

User Manual



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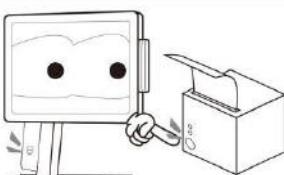
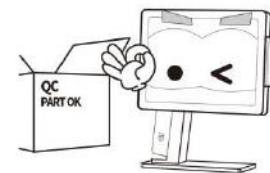
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01. Safety Notices before installation and use



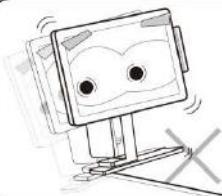
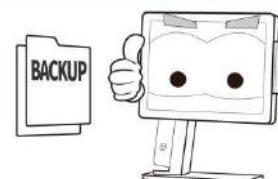
- Use the following safety guidelines to help ensure your own personal safety and to help protect your equipment and working environment from potential damage

System should use compatible peripherals.
Devices other than peripherals provided by us may experience compatibility issues.



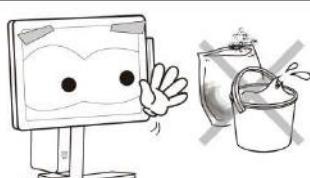
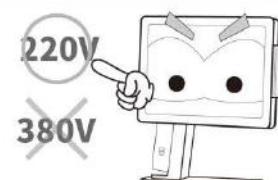
Turn on the peripherals first when turning on system, turn off the system first other than peripherals when turning off system.

Please back up important data frequently. We do not warrant data on storage devices.



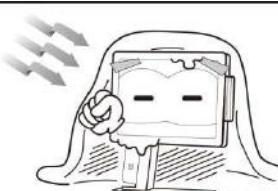
Install the product in a flat, non-slip location that is easily operated by the user.

Use rated voltages to prevent fire hazard and product damage.



Please install the product in a dry and clean place. Dust and moisture can adversely affect the performance and stability of the system.

Do not block the ventilation hole of the product, and install in a well ventilated area. The system may overheat causing performance degradation and stability problems.

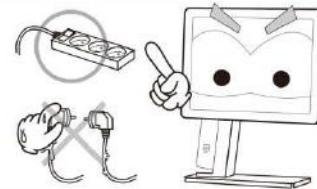


01. Safety Notices before installation and use

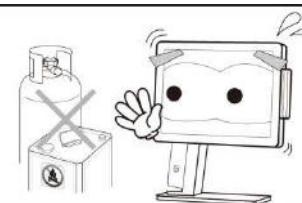


Use the following safety guidelines to help ensure your own personal safety and to help protect your equipment and working environment from potential damage

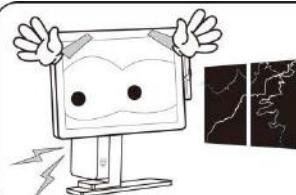
Connect the AC code to the grounded outlet. Do not use the damaged power cable as there may be fire and electric shock hazard of electric shock. Never touch AC power with wet hands. May be electrocuted.



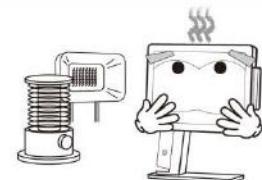
When disassembling or upgrading a product, make sure to turn off the power and remove the power cables and peripherals to avoid the risk of electric shock and damage to the product.



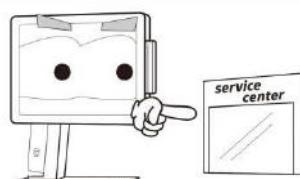
Use a computer-only cleaner. Do not use benzene, excited or alcohol. The product may be deformed.



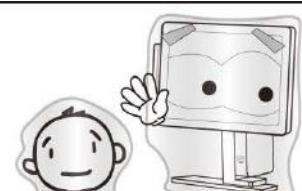
Do not touch the modem, telephone lines, and exposed terminals when thunder and lightning strike. Risk of electric shock and fire.



Keep the product away from the heat appliance (heater, etc.). There is a risk of product deformation or fire.



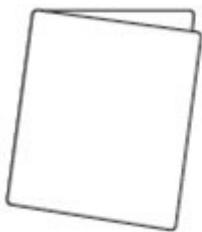
The manufacturer does not warrant product failure due to user arbitrary disassembly, repair or modification. Please use the designated service center for warranty and repair.



Keep plastic wrap out of reach of children.

02. System Introduction

- The exterior design and specifications of product can be changed without prior notice in order to improve quality.



Manual



Adapter, Cable

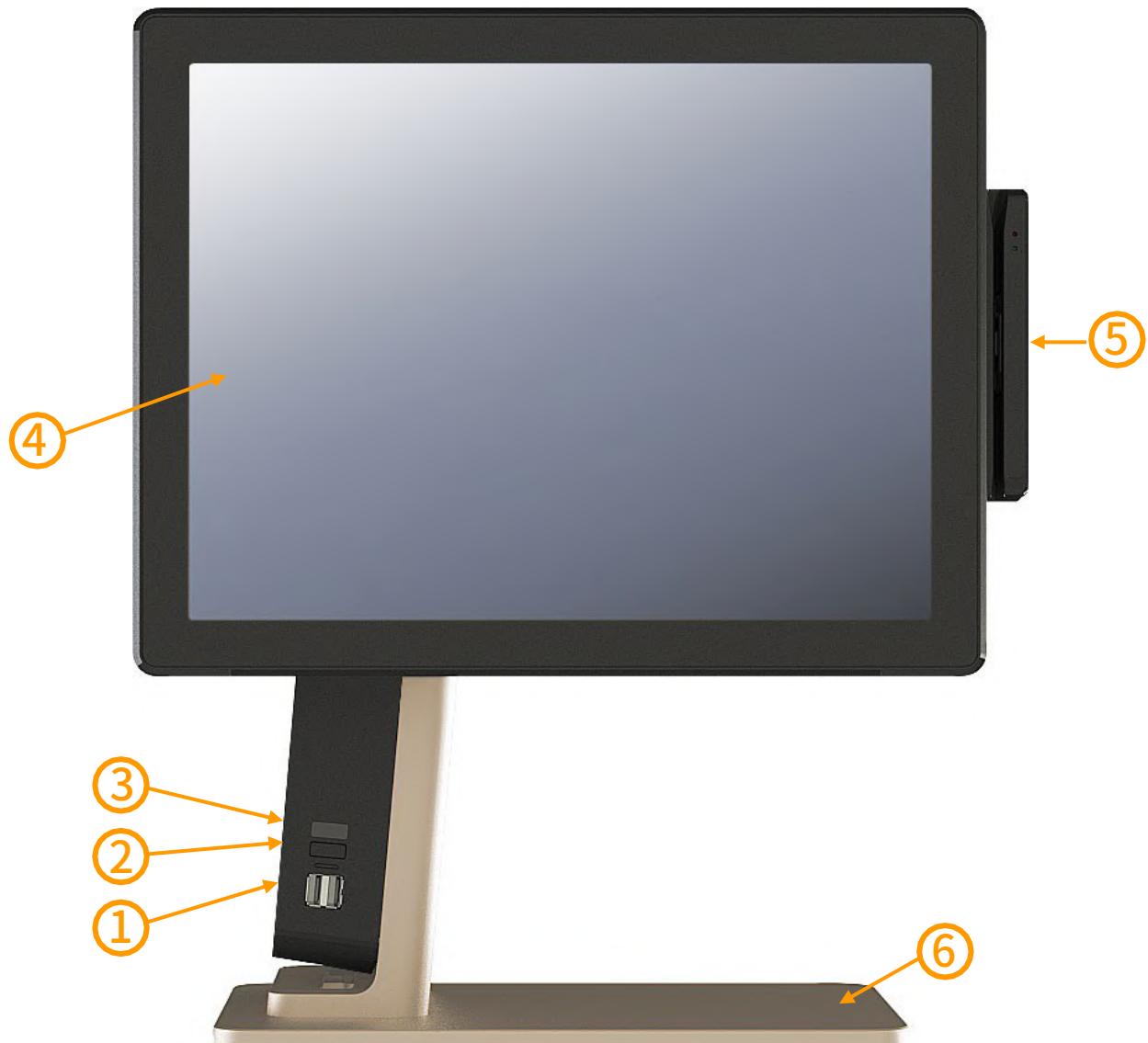
03. General Specifications

Processor	Intel Celeron J1900 2.0GHz(2M Cache, up to 2.42GHz) Intel Celeron J6412 2.0GHz(1.5M Cache, up to 2.6GHz) Intel Core-i3 7100U 2.40GHz(3M Cache) Intel Core-i5 7200U 2.5GHz(3M Cache, up to 3.10GHz)	
Chipset	SOC	
Graphic	Integrated Intel HD Graphics	
Data Storage	SATA-III 2.5" SSD/HDD, m.2 2280SSD RAID Supported (Option)	
Memory	J1900 : DDR3 1600MHz 1 Slot (up to 8GB) J6412 : DDR4 3200MHz 2 Slot (up to 32GB) i3 / i5 : DDR4 2133MHz 2 Slot (up to 32GB)	
BIOS	AMI UEFI BIOS	
Display	15" (38.1cm)	Resolution : 1024 x 768(4:3) Color : 16.2M Colors supported Contrast Ratio : 500:1 Backlight : 350cd/m ² , 50,000 hours
	15.6" (39.62cm)	Resolution : 1366 x 768(16:9) Color : 262K Colors supported Contrast Ratio : 400:1 Backlight : 220cd/m ² , 15,000 hours
	18.5" (46.99cm)	Resolution : 1366 x 768(16:9) Color : 16.7M Colors supported Contrast Ratio : 1000:1 Backlight : 250cd/m ² , 30,000 hours
	10.1" (25.65cm)	Resolution : 1024 x 600(16:9) Color : 262K Colors supported Contrast Ratio : 450:1 Backlight : 180cd/m ² , 20,000 hours
Operating temperature	0~40 °C	
Touch Panel	Type : True flat PCT (Projective Capacitive Touch) Interface : USB Transparency : 85%	
	Surface Hardness : 7H Hitting Life : 100,000,000 times	
OS	POSReady7 / Windows 10	
I/O Interface	COM(Serial) : D-SUB 9P x 3 Ports / RJ-45 x 1Port 5V / 12V or RI outputs through BIOS setup USB Port - J1900 : Front x 2Ports(V2.0) / IO x 4Ports(V2.0) - J6412, Core i3/i5 : Front x 2Ports(V2.0) / IO x 4Ports(V3.0)	
	Ehternet Port : 10M/100M1Gb RJ-45 x 1Port DP(Display Port) : DP x1port HDMI : (J6412, i3/i5 model) HDMI x 1port Audio Port : Line-out x 1port DC – Output Port : 12V DC-OUT 2.5Ø x 1Port	
Booting Device	HDD, SSD ,M.2, External CD / DVD-ROM, USB Memory etc.	
Power Supply	AC INPUT : AC 100~240V /50~60Hz, 2A , DC OUTPUT : 12V / 5A (60W)	
Dimensions / Weight	15" (38.1cm)	355 x 215 x 432 (W x D x H, mm) / 5.5kg
	15.6" (39.62cm)	394 x 215 x 415 (W x D x H, mm) / 5.0kg
	18.5" (46.99cm)	460 x 215 x 433 (W x D x H, mm) / 6.9kg
	10.1" (25.65cm)	291 x 215 x 378 (W x D x H, mm) / 4.2kg

04. Optional Specifications

External I/O Interface	Option 1) SERIAL 1+1	D-SUB 9P x 1Port / RJ-45 x 1Port
	Option 2) USB 2x2	USB 2.0 x 4Ports
	Option 3) Parallel	Parallel x 1Port
Magnetic Stripe Reader(MSR)	<p>Read Track : ISO track 1, 2, 3 Interface : Internal USB Performance : 10~150 cm/sec Head Reliability : 500,000 times Error rate : Less than 0.5%</p>	
Customer Display	<p>1) 2 Line LCD: 20 x 2(8 x 16 dot) Characters LCD 2) 9.7" (24.64cm) 1024 x 768, 4:3 LCD Monitor 3) 15" (38.10cm) 1024 x 768, 4:3 LCD Monitor 4) 10.1" (25.65cm) 1024 x 600, 16:9 LCD Monitor 5) 15.6" (39.62cm) 1366 x 768, 16:9 LCD Monitor</p>	

05. Name and Function of each component Front View



1. USB 2.0 Port

USB Devices can be used through this port, i.e. USB Scanner, USB Keyboard, USB Printer, etc.

2. Power button System power on and off through this button.

3. Indicating LED Lamp

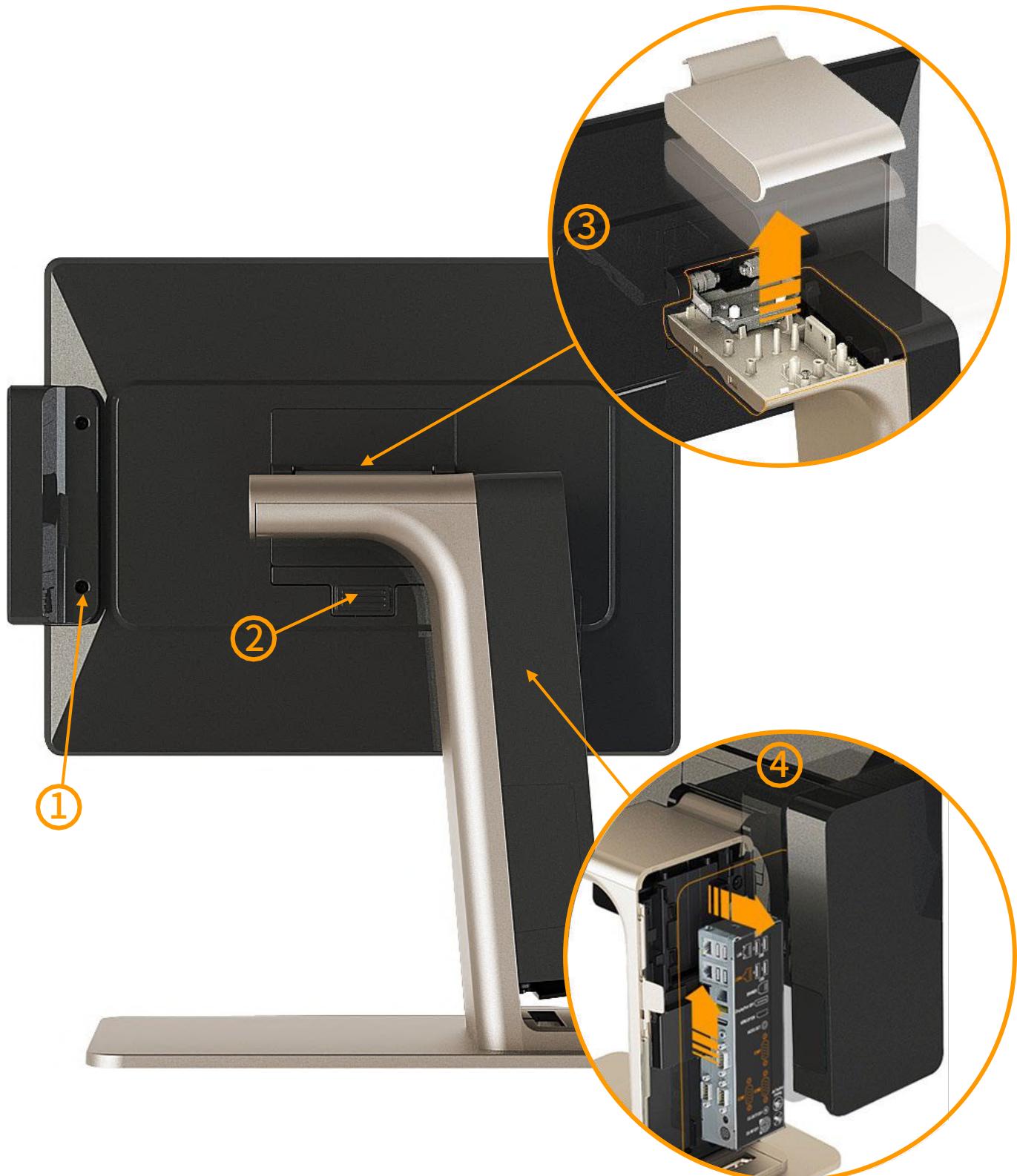
The lights shows the system status and storage operation, i.e. system power on is green light, HDD operation is red light.

4. Display Main Display, PCAP touch.

5. Magnetic Card Reader Can read 3 track magnetic card.

6. Stand & Plate

06. Name and Function of each component Rear View



1. Screw Hole Fix a card reader.

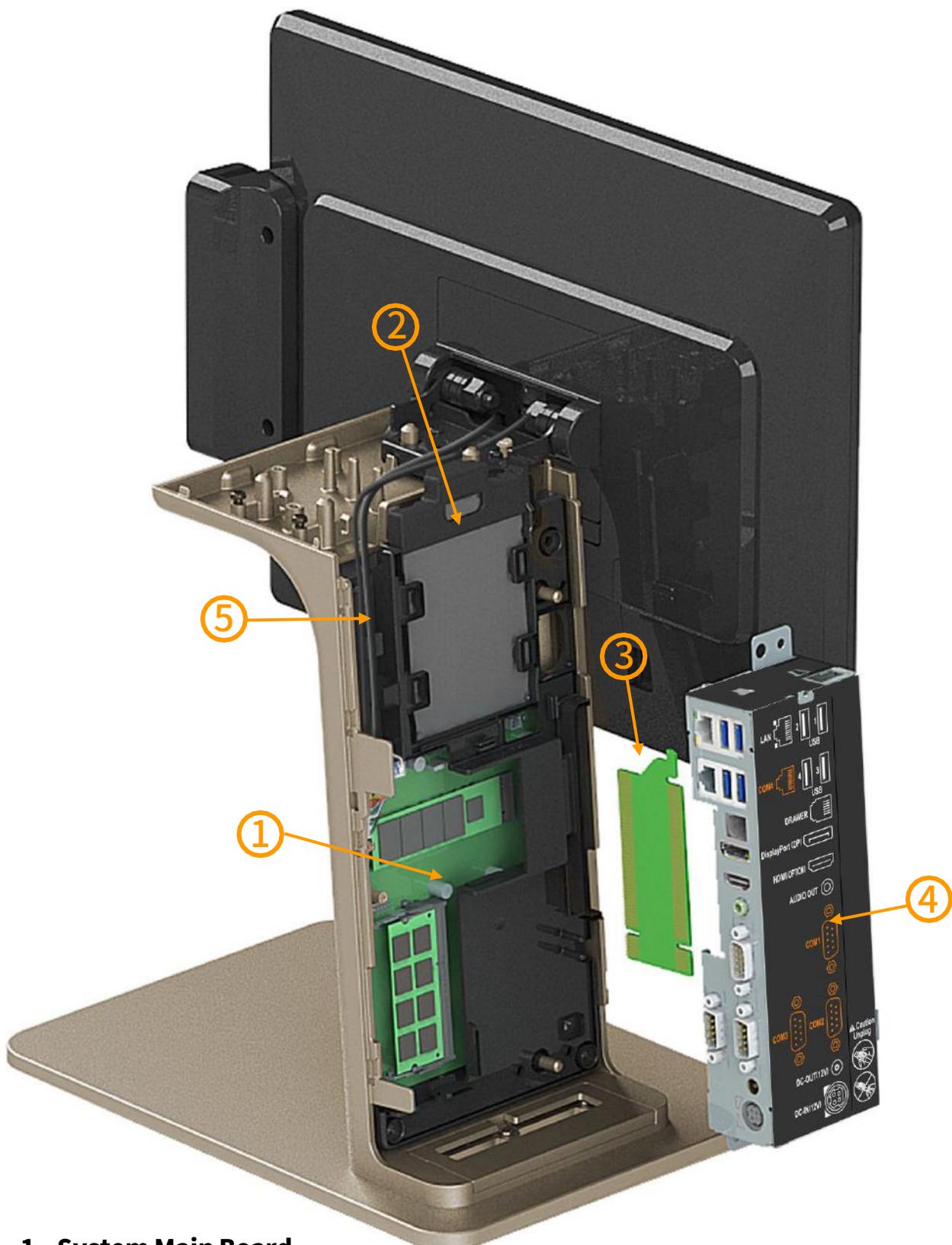
2. Push Button for detachable Main Display

3. Upper Cover of Stand

Remove this cover, you can replace storage or install customer display.

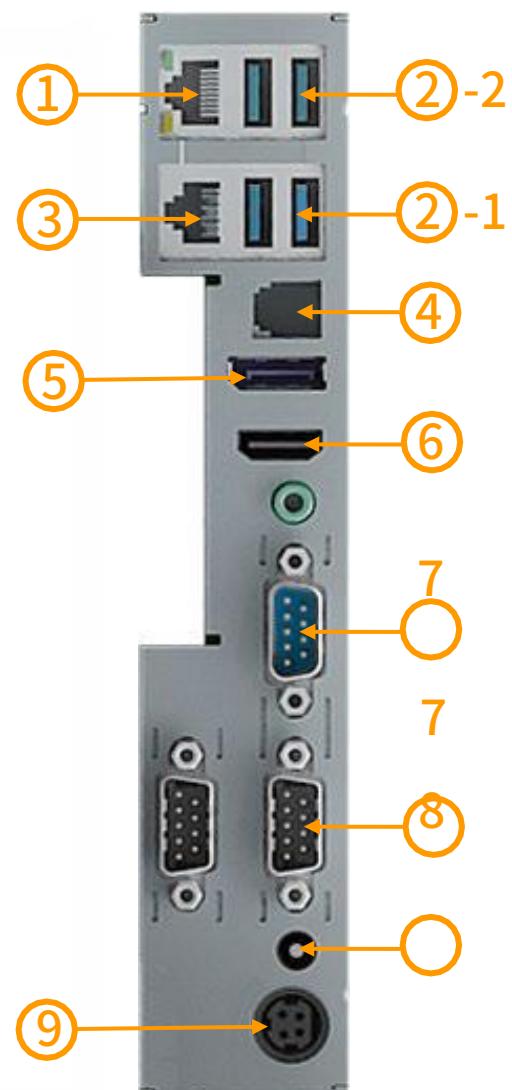
4. System Cover Remove this cover, you can connect peripheral devices.

07. Name and Function of each component Inside View



1. **System Main Board**
2. **2.5" SATAIII Storage (SSD/HDD)**
3. **Bridge board** Connecting Main board and I/O module
4. **I/O Module** Connection peripheral devices
5. **LVDS or eDP Cable** Display cable for Main display

08. Name and Function of each component IO



1. RJ-45 LAN (ETHERNET) port

You can connect RJ45 cable for 100M/1Gbps Ethernet connection

2. USB port You can connect devices such as the USB scanner, USB keyboard, USB printer. J1900 System support USB 2.0, J6412/Core-i3/i5 System supports USB 3.0.

3. RJ-45 8Pin COM(Serial) port

You can connect serial devices such as barcode scanners, printers.

4. RJ-11 6Pin Cash Drawer port You can connect the cash drawer.

5. Display port(DP) You can connect monitor which is support DP port.

6. HDMI port You can connect monitor which is support HDMI port. (For Core i3/i5 only)

7. D-SUB 9pin COM(Serial) Port

You can connect serial devices such as barcode scanners, printers.

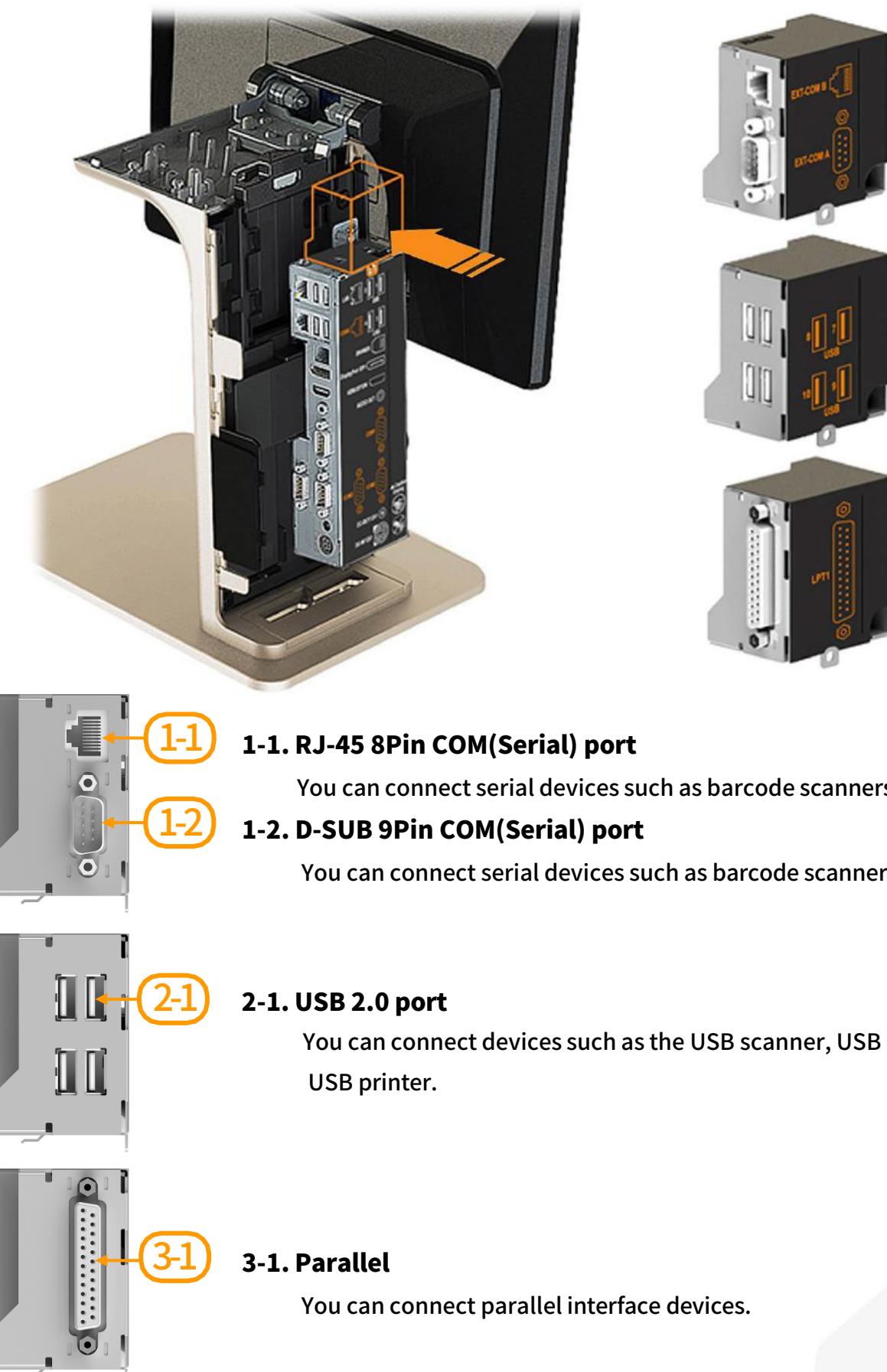
8. 12V DC Output(For dual display) 12V DC/1A power jack for dual display.

9. DC IN 4pin DC Input(Input power connection)

Jack is connected to the power supply to the system.

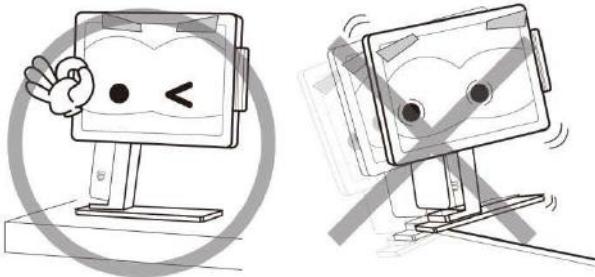
09. Name and Function of each component Expansion IO

Supports 3 types of extended IO module. (USB/RS-232/Parallel)



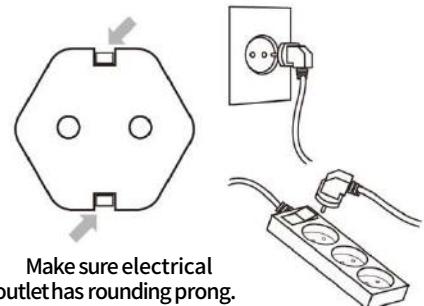
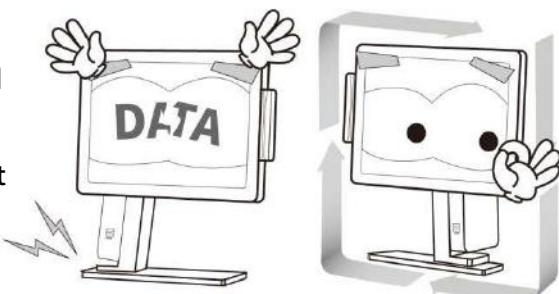
01. Checking the Location for Installation

It is important to choose a safe and secure place to install the terminal. Refer the information below.



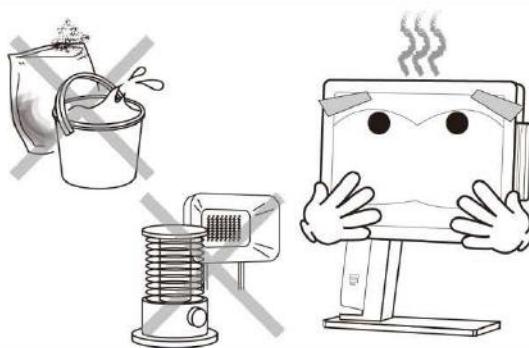
Choose a desk or table big and strong enough to support the weight of the system and peripherals.

- Make sure a system installed in a well-ventilated place and keep the space free around the system.
- Carpeted area can generate static electricity that can alter memory or damage system components.



- Connect the power cable to a grounded electrical outlet.
- Connect all the equipment into an isolated outlet to prevent static electricity and short circuit.
- Do not install near electromagnetic and electrical devices, such as phones that can cause system damage.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

- Choose appropriate environmental conditions such as cool and dry places.
- Avoid humid and dusty places.
- Also avoid direct sunlight, rapidly changing temperatures, or placing the system near heat sources.
- System is not ready for waterproofing, avoid moisture while operating the system.



01. Checking the Location for Installation

It is important to choose a safe and secure place to install the terminal. Refer the information below.

 *How to adjust monitor

Adjust the system depending on the condition and use it with the exact angle.

Adjustable angle shown in the figure



- Use the same battery for the product (motherboard) to prevent a risk of explosion.



- Spec of CMOS Battery : 3V, CR2032

- Dispose of used battery according to the separate instruction.

