

OFT-10WR3

10.1" Open Frame Tablet with Rockchip RK3568J

Quick Reference Guide

2nd Ed – 07 July 2025

Copyright Notice

Copyright © 2025 Avalue Technology Inc., ALL RIGHTS RESERVED.

Document Amendment History

Revision	Date	By	Comment
1 st	March 2025	Avalue	Initial Release
2 nd	July 2025	Avalue	Update Jumper and Connector List

Declaration of Conformity



This device complies with part 15 FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class "a" digital device, pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device contains transmitters and receivers which emit Radio Frequency (RF) energy. The device is designed to comply with the limits for exposure to RF energy set by the Federal Communications Commission (FCC) of the United States, Industry Canada (IC) of Canada, and the regulating entities of other countries

CE statement

The product(s) described in this manual complies with all application European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

Notice

This guide is designed for experienced users to setup the system within the shortest time. For detailed information, please always refer to the electronic user's manual.

Copyright Notice

© 2025 by Avalue Technology Inc. All rights are reserved. No parts of this manual may be copied, modified, or reproduced in any form or by any means for commercial use without the prior written permission of Avalue Technology Inc. All information and specification provided in this manual are for reference only and remain subject to change without prior notice.

Acknowledgements

Intel and Pentium are trademarks of Intel Corporation.

Microsoft Windows is registered trademark of Microsoft Corp.

All other product names or trademarks are properties of their respective owners.

Disclaimer

This manual is intended to be used as a practical and informative guide only and is subject to change without notice. It does not represent a commitment on the part of Avalue. This product might include unintentional technical or typographical errors. Changes are periodically made to the information herein to correct such errors, and these changes are incorporated into new editions of the publication.

A Message to the Customer

Avalue Customer Services

Each and every Avalue's product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Avalue device is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Avalue has come to be known.

Your satisfaction is our primary concern. Here is a guide to Avalue's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

Technical Support and Assistance

1. Visit the Avalue website at <https://www.avalue.com/> where you can find the latest information about the product.
2. Contact your distributor or our technical support team or sales representative for technical support if you need additional assistance. Please have following information ready before you call:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

To receive the latest version of the user's manual; please visit our Web site at:

www.avalue.com

Product Warranty (Returns & Warranties policy)

1. Purpose

Avalue establishes the following maintenance specifications and operation procedures for providing the best quality of service and shortened repair time to our customers.

2. Warranty

2.1 Warranty Period

Avalue endeavors to offer customers the most comprehensive post-sales services and protection; besides offering a 2-year warranty for standard Avalue products, an extended warranty service can also be provided based on additional request from the customer. Within the warranty period, customers are entitled to receive comprehensive and prompt repair and warranty.

Standard products manufactured by Avalue are offered a 2-year warranty, from the date of delivery from Avalue. For ODM/OEM products manufactured by Avalue or PCBA with conformal coating, will follow up the define warranty of the agreement, otherwise will be offered 1-year warranty for ODM/OEM products but non-warranty for PCBA with conformal coating. For outsourcing parts kit by Avalue (ex: Motherboard, LCD touch panel, CPU, RAM, HDD) are offered a 6-month warranty, and Mobile/Tablet PC battery are offered a warranty of the half year, from the date of delivery by Avalue. Products before the mass production stage, i.e. engineering samples are not applied in this warranty or service policy. For extended warranty and cross-territory services, product defects resulting from design, production process or material are covered by the pre-set warranty period after the date of delivery from Avalue. For non-Avalue products, the product warranty and repair time shall be based on the service standards provided by the original manufacturer; in principle Avalue will provide these products a warranty service for no more than one year.

2.2 Maintenance services within the warranty period

In the case of Avalue product DOA (Defect-on-Arrival) when the customer finds any defect within 1 month after the delivery, Avalue will replace it with a new product in a soonest way. Except for custom products, once the customer is approved of a Cross-Shipment Agreement, which allows for delivery a new product to the customer before receiving the defective one, Avalue will immediately proceed with new product replacement for the said DOA case. On validation of the confirmed defect, Avalue is entitled to reserve the right whether to provide a new product for replacement. For the returned defective new product, it is necessary to verify that there shall be no bruise, alteration, scratch or marking to the appearance, and that none of the delivered accessories missing; otherwise, the customer will be requested to pay a processing fee. On the other hand, if the new product defect is resulting from incorrect configuration or erroneous use by the user instead of any problem of the hardware itself, the customer will also be requested to pay for relevant handling fees.

As for other conditions, Avalue will handle defects by way of repair. The customer will be requested to send the defective product to an Avalue authorized service center, and Avalue will return the repaired product back to the customer as soon as possible.

2.3 Ruling of an out-of-warranty defect

The following situations are not included in the warranty:

- The warranty period has expired.
- Product has been altered or its label of the serial number has been torn off.
- Product functionality issues resulting from improper use by the user, unauthorized dismantle or alteration, unfit operation environment, improper maintenance, accident or other causes. Avalue reserves the right for the ruling of the aforementioned situations.
- Product damage resulting from lightning, flood, earthquake or other calamities.
- The warranty rules of non-Avalue products and accessories shall be in accordance with standards set up by the original manufacturer. These products and accessories include RAM, HDD, FDD, CD-ROM, CPU, FAN, etc.
- Product upgrade request or test request submitted by the customer after expiration of the warranty.
- PCBA with conformal coating.
- Avalue semi-product and outsourced products without Avalue serial number.
- Products before the mass production stage, i.e. engineering samples.

3. Procedure for sending for repair

3.1 Attain a RMA number

A customer's rejected product returned for repair shall have a RMA (Return Merchandise Authorization) number. Without a RMA number, Avalue will not provide any repair service for the rejected product, and the product will be returned to the customer at customer's cost. Avalue will not issue any notice for the return of the product.

Each returned product for repair shall have a RMA number, which is simply the authorization of the return for repair; it is not a guarantee that the returned goods can be repaired or replaced. For applying for a RMA number, the customer may enter the eRMA webpage of Avalue <https://www.avalue.com/en/member> and log-in with an account number and a password authorized by Avalue. The system will then automatically issue a RMA number.

When applying for the RMA number, it is essential to fill in basic information of the customer and the product, together with detailed description of the problem encountered. If possible, avoid using ambiguous words such as "does not work" or "problematic". Without a substantial description of the problem, it is hard to start the repair and will cause prolonged repair time. Lacking detailed statement of fault steps also makes the problem hard to be identified, sometimes resulting in second-time repairs.

In case the customer can't define the cause of problem, please contact Avalue application engineers. Sometimes when the problem can be resolved even before the customer sends back the product.

On the other hand, if the customer only returns the key parts to Avalue for repair, it is necessary that the serial number of the entire unit is given in the "Problem Description" field, so that warranty period can be ruled accordingly; or Avalue will handle the case as an Out-of- warranty case.

3.2 Return of faulty product for repair

It is recommended that the customer not to return the accessories (manual, connection cables, etc.) with the products for repair, devices such as CPU, DRAM, CF memory card, etc., shall also be removed from the faulty goods before return for repair. If these devices are relevant to described repair problems and necessary to be returned with the goods; please clearly indicate the items included in the eRMA application form. Avalue shall not be responsible for any item that is not itemized. Moreover, make sure the problem(s) are detailed in the "Problem Description" field.

In the list of delivery, the customer may fill-in a value which is lower than the actual value, to prevent customs levying a higher tax over the excessive value of the return goods. The customer shall be held responsible for extra fees caused by this. We strongly recommend that "Invoice for customs purpose only with no commercial value" be indicated on the delivery note. Also for the purpose of expedited handling, please printout the RMA number and put it in the carton, also indicate the number outside of the carton, with the recipient addressing to Avalue RMA Department.

When returning the defective product, please use an anti-static bag or ESD material to pack it properly. In case of improper packing resulting in damages in the transportation process, Avalue reserves the right to reject the un-repaired faulty good at the customer's costs. Furthermore, it is suggested that the faulty goods shall be sent via a door-to-door courier service. The customer shall be held responsible for any customs clearance fee or extra expenses if Air-Cargo is used for the delivery.

In case of a DOA situation of a new product, Avalue will be responsible for the product and the freight. If the faulty goods are within the warranty period, the sender will take responsibility for the freight. For an out-of-warranty case, the customer shall be responsible for the freight of both trips.

3.3 Maintenance Charge

Avalue will charge a moderate repair fee for the following conditions:

- The warranty period has expired.
- Product has been altered or its label of the serial number has been torn off.
- Product functionality issues resulting from improper use by the user, unauthorized dismantle or alteration, unfit operation environment, improper maintenance, accident

or other causes. Avalue reserves the right for the ruling of the aforementioned situations.

- Product damage resulting from lightning, flood, earthquake or other calamities.
- The warranty rules for non-Avalue products and accessories shall be in accordance with standards set up by the original supplier. These products and accessories include RAM, HDD, FDD, CD-ROM, CPU, FAN, etc.
- Product upgrade request or test request submitted by the customer after expiry of the warranty.
- PCBA with conformal coating.
- Avalue semi-product and outsourced products without Avalue serial number
- Products before the mass production stage, i.e. engineering samples.
- In case the products received are examined as NPF (No Problem Found) within the warranty period, the customer shall be responsible for the freight of both trips.
- Please contact your local distributor to examine in advance to prevent unnecessary freight cost.

For system failure of out-of-warranty products, Avalue will provide a quotation prior to repair service. When the customer applies for the cost, please refer to the Quotation number. In case the customer does not return the DOA product that has already been replaced by a new one, or the customer does not sign back the quotation of the out-of-warranty maintenance, Avalue reserves the right of whether or not to provide the repair service. In case the customer does not reply in 3 months, Avalue shall directly scrap or return the product back to customer at customer's cost without further notice to the customer.

