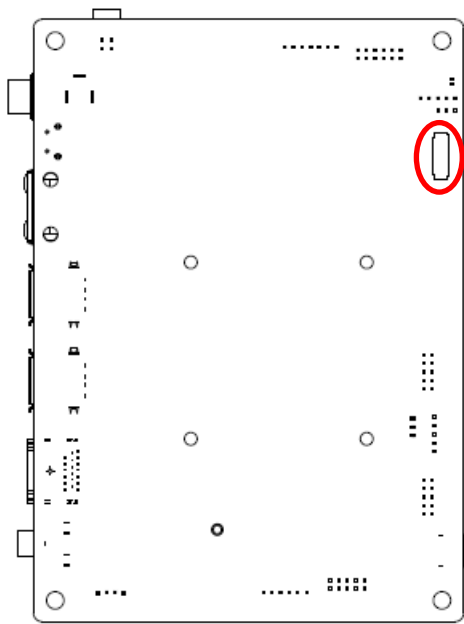
| Signal      | PIN |
|-------------|-----|
| LVDS0_TX1_N | 30  |
| LVDS0_TX1_P | 29  |
| GND         | 28  |
| LVDS0_TX2_N | 27  |
| LVDS0_TX2_P | 26  |
| GND         | 25  |
| LVDS0_CLK_N | 24  |
| LVDS0_CLK_P | 23  |
| GND         | 22  |
| LVDS0_TX3_N | 21  |
| LVDS0_TX3_P | 20  |
| GND         | 19  |
| NC          | 18  |
| NC          | 17  |
| GND         | 16  |
| NC          | 15  |
| NC          | 14  |
| GND         | 13  |
| NC          | 12  |
| NC          | 11  |
| GND         | 10  |
| GND         | 9   |
| GND         | 8   |
| NC          | 7   |
| BKLT_CTL    | 6   |
| BKLT_EN     | 5   |
| NC          | 4   |
| +V7S_BKLT   | 3   |
| +V7S_BKLT   | 2   |
| +V7S_BKLT   | 1   |

2.6.18 Power Button (PWRBTN1)



| Signal      | PIN |
|-------------|-----|
| PMIC_PWRON# | 1   |
| GND         | 2   |

2.6.19 MIPI Port (JMIPI1)



| Signal     | PIN |
|------------|-----|
| +VLED+     | 31  |
| +VLED+     | 30  |
| NC         | 29  |
| +VLED-     | 28  |
| +VLED-     | 27  |
| +VLED-     | 26  |
| NC         | 25  |
| GND        | 24  |
| MIPI_TX3_N | 23  |
| MIPI_TX0_N | 22  |
| MIPI_TX3_P | 21  |

| Signal     | PIN |
|------------|-----|
| MIPI_TX0_P | 20  |
| GND        | 19  |
| GND        | 18  |
| MIPI_CLK_N | 17  |
| MIPI_TX1_N | 16  |
| MIPI_CLK_P | 15  |
| MIPI_TX1_P | 14  |
| GND        | 13  |
| GND        | 12  |
| MIPI_TX2_N | 11  |
| NC         | 10  |
| MIPI_TX2_P | 9   |
| NC         | 8   |
| NC         | 7   |
| MIPI_RST#  | 6   |
| +1.8V      | 5   |
| +1.8V      | 4   |
| +3.3V      | 3   |
| +3.3V      | 2   |
| +3.3V      | 1   |