02. Before Connecting Peripherals

To connect peripherals first remove ‘System Cover’, which is the side of the system.



- Turn off the power of the system and connect/disconnect peripherals.
- Connecting peripherals to the corners parts of the system can cause hands injury. For your safety use the gloves.

1. As in shown in the picture pull the ‘system cover’ in the direction of the arrows.



03. Connecting DC power supply

Connect the DC power cable to the DC power input connector at the side of the system.
(Adapter 100V – 220V free voltage of the system can be used.)



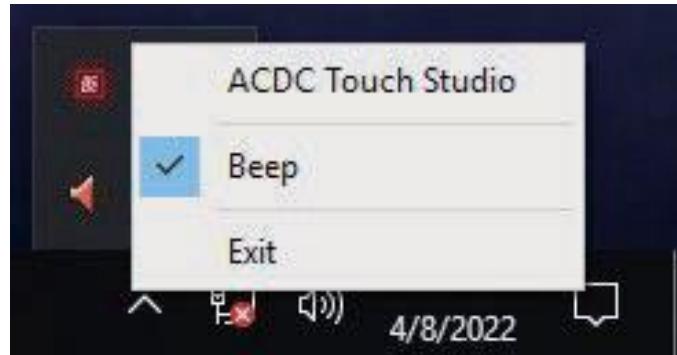
- Only manufacturer adapter should be used for this system.
- Manufacturer won't take responsibility for damages caused by using products which not made by manufacturer.
- Be careful to connect correct direction of adaptor.



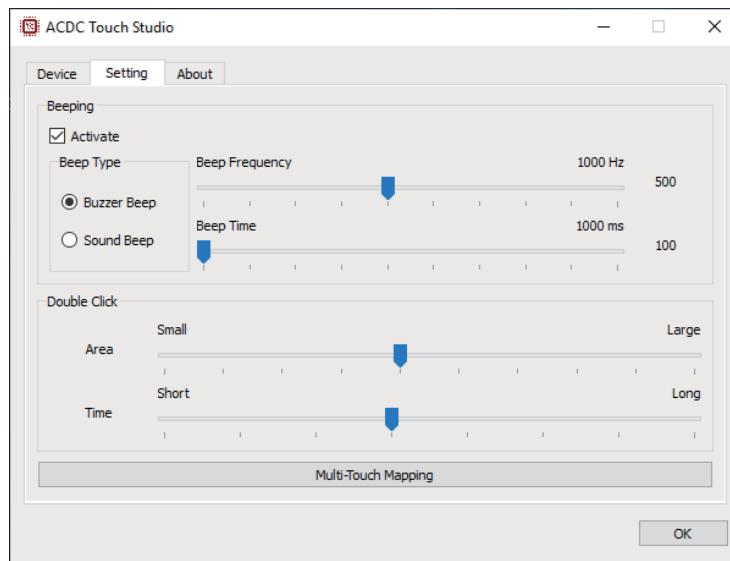
01. Using Touch Screen

During the use of touch screen, when the accuracy becomes an issue, please re-do coordination adjustment.

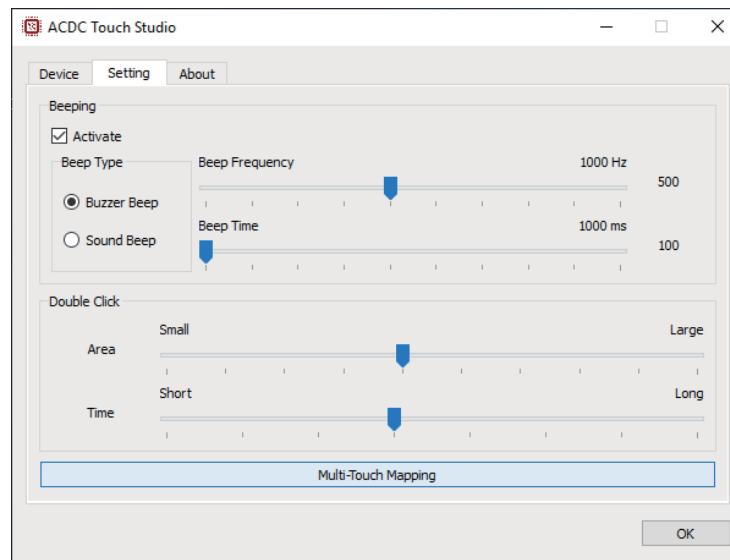
1. Right click on the  icon located at the lower right corner of menu and Click on Setting Tab of ACDC Touch Studio



2. Click on Setting Tab of ACDC Touch Studio



3. Click on Multi-Touch Mapping button to execute Tablet PC Settings of Windows.

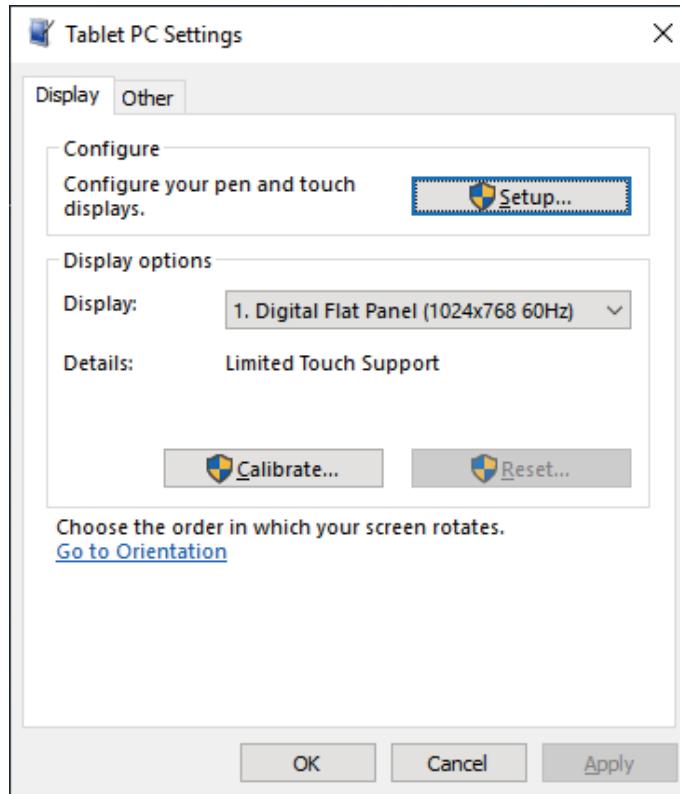


01. Using Touch Screen



- Do not use sharp objects such as pen as it may damage surface of the display.

4. Click on Calibrate button to proceed coordination adjustment.

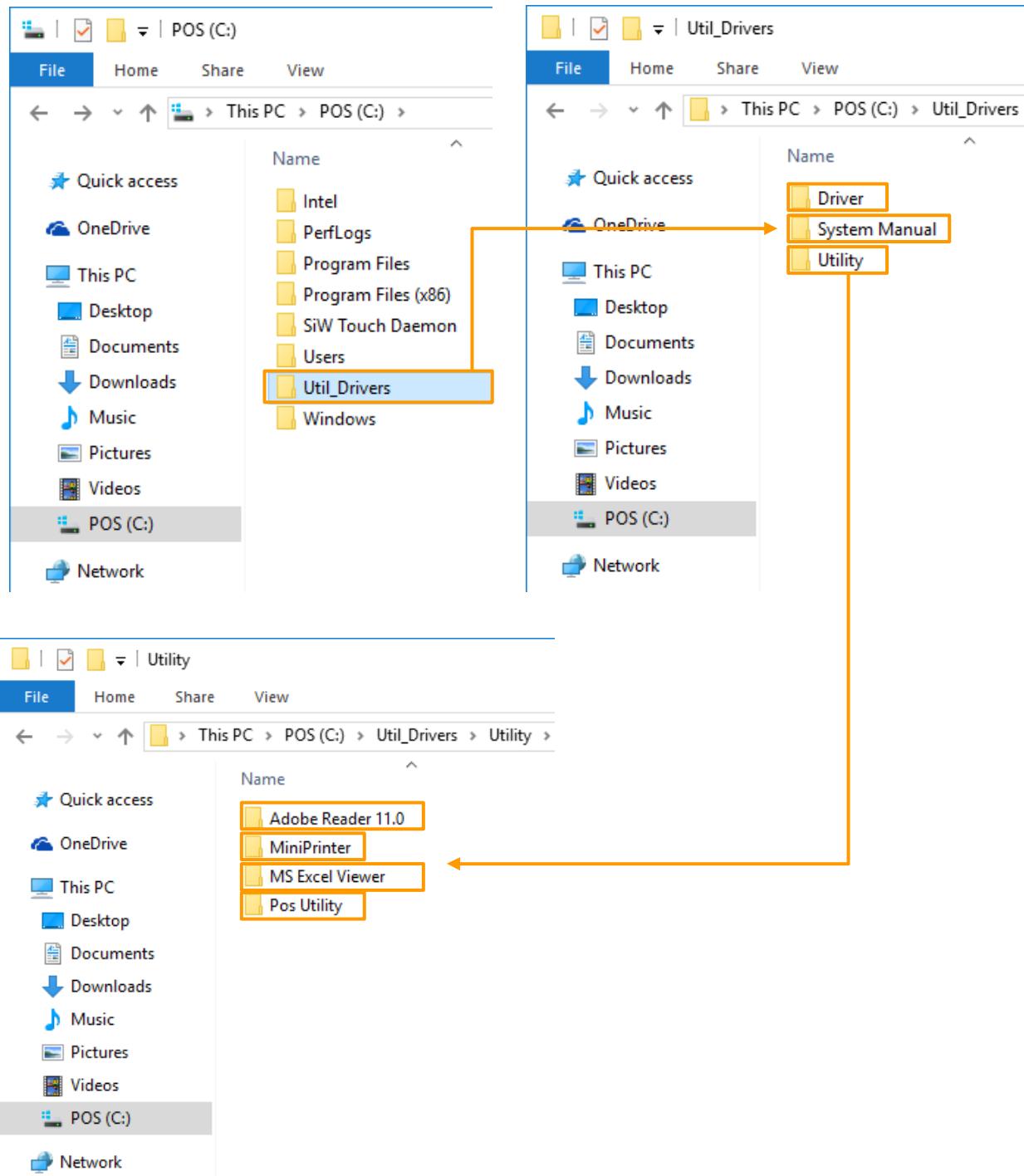


5. Proceed coordination adjustment by clicking Calibrate button.



02. Introducing POS System Driver and Utility

- The driver and utility is inside the C:\Util_Drivers folder of the window installed on the storage device.



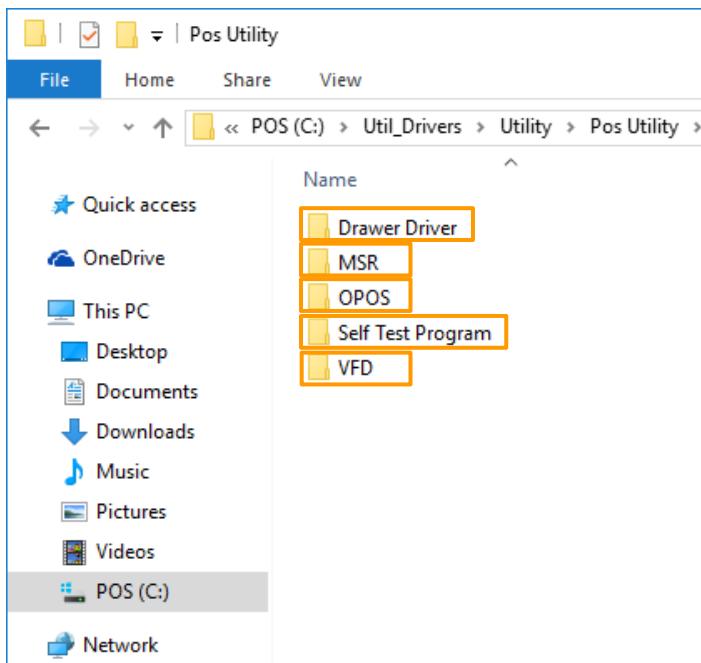
Adobe Reader 11.0 : The Adobe Reader program is inside the folder.

MiniPrinter : The windows driver for SAM4S printer is inside the folder.

MS Excel Viewer : The Microsoft excel viewer program is inside the folder.

POS Utility : The utility files related to POS are inside the folder.

02. Introducing POS System Driver and Utility



Drawer Driver : Cash Drawer Driver Installation file is inside the folder.

MSR : MSR Setup file is inside the folder.

OPOS : OPOS driver installation file is inside the folder.

Self Test Program : Test programs for dealers are inside the folder.

VFD : Files related to VFD are inside the folder.

- Above OPOS(OLE for Point of Sales) is Interoperable one of UPOS (Unified POS) of Microsoft Windows.
- Current OPOS Driver is developed under the POS regulation 1.10 as a standard and OPOS version support will continue.
- OPOS supporting OS : POSReady2009, Win XP Pro, POSReady 7, Win 7 Pro, Win 8.1, Industry 8.1, Win 10

Location for OPOS Installation File

- When taking the goods out of the factory, the files are stored inside the storage device as a default .(D:\Util_Drivers\Utility\Pos Utility\OPOS)

How to Install

- Run the 'xxxxOPOSSET_RVx.xx.exe' file inside the folder.
- During installation, all components are automatically registered and set according to the system structure.

03. Using Dual Display

Forza supports both DP and HDMI and therefore, additional external display can be connected for usage.

(J1900 supports only DP port)

Dual monitor setting is documented based on the Windows 10.

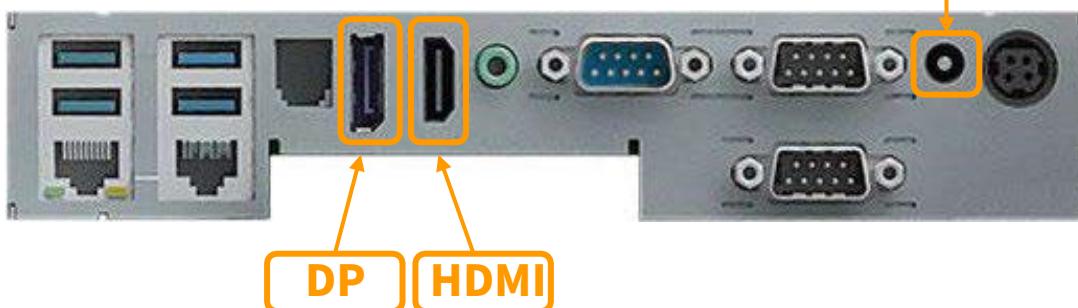
How to Use Dual Display

The function of dual display is using two monitor in one system to show the same screen (Clone) or to extend the monitor screen side (Extend).

1. Connect the external monitor when the system is powered OFF.

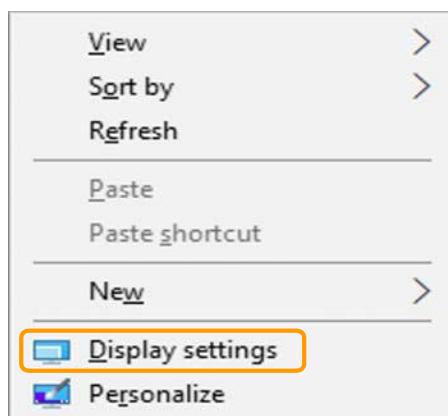
(The DP and HDMI connector is located underneath the I/F cover located on the side of the system.)

- ① Connect the external monitor when the power is OFF.
- ② Connect the power cable of external monitor.



2. Turn ON the power of both system and the external monitor.

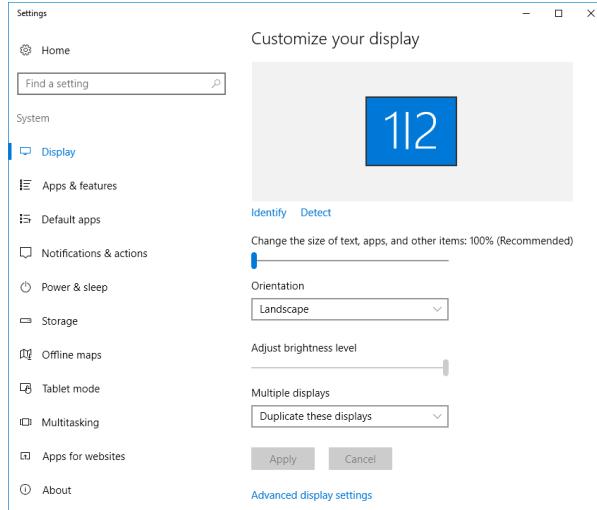
3. Click the right button of mouse on Windows desktop screen and select 'Display setting' from a popup menu.



03. Using Dual Display

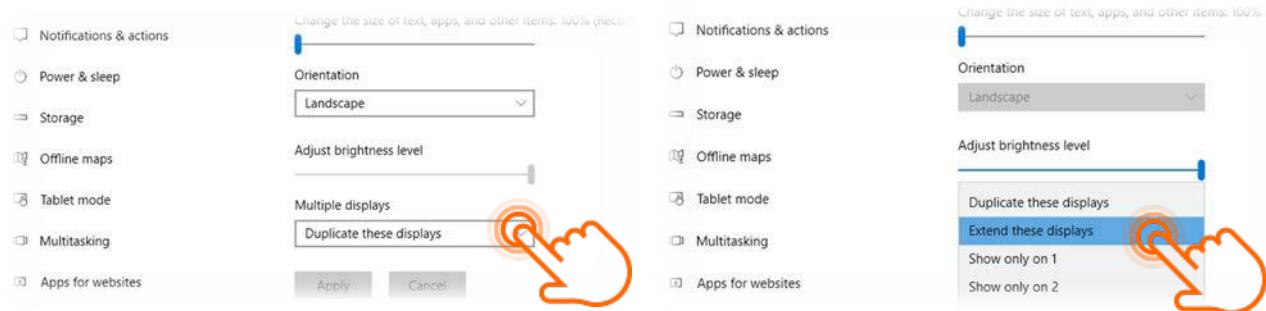
4. At display setting window, set display list (S) as 1 | 2 multiple display and multi display list (M) as duplicate these display.

(in this case, the dual monitor will show the duplicated screen.)

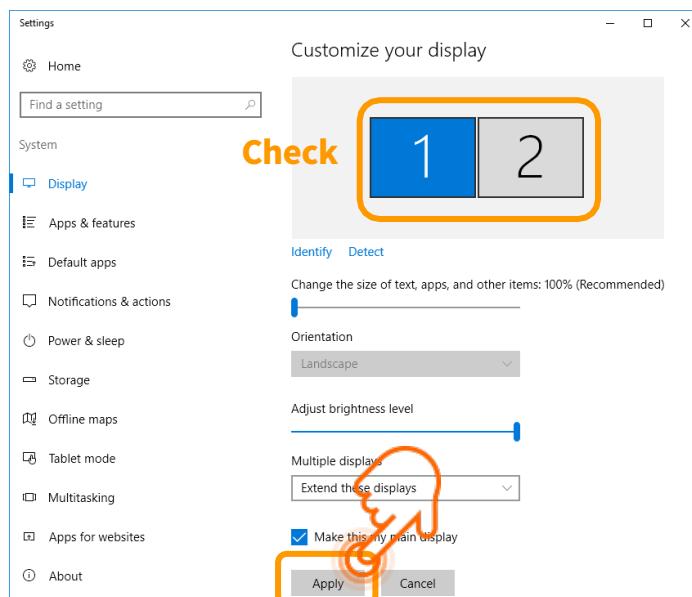


5. If the user want to display extended screen on the dual monitor, from the display setting window, select extend these display on multi display list (M).

(In this case, the dual monitor will show different screen from the monitor and show the extended display.)



6. On Display (S) list, select 1. Digital Flat Channel (1024X768 60Hz) and click 'Apply'.



04. Using Dual Display Touch Screen

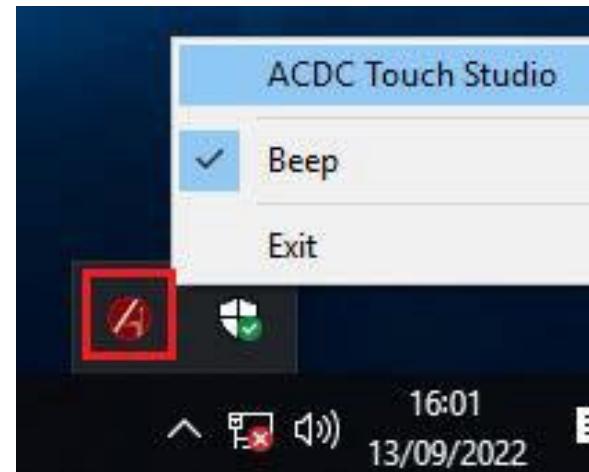
When using expansion mode on touch type dual display, please follow below steps.

(Supporting OS : POSReady7, Window 7, 8.1, 10 (IoT))

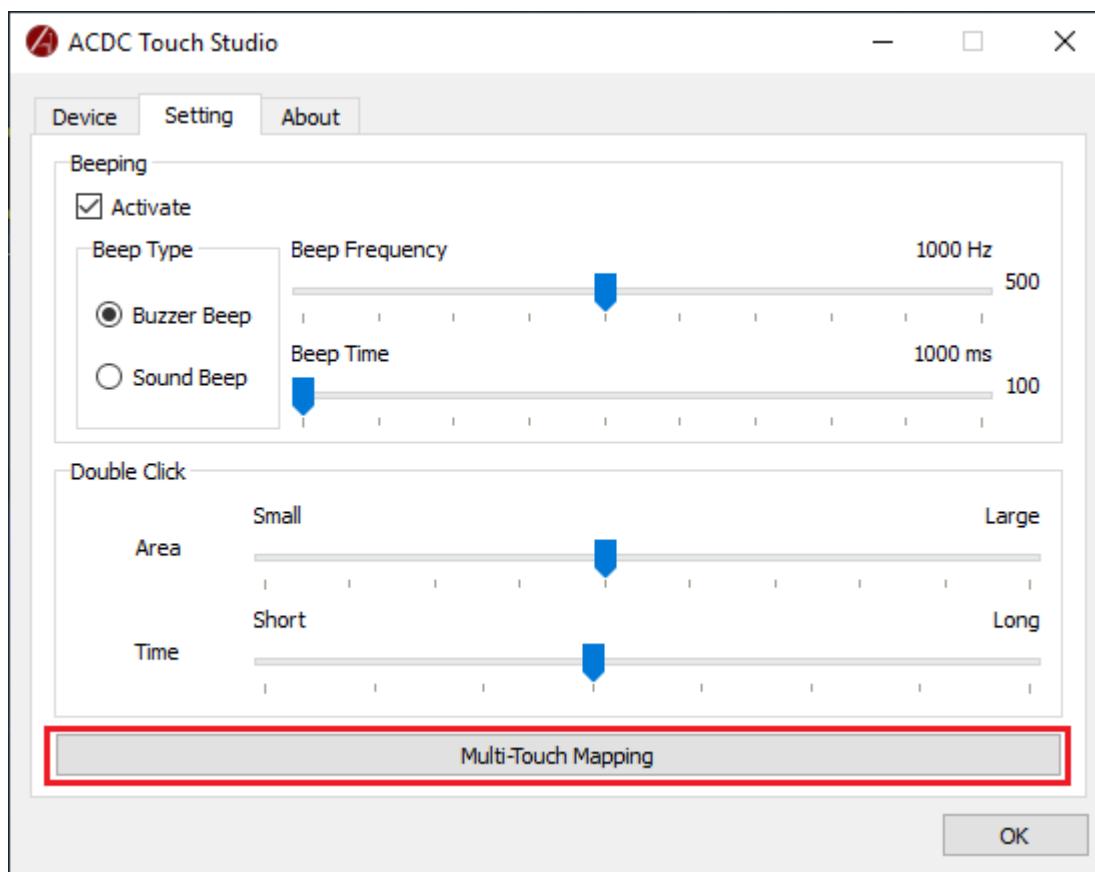
1. Right-mouse click on the icon at the bottom right of Window screen and click on ACDC Touch Studio from the menu.



Icon

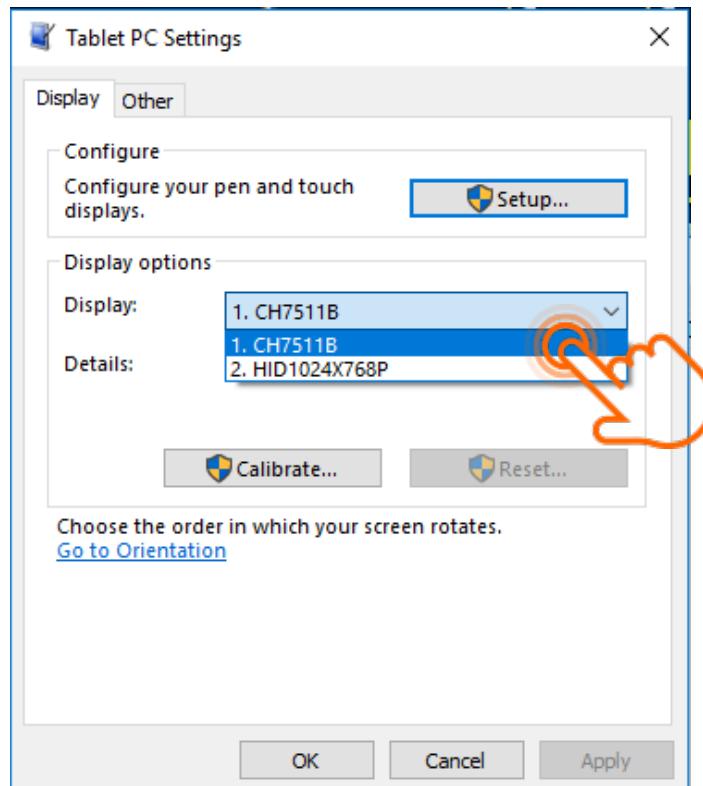


2. Click on Setting tap menu and click on Multi-Touch Mapping button.

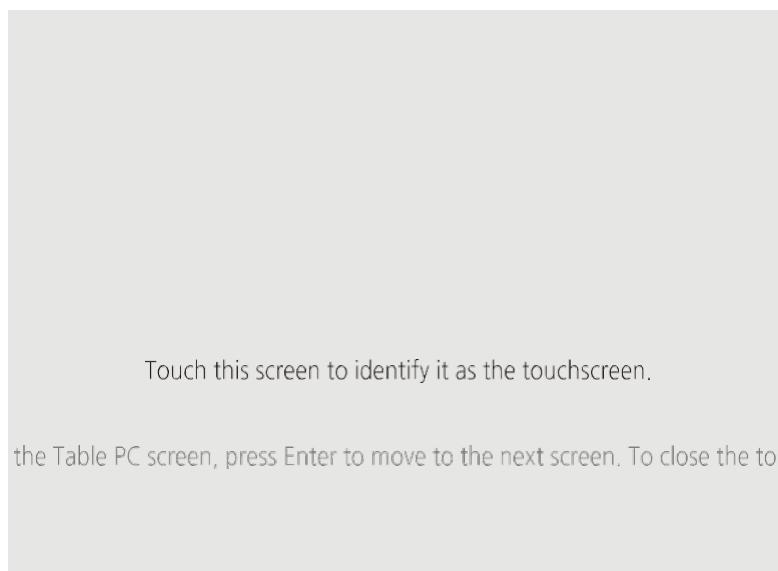


04. Using Dual Display Touch Screen

- From Display Option, select the first main monitor and click on Setup.



- Click on Mapping Touch Input.
- When the 'Touch this Screen to...' message shows on the screen, touch the screen.
- When the message changes to 'Press Enter to...', press on Enter key on the keyboard.
- The screen will convert to the next screen. Please repeat above step 6 and 7. When the setting is complete, the setting window will close.



05. How to control Direct IO in order to use cash drawer

It is HEXA information of the command for control cash drawer. User can refer for programming.

It is possible to control 2 drawers at a same time through 1 port.

J1900, Core i3/i5

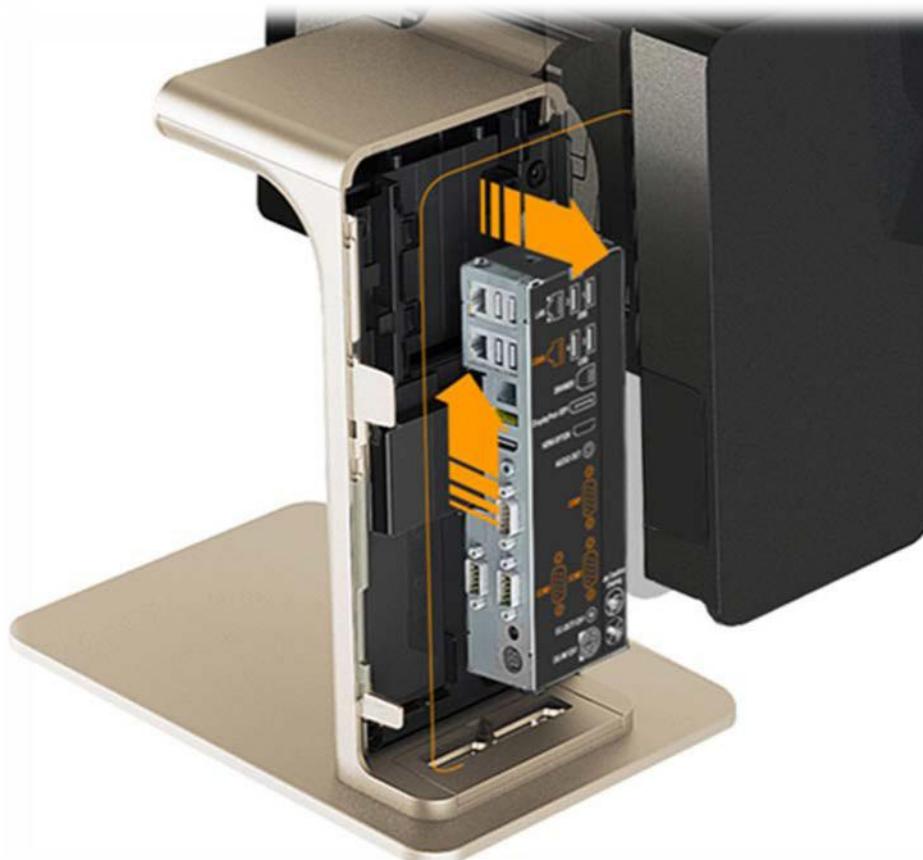
		Hexadecimal	Binary
1		0xA04	1010 0000 0100
		Open	xxxx xxxx1
		Close	xxxx xxxx0
		0x40	x1xx xxxx
		Release	x0xx xxxx
		0x80	1xxx xxxx
		0x7F	0xxx xxxx

J6412

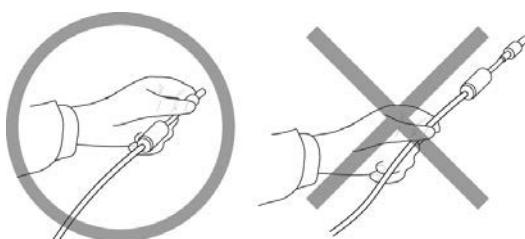
		Hexadecimal	Binary
1	I/O address to open or close Drawer	0x2F	0010 1111
2	Status Check	Open	xxxx x1xxx
		Close	xxxx x0xxx
3	Drawer 1	Kick out	xxxx xxxx0
		Release	xxxx xxxx1
4	Drawer 2	Kick out	xxxx xx0x
		Release	xxxx xx1x

1. Power Adaptor

1. Confirm that the power of peripherals and systems are turned off.
2. Push & Pull the System Cover in the direction of the arrow to disassemble.