3.4 Maintenance service of phased-out products

For servicing phased-out products, Avalue provides an extended period, starting the date of phase-out, as a guaranteed maintenance period of such products, for continuance of the maintenance service to meet customer's requirements. In case of unexpected factors causing Avalue to be unable to repair/replace a warranted but phased-out product, Avalue will, depending on the availability, upgrade the product (free of charge with continued warranty period as of the original product), or, give partial refund (based on the length of the remaining warranty period) to solve this kind of problem.

3.5 Maintenance Report

On completion of repair of a defective product, a Maintenance Report indicating the maintenance result and part(s) replaced (if any) will be sent to the customer together with the product. If the customer demands an additional maintenance analysis report, a service fee of various level will be charged depending on the warranty status. In case the analysis result shows that the defect attributes to Avalue's faulty design or process, the analysis fee will be exempted.

4. Service Products

Avalue provides service products to manage with different customer needs. Should you have any need, please consult to Avalue Sales Department.

Defect Analysis Report (DAR)

Avalue provides DAR (Defect Analysis Report) services aiming to elevating customer satisfaction. A DAR includes defect cause identification/verification/suggestion and improvement precautions, with instructions on correct usage for the avoidance of any reoccurrence.

Upgrade Service

Avalue is capable to provide system upgrade service for customization requirements. This upgrade service is applicable for main parts, such as CPU, memory, HDD, SSD, storage devices; also replacements motherboards of systems. Please contact Avalue sales for details to evaluate the possibility of system upgrade service and obtain information of lead time and price.

Safety Instructions

Safety Precautions

Before installing and using this device, please note the following precautions.

1. Read these safety instructions carefully.
2. Keep this User's Manual for future reference.
3. Disconnected this equipment from any AC outlet before cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
8. Use a power cord that has been approved for using with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to

OFT-10WR3

avoid damage by transient overvoltage.

12. Never pour any liquid into an opening. This may cause fire or electrical shock.












13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel. If one of the following situations arises, get the equipment checked by service personnel:






- The power cord or plug is damaged.
- Liquid has penetrated into the equipment.
- The equipment has been exposed to moisture.
- The equipment does not work well, or you cannot get it work according to the user's manual.
- The equipment has been dropped and damaged.
- The equipment has obvious signs of breakage.

14. CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

15. Equipment intended only for use in a RESTRICTED ACCESS AREA.

Explanation of Graphical Symbols

	Warning	A WARNING statement provides important information about a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	Caution	A CAUTION statement provides important information about a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or in damage to the equipment or other property.
	Note	A NOTE provides additional information intended to avoid inconveniences during operation.
		Direct current.
		Alternating current
		Stand-by, Power on
		FCC Certification
		CE Certification
		Follow the national requirements for disposal of equipment.
		Stacking layer limit
		This side up

		Fragile Packaging
		Beware of water damage, moisture-proof
		Carton recyclable
		Handle with care
		Follow operating instructions of consult instructions for use.

Disposing of your old product

WARNING:

There is danger of explosion if the battery is mishandled or incorrectly replaced. Replace only with the same type of battery. Do not disassemble it or attempt to recharge it outside the system. Do not crush, puncture, dispose of in fire, short the external contacts, or expose to water or other liquids. Dispose of the battery in accordance with local regulations and instructions from your service provider.

CAUTION:

- Lithium Battery Caution: Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type. Dispose batteries according to manufacturer's instructions.
- Disposal of a BATTERY into fire or a hot oven, or mechanically crushing or cutting of a BATTERY, that can result in an EXPLOSION
- Leaving a BATTERY in an extremely high temperature surrounding environment that can result in an EXPLOSION or the leakage of flammable liquid or gas.
- A BATTERY subjected to extremely low air pressure that may result in an EXPLOSION or the leakage of flammable liquid or gas.

Mise en garde!

AVERTISSEMENT : Il existe un risque d'explosion si la batterie est mal manipulée ou remplacée de manière incorrecte. Remplacez uniquement par le même type de batterie. Ne le démontez pas et ne tentez pas de le recharger en dehors du système. Ne pas écraser, percer, jeter au feu, court-circuiter les contacts externes ou exposer à l'eau ou à d'autres liquides. Jetez la batterie conformément aux réglementations locales et aux instructions de votre fournisseur de services.

MISE EN GARDE:

- Pile au lithium Attention : Danger d'explosion si la pile n'est pas remplacée correctement. Remplacer uniquement par un type identique ou équivalent. Jetez les piles conformément aux instructions du fabricant.
- L'élimination d'une BATTERIE dans le feu ou dans un four chaud, ou l'écrasement ou le découpage mécanique d'une BATTERIE, pouvant entraîner une EXPLOSION
- Laisser une BATTERIE dans un environnement à température extrêmement élevée pouvant entraîner une EXPLOSION ou une fuite de liquide ou de gaz inflammable.
- UNE BATTERIE soumise à une pression d'air extrêmement basse pouvant entraîner une EXPLOSION ou une fuite de liquide ou de gaz inflammable.

Content

1.	Getting Started	16
1.1	Safety Precautions	16
1.2	Packing List.....	16
1.3	System Specifications	18
1.4	System Overview	21
1.5	System Dimensions	22
2.	Hardware Configuration	23
2.1	Powering On the System	24
2.2	RSC-3568J Overview.....	25
2.3	RSC-3568J Jumper and Connector List.....	26
2.4	RSC-3568J Jumpers & Connectors settings.....	28
2.4.1	AT/ATX Input power select (JATATX1).....	28
2.4.2	USB ID mode selector (JUSBID).....	28
2.4.3	LVDS VDD selector (JPVDD1).....	29
2.4.4	COM port 5/6 mode selector (JRS4).....	29
2.4.5	RTC Battery connector (JRTC)	30
2.4.6	Backlight control interface connector (JLVBL)	30
2.4.7	USB2.0 connector (JUSB2).....	31
2.4.8	Mic connector (JAMIC1).....	31
2.4.9	CAN BUS connector (J9505).....	32
2.4.10	CAN BUS connector (J9506).....	32
2.4.11	Speaker connector (JSPK1).....	33
2.4.12	General purpose I/O connector (JDIO1)	33
2.4.13	COM1 Debug connector (JDBG1).....	34
2.4.14	COM2 Debug connector (JDBG2).....	34
2.4.15	eDP interface connector (JEDP1)	35
2.4.16	COM 3/4 connector (JRS2)	35
2.4.17	LVDS connector (JLVDS1).....	36
2.4.18	JDCIN connector (JDCIN2)	36
2.4.19	COM 6 connector (JRS3)	37
2.4.20	I2C Sensor connector (JSENSE)	38
2.4.21	Front touch button connector (JTB1).....	38
2.4.22	COM5 connector (JDB1)	39
3.	Installation	40
3.1	Installing Extend Brackets.....	42
14	OFT-10WR3 Quick Reference Guide	

3.2 Panel Mounting43

3.3 Wall Mounting44

4. Product Application45

5. Operating the Device46

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

Before installation, please ensure all the items listed in the following table are included in the package.

Item	Description	Q'ty
1	OFT-10WR3	1



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

Purposes and Applications

The new Open Frame Panel PC equipped with RK3568J CPU offers high-performance processing capability and a flexible open-frame design, suitable for various industrial and commercial applications. Its features include a multi-touch screen, abundant connectivity options, reliable industrial-grade design, and customizable appearance and size. Additionally, it provides extensive software support, delivering powerful computing capabilities and customization options to meet the needs of different application scenarios. This architecture designed open frame panel PC with Rockchip3568J is the platform which is able to compatible with Android13, Debian 11.

Unpacking

Note:

If any of the components listed in the checklist below are missing, do not proceed with the installation. Contact the Avalue reseller or vendor the product was purchased from or contact an Avalue sales representative directly by sending an email to sales@avalue.com.

To unpack the flat bezel panel PC, follow the steps below.

WARNING!

The front side LCD screen has a protective plastic cover stuck to the screen. Only remove the plastic cover after the fiat bezel panel PC has been properly installed. This ensures the screen is protected during the installation process.

Step 1: Carefully cut the tape sealing the box. Only cut deep enough to break the tape.

Step 2: Open the outside box.

Step 3: Carefully cut the tape sealing the box. Only cut deep enough to break the tape.

Step 4: Open the inside box.

Step 5: Lift the panel PC out of the boxes.

Step 6: Remove the peripheral parts box from the main box.

1.3 System Specifications

System Specification				
Mother Board	RSC-3568J			
CPU	Rockchip RK3568J Quad-core Cortex-A55 1.4/1.8GHz			
Memory	Onboard 4GB LPDDR4			
Bluetooth	5.2			
Wi-Fi	6			
Operating System	Android 13,Debian 11			
Storage				
Storage Device	64GB eMMC			
Expansion Card	Micro SD card slot			
Panel				
LCD Panel	2 SKU			
	OFT-10WR3-68-A1-1R : 10.1" 1280*800 500nit Main sku			
	OFT-10WR3-68-A1-2R : 10.1" 1280*800 1200nit (Optional)			
Touch Controller	EETI:EXC81W32			
External IO				
USB	2 x USB 3.0			
Power	1x DC Jack12V~24V (AT / ATX optional by jumper)			
COM	1x DB9 (RS-232/422/485 selected by jumper) (default:RS-232)			
LAN	2x RJ-45 10/100/1000 (Realtek: RTL8211FDI-CG)			
	Max. 1G LAN Port			
	ACT/LINK		SPEED	
	LED	Definition	LED	Definition
	Light Off	No Link	Solid Orange	1G
	Solid Yellow	Connection	Solid Green	100M
	Yellow Flashing	Activity	Light Off	10M
HDMI	1 x HDMI 2.0a Type A			
Physical button	1x HW reset button			
Internal IO				
M.2 socket	M.2 3042 B-Key type for SSD or WLAN			
DC-in wafer	2x2P, pitch 2.0 pin wafer ; 180D			
MIPI DSI	DF13-40pin			
LVDS	DF13-40pin			
COM	2 x 1 x 3P, pitch 2.0mm pin header (COM1/2)(JDBG1/2)			
	2 x 5P, pitch 2.0mm pin header (COM3/4)(JRS2)			
	2 x 5P, pitch 2.0mm pin header (COM6)(JRS3)			

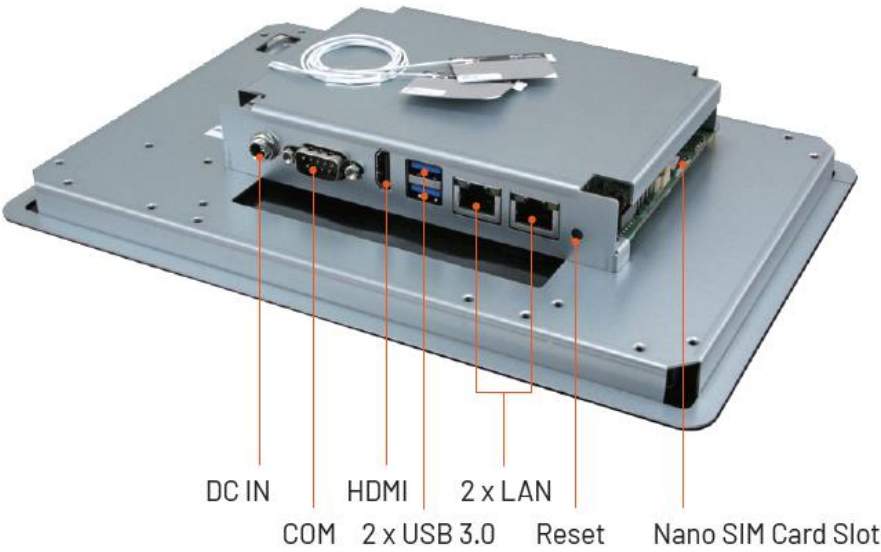
RTC battery	1x2P, pitch 1.25 pin wafer ; 180D
Nano SIM Card socket	1x Nano SIM Card socket
Micro SD slot	1x Micro SD slot
Backlight	1x5P, pitch 2.0 pin header ; 180D
Power Requirement	
DC Input Voltage	12V~24V wide voltage DC input
Power Connector Type	DC jack
Dimension	262 x 178 x 40.9 mm
Weight	1.1 kg
Color	Metallic
Fanless	Yes
OS Support	Android 13,Debian 11
Reliability	
Vibration Test	<p>Standard</p> <p>Random Vibration Operation</p> <p>1 Test PSD : 0.00454G²/Hz , 1.5 Grms</p> <p>2 System condition : operation mode</p> <p>3 Test frequency : 5~500 Hz</p> <p>4 Test axis : X,Y and Z axis</p> <p>5 Test time : 30 minutes per each axis</p> <p>6 IEC60068-2-64 Test Fh</p> <p>6 Storage : eMMC</p> <p>Sine Vibration test (Non-operation)</p> <p>1 Test Acceleration : 2G</p> <p>2 Test frequency : 5~500 Hz</p> <p>3 Sweep : 1 Oct/ per one minute. (logarithmic)</p> <p>4 Test Axis : X,Y and Z axis</p> <p>5 Test time :30 min. each axis</p> <p>6 System condition : Non-Operating mode</p> <p>7. Reference IEC 60068-2-6 Testing procedures</p> <p>Package Vibration Test:</p> <p>1 Test PSD : 0.026G²/Hz , 2.16 Grms</p> <p>2 Test frequency : 5~500 Hz</p> <p>3 Test axis : X,Y and Z axis</p> <p>4 Test time : 30 minutes per each axis</p> <p>5 IEC 60068-2-64 Test Fh</p>
Mechanical Shock	Standard

Test	1 Wave from : Half Sine wave 2 Acceleration Rate : 10G 3 Duration Time : 11ms 4 No. of shock : 300 times 5 Test Axis : Z axis 6 operation mode 7 Reference IEC 60068-2-27 testing procedures Test Eb : eMMC Shock Test
Drop Test	Standard Package drop test Reference ISTA 2A, Method : IEC-60068-2-32 Test:Ed Test Ea : Drop Test 1 Test phase : One corner, three edges, six faces 2 Test high : 96.5cm 3 Package weight : 5Kg 4 Test drawing
Operating Temperature	-30~+60C
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Storage Temperature	-20~+60C

**Note:**

Specifications are subject to change without notice.

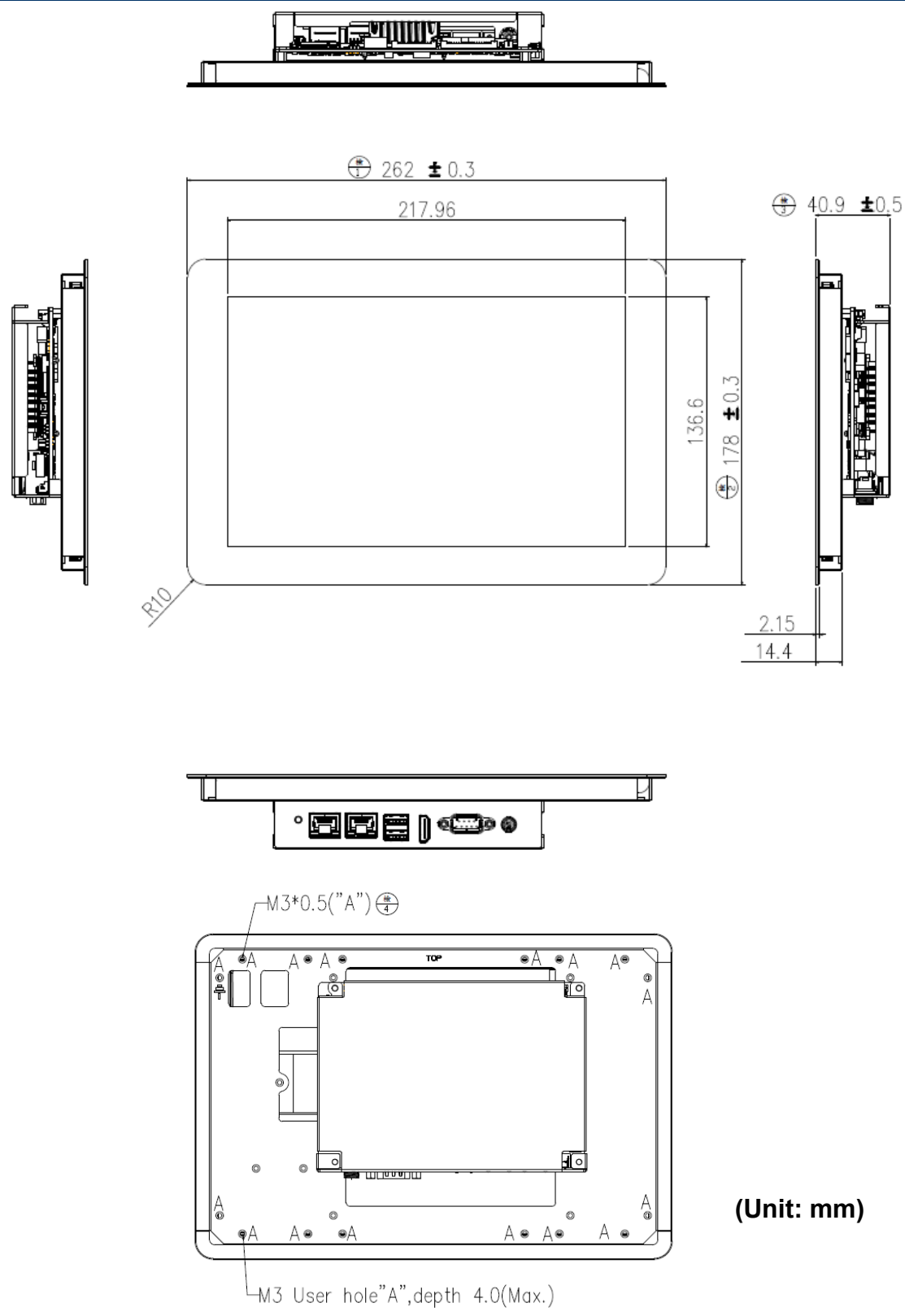
1.4 System Overview



Connectors

Label	Function	Note
Nano SIM Card Slot	Nano SIM Card slot	
HDMI	HDMI connector	
USB3.0	2 x USB3.0 connector	
LAN	2 x RJ-45 Ethernet	
Reset	Reset button	
COM	Serial port 5 connector	DB-9 male connector
DCIN	DC power-in connector	

1.5 System Dimensions



2. Hardware Configuration

For advanced information, please refer to:

- 1- RSC-3568J included in this manual.



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

www.avalue.com

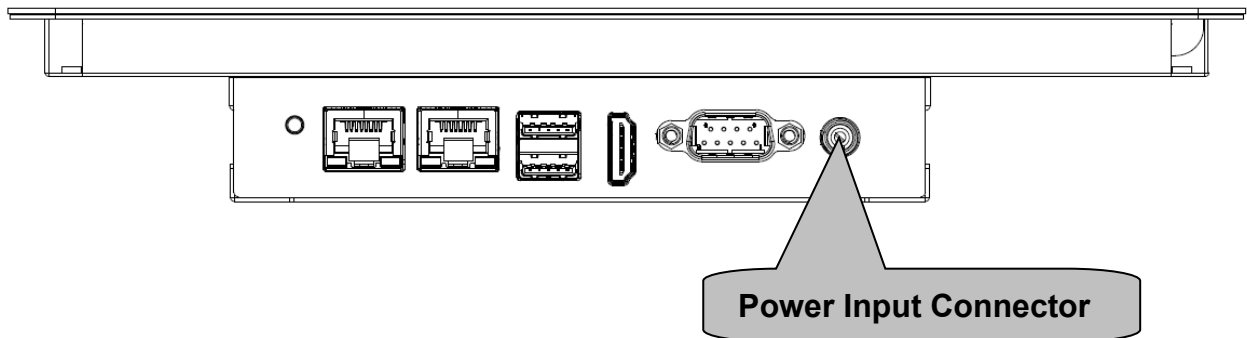
2.1 Powering On the System

To power on the system, follow the steps below.