3. Disconnect the DC power supply and other cable of peripherals.



Caution when disconnecting DC power supply, the neck part of the power jack must be removed pulled before disassembly.

02. 2 Line Display

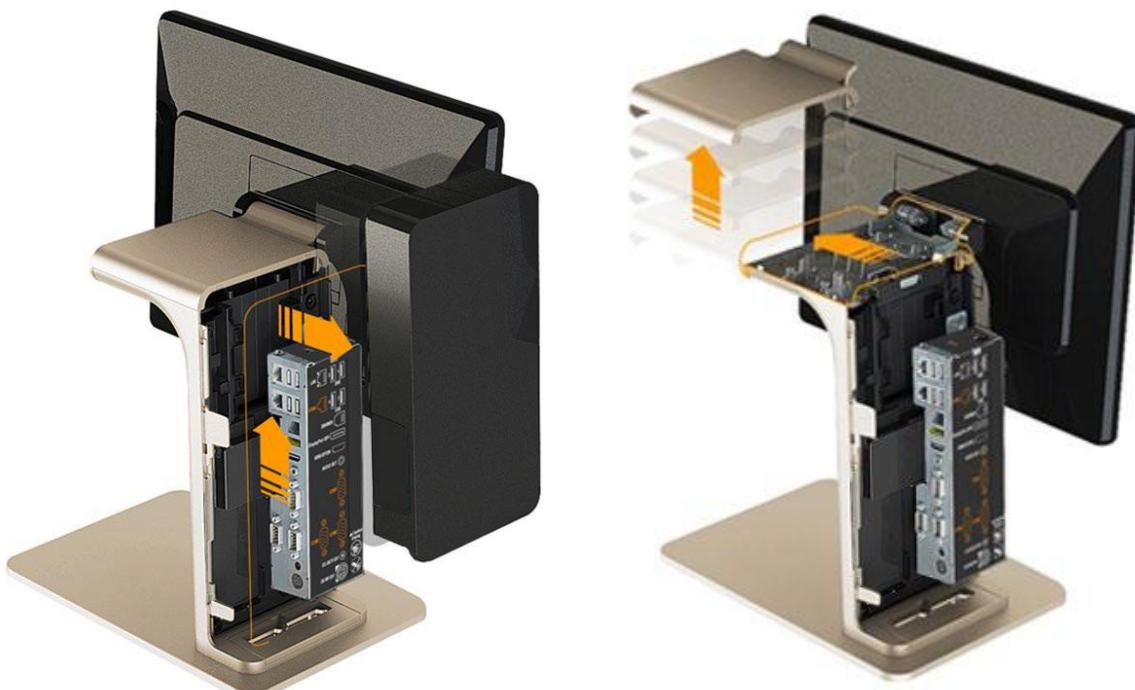
1. Operating Voltage of 2 Line Display is 5V.

You can refer to [Appendix A. BIOS Set up - 02. Serial voltage change & Using Keyboard shortcut] to set the Voltage of COM4



• Before connecting 2 Line Display, please check Voltage set up of COM4. If it is set as 12V, Display will be damaged.

2. Confirm that the power of peripherals and systems are turned off..
3. Push & Pull the System Cover in the direction of the arrow to disassemble.
4. Remove the Upper Cover

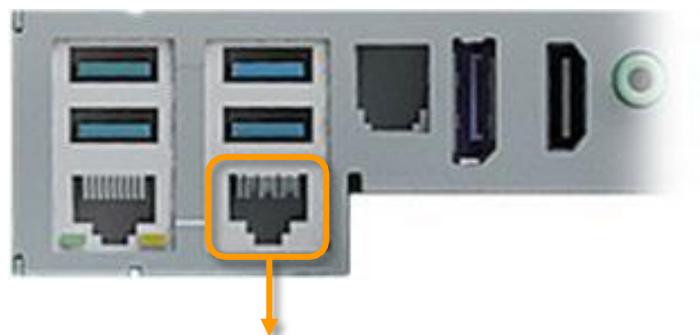


5. Please mount 2 Line Display as below picture then fasten 2 screws.



02. 2 Line Display

6. Connect Serial Cable to COM4 as below picture.



RJ-45 8pin Serial (COM4)



• Please be aware of not connecting to LAN port. System will be damaged.

7. Assemble the Upper Case for Dual Display which is enclosed herewith 2 Line Display

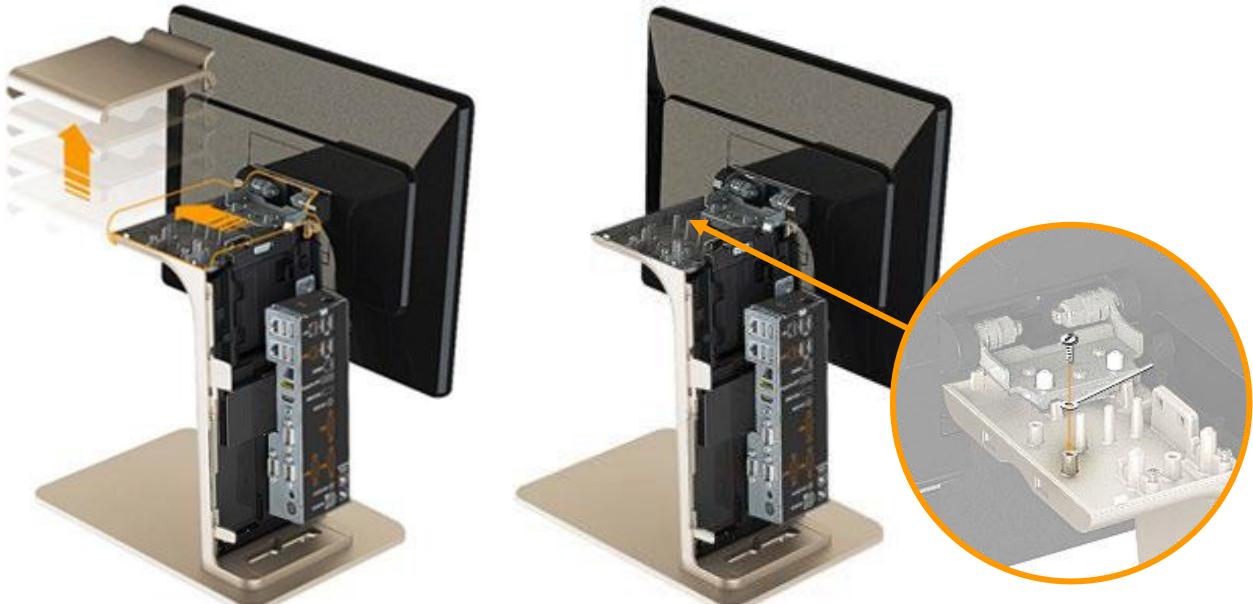
8. Assemble the System Cover.



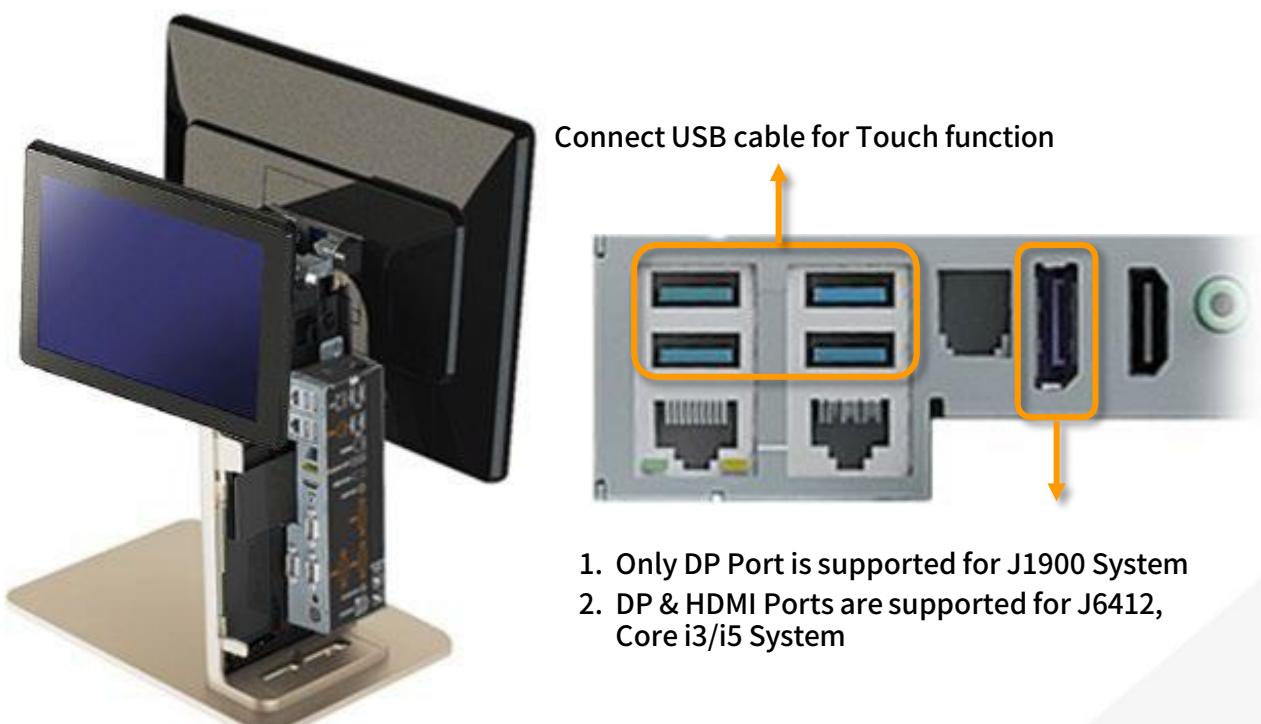
03. Dual Display

* Assemble & Disassemble structure is same for 9.7", 15" 10.1" and 15.6" Dual Display.

1. Do the stage No.3 at [02. 2 Line Display]
2. Screw the Cable Clamp which is enclosed herewith Dual Display



3. Assemble Dual Display on the Stand and fasten 2 screws.
4. Connect Power Cable and Display Cable to the Interface
If Dual Display supports touch function, please connect USB cable.



1. Only DP Port is supported for J1900 System
2. DP & HDMI Ports are supported for J6412, Core i3/i5 System



1. 9.7" (24.64cm) Dual Display



2. 15" (38.1cm) Dual Display



3. 2 Line Display



4. 10.1"(25.65cm) Dual Display

04. Magnetic Card Reader

1. Unfasten 2 screws of Magnetic Card Reader to disassemble



05. 2.5 inch SSD / HDD

1. Confirm that the power of peripherals and systems are turned off.
2. Disassemble Upper Case
3. Pull 2.5 inch SSD(or HDD) to disassemble.



• assemble and confirmation of it working

1. Assemble the SSD/HDD following the above direction in reverse order
2. Connect power cable and Press the power button to start the system and check the newly installed SSD/HDD is properly connected.

06. Basic IO Module

1. Confirm that the power of peripherals and systems are turned off. .
2. Push & Pull the System Cover in the direction of the arrow to disassemble.



3. Remove Power Adapter and Cables
4. Unfasten 3 screws and disassemble IO Module.



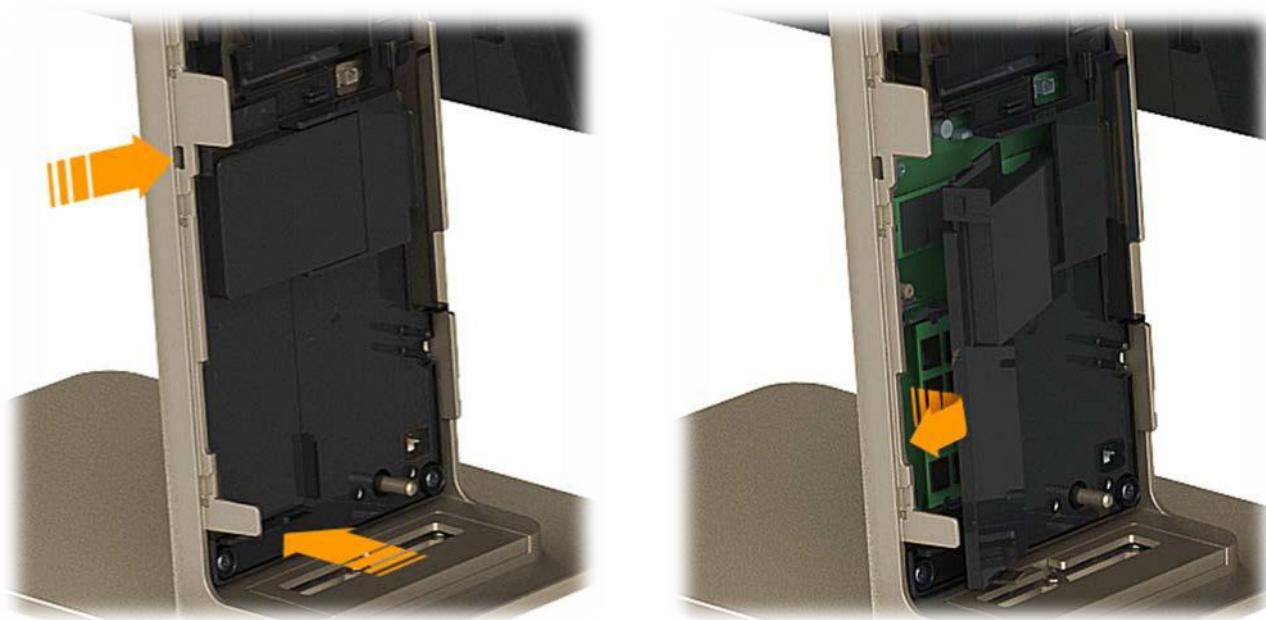
• Be noticed that there will be serious damage if power is not off when disassemble I/O interface.

07. M.2 / M.2 RAID

Can support not only the usage of SATA 2.5" Storage but also that of m.2 SSD and RAID function

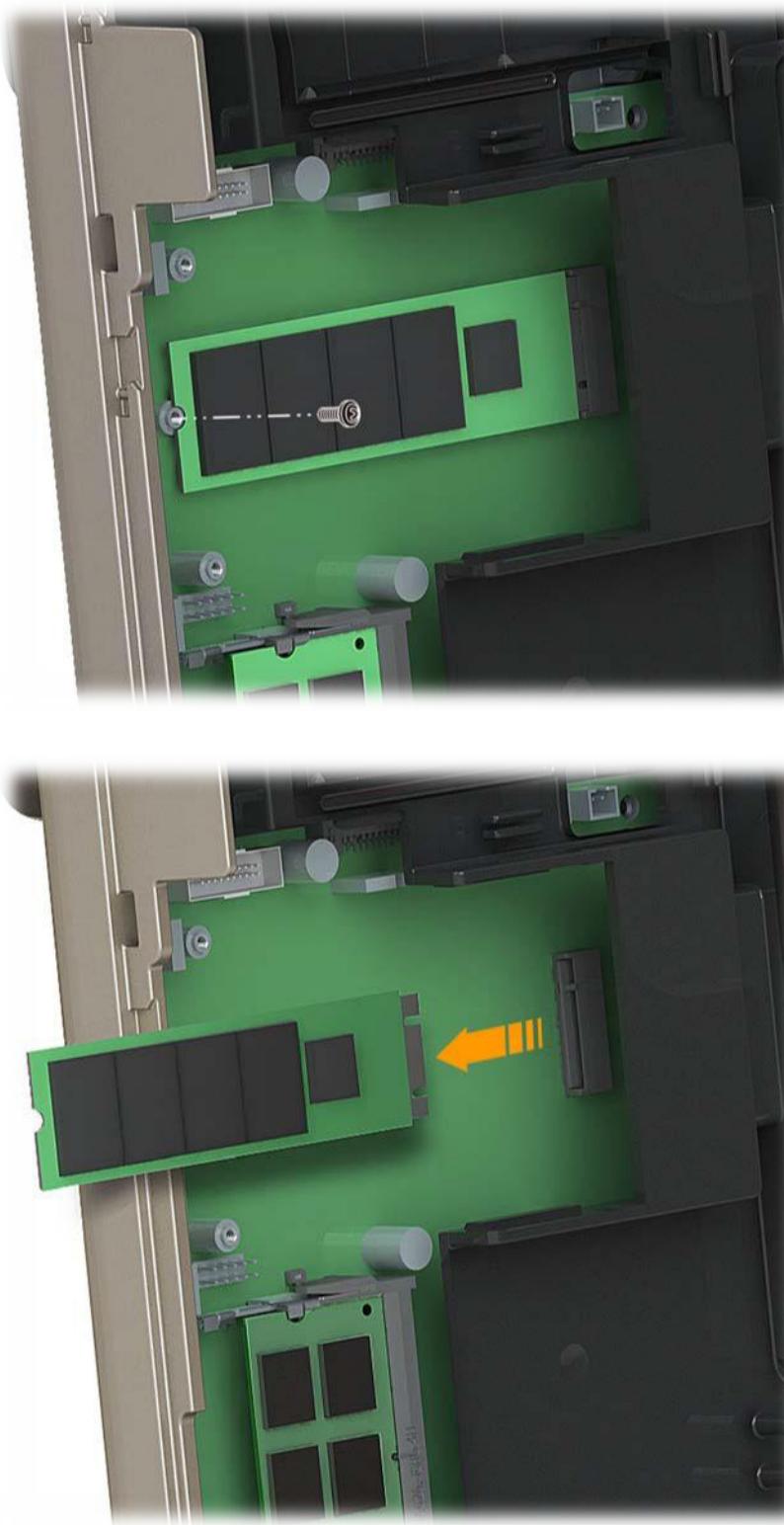
1. Do the All stage at [06. Basic IO Module]

2. Detach the Cover of Main Board



07. M.2 / M.2 RAID

3. Unscrew 1unit to disassemble M.2 SSD from the System in case of M.2 RAID, No. of Screw is 2units

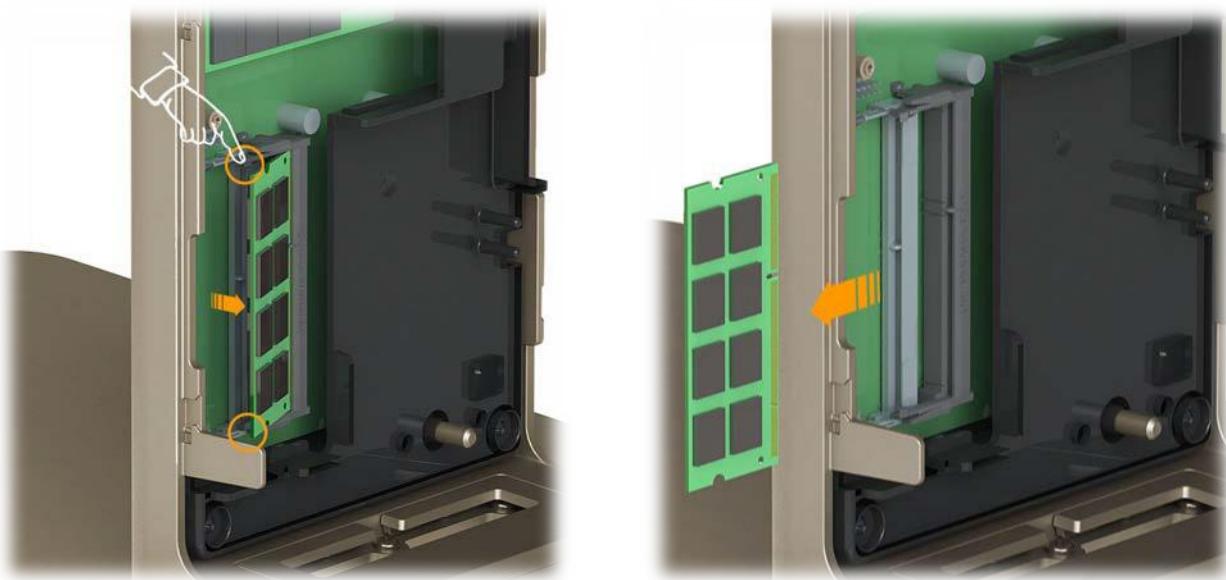


Re-Assembly and Checking

Assemble in reverse ways, and press the Power Button to run the system, and need to check if new storage is well connected and working well

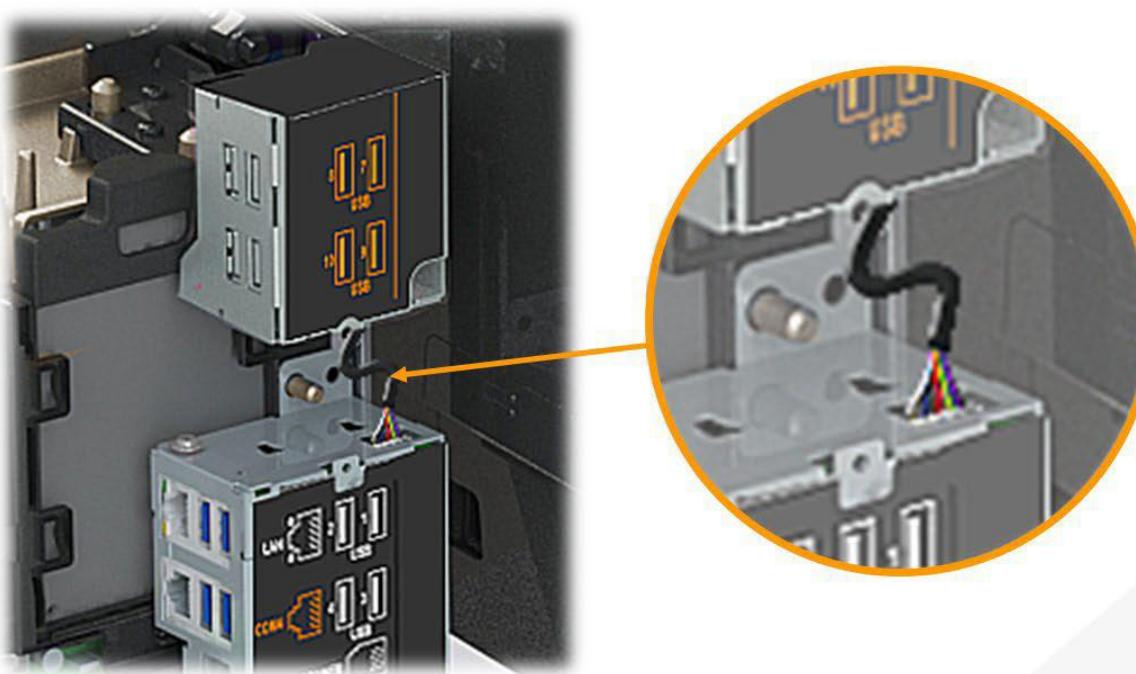
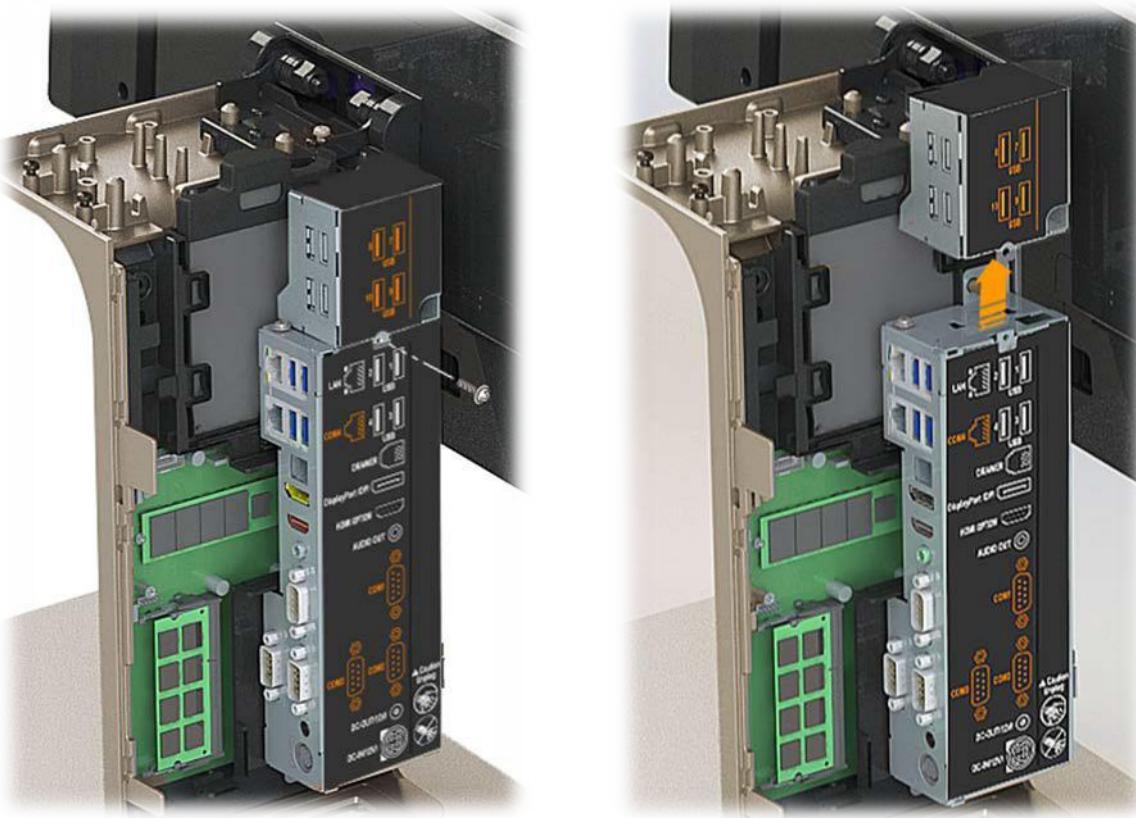
08. Memory

1. Do the Stage from No.1 ~ No. 3 at [06. Basic IO Module]
2. Detach the Cover of Main Board
3. Detach the Memory



09. Expansion IO Module

1. Do the Stage from No.1 ~ No.3 at [06. Basic IO Module]
2. Shown in photo, unscrew 1 unit to detach Extension IO Board from Basic I/O Board
3. Unplug the Cables connected to Basic IO Board

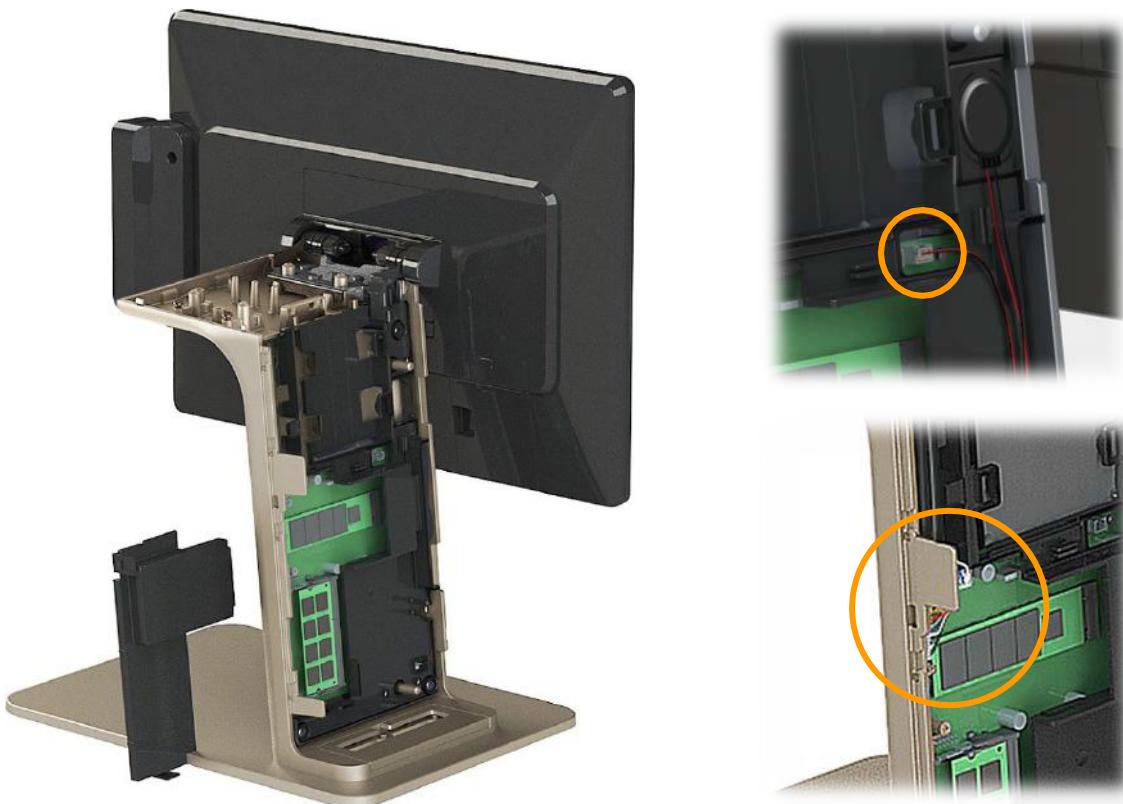


10. Main Board

1. Do the All stage at [06. IO Module]
2. Detach (SSD/HDD) from the System



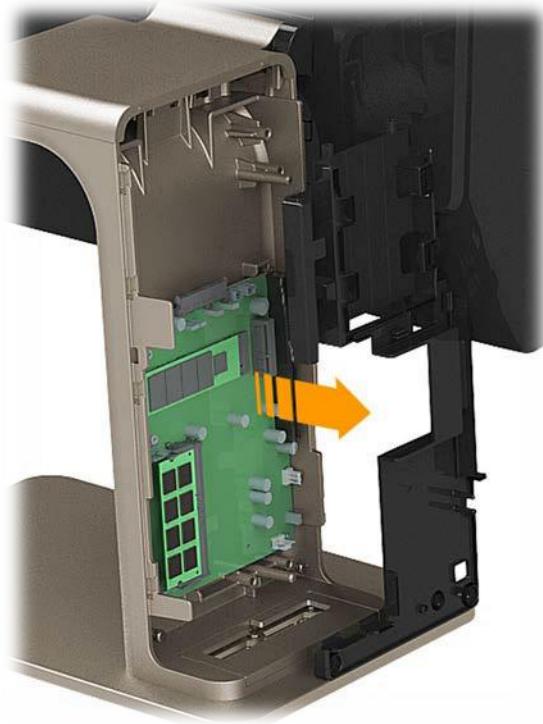
3. Detach the cover of Main Board
4. Detach Main Display and Speaker Cable connected to Main Board



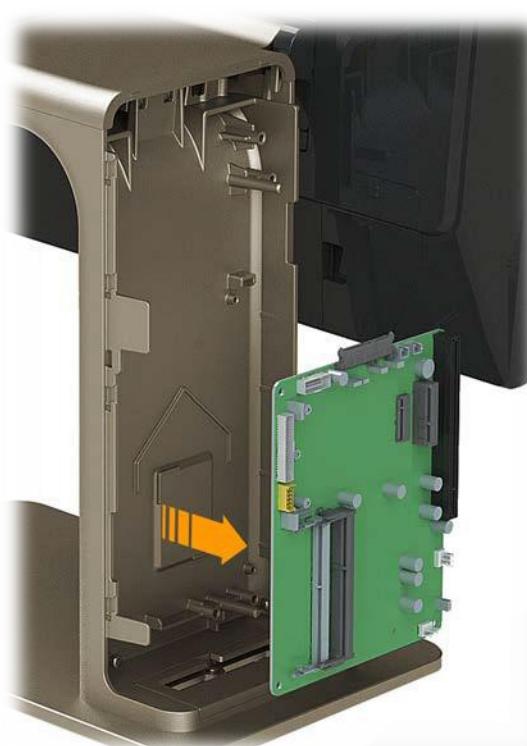
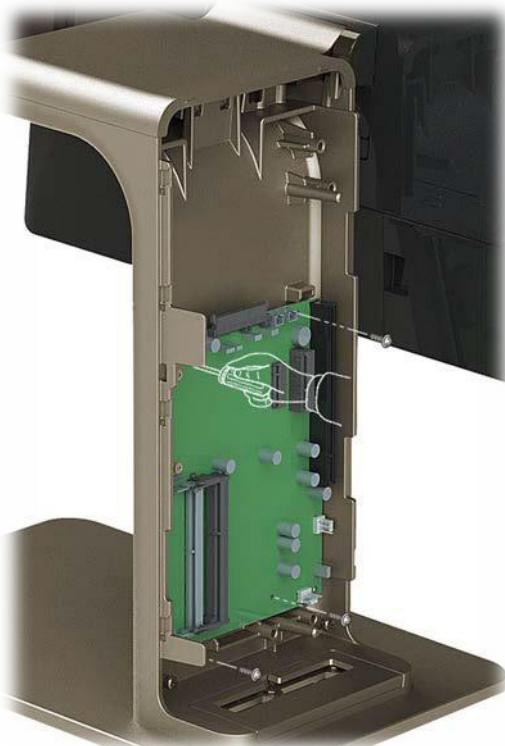
10. Main Board

6. Detach Display Cable connected to Main Board

7. Unscrew 3units to detach inner cover

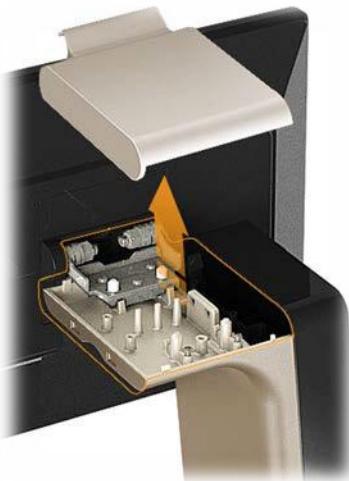


8. Unscrew 4units to detach Main Board from System



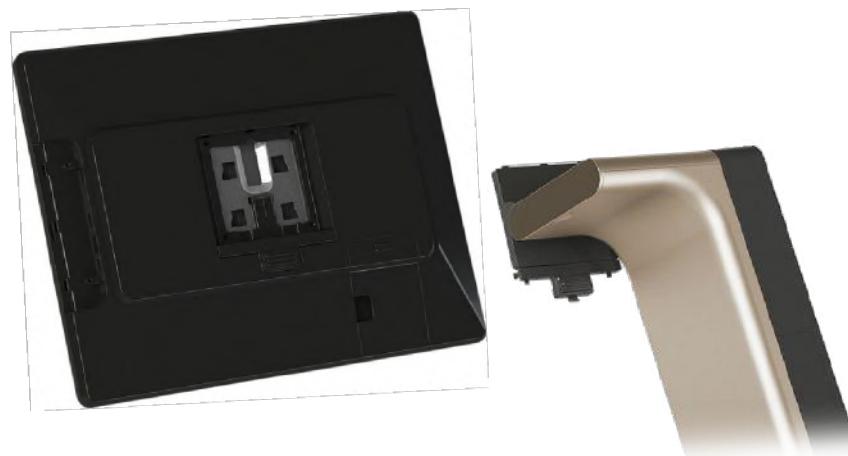
11. Main Display Separation

1. Detach Upper Cover from Stand
2. Detach System Cover
3. Disconnect Power Cable and Display Cable connected to Main Board



11. Main Display Separation

4. Push the Display upward to detach by pressing back Lever



12. Touch Panel and LCD

• Display Common

Touch Panel is fixed to Display front Cover.

When need Touch Panel replacement, need to replace Display front Cover as well

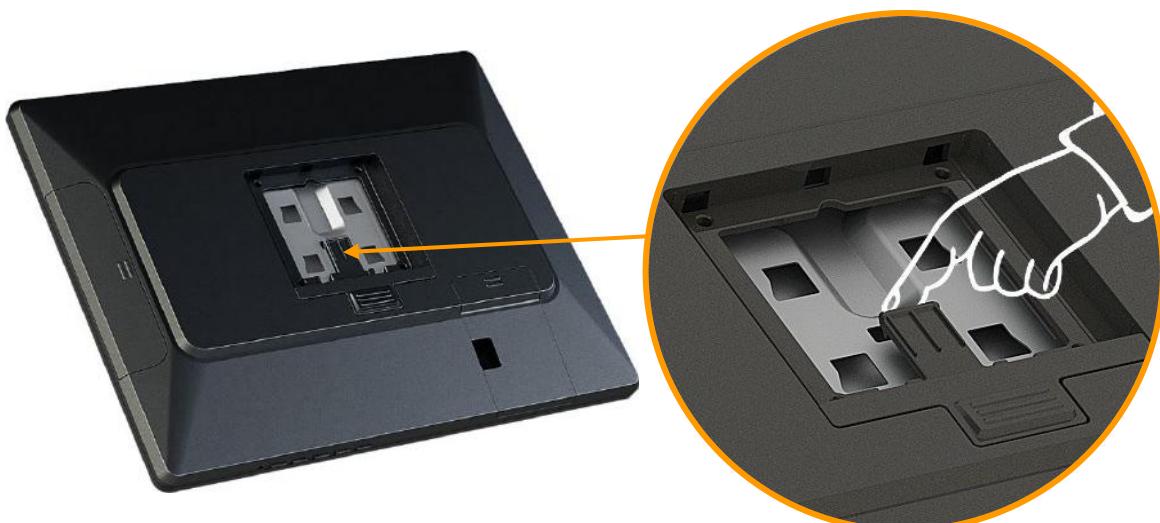


- Be careful not to get Cable damaged while working
- Be careful not to get damaged on device and human
- Be careful not to make any scratch or have any dirt on it

1. Do the all stage at [11. Main Display Separation]
2. In case if Security MSR is attached, unscrew 2 units to detach IC Reader



3. Unlock the fixing hook at back of Display shown in photo below



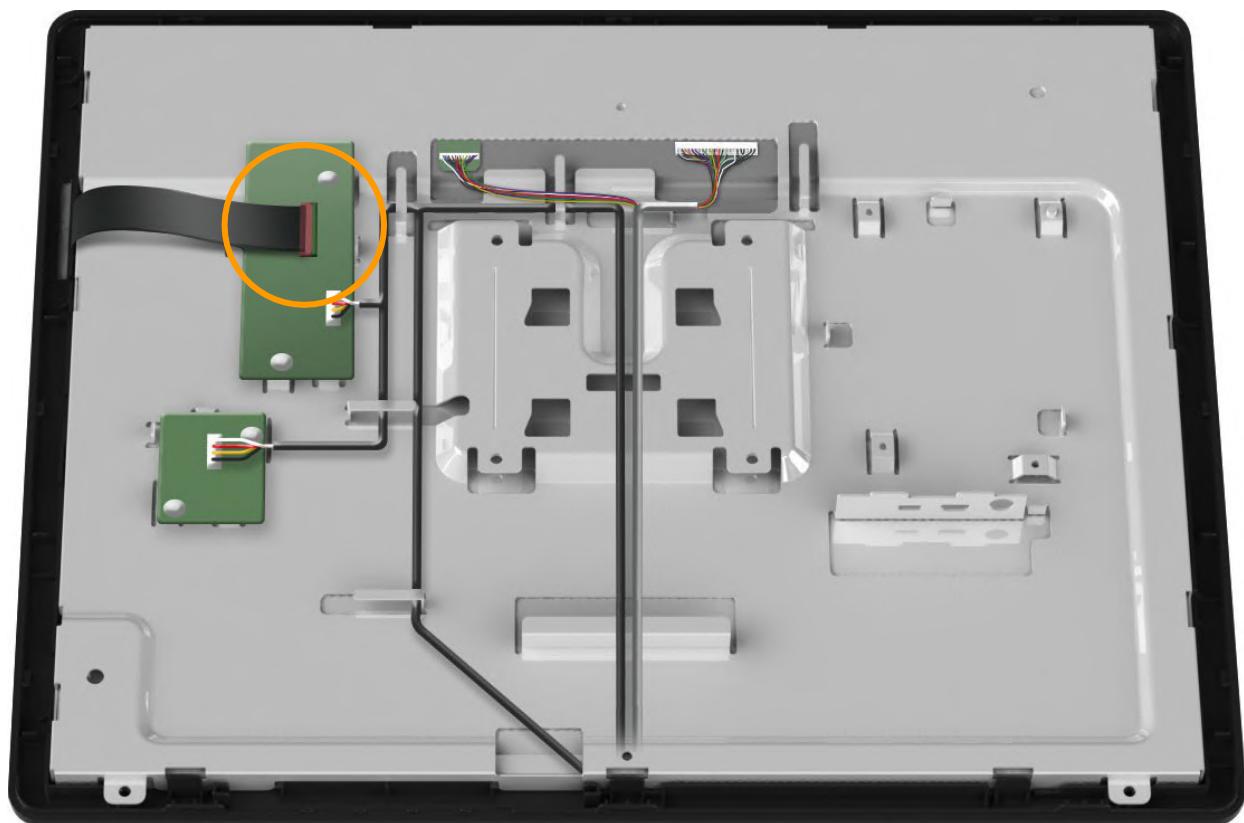
12. Touch Panel and LCD

- **Display Common**

3-1 Unlocking the hook and push down the gRear display cover· to dissemble.



4. Disconnect the touch cable from the touch control board.



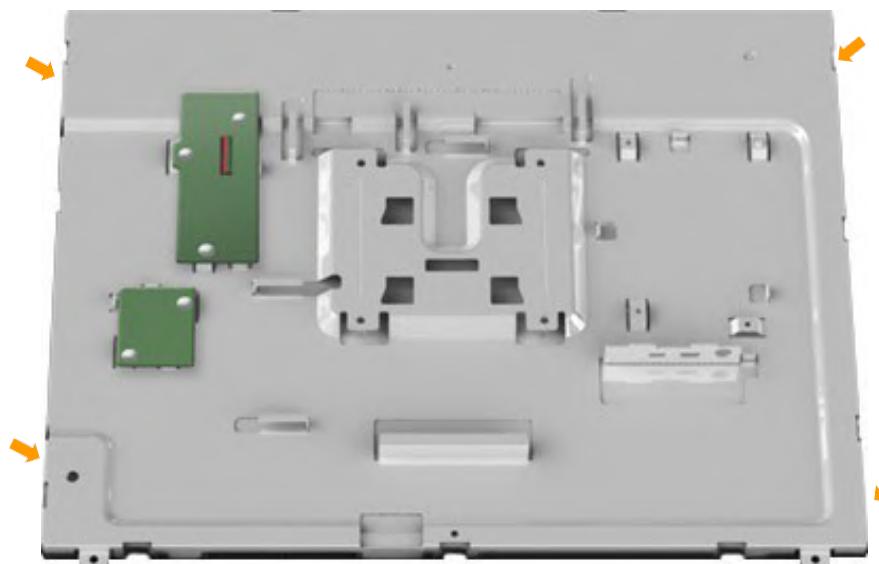
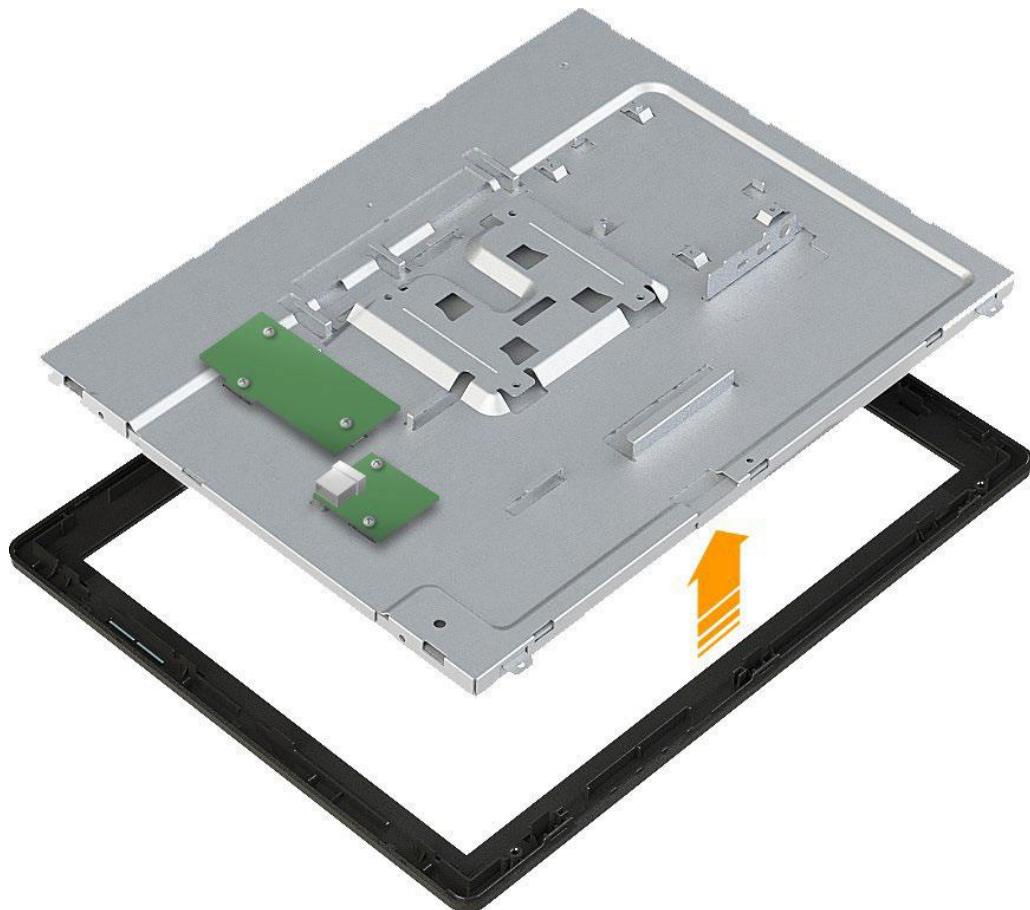
12. Touch Panel and LCD

- 15 inch Display

1. Do the All stage at [Display Common].
2. Detach the display bracket and assembled LCD from the “Front display cover”,
3. Unscrew 4 screws to detach display bracket and LCD.



• Be careful of not damaging LCD cable connector.



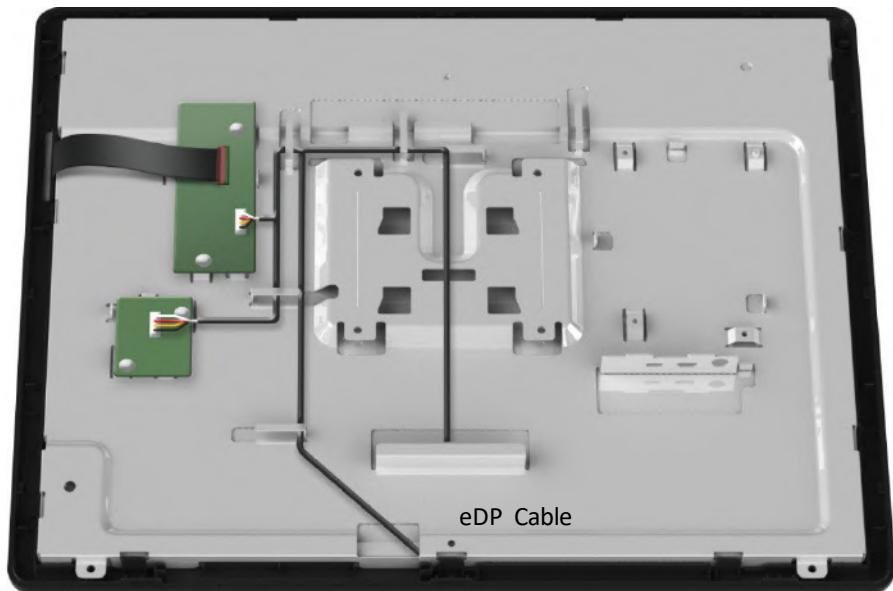
12. Touch Panel and LCD

- **15.6 inch Display**

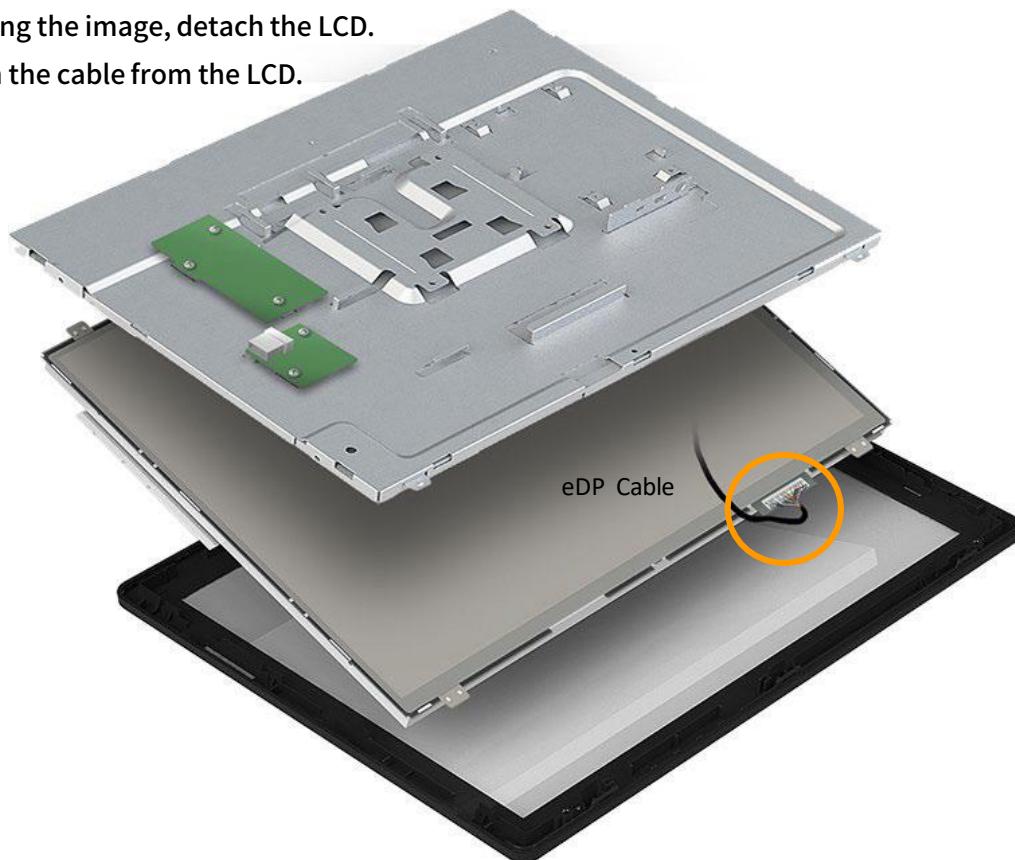
1. Do the All stage at [Display Common].
2. Detach the cable connected to USB board and Touch control board.
3. Detach the display bracket from the 'Front display cover'.



• Be careful of not damaging LCD cable connector.



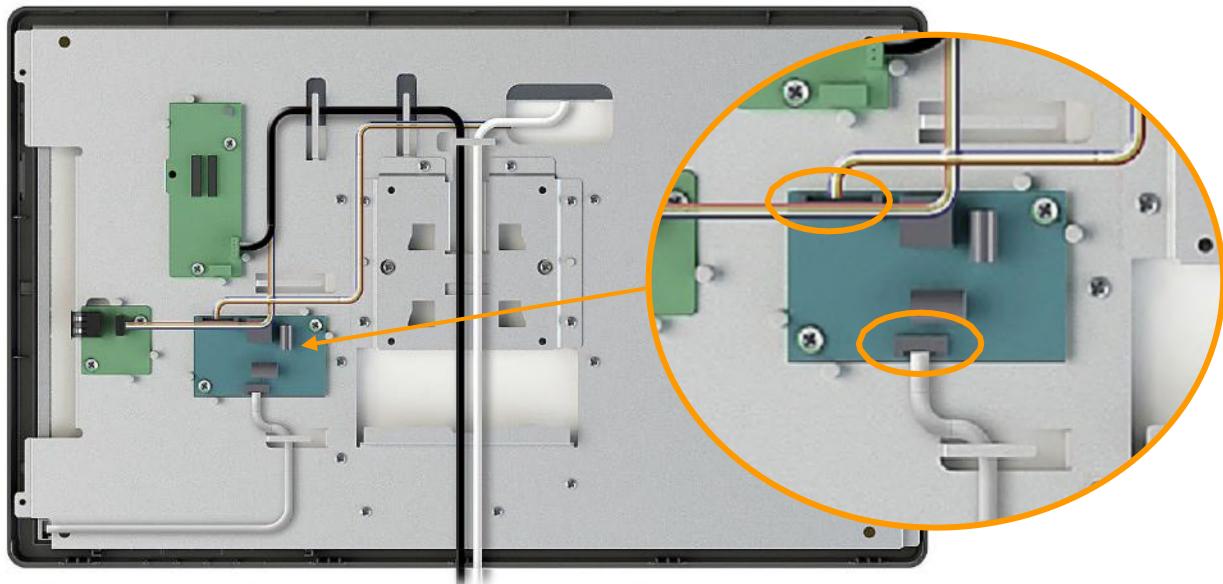
4. Referring the image, detach the LCD.
5. Detach the cable from the LCD.



12. Touch Panel and LCD

- **18.5 inch Display**

1. Do the All stage at [Display Common].
2. Detach the 2 cables connected to Backlight board.



3. Unscrew 4 screws to detach display bracket and LCD.
4. Detach the cable from the LCD.



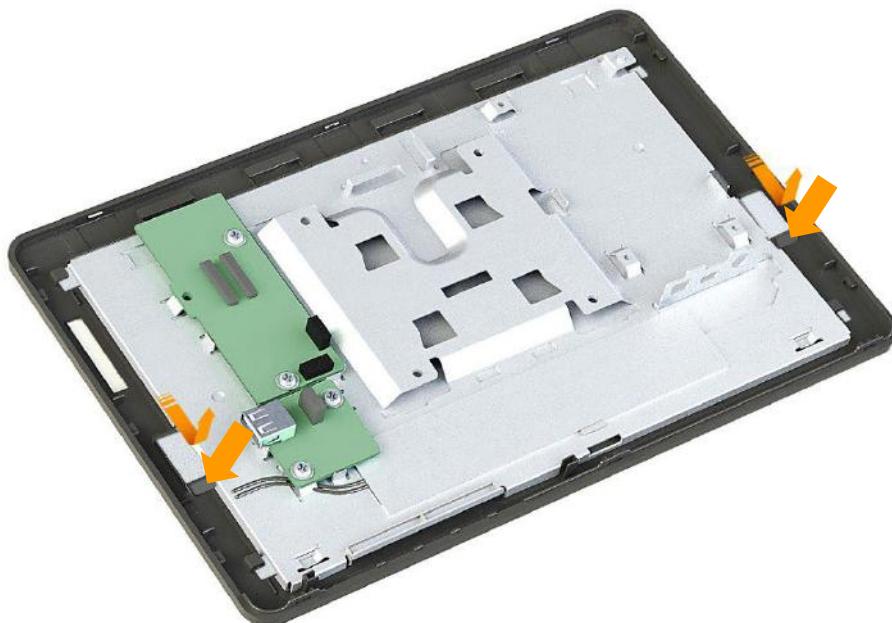
. Be careful of not damaging LCD cable connector.



12. Touch Panel and LCD

- 10.1 inch Display

1. Do the All stage at [Display Common].
2. Push the Display downward to detach by pressing 2 side Lever.



3. Detach the cable from the LCD.



.Be careful of not damaging LCD cable connector.



01. Understanding BIOS

1-1 Understanding UEFI Set up

UEFI BIOS is the latest BIOS for alternative of Legacy BIOS.

it enables a user to configure or change the system environmental set up. The setting value is registered in Mainboard CMOS ROM.



- BIOS Set up values can seriously affect the system stability and operation.
- Therefore, users should determine and understand thoroughly all options before configuring/changing BIOS set up.

1-2 Entering UEFI BIOS setup

- Turn on the system and the system will show 'Press to enter setup · message
- When this message shows up, press or <Delete> key to enter BIOS SETUP screen
- Or when the system is stared, 'Setup · message is shown so just touch the "Setup · message to enter BIOS SETUP screen



1-3 BIOS Setup control key

→← : Select menu

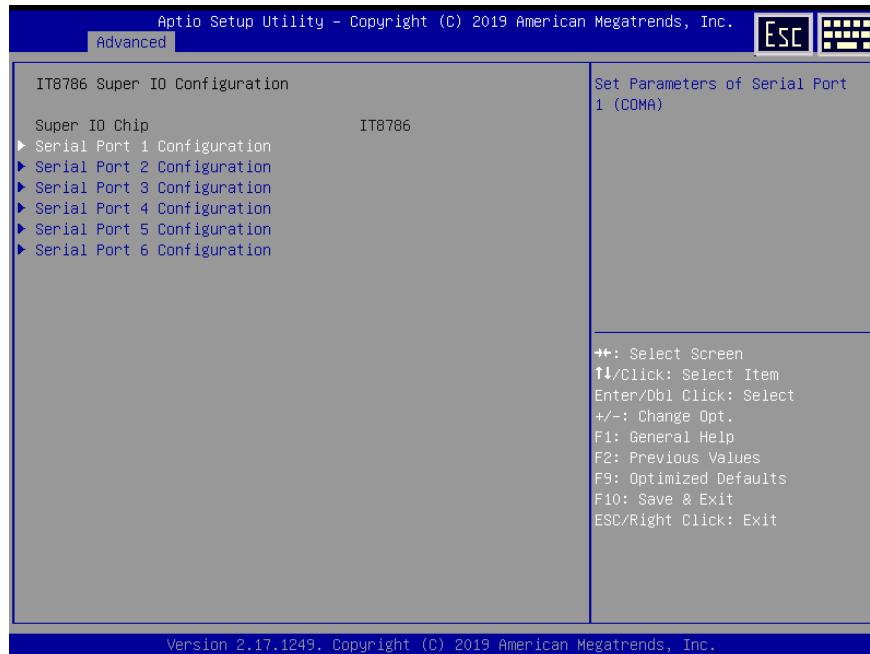
- ↑ ↓ : Select Screen(Select item within menu)
- Enter key /Double-click : Select setting value
- +/ - : Change Option
- F1: General Help
- F2: Previous Values
- F9: Optimized BIOS setting defaults
- F10: Save & Exit
- F12: BIOS Boot Menu
- ESC/Right Click: Exit

02. Serial voltage change - J1900, Core i3/i5

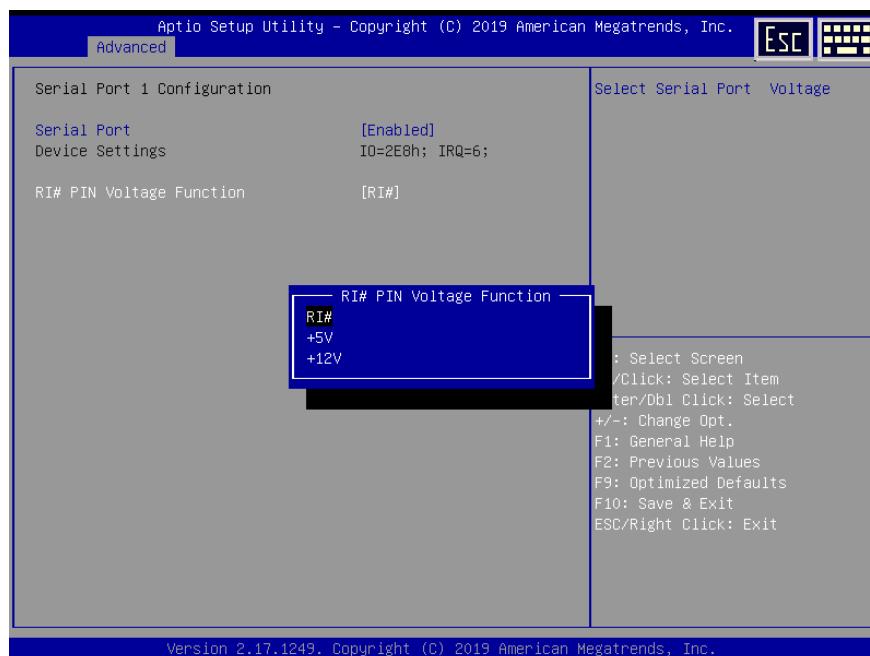


- Default Serial port voltage for Forza is No Power for J1900 and RI# for Core i3/i5

1. Advanced menu
2. Select IT8786 Super IO Configuration and press ‘ENTER’ key or double-click.
3. Select the Serial port you want to change and press ‘ENTER’ key or double-click.