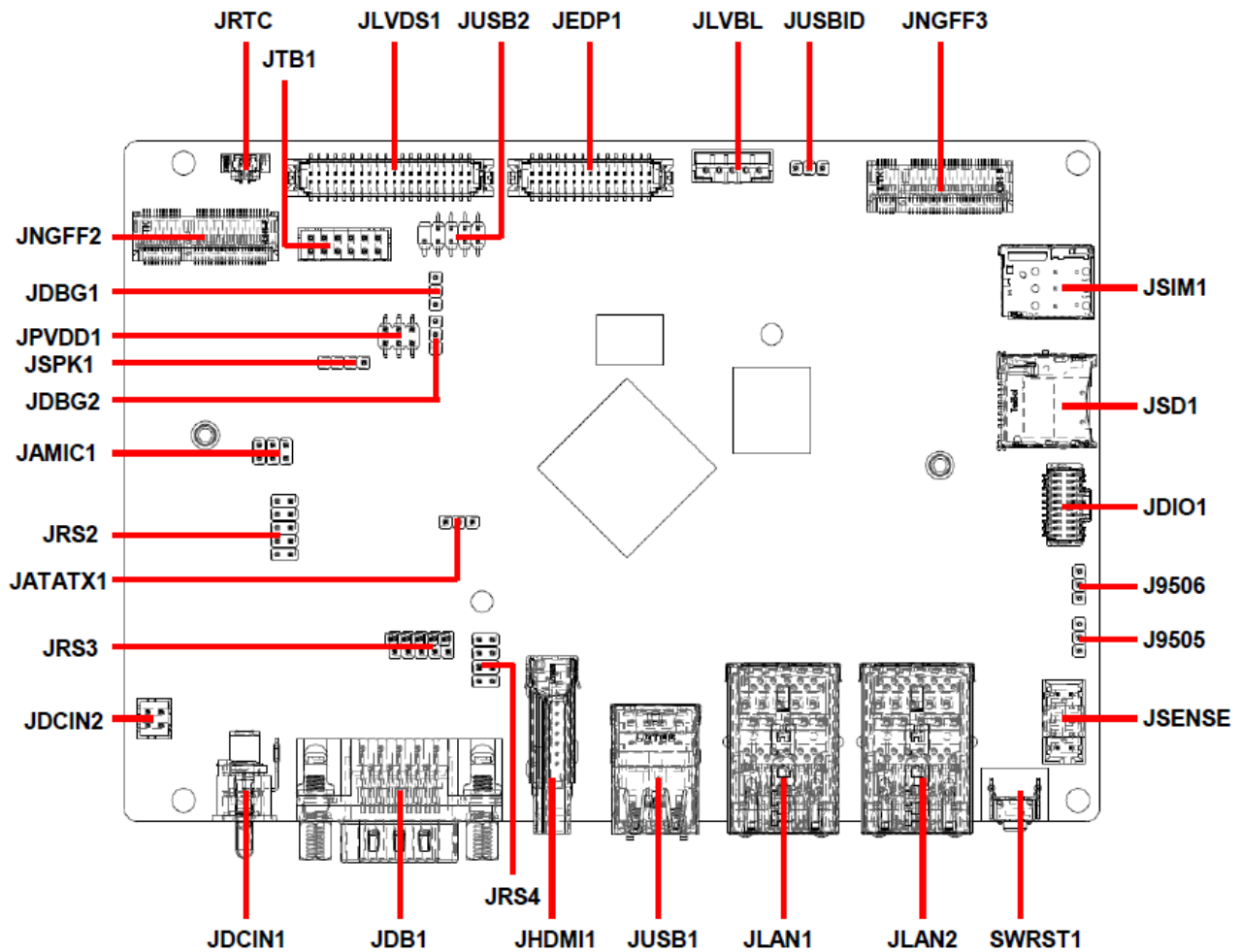
Step 1: Connect the power cord to the power adapter. Connect the other end of the power cord to a power source. Ensure to connect the power cord to a socket-outlet with earthing connection.

Step 2: Connect the power adapter to the power connector of the product.

Step 3: This product operates in AT mode, meaning that once power is supplied, the product will automatically power on and start up.



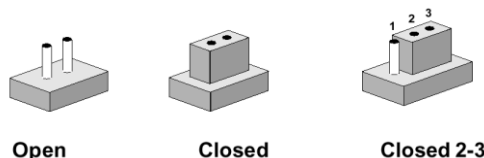
2.2 RSC-3568J Overview



2.3 RSC-3568J Jumper and Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip. To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



The jumper settings are schematically depicted in this manual as follows:



A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

The following tables list the function of each of the board's jumpers and connectors.

Jumpers

Label	Function	Note
JATATX1	AT/ATX Input power select	3 x 1 header, pitch 2.00mm
JUSBID	USB ID mode selector	3 x 1 header, pitch 2.00mm
JPVDD1	LVDS VDD selector	3 x 2 header, pitch 2.00mm
JRS4	COM port 5/6 mode selector	4 x 2 header, pitch 2.00mm

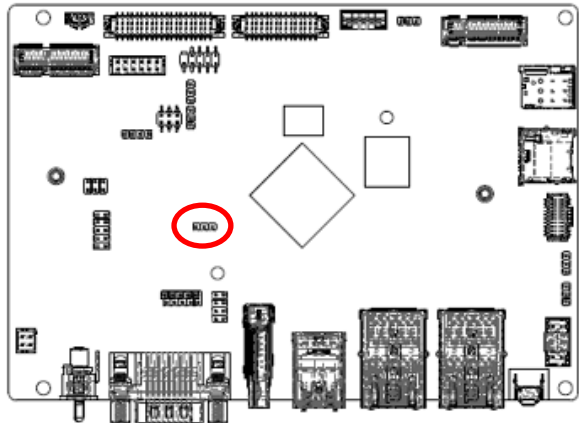
Connectors

Label	Function	Note
JLVBL	Backlight control interface	5 x 1 wafer, pitch 2.00mm Note: Matching connector: JST PHR-5
JDIO1	General purpose I/O connector	10 x 2 wafer, pitch 1.00mm
JNGFF2	M.2 KEY-E 2230 connector	

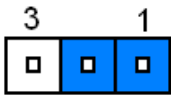
JNGFF3	M.2 KEY-B 3042/2242 connector	
JLAN1/2	2 x RJ-45 Ethernet	
JHDMI1	HDMI connector	
JDB1	COM5 connector	
JDCIN1	JDCIN1 connector	
JUSB1	2 x USB3.0 connector	
JUSB2	USB2.0 connector	5 x 2 header, pitch 2.00mm
JAMIC1	Mic connector	3 x 2 header, pitch 2.00mm
J9505	CAN BUS connector	3 x 1 header, pitch 2.00mm
J9506	CAN BUS connector	3 x 1 header, pitch 2.00mm
JRS2	COM 3/4 connector	5 x 2 header, pitch 2.00mm
JRS3	COM 6 connector	5 x 2 header, pitch 2.00mm
JSENSE	I2C Sensor connector	5 x 2 header, pitch 2.00mm
JTB1	Front touch button connector	6 x 2 wafer, pitch 2.00mm
JEDP1	eDP interface connector	15 x 2 wafer, pitch 1.25mm Note: Matching connector: Hirose DF13-30DS-1.25C
JLVDS1	LVDS/MIPI connector	20 x 2 wafer, pitch 1.25mm Note: Matching connector: Hirose DF13-40DS-1.25C
JRTC	RTC Battery connector	2 x 1 wafer, pitch 1.25mm
JDBG1/2	COM 1/2 Debug connector	3 x 1 header, pitch 2.00mm
JSIM1	Nano SIM card slot	
JSD1	Micro SD card slot	
SWRST	Reset key	
JSPK1	Speaker connector	4 x 1 header, pitch 2.00mm

2.4 RSC-3568J Jumpers & Connectors settings

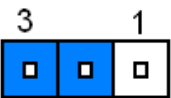
2.4.1 AT/ATX Input power select (JATATX1)



AT*

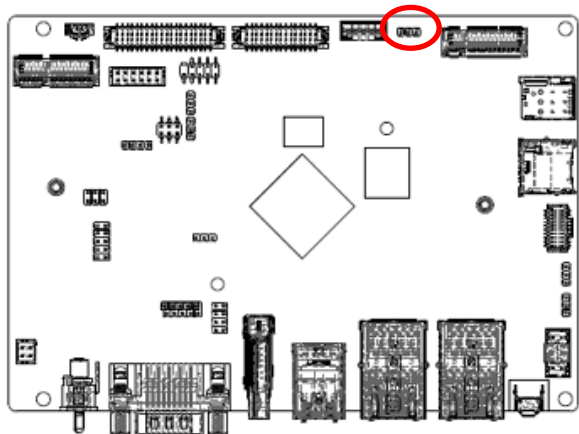


ATX



* Default

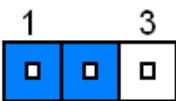
2.4.2 USB ID mode selector (JUSBID)



Client Mode

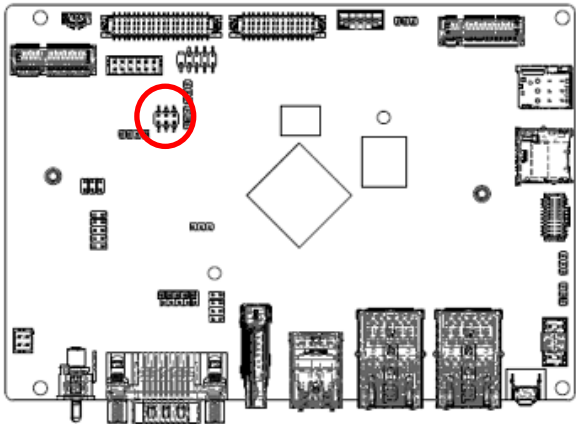


HOST*



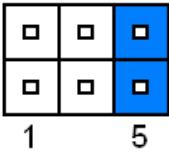
* Default

2.4.3 LVDS VDD selector (JPVDD1)

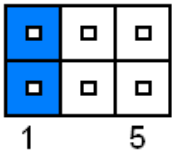


* Default

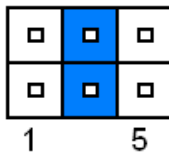
+3.3V*



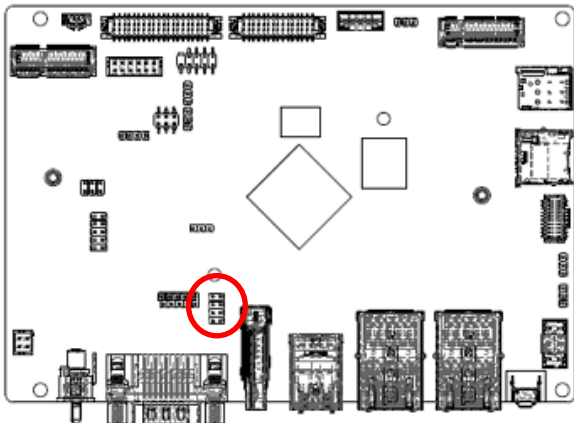
+5V



NC

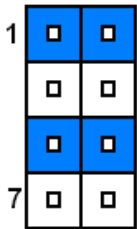


2.4.4 COM port 5/6 mode selector (JRS4)



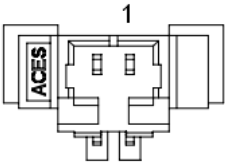
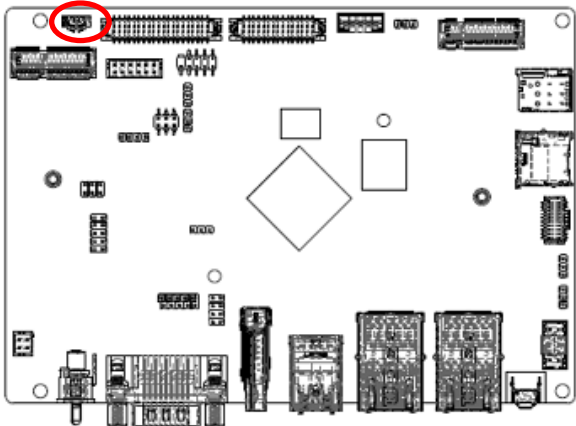
* Default

RS232*



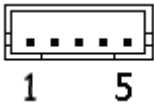
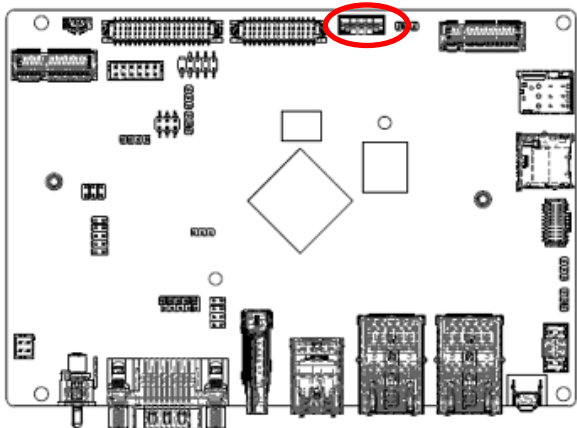
	RS-232	RS-485	RS-422
COM5	1-2	N/A	1-2
JDB1	N/A	3-4	3-4
COM6	5-6	N/A	5-6
JRS3	N/A	7-8	7-8

2.4.5 RTC Battery connector (JRTC)



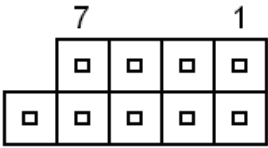
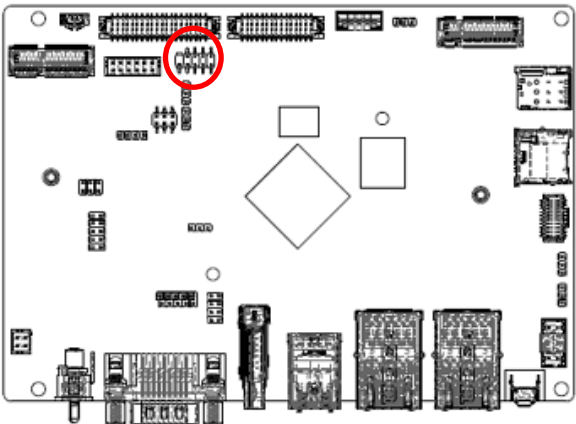
Signal	PIN
+VDD_RTC	1
GND	2

2.4.6 Backlight control interface connector (JLVBL)



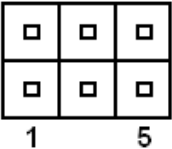
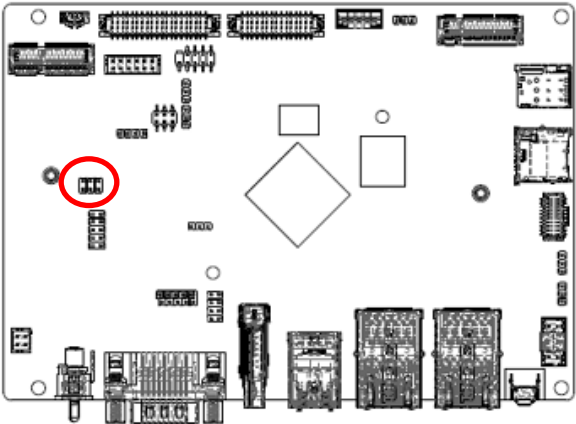
Signal	PIN
+12V	1
+12V	2
EN	3
PWM	4
GND	5

2.4.7 USB2.0 connector (JUSB2)



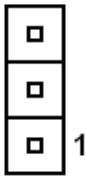
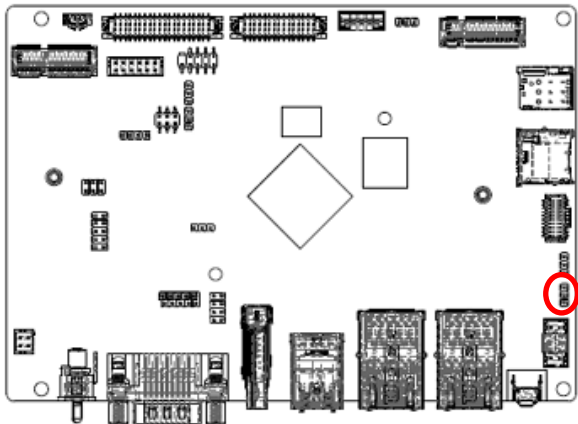
Signal	PIN	PIN	Signal
+5V	1	2	+5V
DATA-	3	4	DATA-
DATA+	5	6	DATA+
GND	7	8	GND
		10	GND

2.4.8 Mic connector (JAMIC1)



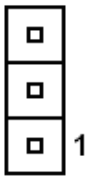
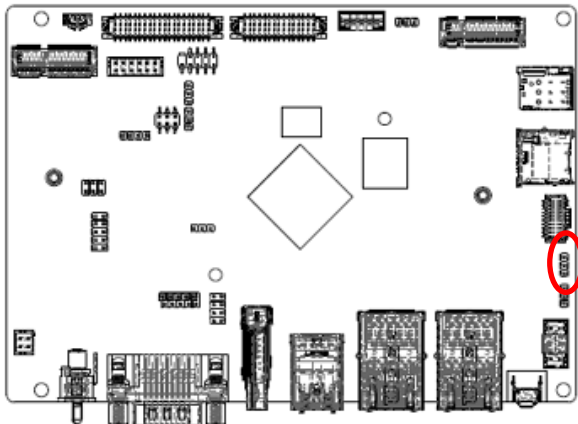
Signal	PIN	PIN	Signal
HP_RIGHT_R	1	2	HEAD_DET#_R
HP_LEFT_R	3	4	MIC1_INP
GND	5	6	MIC_JD#

2.4.9 CAN BUS connector (J9505)



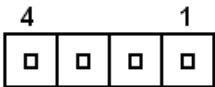
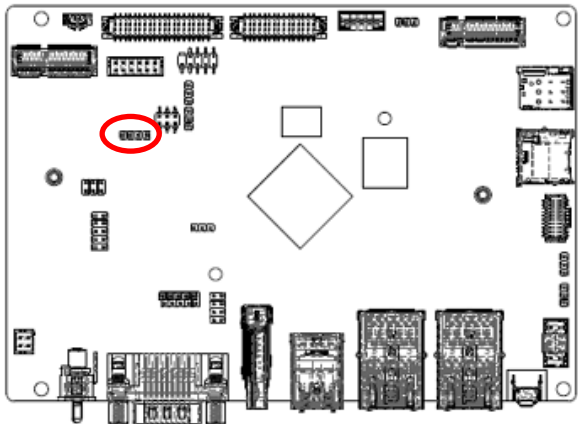
Signal	PIN
CAN1_VSS	3
CAN1_L	2
CAN1_H	1

2.4.10 CAN BUS connector (J9506)



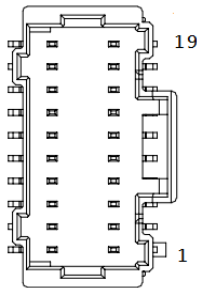
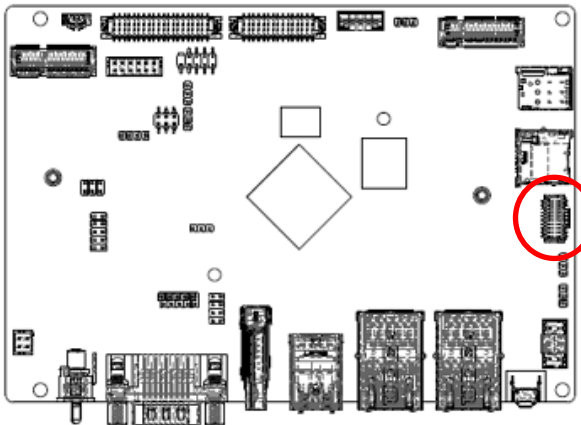
Signal	PIN
CAN_VSS	3
CANL	2
CANH	1