4. Adjust the voltage and press ‘ENTER’ key or double-click.



5. Press “F10” Key to save the setting and exit the BIOS setup.

03. Cash drawer port voltage setting-J1900, Core i3/i5



- Before connecting the cash drawer, check the cash drawer operation voltage first and set the voltage.
- Default cash drawer port voltage for Forza is 24V.

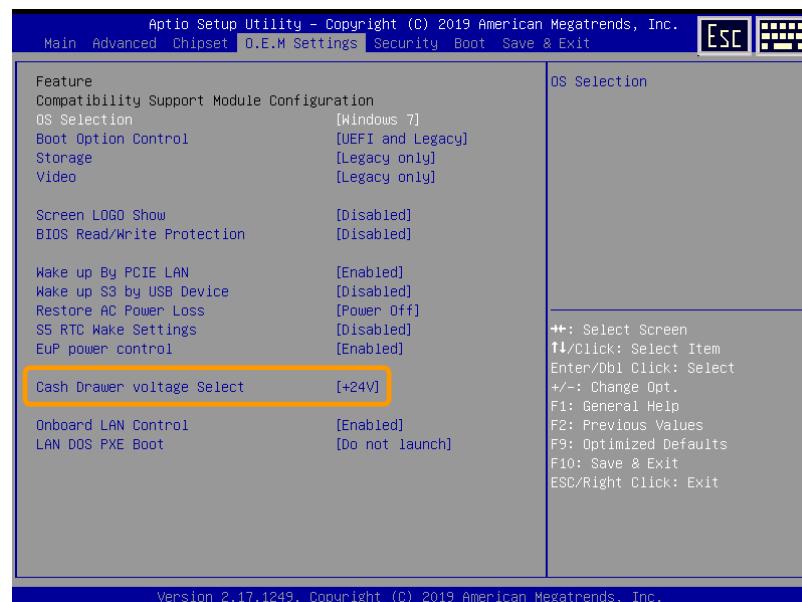
There are 2 methods to change cash drawer voltage.

1. Using Keyboard Function key

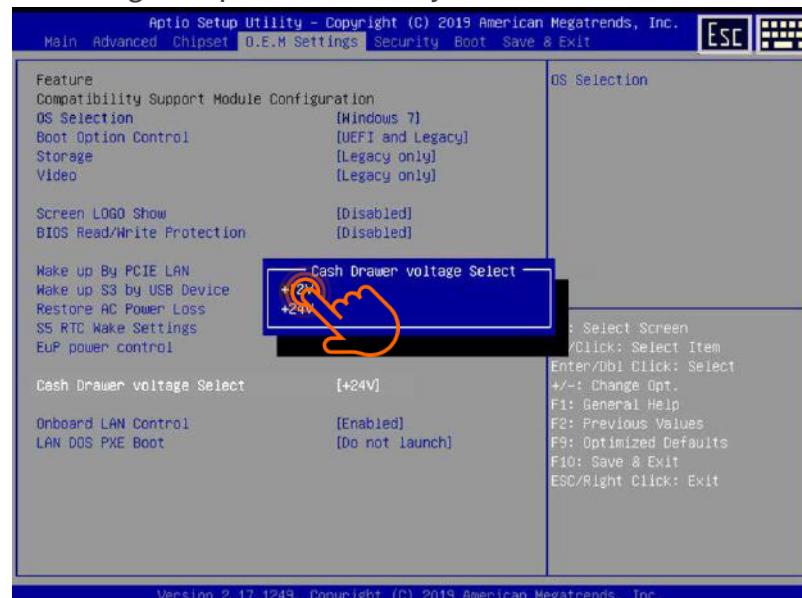
- 1) When the system is powered on and the BIOS logo(or OEM logo) is shown, press key 'Ctrl+F2' and the setting is changed to 12V.
- 2) You'll hear the beep sound twice.

2. Using BIOS

- 1) Enter BIOS setup -> Select O.E.M Setting menu => Cash Drawer Voltage Select



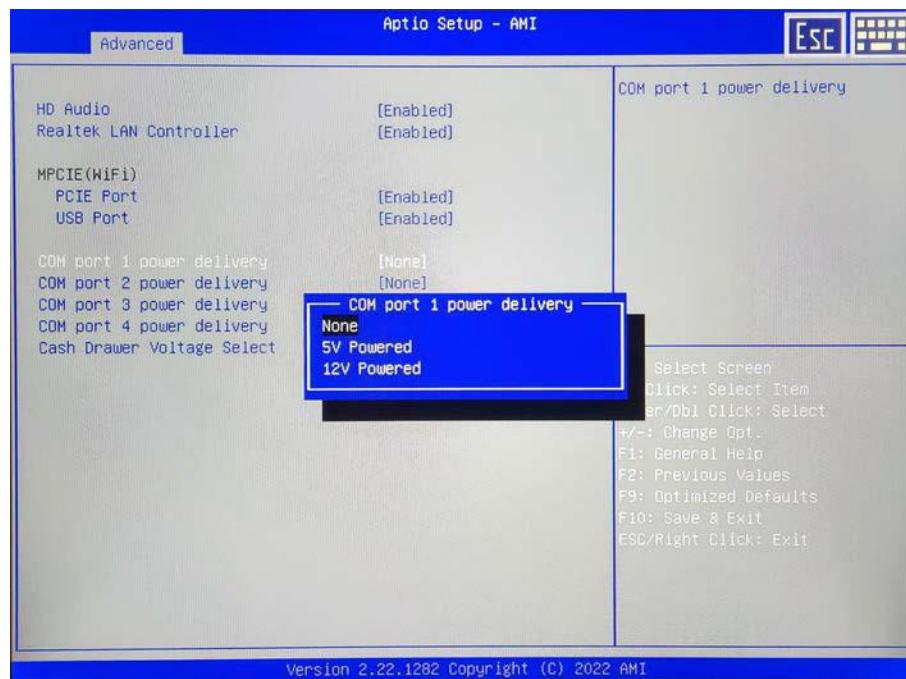
- 2) Select the voltage and press 'ENTER' key.



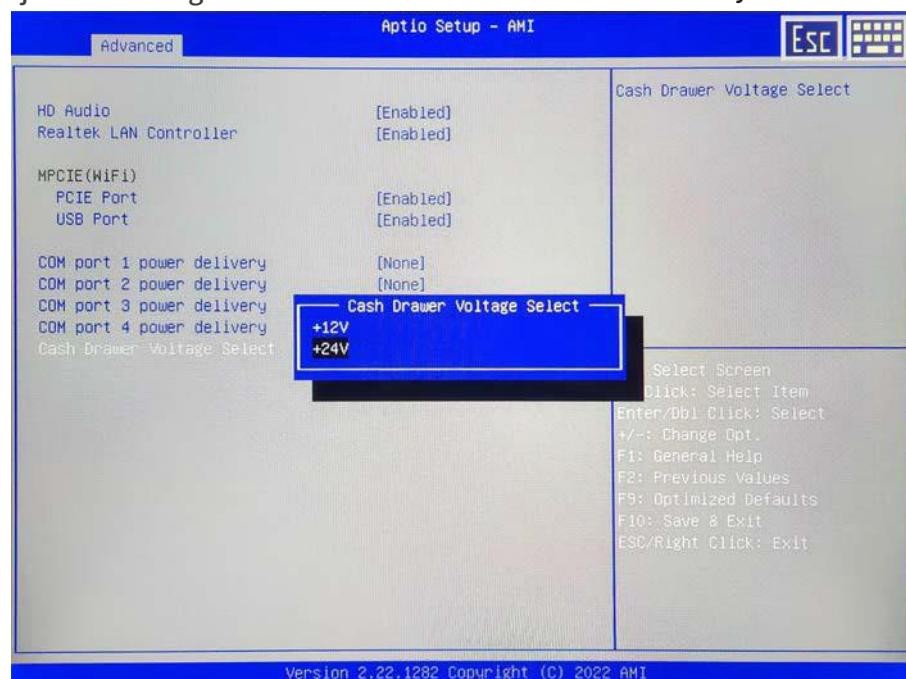
- 3) Press "F10" Key to save the setting and exit the BIOS setup.

04. Serial & Cash drawer port voltage setting - J6412

- 1) Advanced menu
- 2) Onboard Device Configuration
- 3) COM port power delivery
- 4) Adjust the voltage of the serial port and press 'ENTER' key or double-click.



- 5) Adjust the voltage of the cash drawer and Press 'ENTER' Key or double click.



- 6) Press "F10" Key to save the setting and exit the BIOS setup

05. Display output and changing display resolution Hoy key



- You can easily change the resolution simply using Keyboard function key.
- Before changing the setting, check currently using main display size and resolution.
- Be careful to set the appropriate resolution for relevant display size.

1. J1900

Function Key	Function	Remark
Crtl+F4	1024 * 768 / 24 Bit color	Main display size : 15"(38.1cm)
Crtl+F5	1366 * 768 / 24 Bit color	Main display size : 15.6"(39.62cm) / 18.5"(46.99cm)
Crtl+F7 [Default]	Main display output : [LVDS/eDP] Customer display output : [Disabled]	Select LVDS for main display output
Crtl+F8	Main display output : [DP/DP++] Customer display output : [Disabled]	Select DP for main display output
Crtl+F9	1024 * 600 / 18 Bit color	Main display size : 10.1"(26.65cm)

2. J6412, Core i3/i5

Function key	Function	Remark
Crtl+F4	1024 * 768 / 24 Bit color	Main display size : 15"(38.1cm)
Crtl+F5	1366 * 768 / 24 Bit color	Main display size : 15.6"(39.62cm) / 18.5"(46.99cm)
Crtl+F7 [Default]	Main display output : [LVDS/eDP] Customer display output : [DP/DP++]	Select LVDS for main display output Select DP for customer display output
Crtl+F8	Main display output : [DP/DP++] Customer display output : [HDMI]	Select DP for main display output Select HDMI for customer display output

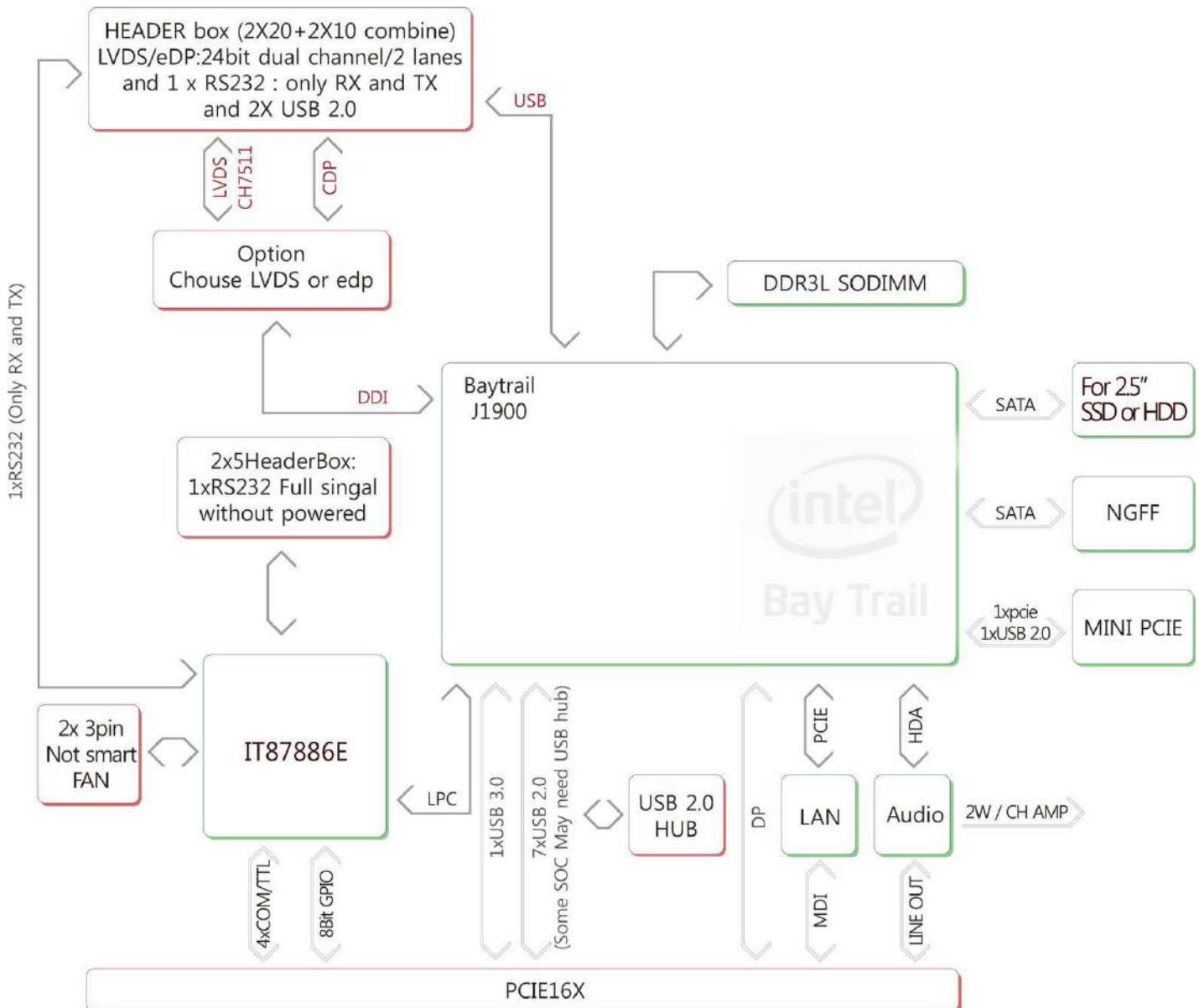
- If incorrect resolution is applied, using above Function key to fix it.
- When the setting is correctly applied, you'll hear beep sound twice.

System Configuration

Appendix B

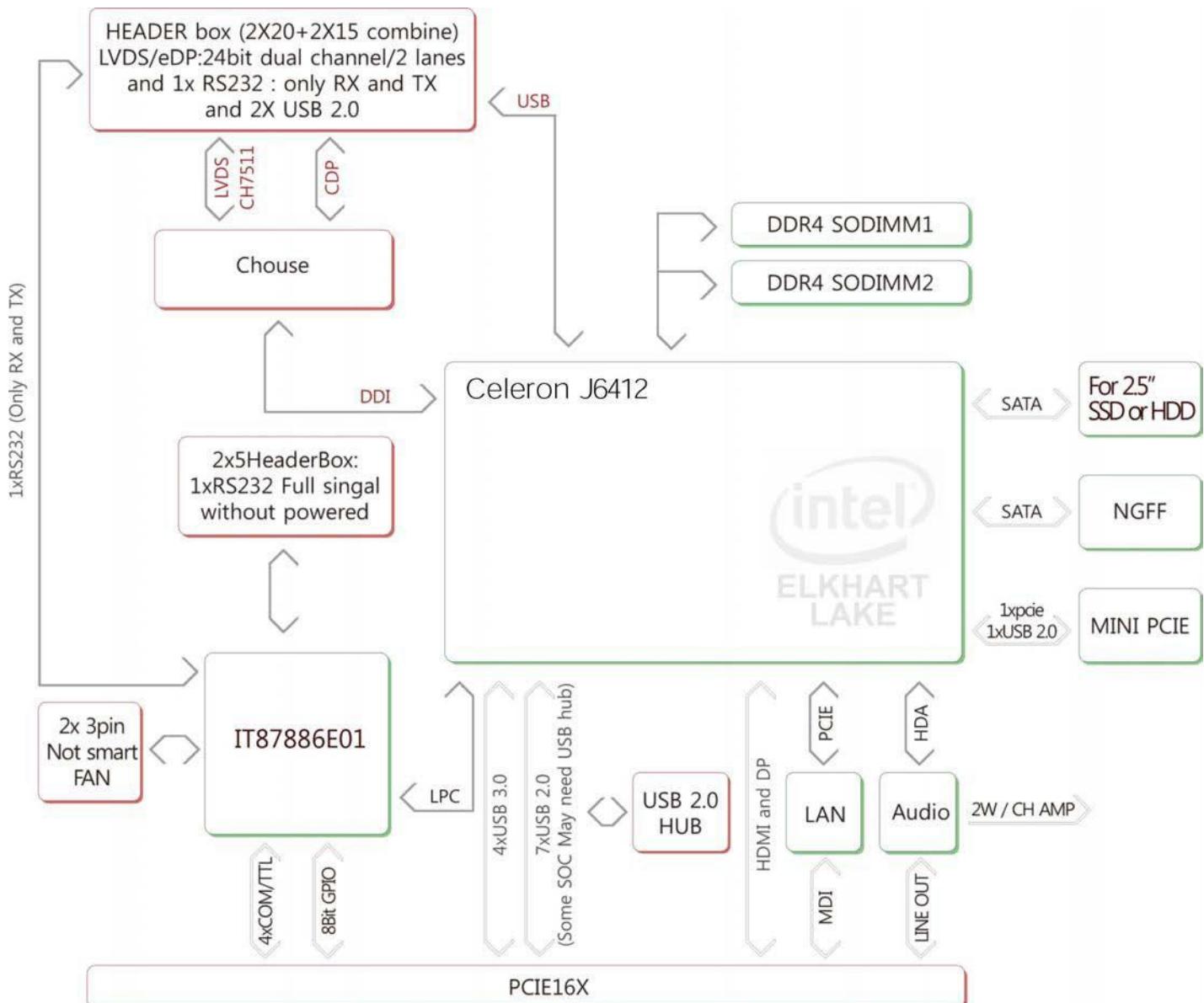
1. System block diagram

•J1900 Mainboard system block diagram



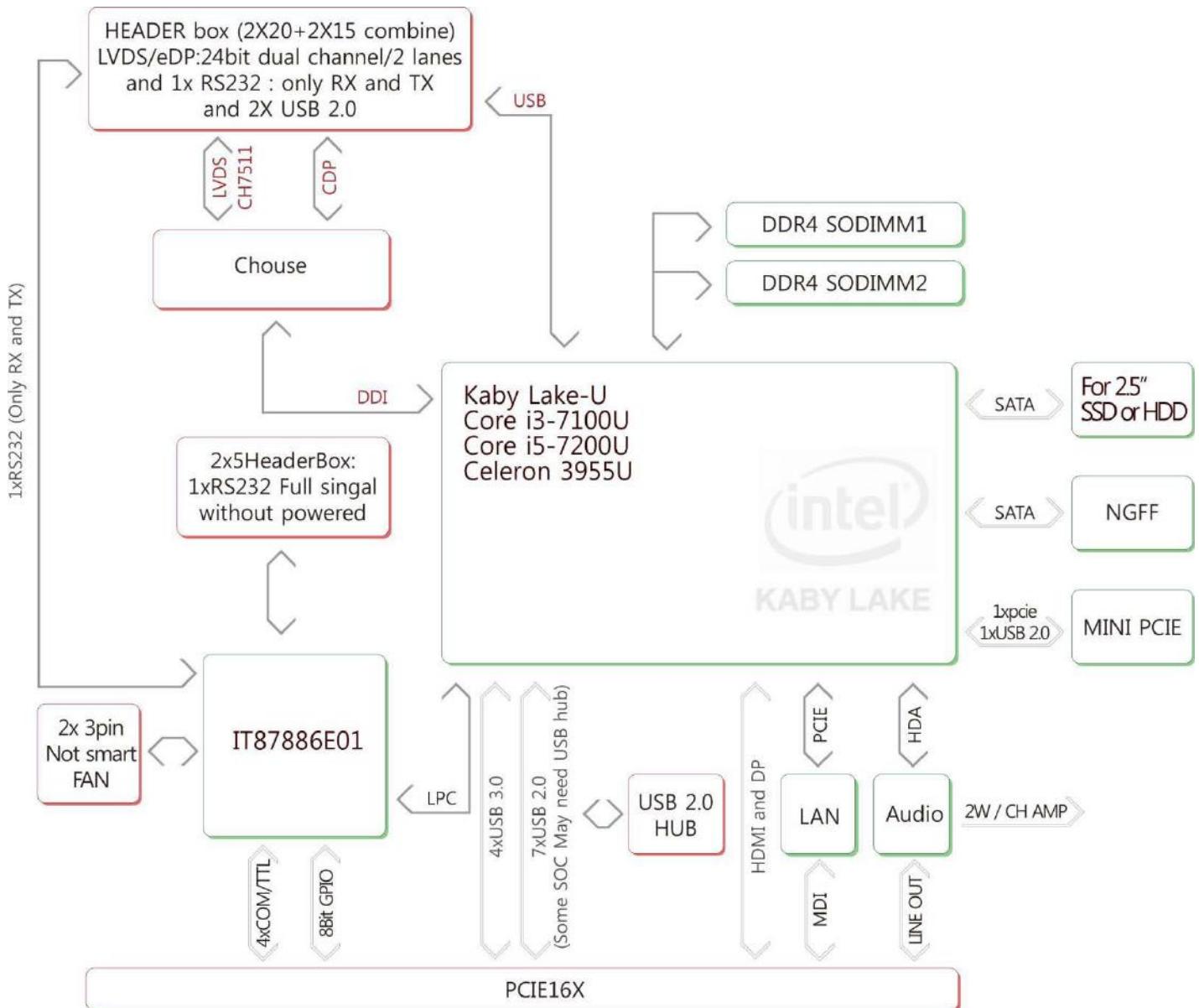
1. System block diagram

- J6412 Mainboard system block diagram



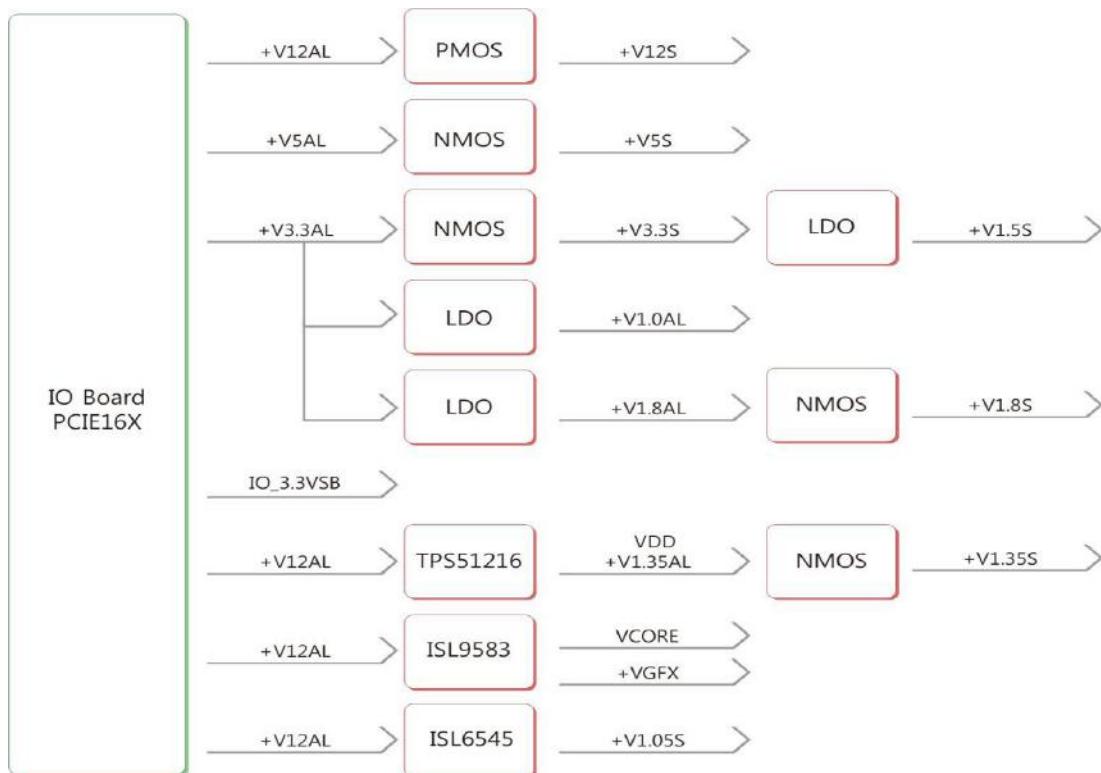
1. System block diagram

- Core i3 / i5 Mainboard system block diagram

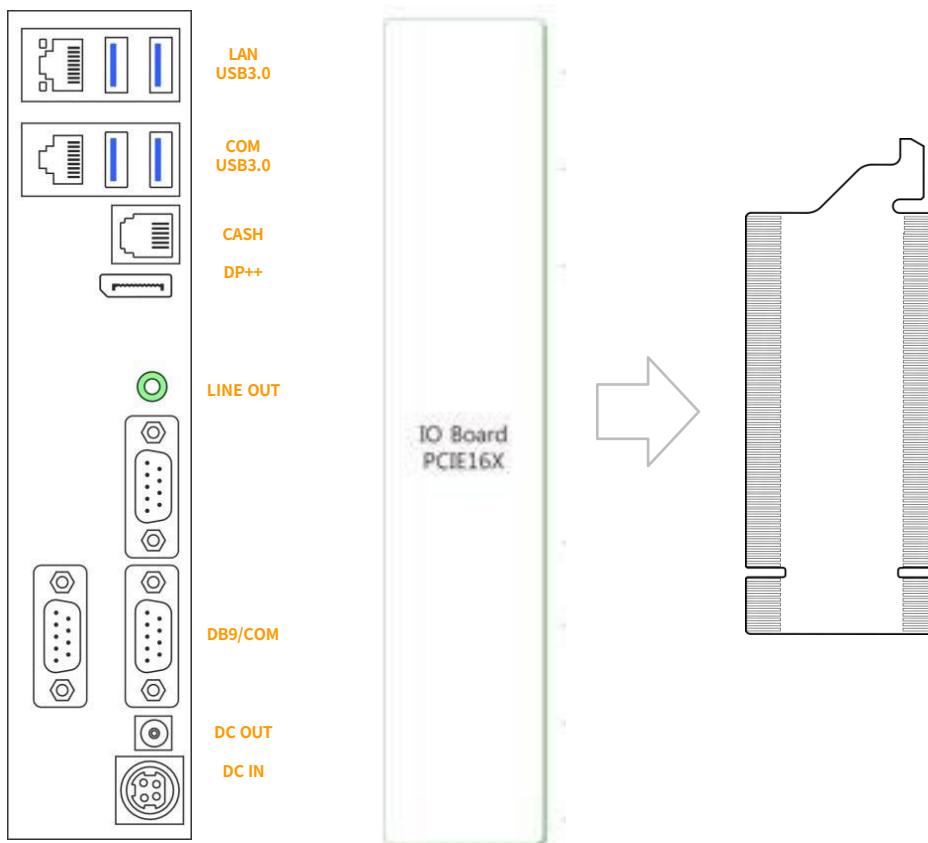


1. System block diagram

- J1900 IO board system block diagram (POWER)

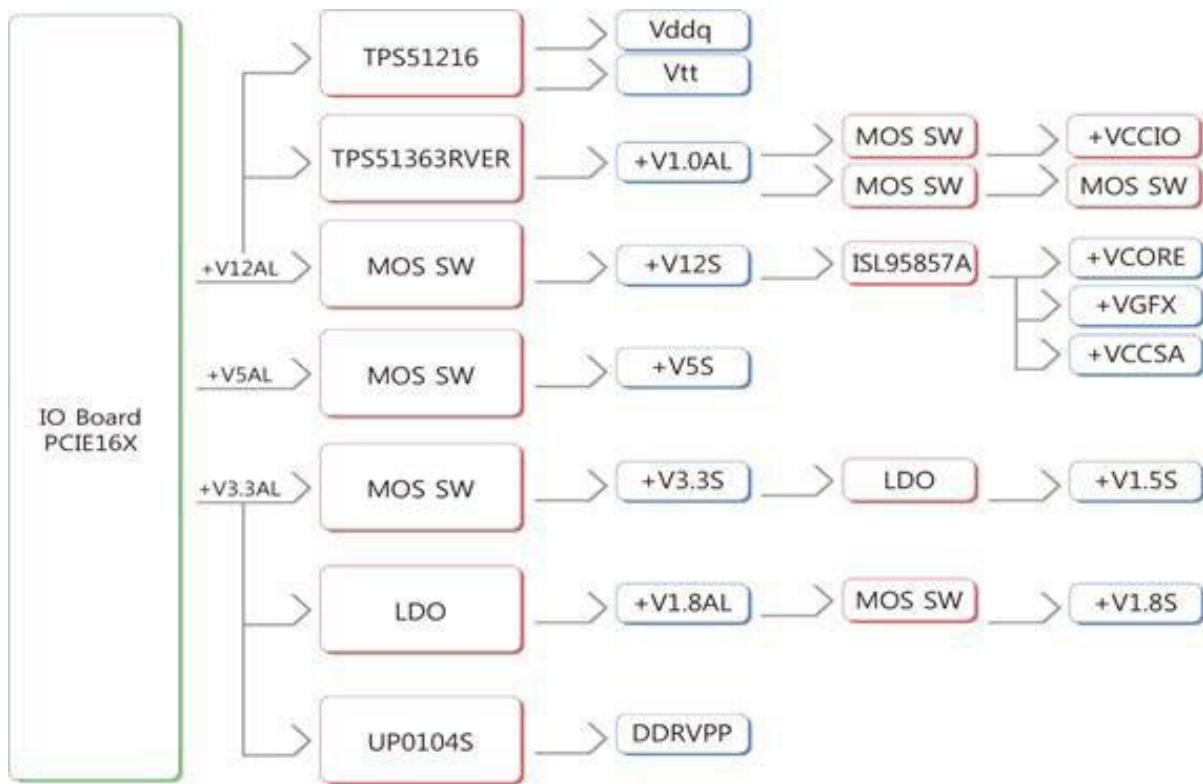


- J1900 IO board system block diagram (IO)