2.4.11 Speaker connector (JSPK1)



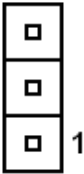
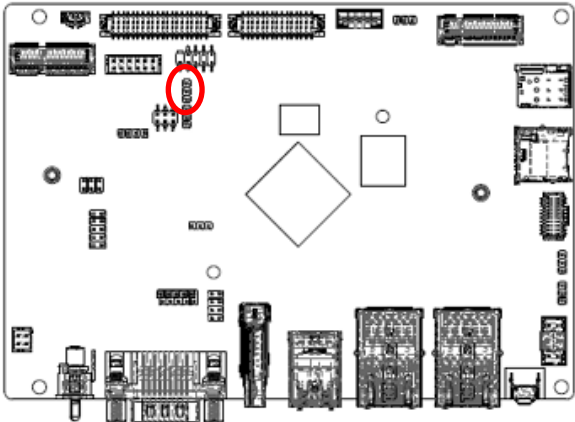
Signal	PIN
SPK_L+	1
SPK_L-	2
SPK_R+	3
SPK_R-	4

2.4.12 General purpose I/O connector (JDIO1)



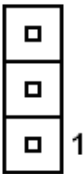
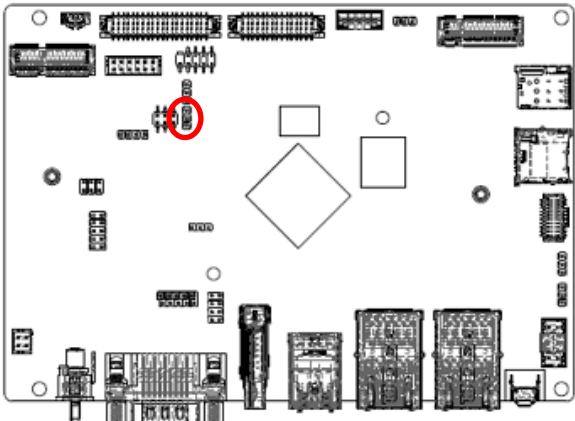
Signal	PIN	PIN	Signal
GND	20	19	+5V
I2C_3_LV_SCL	18	17	I2C_3_LV_SDA
DIO_GP27	16	15	DIO_GP17
DIO_GP26	14	13	DIO_GP16
DIO_GP25	12	11	DIO_GP15
DIO_GP24	10	9	DIO_GP14
DIO_GP23	8	7	DIO_GP13
DIO_GP22	6	5	DIO_GP12
DIO_GP21	4	3	DIO_GP11
DIO_GP20	2	1	DIO_GP10

2.4.13 COM1 Debug connector (JDBG1)



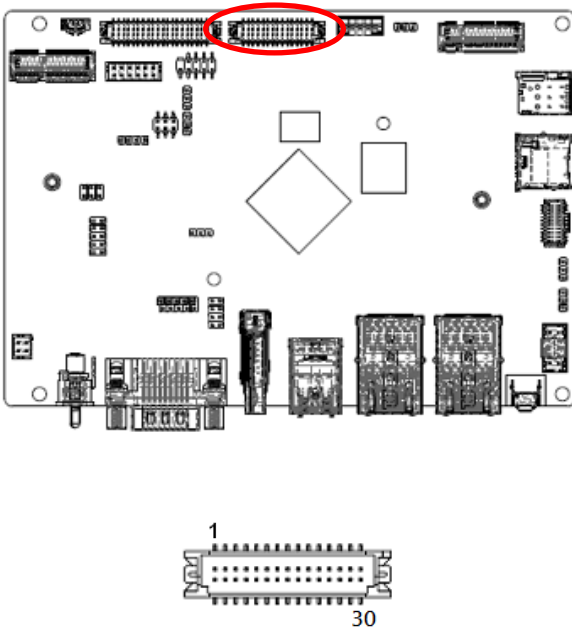
Signal	PIN
GND	3
RX	2
TX	1

2.4.14 COM2 Debug connector (JDBG2)



Signal	PIN
GND	3
RX	2
TX	1

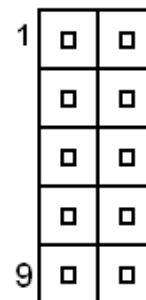
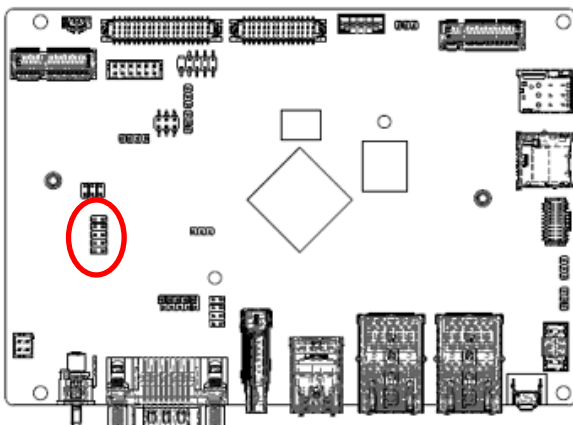
2.4.15 eDP interface connector (JEDP1)



Note: +PANEL_VDD can be selected to +3.3V/+5V/NC by jumper (JPVDD1)

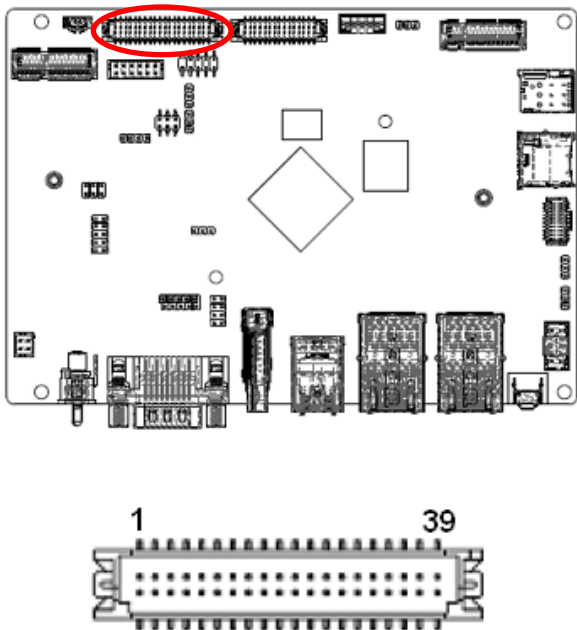
Signal	PIN	PIN	Signal
+12V	2	1	+12V
+12V	4	3	+12V
GND	6	5	GND
GND	8	7	GND
+PANEL_VDD	10	9	EDP_TX_D0P
+PANEL_VDD	12	11	EDP_TX_D0N
GND	14	13	GND
GND	16	15	EDP_TX_D1P
EDP_TX_AUXN	18	17	EDP_TX_D1N
EDP_TX_AUXP	20	19	GND
GND	22	21	EDP_HPD
GND	24	23	LCM_BL_EN_33V
GND	26	25	CPU_eDP_PWM_33V
GND	28	27	GND
GND	30	29	GND

2.4.16 COM 3/4 connector (JRS2)



Signal	PIN	PIN	Signal
COM4_RXD	1	2	COM3_RXD
COM4_TXD	3	4	COM3_TXD
COM4_RTS	5	6	COM3_RTS
COM4_CTS	7	8	COM3_CTS
GND	9	10	GND

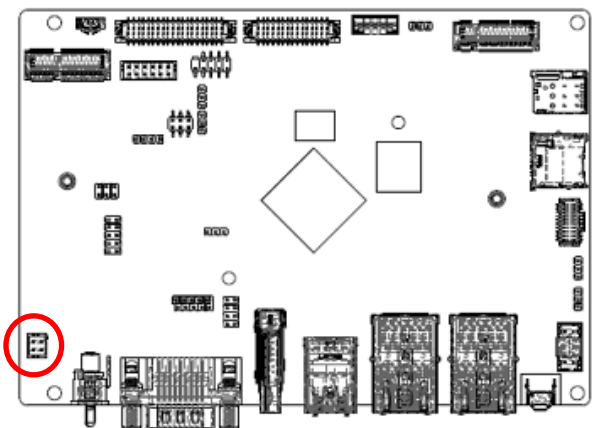
2.4.17 LVDS connector (JLVDS1)



Note: +PANEL_VDD can be selected to +3.3V/+5V/NC by jumper (JPVDD1)

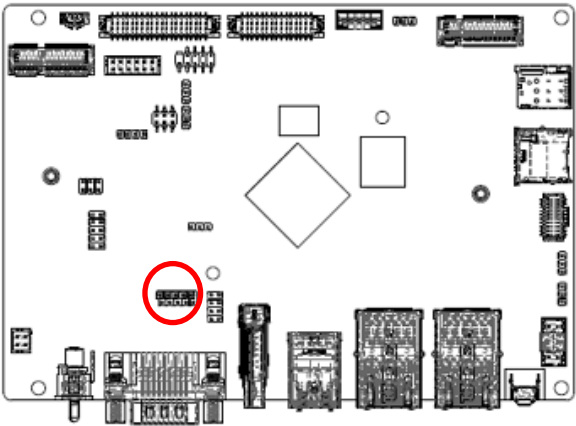
Signal	PIN	PIN	Signal
DSI_RESET#_3V3	2	1	+PANEL_VDD
7_10_BL	4	3	+PANEL_VDD
GND	6	5	GND
+PANEL_LEDK-	8	7	+PANEL_LED A
+PANEL_LEDK-	10	9	+PANEL_LED A
GND	12	11	GND
MIPI_DSI_TX1_D0N	14	13	MIPI_DSI_TX0_D0N
MIPI_DSI_TX1_D0P	16	15	MIPI_DSI_TX0_D0P
GND	18	17	GND
MIPI_DSI_TX1_D1N	20	19	MIPI_DSI_TX0_D1N
MIPI_DSI_TX1_D1P	22	21	MIPI_DSI_TX0_D1P
GND	24	23	GND
MIPI_DSI_TX1_CLKN	26	25	MIPI_DSI_TX0_CLKN
MIPI_DSI_TX1_CLKP	28	27	MIPI_DSI_TX0_CLKP
GND	30	29	GND
MIPI_DSI_TX1_D2N	32	31	MIPI_DSI_TX0_D2N
MIPI_DSI_TX1_D2P	34	33	MIPI_DSI_TX0_D2P
GND	36	35	GND
MIPI_DSI_TX1_D3N	38	37	MIPI_DSI_TX0_D3N
MIPI_DSI_TX1_D3P	40	39	MIPI_DSI_TX0_D3P

2.4.18 JDCIN connector (JDCIN2)

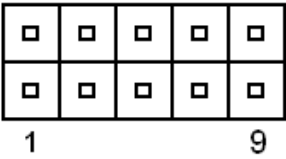


Signal	PIN	PIN	Signal
GND	2	1	+12V~+24V_Vin
GND	4	3	+12V~+24V_Vin

2.4.19 COM 6 connector (JRS3)



Note: JRS3 can be selected to RS232(Default)/RS422/RS485 by jumper (JRS4)



RS232

Signal	PIN	PIN	Signal
RXD	1	2	DCD#
TXD	3	4	DTR#
RTS#	5	6	NC
CTS#	7	8	NC
GND	9	10	NC

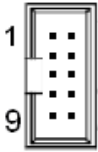
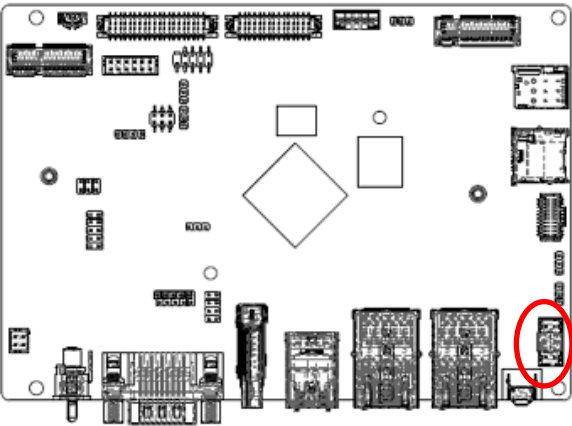
RS422

Signal	PIN	PIN	Signal
Tx+	1	2	Tx-
Rx+	3	4	Rx-
NC	5	6	NC
NC	7	8	NC
GND	9	10	NC

RS485

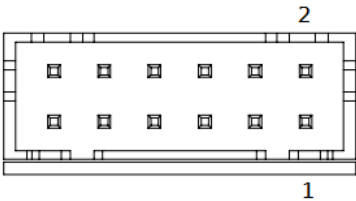
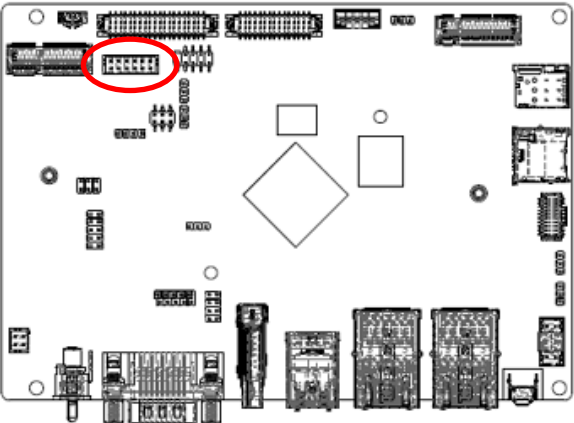
Signal	PIN	PIN	Signal
DATA+	1	2	DATA-
NC	3	4	NC
NC	5	6	NC
NC	7	8	NC
GND	9	10	NC

2.4.20 I2C Sensor connector (JSENSE)



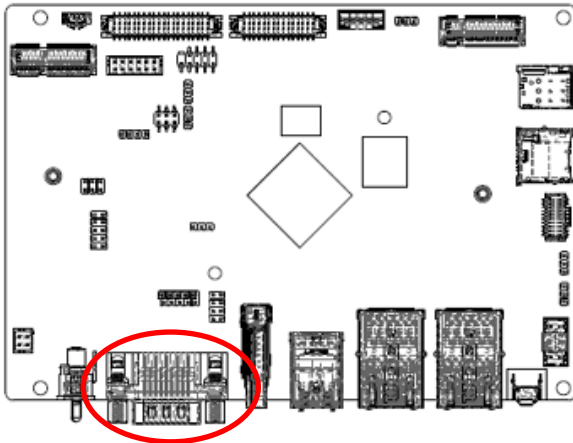
Signal	PIN	PIN	Signal
+3V	1	2	+3V
I2C3_SCL_3.3V_CONN	3	4	I2C5_SCL_3.3V_CONN
I2C3_SDA_3.3V_CONN	5	6	I2C5_SDA_3.3V_CONN
SENSE0_IRQ_R	7	8	SENSE2_IRQ_R
GND	9	10	GND

2.4.21 Front touch button connector (JTB1)

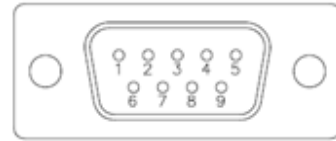


Function	Signal	PIN
Reset button	LINUX_SW	3
	+5V	1
VOL_UP	VOL_UP	5
	+5V	1
VOL_DOWN	VOL_DOWN	6
	+5V	1
PWRBTN	PWRBTN	7
	+5V	1
BRIGHTNESS+	BRIGHTNESS+	8
	+5V	1
BRIGHTNESS-	BRIGHTNESS-	9
	+5V	1
LED_ORANGE (Power off)	LED_ORANGE+	12
	LED_GND	2
LED_GREEN (Power on)	LED_GREEN+	11
	LED_GND	2
For internal use only	BU1	4
	BU7	10

2.4.22 COM5 connector (JDB1)



Note: JDB1 can be selected to RS232(Default)/RS422/RS485 by jumper (JRS4)



RS232

Signal	PIN	PIN	Signal
DCD#	1	6	DSR#
RXD	2	7	RTS#
TXD	3	8	CTS#
DTR#	4	9	RI#
GND	5		

RS422

Signal	PIN	PIN	Signal
Tx-	1	6	NC
Tx+	2	7	NC
Rx+	3	8	NC
Rx-	4	9	NC
GND	5		

RS485

Signal	PIN	PIN	Signal
DATA-	1	6	NC
DATA+	2	7	NC
NC	3	8	NC
NC	4	9	NC
GND	5		

3. Installation

Removing the Top Cover Warning

To prevent electric shock or system damage, before removing the chassis cover, must turn off power and disconnect the unit from power source.

Electrostatic discharge (ESD) can cause serious damage to electronic components. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the product is accessed internally, or any other electrical component is handled, the following anti-static precautions are strictly adhered to:

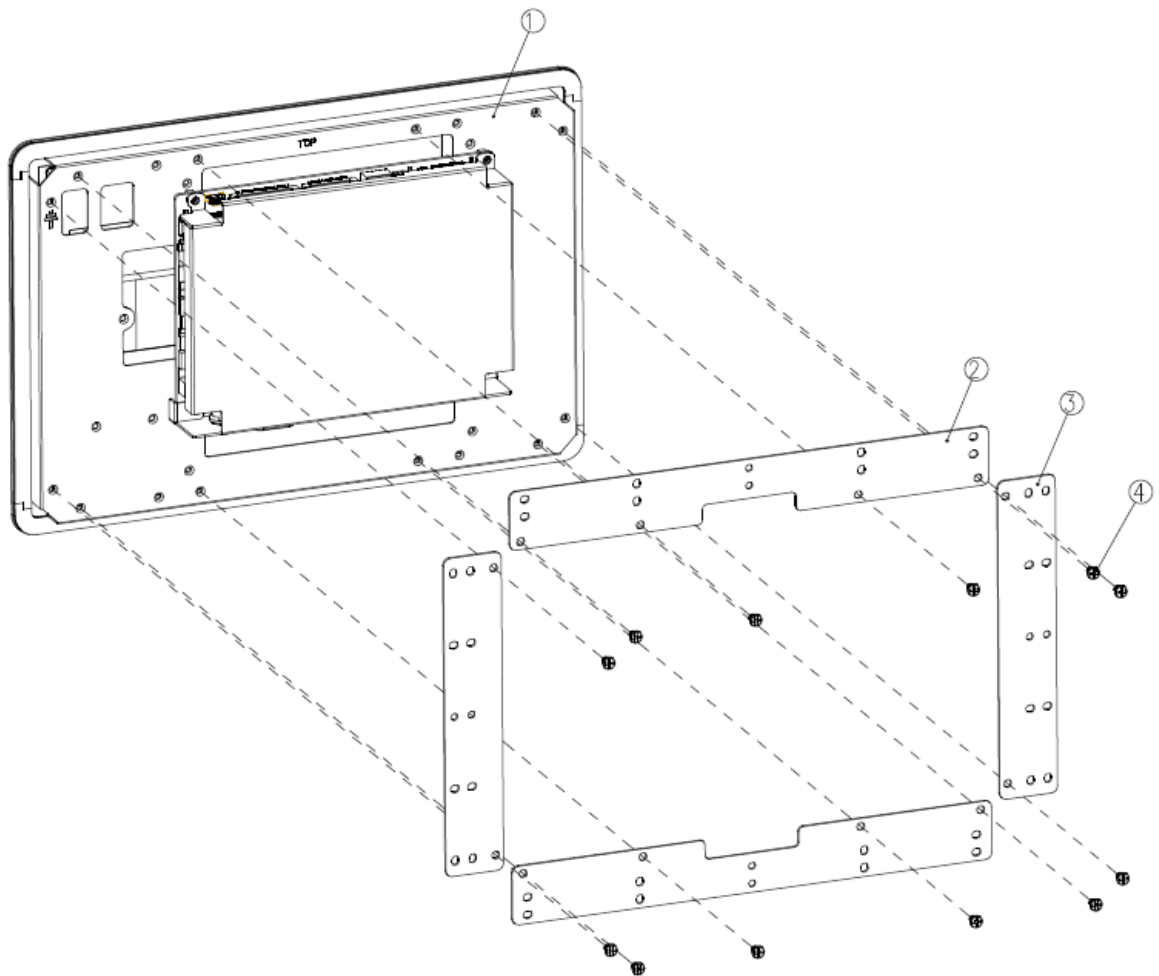
- Wear an anti-static wristband: Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- Self-grounding: Before handling the board, touch any grounded conducting material. During the time the board is handled, frequently touch any conducting materials that are connected to the ground.
- Use an anti-static pad: When configuring the product, place it on an anti-static pad. This reduces the possibility of ESD damaging the product.
- Only handle the edges of the PCB: When handling the PCB, hold the PCB by the edges.