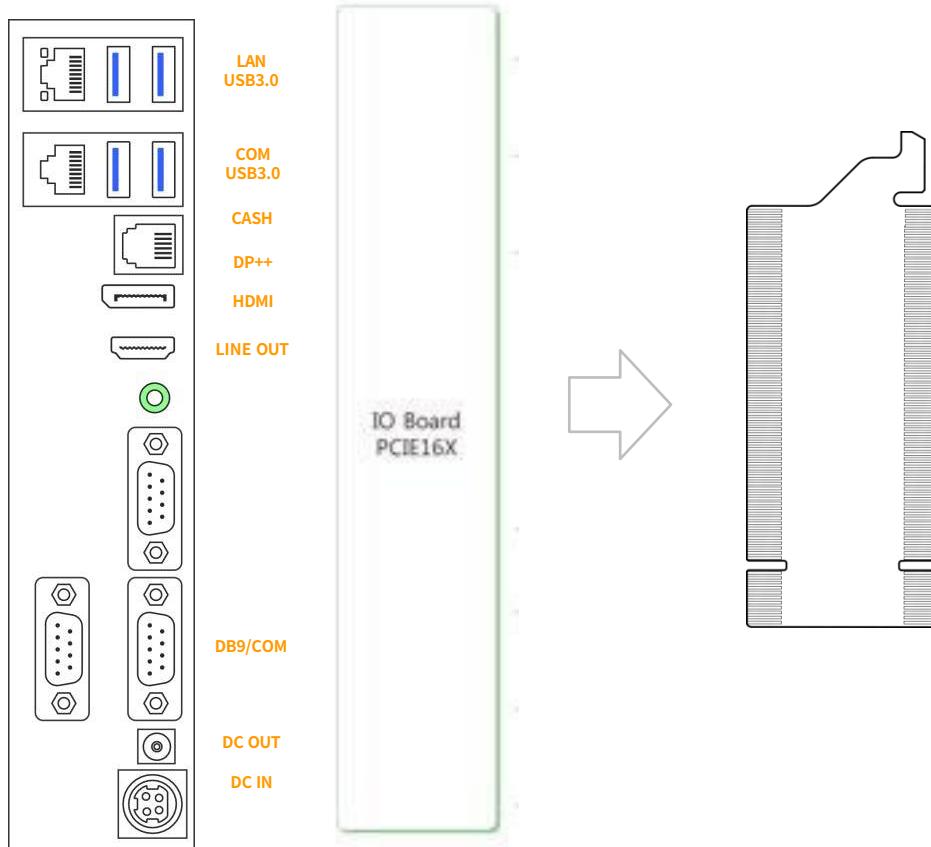


1. System block diagram

- Core i3 / i5 IO board system block diagram (POWER)

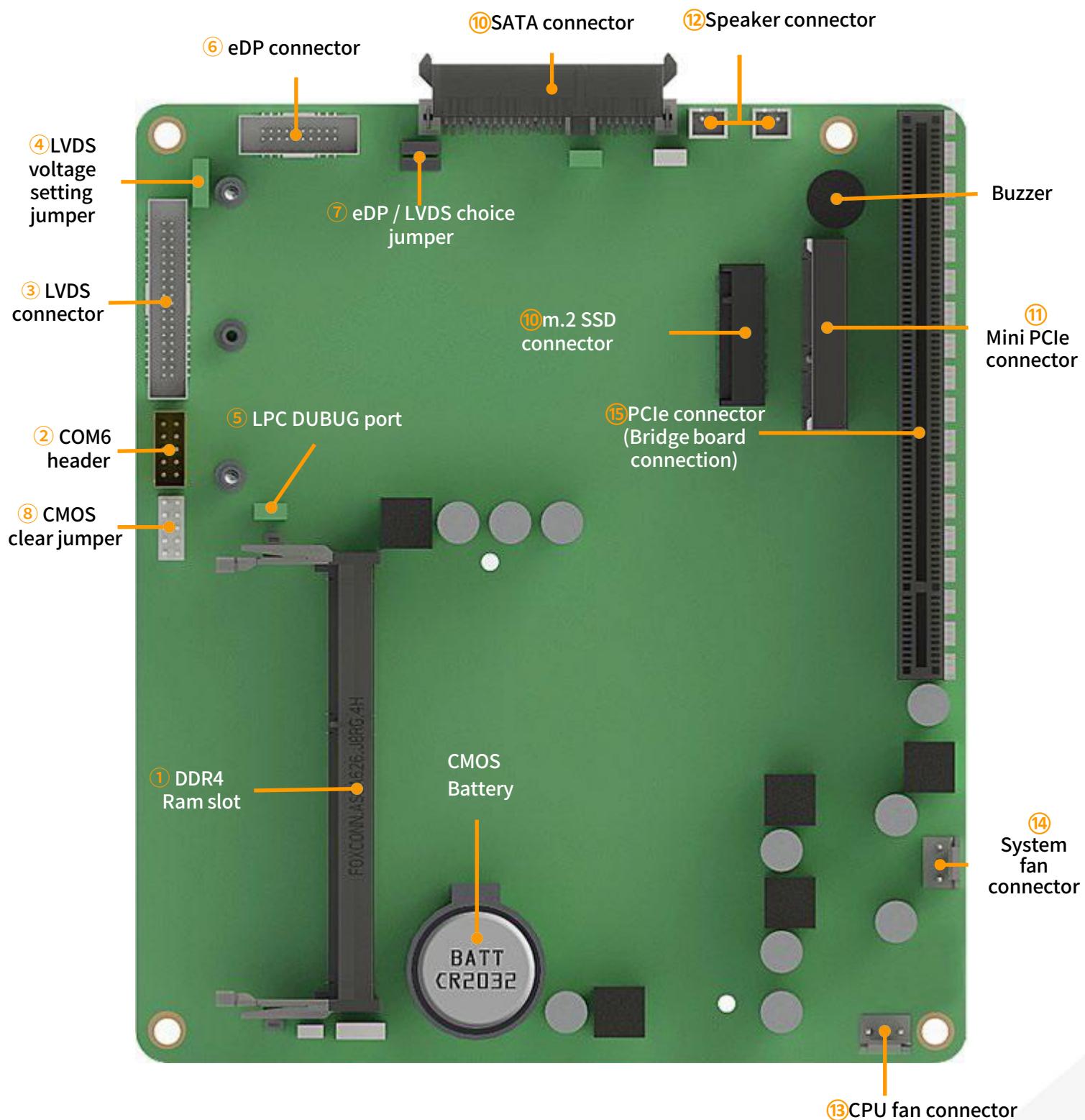


- J1900 IO board system block diagram (IO)



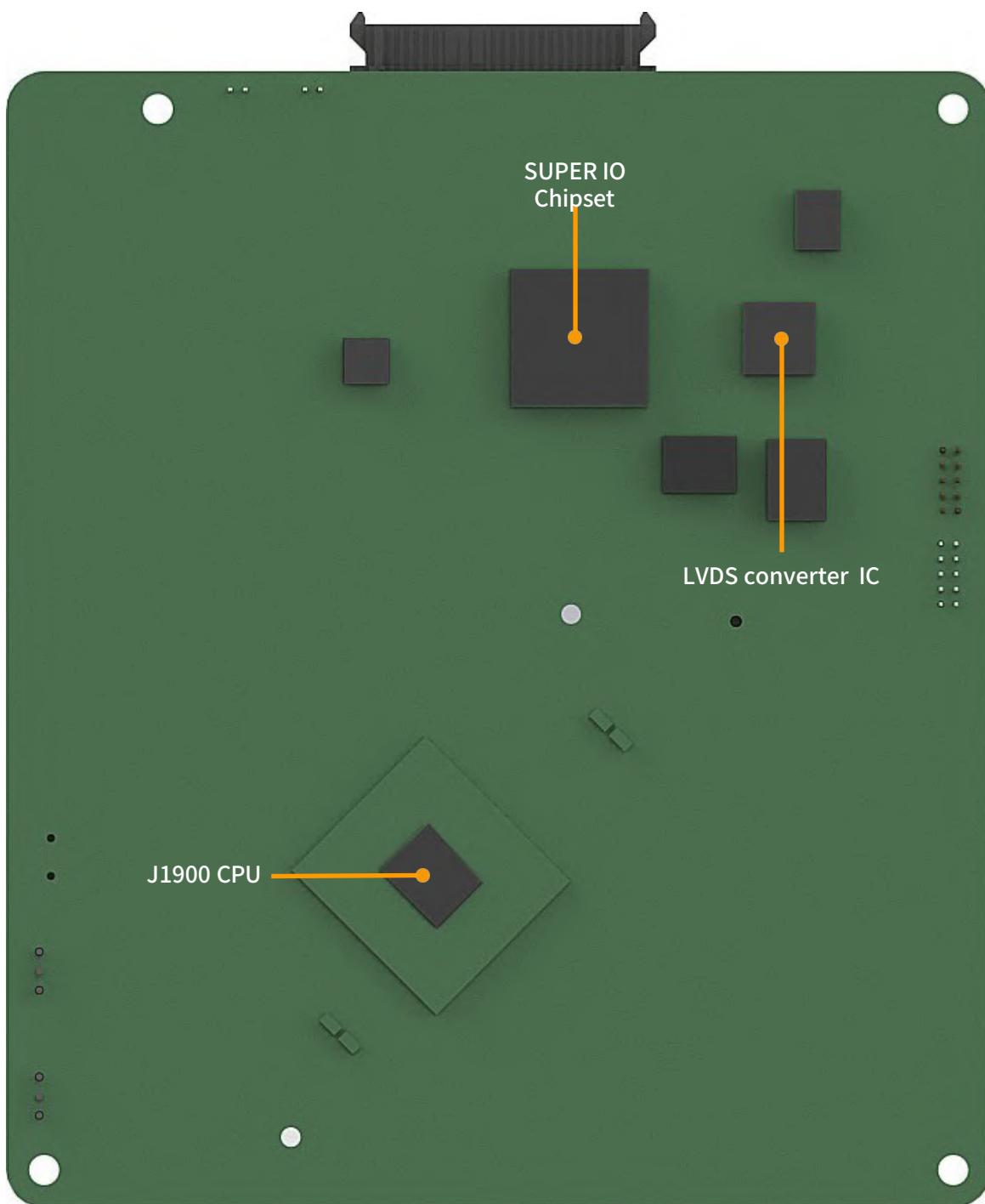
02. J1900 Mainboard Layout (Chipset & connector)

- J1900 Mainboard (Top)



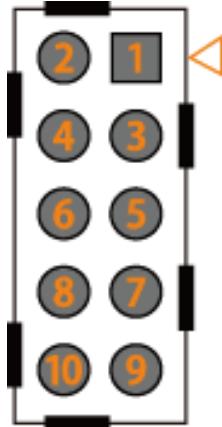
02. J1900 Mainboard Layout (Chipset & connector)

- J1900 Mainboard (Bottom)

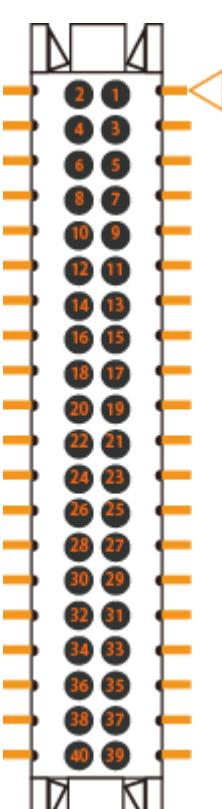


03. J1900 M/B Connector pin map & jumper setting

SODIMM	SODIMM ①
PIN Define	 <p>SODIMM</p>
Type	Standard DDR3L SODIMM 204pin socket
Memo	Standard DDR3L pin map. Refer to JEDEC table for more pin information

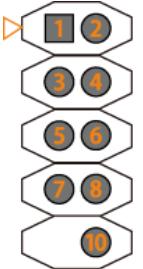
COM	COM ②																				
PIN Define	 <table border="1"> <tr> <td>1</td> <td>DCD</td> <td>2</td> <td>RXD</td> </tr> <tr> <td>3</td> <td>TXD</td> <td>4</td> <td>DTR</td> </tr> <tr> <td>5</td> <td>GND</td> <td>6</td> <td>DSR</td> </tr> <tr> <td>7</td> <td>RTS</td> <td>8</td> <td>CTS</td> </tr> <tr> <td>9</td> <td>RI</td> <td>10</td> <td>N/A</td> </tr> </table>	1	DCD	2	RXD	3	TXD	4	DTR	5	GND	6	DSR	7	RTS	8	CTS	9	RI	10	N/A
1	DCD	2	RXD																		
3	TXD	4	DTR																		
5	GND	6	DSR																		
7	RTS	8	CTS																		
9	RI	10	N/A																		
Type	2x5 Header Box PH=2.0mm																				
Memo	1. RS-232 communication header																				

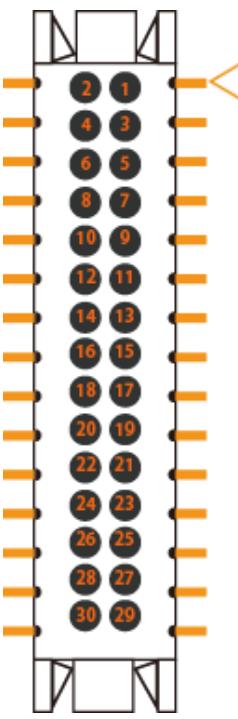
03. J1900 M/B Connector pin map & jumper setting

LVDS	LVDS ③	1	+V12S	2	+V12S
PIN Define		3	+V12S	4	+V12S
		5	+V12S	6	GND
		7	+V3.3S	8	GND
		9	LCDVDD	10	LCDVDD
		11	SPC	12	SPD
		13	BKLT_PWM	14	VDD_EN
		15	BKLT_ON	16	GND
		17	A0M	18	A0P
		19	A1M	20	A1P
		21	A2M	22	A2P
		23	CLKIM	24	CLKIP
		25	A3M	26	A3P
		27	GND	28	GND
		29	A4M	30	A4P
		31	A5M	32	A5P
		33	A6M	34	A6P
		35	CLK2M	36	CLK2P
		37	A7M	38	A7P
		39	GND	40	GND
Type	2x20 PH=0.15mm				
Memo	1. 2 channel LVDS connector for main display				

JLV	JLV1	PIN	1-2	2-3
PIN Define		Define	+3.3V	+5V
		Default	1-2	
Type	1x3 DuPont Header PH=2.0mm			
Memo	LVDS supply voltage setting jumper header (select 3.3V/5V)			

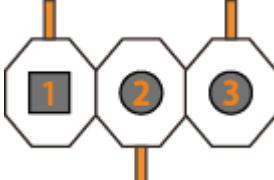
03. J1900 M/B Connector pin map & jumper setting

LPC_DEBUG	LPC_DEBUG ⑤				
PIN Define		1	LAD3	2	25M_CLK
		3	LAD2	4	LFRAME#
		5	LAD1	6	LESET#
		7	LAD0	8	GND
		9	NC	10	+3.3V
Type	2x5 DuPont Header, PIN9 NC, PH=2.0mm				
Memo	Header only for debugging				

eDP	eDP ⑥				
PIN Define		1	+V12S	2	+V12S
		3	GND	4	GND
		5	LCD_VDD	6	LCD_VDD
		7	BKLT_PWM	8	LCDVDD_EN
		9	BKLT_ON	10	GND
		11	eDP_TX1_N	12	eDP_TX1_P
		13	eDP_TX0_N	14	eDP_TX0_P
		15	GND	16	GND
		17	eDP_AUXN	18	eDP_AUXP
		19	GND	20	GND
		21	D0-	22	D0+
		23	D1-	24	D1+
		25	TXD5	26	RXD5
		27	+V5AL	28	eDP_HPD
		29	+V5AL	30	GND
Type	2x15 PH=0.15mm				
Memo	eDP connector (39.26cm/15.6") for main display				

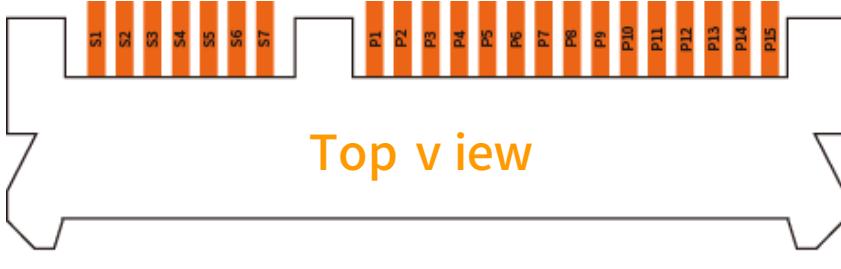
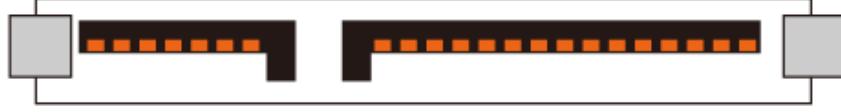
03. J1900 M/B Connector pin map & jumper setting

SW_LVDS/eDP	SW_LVDS/eDP ⑦									
PIN Define	 <table border="1"> <thead> <tr> <th>PIN</th> <th>1-2</th> <th>2-3</th> </tr> </thead> <tbody> <tr> <td>Define</td> <td>LVDS</td> <td>eDP</td> </tr> <tr> <td>Default</td> <td colspan="2">1-2</td> </tr> </tbody> </table>	PIN	1-2	2-3	Define	LVDS	eDP	Default	1-2	
PIN	1-2	2-3								
Define	LVDS	eDP								
Default	1-2									
Type	1x3 DuPont Header PH=2.0mm									
Memo	Main Display Interface Selection Jumper (eDP/LVDS)									

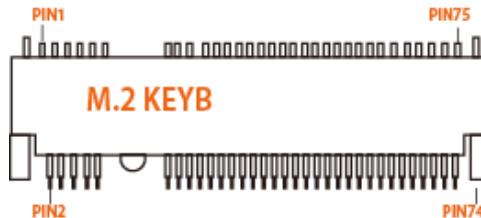
JCMOS	JCMOS ⑧									
PIN Define	 <table border="1"> <thead> <tr> <th>PIN</th> <th>1-2</th> <th>2-3</th> </tr> </thead> <tbody> <tr> <td>Define</td> <td>Normal</td> <td>Clear</td> </tr> <tr> <td>Default</td> <td colspan="2">1-2</td> </tr> </tbody> </table>	PIN	1-2	2-3	Define	Normal	Clear	Default	1-2	
PIN	1-2	2-3								
Define	Normal	Clear								
Default	1-2									
Type	1x3 DuPont Header PH=2.54mm									
Memo	CMOS Clear jumper. 1-2connection: Basics 2-3connection: CMOS Clear									

JME	JME ⑨
PIN Define	
Type	1x2 DuPont Header Ph=2.0mm
Memo	Short 1-2 can Disable ME

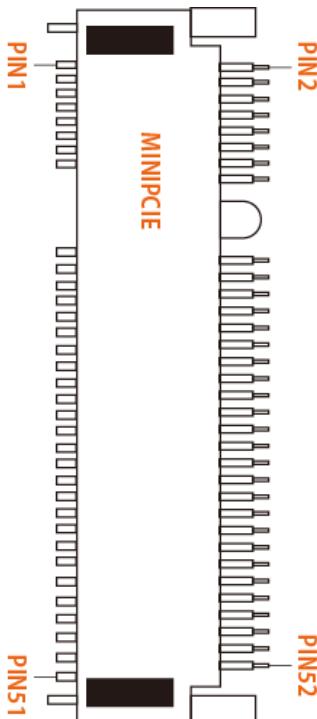
03. J1900 M/B Connector pin map & jumper setting

SATA	MINI SATA 																																																												
	 <p>Top view</p>																																																												
	 <p>Front view</p>																																																												
PIN Define	<table border="1"> <tbody> <tr><td>1</td><td>+V12S</td><td>2</td><td>+V12S</td></tr> <tr><td>3</td><td>GND</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>LCD_VDD</td><td>6</td><td>LCD_VDD</td></tr> <tr><td>7</td><td>BKLT_PWM</td><td>8</td><td>LCDVDD_EN</td></tr> <tr><td>9</td><td>BKLT_ON</td><td>10</td><td>GND</td></tr> <tr><td>11</td><td>eDP_TX1_N</td><td>12</td><td>eDP_TX1_P</td></tr> <tr><td>13</td><td>eDP_TX0_N</td><td>14</td><td>eDP_TX0_P</td></tr> <tr><td>15</td><td>GND</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>eDP_AUXN</td><td>18</td><td>eDP_AUXP</td></tr> <tr><td>19</td><td>GND</td><td>20</td><td>GND</td></tr> <tr><td>21</td><td>D0-</td><td>22</td><td>D0+</td></tr> <tr><td>23</td><td>D1-</td><td>24</td><td>D1+</td></tr> <tr><td>25</td><td>TXD5</td><td>26</td><td>RXD5</td></tr> <tr><td>27</td><td>+V5AL</td><td>28</td><td>eDP_HPD</td></tr> <tr><td>29</td><td>+V5AL</td><td>30</td><td>GND</td></tr> </tbody> </table>	1	+V12S	2	+V12S	3	GND	4	GND	5	LCD_VDD	6	LCD_VDD	7	BKLT_PWM	8	LCDVDD_EN	9	BKLT_ON	10	GND	11	eDP_TX1_N	12	eDP_TX1_P	13	eDP_TX0_N	14	eDP_TX0_P	15	GND	16	GND	17	eDP_AUXN	18	eDP_AUXP	19	GND	20	GND	21	D0-	22	D0+	23	D1-	24	D1+	25	TXD5	26	RXD5	27	+V5AL	28	eDP_HPD	29	+V5AL	30	GND
1	+V12S	2	+V12S																																																										
3	GND	4	GND																																																										
5	LCD_VDD	6	LCD_VDD																																																										
7	BKLT_PWM	8	LCDVDD_EN																																																										
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25	TXD5	26	RXD5																																																										
27	+V5AL	28	eDP_HPD																																																										
29	+V5AL	30	GND																																																										
Type	7+15P Reverse MINI SATA Connector																																																												
Memo	2.5" SATAIII connection slot																																																												

03. J1900 M/B Connector pin map & jumper setting

M. 2	M. 2 ⑪																																																																																																																																																															
PIN Define	 <p>M.2 KEYB</p>																																																																																																																																																															
	<table border="1"> <thead> <tr> <th>1</th><th>CONFIG_3</th><th>2</th><th>+3.3V</th><th>41</th><th>PETNO /SATA-B+</th><th>42</th><th>GPIO_1</th></tr> </thead> <tbody> <tr><td>3</td><td>GND</td><td>4</td><td>+3.3V</td><td>43</td><td>PETNO /SATA-B-</td><td>44</td><td>GPIO_2</td></tr> <tr><td>5</td><td>GND</td><td>6</td><td>POWER_OFF</td><td>45</td><td>GND</td><td>46</td><td>GPIO_3</td></tr> <tr><td>7</td><td>USBD+</td><td>8</td><td>W_DISABLE #1</td><td>47</td><td>PETNO /SATA-A-</td><td>48</td><td>GPIO_4</td></tr> <tr><td>9</td><td>USBD-</td><td>10</td><td>GPIO_9 /DAS/DSS</td><td>49</td><td>PETNO /SATA-A+</td><td>50</td><td>PERST#</td></tr> <tr><td>11</td><td>GND</td><td>12</td><td>Key</td><td>51</td><td>GND</td><td>52</td><td>CLKREQ#</td></tr> <tr><td>13</td><td>Key</td><td>14</td><td>Key</td><td>53</td><td>REFCLKN</td><td>54</td><td>PEWake#</td></tr> <tr><td>15</td><td>Key</td><td>16</td><td>Key</td><td>55</td><td>REFCLKP</td><td>56</td><td>NC</td></tr> <tr><td>17</td><td>Key</td><td>18</td><td>Key</td><td>57</td><td>GND</td><td>58</td><td>NC</td></tr> <tr><td>19</td><td>Key</td><td>20</td><td>GPIO_5</td><td>59</td><td>ATCTL0</td><td>60</td><td>COEX3</td></tr> <tr><td>21</td><td>CONFIG_0</td><td>22</td><td>GPIO_6</td><td>61</td><td>ATCTL1</td><td>62</td><td>COEX2</td></tr> <tr><td>23</td><td>GPIO_11</td><td>24</td><td>GPIO_7</td><td>63</td><td>ATCTL2</td><td>64</td><td>COEX1</td></tr> <tr><td>25</td><td>GPIO_12</td><td>26</td><td>GPIO_10</td><td>65</td><td>ATCTL3</td><td>66</td><td>SIM Detect</td></tr> <tr><td>27</td><td>GND</td><td>28</td><td>GPIO_8</td><td>67</td><td>Reset#</td><td>68</td><td>SUSCLK (32kHz)</td></tr> <tr><td>29</td><td>PERN1 /USB3.0-RX-</td><td>30</td><td>UIM-RESET</td><td>69</td><td>CONFIG_2</td><td>70</td><td>+3.3V</td></tr> <tr><td>31</td><td>PERN1 /USB3.0-RX+</td><td>32</td><td>UIM-CLK</td><td>71</td><td>GND</td><td></td><td>+3.3V</td></tr> <tr><td>33</td><td>GND</td><td>34</td><td>UIM-DATA</td><td>73</td><td>GND</td><td></td><td>+3.3V</td></tr> <tr><td>35</td><td>PETN1 /USB3.0-TX-</td><td>36</td><td>UIM-PWR</td><td>75</td><td>CONFIG_2</td><td></td><td></td></tr> <tr><td>37</td><td>PETN1 /USB3.0-TX+</td><td>38</td><td>DEVSLP</td><td></td><td></td><td></td><td></td></tr> <tr><td>39</td><td>GND</td><td>40</td><td>GPIO_0</td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	1	CONFIG_3	2	+3.3V	41	PETNO /SATA-B+	42	GPIO_1	3	GND	4	+3.3V	43	PETNO /SATA-B-	44	GPIO_2	5	GND	6	POWER_OFF	45	GND	46	GPIO_3	7	USBD+	8	W_DISABLE #1	47	PETNO /SATA-A-	48	GPIO_4	9	USBD-	10	GPIO_9 /DAS/DSS	49	PETNO /SATA-A+	50	PERST#	11	GND	12	Key	51	GND	52	CLKREQ#	13	Key	14	Key	53	REFCLKN	54	PEWake#	15	Key	16	Key	55	REFCLKP	56	NC	17	Key	18	Key	57	GND	58	NC	19	Key	20	GPIO_5	59	ATCTL0	60	COEX3	21	CONFIG_0	22	GPIO_6	61	ATCTL1	62	COEX2	23	GPIO_11	24	GPIO_7	63	ATCTL2	64	COEX1	25	GPIO_12	26	GPIO_10	65	ATCTL3	66	SIM Detect	27	GND	28	GPIO_8	67	Reset#	68	SUSCLK (32kHz)	29	PERN1 /USB3.0-RX-	30	UIM-RESET	69	CONFIG_2	70	+3.3V	31	PERN1 /USB3.0-RX+	32	UIM-CLK	71	GND		+3.3V	33	GND	34	UIM-DATA	73	GND		+3.3V	35	PETN1 /USB3.0-TX-	36	UIM-PWR	75	CONFIG_2			37	PETN1 /USB3.0-TX+	38	DEVSLP					39	GND	40	GPIO_0			
1	CONFIG_3	2	+3.3V	41	PETNO /SATA-B+	42	GPIO_1																																																																																																																																																									
3	GND	4	+3.3V	43	PETNO /SATA-B-	44	GPIO_2																																																																																																																																																									
5	GND	6	POWER_OFF	45	GND	46	GPIO_3																																																																																																																																																									
7	USBD+	8	W_DISABLE #1	47	PETNO /SATA-A-	48	GPIO_4																																																																																																																																																									
9	USBD-	10	GPIO_9 /DAS/DSS	49	PETNO /SATA-A+	50	PERST#																																																																																																																																																									
11	GND	12	Key	51	GND	52	CLKREQ#																																																																																																																																																									
13	Key	14	Key	53	REFCLKN	54	PEWake#																																																																																																																																																									
15	Key	16	Key	55	REFCLKP	56	NC																																																																																																																																																									
17	Key	18	Key	57	GND	58	NC																																																																																																																																																									
19	Key	20	GPIO_5	59	ATCTL0	60	COEX3																																																																																																																																																									
21	CONFIG_0	22	GPIO_6	61	ATCTL1	62	COEX2																																																																																																																																																									
23	GPIO_11	24	GPIO_7	63	ATCTL2	64	COEX1																																																																																																																																																									
25	GPIO_12	26	GPIO_10	65	ATCTL3	66	SIM Detect																																																																																																																																																									
27	GND	28	GPIO_8	67	Reset#	68	SUSCLK (32kHz)																																																																																																																																																									
29	PERN1 /USB3.0-RX-	30	UIM-RESET	69	CONFIG_2	70	+3.3V																																																																																																																																																									
31	PERN1 /USB3.0-RX+	32	UIM-CLK	71	GND		+3.3V																																																																																																																																																									
33	GND	34	UIM-DATA	73	GND		+3.3V																																																																																																																																																									
35	PETN1 /USB3.0-TX-	36	UIM-PWR	75	CONFIG_2																																																																																																																																																											
37	PETN1 /USB3.0-TX+	38	DEVSLP																																																																																																																																																													
39	GND	40	GPIO_0																																																																																																																																																													
Type	M.2 Key B Socket																																																																																																																																																															
Memo	m.2 SSD connection slot. Only SATAIII SSD is available, NVME doesn't support.																																																																																																																																																															