Installation Precautions

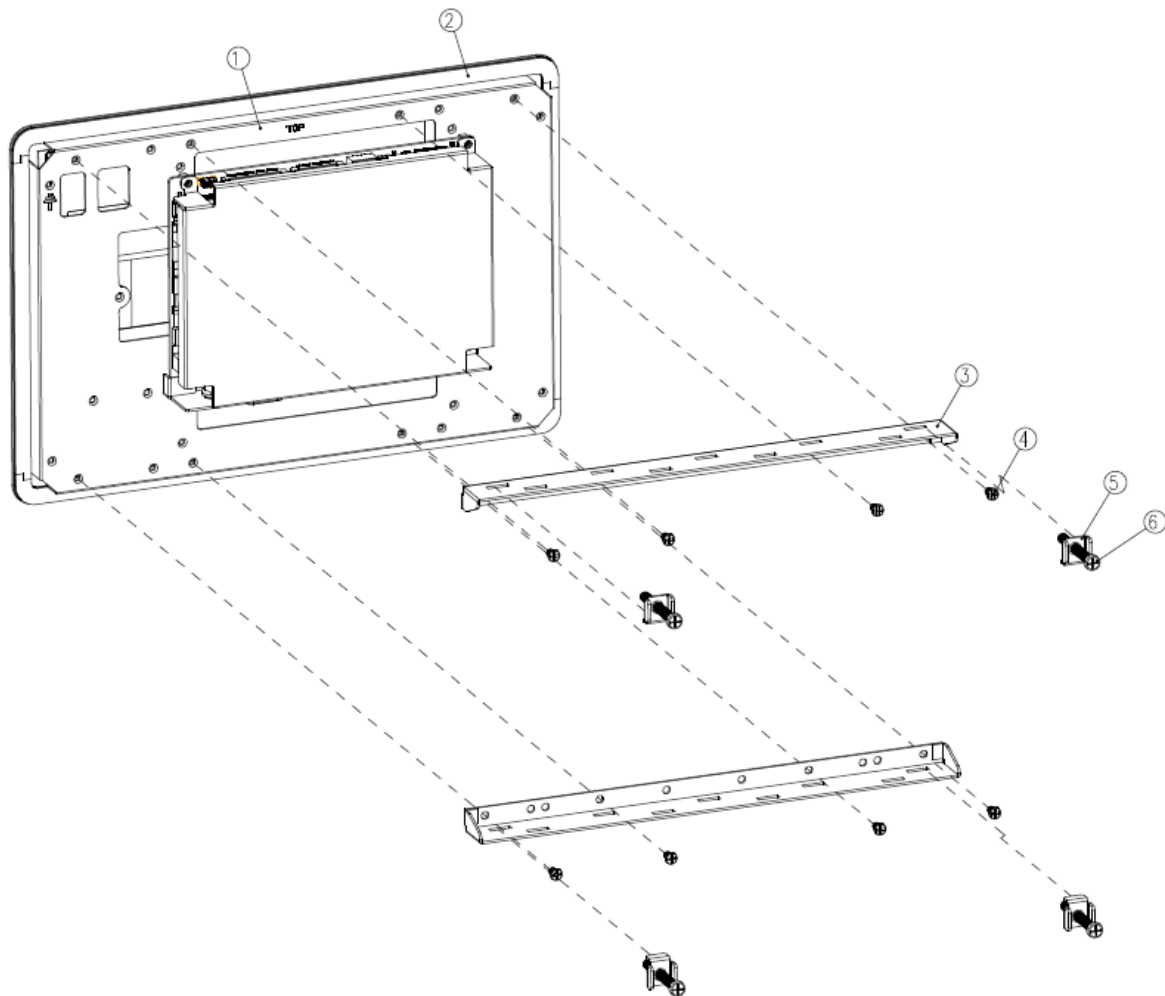
When installing the flat bezel panel PC, please follow the precautions listed below:

- Power turned off: When installing the flat bezel panel PC, make sure the power is off. Failing to turn off the power may cause severe injury to the body and/or damage to the system.
- Certified Engineers: Never open the equipment. For safety reasons, the equipment should be opened only by qualified skilled person.
- Anti-static Discharge: If a user open the rear panel of the flat bezel panel PC, to configure the jumpers or plug in added peripheral devices, ground themselves first and wear an anti-static wristband.

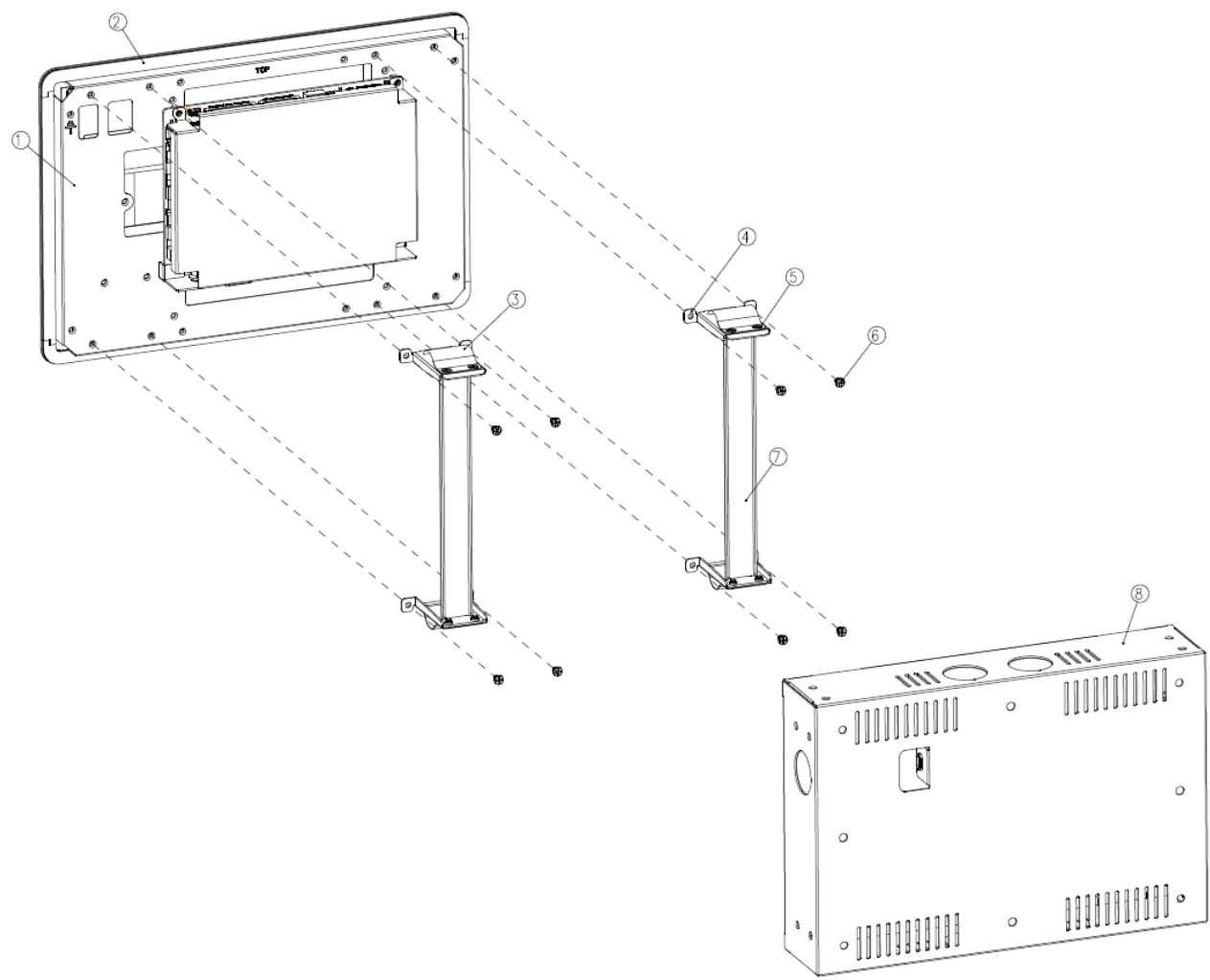
3.1 Installing Extend Brackets



3.2 Panel Mounting



3.3 Wall Mounting



4. Product Application

For detailed instructions on the operation of the Watchdog Timer and Digital I/O (DIO) features of this Panel PC, please refer to the comprehensive guide available in the "AvalueIOAPI" manual. Please reaching out to your respective distributors, Avalue technical support team, or Avalue customer service representatives for further information. Feel free to inquire about this supplementary resource to enhance your understanding of the Watchdog Timer and Digital I/O (DIO) Application for optimal utilization of your Panel PC.

5. Operating the Device

The Multi-Touch mode was pre-installed on the Panel PC and need tools for any customizations. Should you have specific requirements or encounter scenarios where a customized touch mode is necessary, we recommend reaching out to your local distributors, Avalue technical support team, or Avalue customer service representatives. These professionals can provide tailored guidance and assistance to address any unique needs related to Multi-Touch mode adjustments.