03. J1900 M/B Connector pin map & jumper setting

MINI PCIE	MINI PCIE (11)																																																																																																								
PIN Define	 <table border="1"> <tbody> <tr><td>1</td><td>WAKE#</td><td>2</td><td>+3.3V</td></tr> <tr><td>3</td><td>SCL</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>SDA</td><td>6</td><td>+1.5V</td></tr> <tr><td>7</td><td>CLKREQ#</td><td>8</td><td>SIM 4</td></tr> <tr><td>9</td><td>GND</td><td>10</td><td>SIM 3</td></tr> <tr><td>11</td><td>REFCLK-</td><td>12</td><td>SIM 2</td></tr> <tr><td>13</td><td>REFCLK+</td><td>14</td><td>SIM 1</td></tr> <tr><td>15</td><td>GND</td><td>16</td><td>SIM 0</td></tr> <tr><td>17</td><td>RSV</td><td>18</td><td>GND</td></tr> <tr><td>19</td><td>RSV</td><td>20</td><td>DISABLE</td></tr> <tr><td>21</td><td>GND</td><td>22</td><td>PERST#</td></tr> <tr><td>23</td><td>PERN</td><td>24</td><td>+3.3VAL</td></tr> <tr><td>25</td><td>PERP</td><td>26</td><td>GND</td></tr> <tr><td>27</td><td>GND</td><td>28</td><td>+1.5V</td></tr> <tr><td>29</td><td>GND</td><td>30</td><td>SMB_CLK</td></tr> <tr><td>31</td><td>PETN</td><td>32</td><td>SMB_DATA</td></tr> <tr><td>33</td><td>PETP</td><td>34</td><td>GND</td></tr> <tr><td>35</td><td>GND</td><td>36</td><td>USB-D-</td></tr> <tr><td>37</td><td>GND</td><td>38</td><td>USB-D+</td></tr> <tr><td>39</td><td>+3.3V</td><td>40</td><td>GND</td></tr> <tr><td>41</td><td>+3.3V</td><td>42</td><td>LED_WSAN#</td></tr> <tr><td>43</td><td>GND</td><td>44</td><td>LED_WLAN#</td></tr> <tr><td>45</td><td>RSV</td><td>46</td><td>LED_WPAN#</td></tr> <tr><td>47</td><td>RSV</td><td>48</td><td>+1.5V</td></tr> <tr><td>49</td><td>RSV</td><td>50</td><td>GND</td></tr> <tr><td>51</td><td>RSV</td><td>52</td><td>+3.3V</td></tr> </tbody> </table>	1	WAKE#	2	+3.3V	3	SCL	4	GND	5	SDA	6	+1.5V	7	CLKREQ#	8	SIM 4	9	GND	10	SIM 3	11	REFCLK-	12	SIM 2	13	REFCLK+	14	SIM 1	15	GND	16	SIM 0	17	RSV	18	GND	19	RSV	20	DISABLE	21	GND	22	PERST#	23	PERN	24	+3.3VAL	25	PERP	26	GND	27	GND	28	+1.5V	29	GND	30	SMB_CLK	31	PETN	32	SMB_DATA	33	PETP	34	GND	35	GND	36	USB-D-	37	GND	38	USB-D+	39	+3.3V	40	GND	41	+3.3V	42	LED_WSAN#	43	GND	44	LED_WLAN#	45	RSV	46	LED_WPAN#	47	RSV	48	+1.5V	49	RSV	50	GND	51	RSV	52	+3.3V
1	WAKE#	2	+3.3V																																																																																																						
3	SCL	4	GND																																																																																																						
5	SDA	6	+1.5V																																																																																																						
7	CLKREQ#	8	SIM 4																																																																																																						
9	GND	10	SIM 3																																																																																																						
11	REFCLK-	12	SIM 2																																																																																																						
13	REFCLK+	14	SIM 1																																																																																																						
15	GND	16	SIM 0																																																																																																						
17	RSV	18	GND																																																																																																						
19	RSV	20	DISABLE																																																																																																						
21	GND	22	PERST#																																																																																																						
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27	GND	28	+1.5V																																																																																																						
29	GND	30	SMB_CLK																																																																																																						
31	PETN	32	SMB_DATA																																																																																																						
33	PETP	34	GND																																																																																																						
35	GND	36	USB-D-																																																																																																						
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49	RSV	50	GND																																																																																																						
51	RSV	52	+3.3V																																																																																																						
Type	MINI PCIE Socket, H=9.9mm																																																																																																								
Memo	MINI PCIE socket Customized PCB size, Support USB and PCIE Interface																																																																																																								

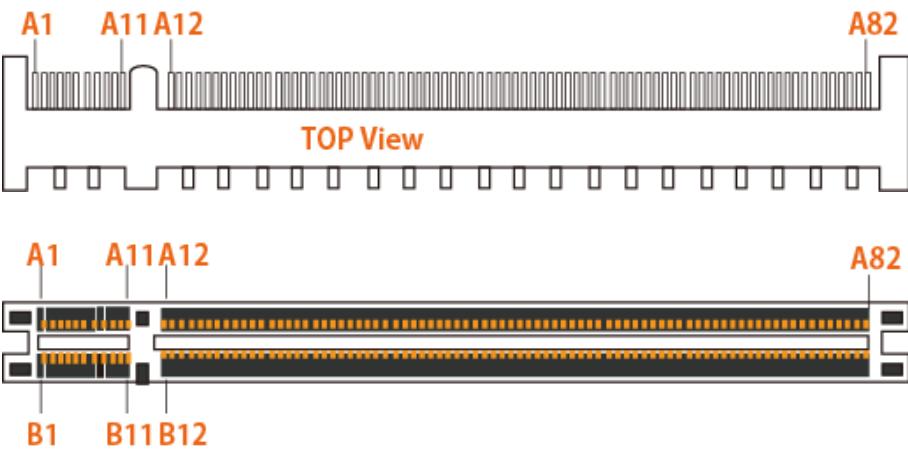
03. J1900 M/B Connector pin map & jumper setting

Amplifier	SPKR1, 2 ⑫																
PIN Define	 <table border="1"> <thead> <tr> <th colspan="2">SPR1(Left)</th> </tr> <tr> <th>PIN</th> <th>Assignment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SPKLN</td> </tr> <tr> <td>2</td> <td>SPKLP</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">SPR2 (Right)</th> </tr> <tr> <th>PIN</th> <th>Assignment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SPKRN</td> </tr> <tr> <td>2</td> <td>SPKRP</td> </tr> </tbody> </table>	SPR1(Left)		PIN	Assignment	1	SPKLN	2	SPKLP	SPR2 (Right)		PIN	Assignment	1	SPKRN	2	SPKRP
SPR1(Left)																	
PIN	Assignment																
1	SPKLN																
2	SPKLP																
SPR2 (Right)																	
PIN	Assignment																
1	SPKRN																
2	SPKRP																
Type	1x2 Wafer PH=2.0																
Memo	Speaker connection connector Realtek ALC269 2.0W Class D Amplifier																

CPU_FAN	CPU_FAN1 ⑬						
PIN Define	 <table border="1"> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>+V12_FAN</td> </tr> <tr> <td>3</td> <td>CPUFAN_TAC</td> </tr> </table>	1	GND	2	+V12_FAN	3	CPUFAN_TAC
1	GND						
2	+V12_FAN						
3	CPUFAN_TAC						
Type	1x3 FAN Connector, PH=2.54mm						
Memo	CPU fan connector +V12_FAN is Control by Bios setting						

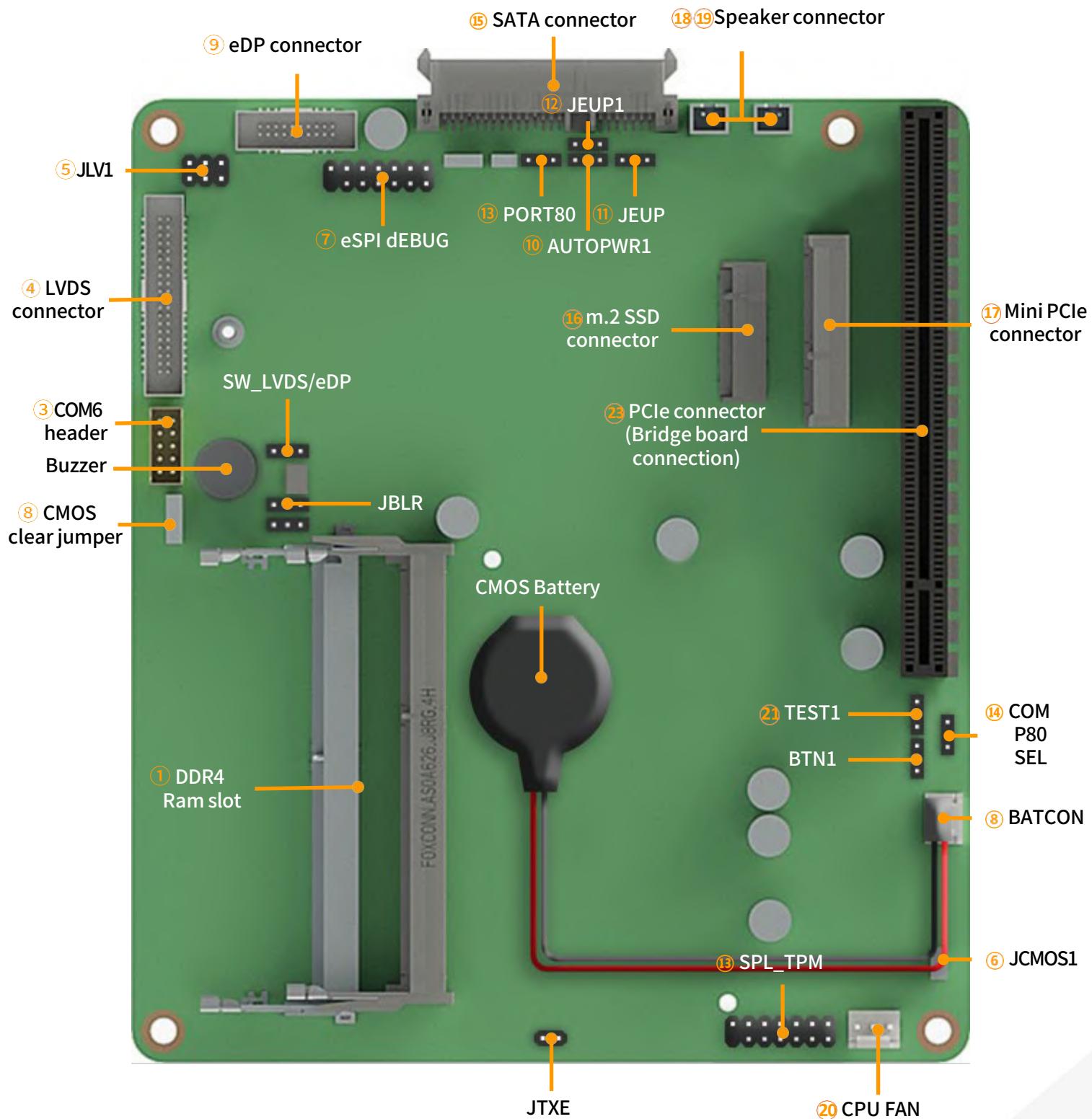
SYS_FAN	SYS_FAN ⑭						
PIN Define	 <table border="1"> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>+V12_FAN</td> </tr> <tr> <td>3</td> <td>CPUFAN_TAC</td> </tr> </table>	1	GND	2	+V12_FAN	3	CPUFAN_TAC
1	GND						
2	+V12_FAN						
3	CPUFAN_TAC						
Type	1x3 FAN Connector , PH=2.54mm						
Memo	System fan connector +V12_FAN is Control by Bios setting						

03. J1900 M/B Connector pin map & jumper setting

PCIE16X	PCIE16X1 ⑯
PIN Define	 <p>TOP View</p>
Type	PCIE 16X slot. This slot has been changed to match the pin map of this system. Standard PCIE 16X is not supported

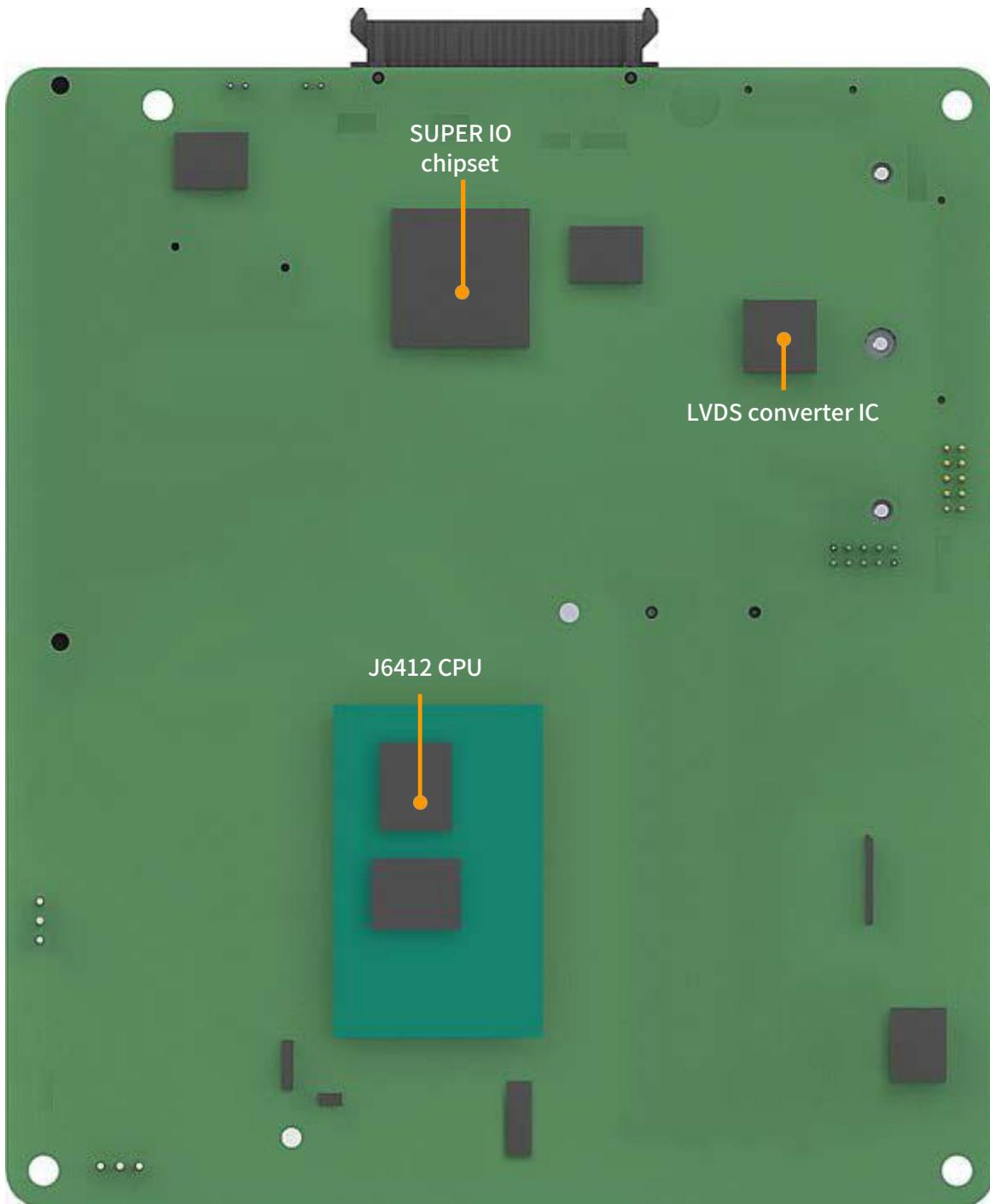
04. J6412 Mainboard Layout (Chipset & Connector)

- J6412 motherboard (Top)

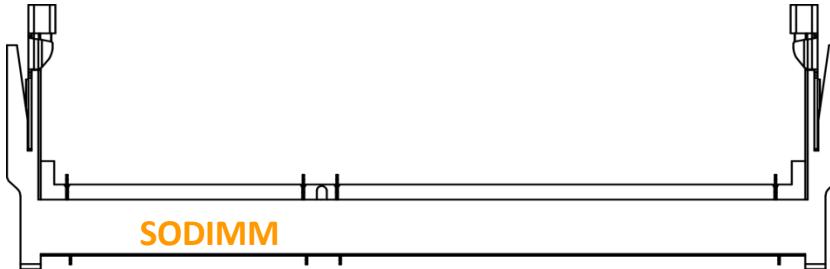


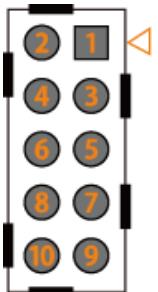
04. J6412 Mainboard Layout (Chipset & Connector)

- J6412 motherboard (Bottom)



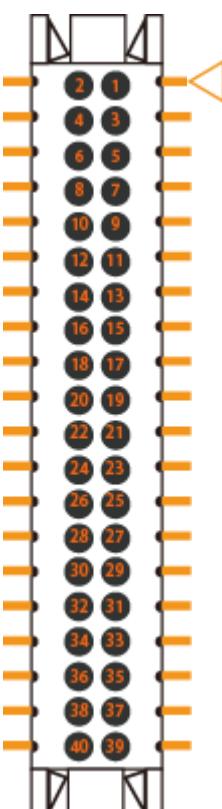
05. J6412 M/B connector pin map & Jumper Setting

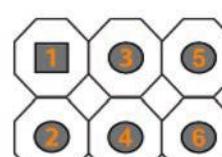
SODIMM	SODIMM1 SODIMM2 ①
PIN Define	 <p>SODIMM</p>
Type	Standard DDR4 SODIMM 260pin socket 260PIN Standard DDR4 SODIMM Socket
Memo	Standard DDR3L pin map. Refer to JEDEC Reference Table for more pin information Standard PIN Define, Detail refer to JEDEC Specification

COM	COM6 ③																				
PIN Define	 <table border="1"> <tr> <td>1</td><td>DCD</td><td>2</td><td>RxD</td></tr> <tr> <td>3</td><td>TxD</td><td>4</td><td>DTR</td></tr> <tr> <td>5</td><td>GND</td><td>6</td><td>DSR</td></tr> <tr> <td>7</td><td>RTS</td><td>8</td><td>CTS</td></tr> <tr> <td>9</td><td>RI</td><td>10</td><td>N/A</td></tr> </table>	1	DCD	2	RxD	3	TxD	4	DTR	5	GND	6	DSR	7	RTS	8	CTS	9	RI	10	N/A
1	DCD	2	RxD																		
3	TxD	4	DTR																		
5	GND	6	DSR																		
7	RTS	8	CTS																		
9	RI	10	N/A																		
Type	2x5 Header Box PH=2.0mm																				
Memo	RS-232 communication header Support RS232																				

SW_LVDS/eDP	SW_LVDS/eDP ⑩									
PIN Define	 <table border="1"> <tr> <td>PIN</td> <td>1-2</td> <td>2-3</td> </tr> <tr> <td>Define</td> <td>LVDS</td> <td>eDP</td> </tr> <tr> <td>Default</td> <td colspan="2">1-2</td> </tr> </table>	PIN	1-2	2-3	Define	LVDS	eDP	Default	1-2	
PIN	1-2	2-3								
Define	LVDS	eDP								
Default	1-2									
Type	1x3 DuPont Header PH=2.0mm									
Memo	Main display interface select jumper (eDP/LVDS). Not included basically.									

05. J6412 M/B connector pin map & Jumper Setting

LVDS	LVDS ④				
PIN Define		1	+V12S	2	+V12S
		3	+V12S	4	+V12S
		5	+V12S	6	GND
		7	+V3.3S	8	GND
		9	LCDVDD	10	LCDVDD
		11	SPC	12	SPD
		13	BKLT_PWM	14	VDD_EN
		15	BKLT_ON	16	GND
		17	A0M	18	A0P
		19	A1M	20	A1P
		21	A2M	22	A2P
		23	CLKIM	24	CLKIP
		25	A3M	26	A3P
		27	GND	28	GND
		29	A4M	30	A4P
		31	A5M	32	A5P
		33	A6M	34	A6P
		35	CLK2M	36	CLK2P
		37	A7M	38	A7P
		39	GND	40	GND
Type	2x20 PH=0.15mm				
Memo	Main display 2channel LVDS connector				

JLV	JLV1 ⑤			
PIN Define		PIN	Voltage	2-3
		1-2	+3.3V	Default
		4-3	+5.0V	
		6-5	+12V	
Type	2x3 DuPont Header PH=2.0mm			
Memo	LVDS supply voltage setting jumper header (Select 3.3V/5V)			

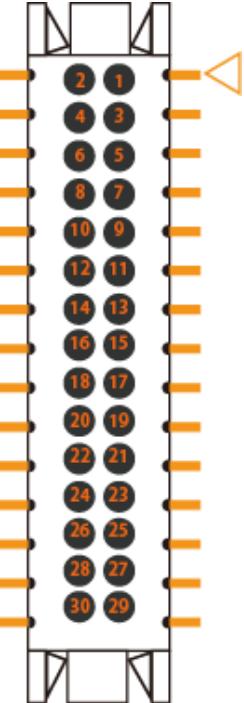
05. J6412 M/B connector pin map & Jumper Setting

JCMOS	JCMOS ⑥	Define	Normal	Clear		
PIN Define		Default	1-2			
Type	1x3 DuPont Header PH=2.0					
Memo	CMOS Clear jumper 1-2connection: Standard 2-3connection: CMOS Clear					

eSPI_DEBUG	eSPI_DEBUG ⑦	1	LAD3	2	25M_CLK
PIN Define		3	LAD2	4	LFRAME#
		5	LAD1	6	LESET#
		7	LAD0	8	GND
		9	NC	10	+3.3V
Type	2x5 DuPont Header, PIN9 NC, PH=2.0mm				
Memo	Debugging header only				

BAT	BAT2 ⑧	1	BAT
PIN Define		2	GND
Type	CMOS battery connection connector 1x4 PIN Wafer, PH=1.25mm		

05. J6412 M/B connector pin map & Jumper Setting

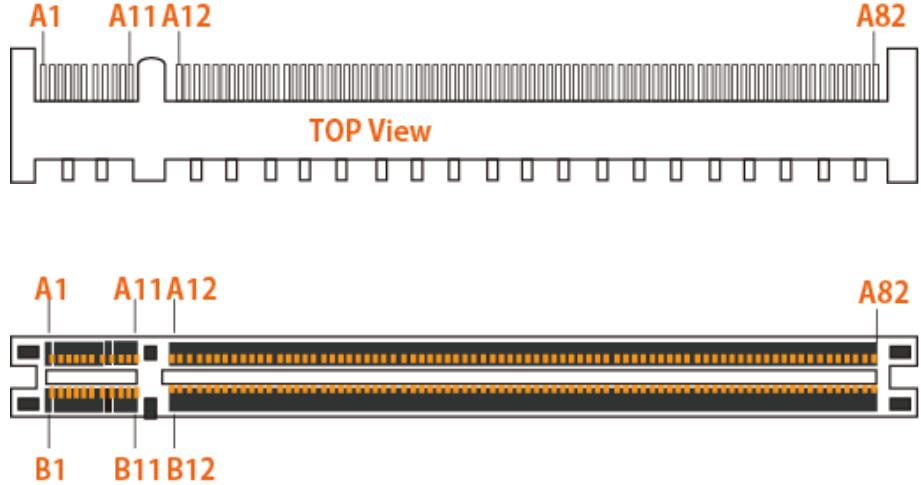
eDP	eDP ⑨																																																													
PIN Define		<table border="1"> <tbody> <tr><td>1</td><td>+V12S</td><td>2</td><td>+V12S</td></tr> <tr><td>3</td><td>GND</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>LCD_VDD</td><td>6</td><td>LCD_VDD</td></tr> <tr><td>7</td><td>BKLT_PWM</td><td>8</td><td>LCDVDD_EN</td></tr> <tr><td>9</td><td>BKLT_ON</td><td>10</td><td>GND</td></tr> <tr><td>11</td><td>eDP_TX1_N</td><td>12</td><td>eDP_TX1_P</td></tr> <tr><td>13</td><td>eDP_TX0_N</td><td>14</td><td>eDP_TX0_P</td></tr> <tr><td>15</td><td>GND</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>eDP_AUXN</td><td>18</td><td>eDP_AUXP</td></tr> <tr><td>19</td><td>GND</td><td>20</td><td>GND</td></tr> <tr><td>21</td><td>D0-</td><td>22</td><td>D0+</td></tr> <tr><td>23</td><td>D1-</td><td>24</td><td>D1+</td></tr> <tr><td>25</td><td>TXD5</td><td>26</td><td>RXD5</td></tr> <tr><td>27</td><td>+V5AL</td><td>28</td><td>eDP_HPD</td></tr> <tr><td>29</td><td>+V5AL</td><td>30</td><td>GND</td></tr> </tbody> </table>	1	+V12S	2	+V12S	3	GND	4	GND	5	LCD_VDD	6	LCD_VDD	7	BKLT_PWM	8	LCDVDD_EN	9	BKLT_ON	10	GND	11	eDP_TX1_N	12	eDP_TX1_P	13	eDP_TX0_N	14	eDP_TX0_P	15	GND	16	GND	17	eDP_AUXN	18	eDP_AUXP	19	GND	20	GND	21	D0-	22	D0+	23	D1-	24	D1+	25	TXD5	26	RXD5	27	+V5AL	28	eDP_HPD	29	+V5AL	30	GND
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27	+V5AL	28	eDP_HPD																																																											
29	+V5AL	30	GND																																																											
Type	2x15 PH=0.15mm																																																													
Memo	Main display eDP connector (39.26cm/15.6")																																																													

JEUP	JEUP ⑪										
PIN Define		<table border="1"> <thead> <tr> <th>PIN</th> <th>1-2</th> <th>2-3</th> </tr> </thead> <tbody> <tr> <td>Define</td> <td>Enable</td> <td>Disable</td> </tr> <tr> <td>Default</td> <td colspan="2">1-2</td> </tr> </tbody> </table>	PIN	1-2	2-3	Define	Enable	Disable	Default	1-2	
PIN	1-2	2-3									
Define	Enable	Disable									
Default	1-2										
Type	1x3 DuPont Header PH=2.0mm										
Memo	ERP setting jumper This Setting Combine with Bios Setting When short 1-2, Bios ERP Setting will take effect When short 2-3, Bios ERP Setting will not take effect										

05. J6412 M/B connector pin map & Jumper Setting

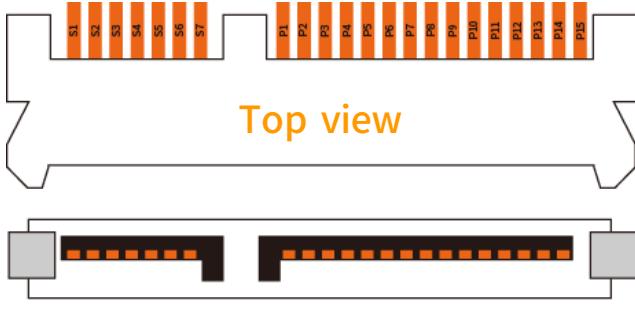
BTN	BTN ⑯
PIN Define	
Type	1x2 DuPont Header PH=2.0mm
Memo	Debugging only header

SYS_FAN	SYS_FAN1 ⑰
PIN Define	
Type	1x3 FAN Connector, PH=2.54mm
Memo	System fan connector +V12_FAN is Control by Bios setting

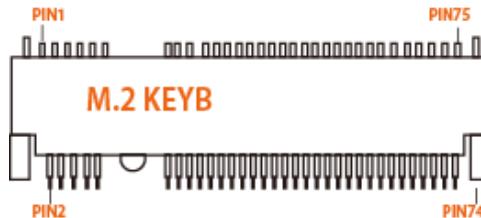
PCIE16X	PCIE16X1 ⑲
PIN Define	
Type	PCIE16X slot. This slot has been changed to match the pin map of this system. Standard PCIE 16X is not supported.

05. J6412 M/B connector pin map & Jumper Setting

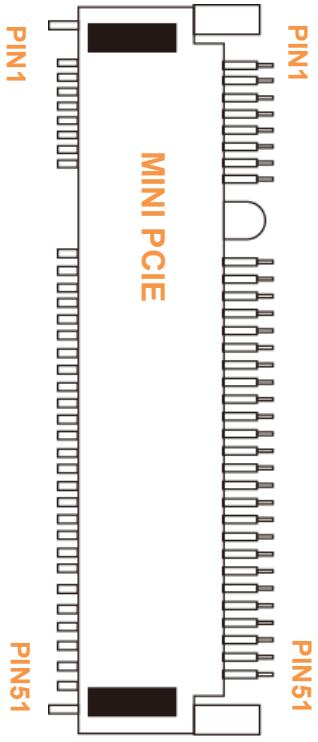
RESET	RESET ⑯
PIN Define	
Type	1x2 DuPont Header PH=2.0mm
Memo	Debugging only header

SATA	MINISATA ⑰																																																												
PIN Define	 <p style="text-align: center;">Top view</p> <p style="text-align: center;">Front view</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Signal Segment</th> <th colspan="4">Power Segment</th> </tr> <tr> <th>Name</th> <th>Type</th> <th>Name</th> <th>Type</th> <th>Name</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>S1</td> <td>GND</td> <td>P1</td> <td>V3.3</td> <td>P9</td> <td>V5</td> </tr> <tr> <td>S2</td> <td>A+</td> <td>P2</td> <td>V3.3</td> <td>P10</td> <td>GND</td> </tr> <tr> <td>S3</td> <td>A-</td> <td>P3</td> <td>V3.3</td> <td>P11</td> <td>DAS/DSS</td> </tr> <tr> <td>S4</td> <td>GND</td> <td>P4</td> <td>GND</td> <td>P12</td> <td>GND</td> </tr> <tr> <td>S5</td> <td>B-</td> <td>P5</td> <td>GND</td> <td>P13</td> <td>V12</td> </tr> <tr> <td>S6</td> <td>B+</td> <td>P6</td> <td>GND</td> <td>P14</td> <td>V12</td> </tr> <tr> <td>S7</td> <td>GND</td> <td>P7</td> <td>V5</td> <td>P15</td> <td>V12</td> </tr> <tr> <td></td> <td></td> <td>P8</td> <td>V5</td> <td></td> <td></td> </tr> </tbody> </table>	Signal Segment		Power Segment				Name	Type	Name	Type	Name	Type	S1	GND	P1	V3.3	P9	V5	S2	A+	P2	V3.3	P10	GND	S3	A-	P3	V3.3	P11	DAS/DSS	S4	GND	P4	GND	P12	GND	S5	B-	P5	GND	P13	V12	S6	B+	P6	GND	P14	V12	S7	GND	P7	V5	P15	V12			P8	V5		
Signal Segment		Power Segment																																																											
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S1	GND	P1	V3.3	P9	V5																																																								
S2	A+	P2	V3.3	P10	GND																																																								
S3	A-	P3	V3.3	P11	DAS/DSS																																																								
S4	GND	P4	GND	P12	GND																																																								
S5	B-	P5	GND	P13	V12																																																								
S6	B+	P6	GND	P14	V12																																																								
S7	GND	P7	V5	P15	V12																																																								
		P8	V5																																																										
Type	7+15P Reverse MINI SATA Connector																																																												
Memo	2.5" SATAIII connection slot																																																												

05. J6412 M/B connector pin map & Jumper Setting

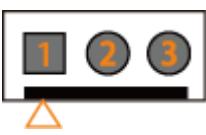
M. 2	NGFF ⑯																																																																																																																																																																																													
PIN Define	 <table border="1"> <thead> <tr> <th>Pin</th> <th>Name</th> <th>Pin</th> <th>Name</th> <th>Pin</th> <th>Name</th> <th>Pin</th> <th>Name</th> <th>Pin</th> </tr> </thead> <tbody> <tr><td>1</td><td>CONFIG_3</td><td>2</td><td>+3.3V</td><td>41</td><td>PETNO /SATA-B+</td><td>42</td><td>GPIO_1</td><td></td></tr> <tr><td>3</td><td>GND</td><td>4</td><td>+3.3V</td><td>43</td><td>PETNO /SATA-B-</td><td>44</td><td>GPIO_2</td><td></td></tr> <tr><td>5</td><td>GND</td><td>6</td><td>POWER_OFF</td><td>45</td><td>GND</td><td>46</td><td>GPIO_3</td><td></td></tr> <tr><td>7</td><td>USBD+</td><td>8</td><td>W_DISABLE #1</td><td>47</td><td>PETNO /SATA-A-</td><td>48</td><td>GPIO_4</td><td></td></tr> <tr><td>9</td><td>USBD-</td><td>10</td><td>GPIO_9 /DAS/DSS</td><td>49</td><td>PETNO /SATA-A+</td><td>50</td><td>PERST#</td><td></td></tr> <tr><td>11</td><td>GND</td><td>12</td><td>Key</td><td>51</td><td>GND</td><td>52</td><td>CLKREQ#</td><td></td></tr> <tr><td>13</td><td>Key</td><td>14</td><td>Key</td><td>53</td><td>REFCLKN</td><td>54</td><td>PEWake#</td><td></td></tr> <tr><td>15</td><td>Key</td><td>16</td><td>Key</td><td>55</td><td>REFCLKP</td><td>56</td><td>NC</td><td></td></tr> <tr><td>17</td><td>Key</td><td>18</td><td>Key</td><td>57</td><td>GND</td><td>58</td><td>NC</td><td></td></tr> <tr><td>19</td><td>Key</td><td>20</td><td>GPIO_5</td><td>59</td><td>ATCTL0</td><td>60</td><td>COEX3</td><td></td></tr> <tr><td>21</td><td>CONFIG_0</td><td>22</td><td>GPIO_6</td><td>61</td><td>ATCTL1</td><td>62</td><td>COEX2</td><td></td></tr> <tr><td>23</td><td>GPIO_11</td><td>24</td><td>GPIO_7</td><td>63</td><td>ATCTL2</td><td>64</td><td>COEX1</td><td></td></tr> <tr><td>25</td><td>GPIO_12</td><td>26</td><td>GPIO_10</td><td>65</td><td>ATCTL3</td><td>66</td><td>SIM Detect</td><td></td></tr> <tr><td>27</td><td>GND</td><td>28</td><td>GPIO_8</td><td>67</td><td>Reset#</td><td>68</td><td>SUSCLK (32kHz)</td><td></td></tr> <tr><td>29</td><td>PERN1 /USB3.0-RX-</td><td>30</td><td>UIM-RESET</td><td>69</td><td>CONFIG_2</td><td>70</td><td>+3.3V</td><td></td></tr> <tr><td>31</td><td>PERN1 /USB3.0-RX+</td><td>32</td><td>UIM-CLK</td><td>71</td><td>GND</td><td></td><td>+3.3V</td><td></td></tr> <tr><td>33</td><td>GND</td><td>34</td><td>UIM-DATA</td><td>73</td><td>GND</td><td></td><td>+3.3V</td><td></td></tr> <tr><td>35</td><td>PETN1 /USB3.0-TX-</td><td>36</td><td>UIM-PWR</td><td>75</td><td>CONFIG_2</td><td></td><td></td><td></td></tr> <tr><td>37</td><td>PETN1 /USB3.0-TX+</td><td>38</td><td>DEVSLP</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>39</td><td>GND</td><td>40</td><td>GPIO_0</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Pin	Name	Pin	Name	Pin	Name	Pin	Name	Pin	1	CONFIG_3	2	+3.3V	41	PETNO /SATA-B+	42	GPIO_1		3	GND	4	+3.3V	43	PETNO /SATA-B-	44	GPIO_2		5	GND	6	POWER_OFF	45	GND	46	GPIO_3		7	USBD+	8	W_DISABLE #1	47	PETNO /SATA-A-	48	GPIO_4		9	USBD-	10	GPIO_9 /DAS/DSS	49	PETNO /SATA-A+	50	PERST#		11	GND	12	Key	51	GND	52	CLKREQ#		13	Key	14	Key	53	REFCLKN	54	PEWake#		15	Key	16	Key	55	REFCLKP	56	NC		17	Key	18	Key	57	GND	58	NC		19	Key	20	GPIO_5	59	ATCTL0	60	COEX3		21	CONFIG_0	22	GPIO_6	61	ATCTL1	62	COEX2		23	GPIO_11	24	GPIO_7	63	ATCTL2	64	COEX1		25	GPIO_12	26	GPIO_10	65	ATCTL3	66	SIM Detect		27	GND	28	GPIO_8	67	Reset#	68	SUSCLK (32kHz)		29	PERN1 /USB3.0-RX-	30	UIM-RESET	69	CONFIG_2	70	+3.3V		31	PERN1 /USB3.0-RX+	32	UIM-CLK	71	GND		+3.3V		33	GND	34	UIM-DATA	73	GND		+3.3V		35	PETN1 /USB3.0-TX-	36	UIM-PWR	75	CONFIG_2				37	PETN1 /USB3.0-TX+	38	DEVSLP						39	GND	40	GPIO_0					
Pin	Name	Pin	Name	Pin	Name	Pin	Name	Pin																																																																																																																																																																																						
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7	USBD+	8	W_DISABLE #1	47	PETNO /SATA-A-	48	GPIO_4																																																																																																																																																																																							
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19	Key	20	GPIO_5	59	ATCTL0	60	COEX3																																																																																																																																																																																							
21	CONFIG_0	22	GPIO_6	61	ATCTL1	62	COEX2																																																																																																																																																																																							
23	GPIO_11	24	GPIO_7	63	ATCTL2	64	COEX1																																																																																																																																																																																							
25	GPIO_12	26	GPIO_10	65	ATCTL3	66	SIM Detect																																																																																																																																																																																							
27	GND	28	GPIO_8	67	Reset#	68	SUSCLK (32kHz)																																																																																																																																																																																							
29	PERN1 /USB3.0-RX-	30	UIM-RESET	69	CONFIG_2	70	+3.3V																																																																																																																																																																																							
31	PERN1 /USB3.0-RX+	32	UIM-CLK	71	GND		+3.3V																																																																																																																																																																																							
33	GND	34	UIM-DATA	73	GND		+3.3V																																																																																																																																																																																							
35	PETN1 /USB3.0-TX-	36	UIM-PWR	75	CONFIG_2																																																																																																																																																																																									
37	PETN1 /USB3.0-TX+	38	DEVSLP																																																																																																																																																																																											
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Type	M. 2 Key B Socket																																																																																																																																																																																													
Memo	m.2 SATA / m.2NVME SSD connection slot.																																																																																																																																																																																													

05. J6412 M/B connector pin map & Jumper Setting

MINI PCIE	MINI PCIE ⑯			
PIN Define		1	WAKE#	2 +3.3V
		3	SCL	4 GND
		5	SDA	6 +1.5V
		7	CLKREQ#	8 SIM 4
		9	GND	10 SIM 3
		11	REFCLK-	12 SIM 2
		13	REFCLK+	14 SIM 1
		15	GND	16 SIM 0
		17	RSV	18 GND
		19	RSV	20 DISABLE
		21	GND	22 PERST#
		23	PERN	24 +3.3VAL
		25	PERP	26 GND
		27	GND	28 +1.5V
		29	GND	30 SMB_CLK
		31	PETN	32 SMB_DATA
		33	PETP	34 GND
		35	GND	36 USBD-
		37	GND	38 USBD+
		39	+3.3V	40 GND
		41	+3.3V	42 LED_WSAN#
		43	GND	44 LED_WLAN#
		45	RSV	46 LED_WPAN#
		47	RSV	48 +1.5V
		49	RSV	50 GND
		51	RSV	52 +3.3V
Type	MINI PCIE Socket, H=9.9mm			
Memo	MINI PCIE socket Customized PCB size, Support USB and PCIE Interface			

05. J6412 M/B connector pin map & Jumper Setting

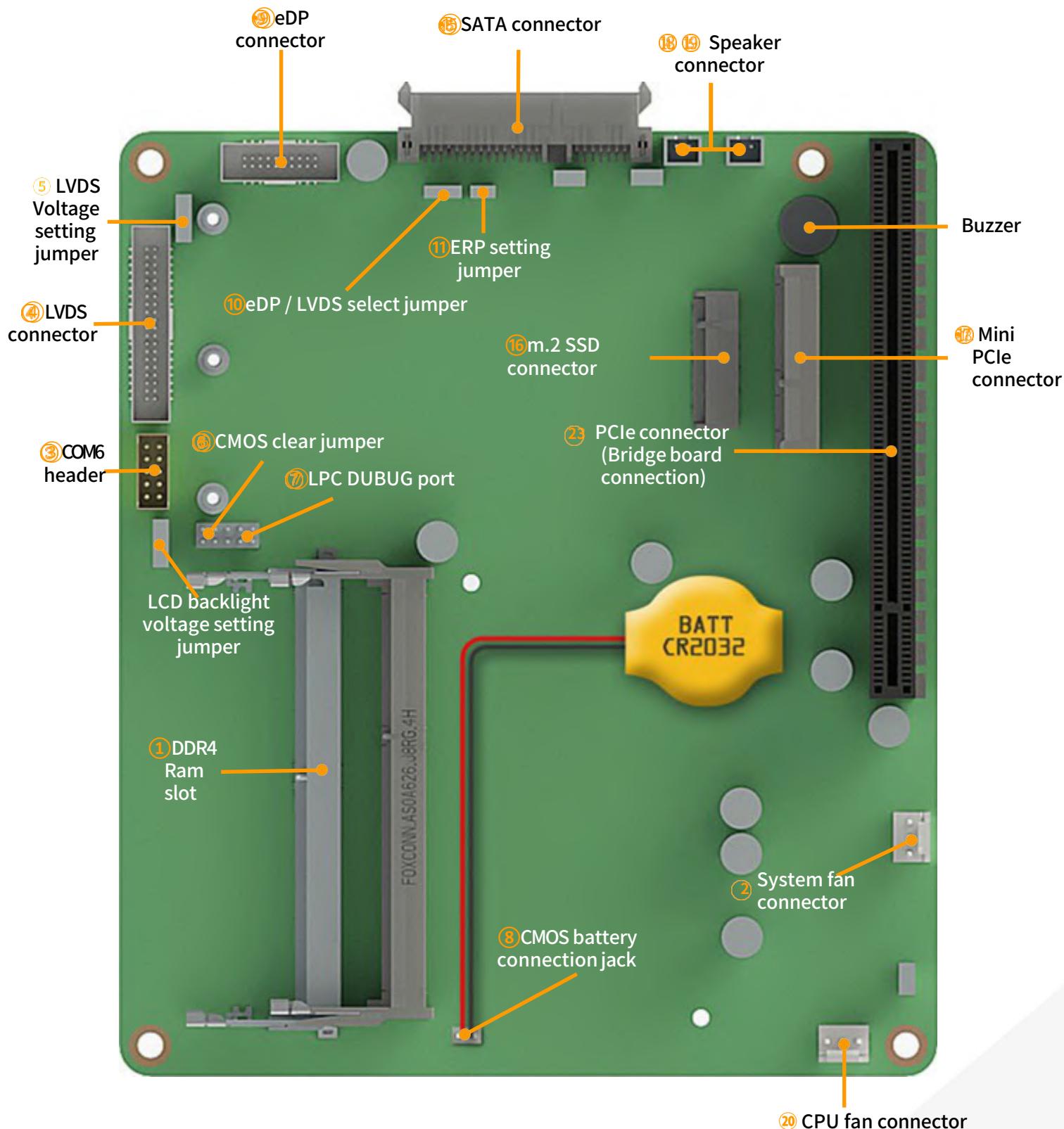
Amplifier	SPKR1 ⑯, SPKR2 ⑰																
PIN Define	 <table border="1"> <thead> <tr> <th colspan="2">SPR1(Left)</th> </tr> <tr> <th>PIN</th> <th>Assignment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SPKLN</td> </tr> <tr> <td>2</td> <td>SPKLP</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">SPR2 (Right)</th> </tr> <tr> <th>PIN</th> <th>Assignment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SPKRN</td> </tr> <tr> <td>2</td> <td>SPKRP</td> </tr> </tbody> </table>	SPR1(Left)		PIN	Assignment	1	SPKLN	2	SPKLP	SPR2 (Right)		PIN	Assignment	1	SPKRN	2	SPKRP
SPR1(Left)																	
PIN	Assignment																
1	SPKLN																
2	SPKLP																
SPR2 (Right)																	
PIN	Assignment																
1	SPKRN																
2	SPKRP																
Type	1x2 Wafer PH=2.0																
Memo	Speaker connection connector Realtek ALC269 2.0W Class D Amplifier																

CPU_FAN	CPU_FAN1 ⑲						
PIN Define	 <table border="1"> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>+V12_FAN</td> </tr> <tr> <td>3</td> <td>CPUFAN_TAC</td> </tr> </table>	1	GND	2	+V12_FAN	3	CPUFAN_TAC
1	GND						
2	+V12_FAN						
3	CPUFAN_TAC						
Type	1x3 FAN Connector, PH=2.54mm						
Memo	CPU fan connector +V12_FAN Is Control by Bios setting						

TEST	TEST ㉑				
PIN Define	 <table border="1"> <tr> <td>1</td> <td>+5VAL</td> </tr> <tr> <td>2</td> <td>GND</td> </tr> </table>	1	+5VAL	2	GND
1	+5VAL				
2	GND				
Type	1x2 DuPont Header PH=2.2.54mm				
Memo	Debugging header only				

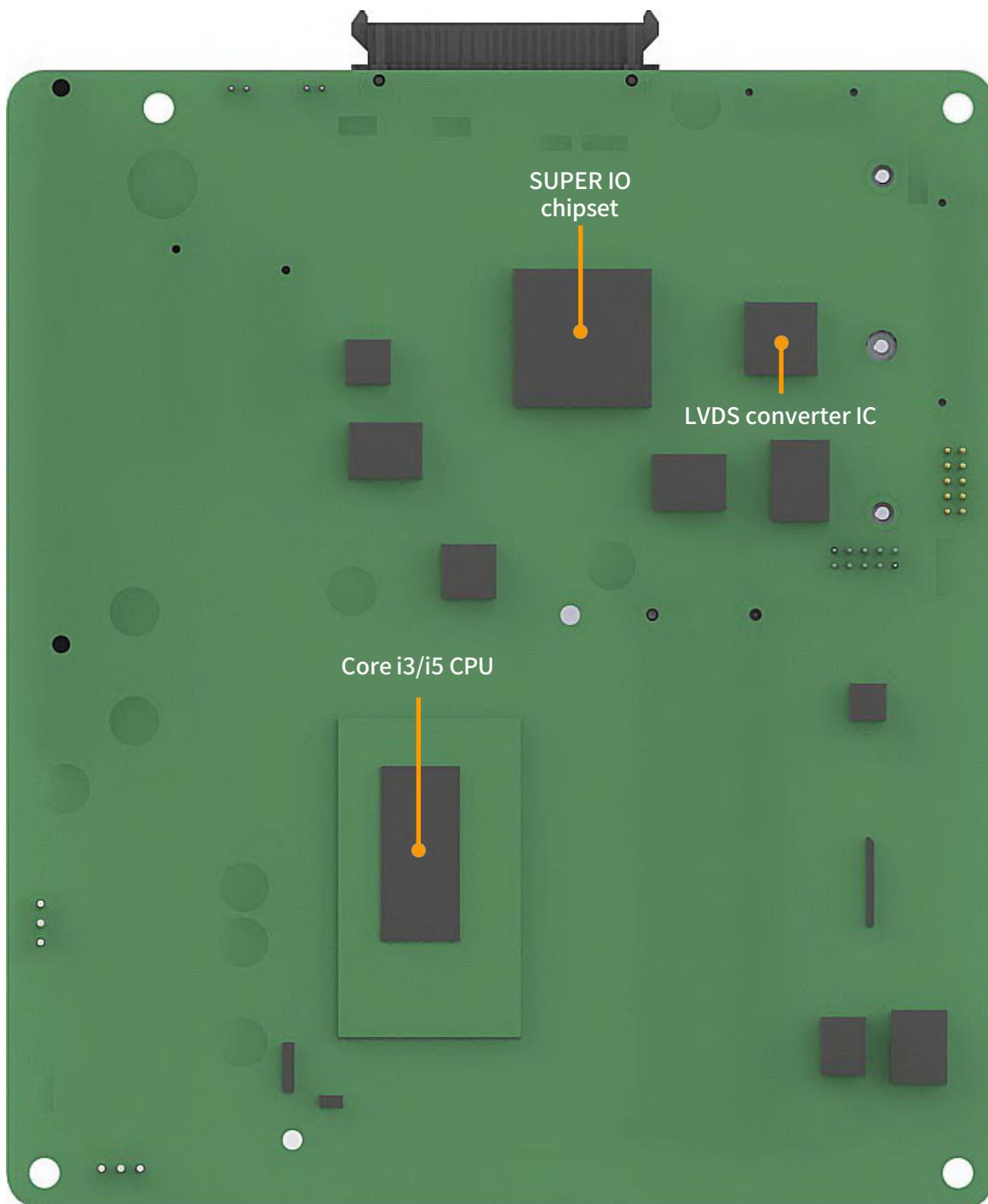
06. Core-i3/i5 Mainboard Layout (Chipset & Connector)

- Core i3/i5 Mainboard (Top)

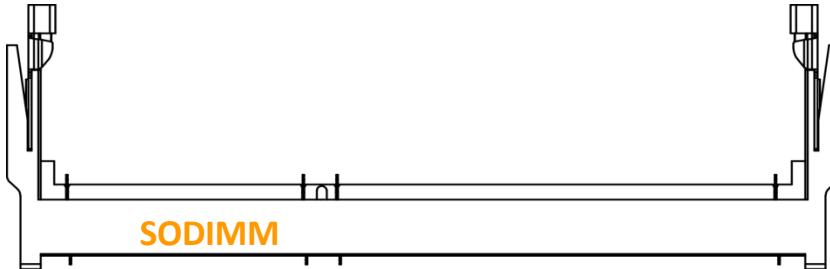
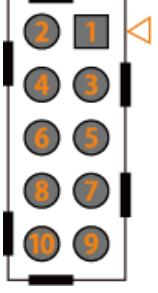


06. Core-i3/i5 Mainboard Layout (Chipset & Connector)

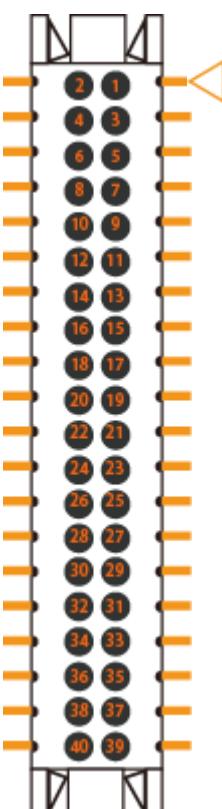
- Core i3/i5 Mainboard (Bottom)



07. Core-i3/i5 M/B connector pin map & Jumper Setting

SODIMM	SODIMM1, SODIMM2 ①																					
PIN Define																						
Type	Standard DDR4 SODIMM 260pin socket 260PIN Standard DDR4 SODIMM Socket																					
Memo	Standard DDR3L pin map. Refer to JEDEC Reference Table for more pin information Standard PIN Define, Detail refer to JEDEC Specification																					
JPWM	JPWM ②																					
PIN Define	 <table border="1"> <thead> <tr> <th>PIN</th> <th>1-2</th> <th>2-3</th> </tr> </thead> <tbody> <tr> <td>Define</td> <td>+3.3V</td> <td>+5V</td> </tr> <tr> <td>Default</td> <td colspan="2">1-2</td></tr> </tbody> </table>	PIN	1-2	2-3	Define	+3.3V	+5V	Default	1-2													
PIN	1-2	2-3																				
Define	+3.3V	+5V																				
Default	1-2																					
Type	1x3 DuPont Header PH=2.0mm																					
Memo	Main display PWM setting jumper PWM Voltage Level select																					
COM	COM6 ③																					
PIN Define	 <table border="1"> <tbody> <tr> <td>1</td> <td>DCD</td> <td>2</td> <td>RXD</td> </tr> <tr> <td>3</td> <td>TXD</td> <td>4</td> <td>DTR</td> </tr> <tr> <td>5</td> <td>GND</td> <td>6</td> <td>DSR</td> </tr> <tr> <td>7</td> <td>RTS</td> <td>8</td> <td>CTS</td> </tr> <tr> <td>9</td> <td>RI</td> <td>10</td> <td>N/A</td> </tr> </tbody> </table>	1	DCD	2	RXD	3	TXD	4	DTR	5	GND	6	DSR	7	RTS	8	CTS	9	RI	10	N/A	
1	DCD	2	RXD																			
3	TXD	4	DTR																			
5	GND	6	DSR																			
7	RTS	8	CTS																			
9	RI	10	N/A																			
Type	2x5 Header Box PH=2.0mm																					
Memo	RS-232 communication header Support RS232																					

07. Core-i3/i5 M/B connector pin map & Jumper Setting

LVDS	LVDS ④				
PIN Define		1	+V12S	2	+V12S
		3	+V12S	4	+V12S
		5	+V12S	6	GND
		7	+V3.3S	8	GND
		9	LCDVDD	10	LCDVDD
		11	SPC	12	SPD
		13	BKLT_PWM	14	VDD_EN
		15	BKLT_ON	16	GND
		17	A0M	18	A0P
		19	A1M	20	A1P
		21	A2M	22	A2P
		23	CLKIM	24	CLKIP
		25	A3M	26	A3P
		27	GND	28	GND
		29	A4M	30	A4P
		31	A5M	32	A5P
		33	A6M	34	A6P
		35	CLK2M	36	CLK2P
		37	A7M	38	A7P
		39	GND	40	GND
Type	2x20 PH=0.15mm				
Memo	Main display 2channel LVDS connector				

JLV	JLV1 ⑤					
PIN Define		Define	+3.3V	+5V		
		Default	1-2			
Type	1x3 DuPont Header PH=2.0mm					
Memo	LVDS supply voltage setting jumper header (Select 3.3V/5V)					

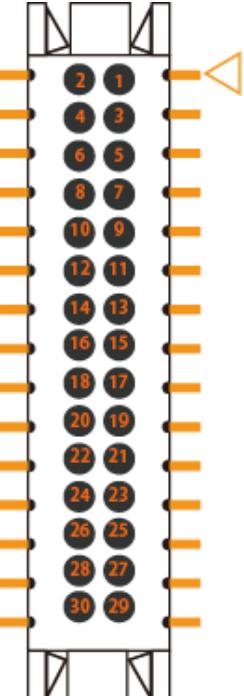
07. Core-i3/i5 M/B connector pin map & Jumper Setting

JCMOS	JCMOS ⑥	Define	Normal	Clear		
PIN Define		Default	1-2			
Type	1x3 DuPont Header PH=2.0					
Memo	CMOS Clear jumper 1-2connection: Standard 2-3connection: CMOS Clear					

LPC_DEBUG	LPC_DEBUG ⑦	1	LAD3	2	25M_CLK
PIN Define		3	LAD2	4	LFRAME#
		5	LAD1	6	LESET#
		7	LAD0	8	GND
		9	NC	10	+3.3V
Type	2x5 DuPont Header, PIN9 NC, PH=2.0mm				
Memo	Debugging header only				

BAT	BAT2 ⑧	1	BAT
PIN Define		2	GND
Type	CMOS battery connection connector 1x4 PIN Wafer, PH=1.25mm		

07. Core-i3/i5 M/B connector pin map & Jumper Setting

eDP	eDP ⑨																																																													
PIN Define		<table border="1"> <tbody> <tr><td>1</td><td>+V12S</td><td>2</td><td>+V12S</td></tr> <tr><td>3</td><td>GND</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>LCD_VDD</td><td>6</td><td>LCD_VDD</td></tr> <tr><td>7</td><td>BKLT_PWM</td><td>8</td><td>LCDVDD_EN</td></tr> <tr><td>9</td><td>BKLT_ON</td><td>10</td><td>GND</td></tr> <tr><td>11</td><td>eDP_TX1_N</td><td>12</td><td>eDP_TX1_P</td></tr> <tr><td>13</td><td>eDP_TX0_N</td><td>14</td><td>eDP_TX0_P</td></tr> <tr><td>15</td><td>GND</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>eDP_AUXN</td><td>18</td><td>eDP_AUXP</td></tr> <tr><td>19</td><td>GND</td><td>20</td><td>GND</td></tr> <tr><td>21</td><td>D0-</td><td>22</td><td>D0+</td></tr> <tr><td>23</td><td>D1-</td><td>24</td><td>D1+</td></tr> <tr><td>25</td><td>TXD5</td><td>26</td><td>RXD5</td></tr> <tr><td>27</td><td>+V5AL</td><td>28</td><td>eDP_HPD</td></tr> <tr><td>29</td><td>+V5AL</td><td>30</td><td>GND</td></tr> </tbody> </table>	1	+V12S	2	+V12S	3	GND	4	GND	5	LCD_VDD	6	LCD_VDD	7	BKLT_PWM	8	LCDVDD_EN	9	BKLT_ON	10	GND	11	eDP_TX1_N	12	eDP_TX1_P	13	eDP_TX0_N	14	eDP_TX0_P	15	GND	16	GND	17	eDP_AUXN	18	eDP_AUXP	19	GND	20	GND	21	D0-	22	D0+	23	D1-	24	D1+	25	TXD5	26	RXD5	27	+V5AL	28	eDP_HPD	29	+V5AL	30	GND
1	+V12S	2	+V12S																																																											
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15	GND	16	GND																																																											
17	eDP_AUXN	18	eDP_AUXP																																																											
19	GND	20	GND																																																											
21	D0-	22	D0+																																																											
23	D1-	24	D1+																																																											
25	TXD5	26	RXD5																																																											
27	+V5AL	28	eDP_HPD																																																											
29	+V5AL	30	GND																																																											
Type	2x15 PH=0.15mm																																																													
Memo	Main display eDP connector (39.26cm/15.6")																																																													

07. Core-i3/i5 M/B connector pin map & Jumper Setting

SW_LVDS/eDP	SW_LVDS/eDP ⑩						
PIN Define	 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th>Define</th> <th>LVDS</th> <th>eDP</th> </tr> <tr> <td>Default</td> <td colspan="2">1-2</td> </tr> </table>	Define	LVDS	eDP	Default	1-2	
Define	LVDS	eDP					
Default	1-2						
Type	1x3 DuPont Header PH=2.0mm						
Memo	Main display interface select jumper (eDP/LVDS). Not included basically.						

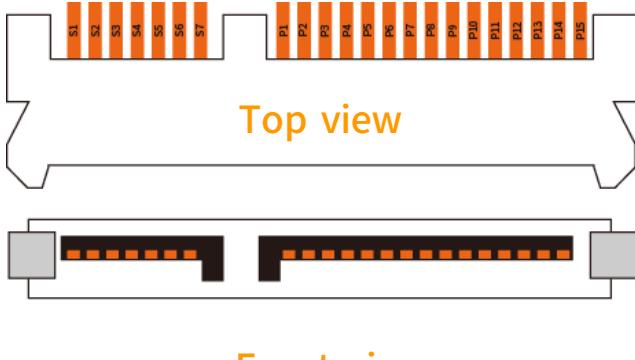
JEUP	JEUP ⑪									
PIN Define	 <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th>PIN</th> <th>1-2</th> <th>2-3</th> </tr> <tr> <td>Define</td> <td>Enable</td> <td>Disable</td> </tr> <tr> <td>Default</td> <td colspan="2">1-2</td> </tr> </table>	PIN	1-2	2-3	Define	Enable	Disable	Default	1-2	
PIN	1-2	2-3								
Define	Enable	Disable								
Default	1-2									
Type	1x3 DuPont Header PH=2.0mm									
Memo	ERP setting jumper This Setting Combine with Bios Setting When short 1-2, Bios ERP Setting will take effect When short 2-3, Bios ERP Setting will not take effect									

JTXE	J2 ⑫
PIN Define	
Type	1x2 DuPont Header PH=2.0mm
Memo	Short 1-2 can disable ME

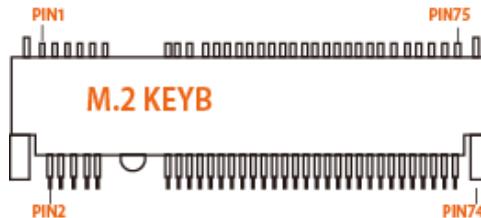
BTN	BTN ⑬
PIN Define	
Type	1x2 DuPont Header PH=2.0mm
Memo	Debugging only header

07. Core-i3/i5 M/B connector pin map & Jumper Setting

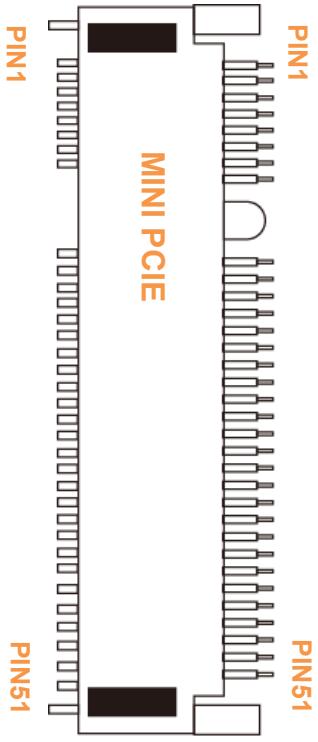
RESET	RESET ⑯
PIN Define	
Type	1x2 DuPont Header PH=2.0mm
Memo	Debugging only header

SATA	MINI SATA ⑰																																																												
PIN Define	 <p style="text-align: center;">Top view</p> <p style="text-align: center;">Front view</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Signal Segment</th> <th colspan="4">Power Segment</th> </tr> <tr> <th>Name</th> <th>Type</th> <th>Name</th> <th>Type</th> <th>Name</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>S1</td> <td>GND</td> <td>P1</td> <td>V3.3</td> <td>P9</td> <td>V5</td> </tr> <tr> <td>S2</td> <td>A+</td> <td>P2</td> <td>V3.3</td> <td>P10</td> <td>GND</td> </tr> <tr> <td>S3</td> <td>A-</td> <td>P3</td> <td>V3.3</td> <td>P11</td> <td>DAS/DSS</td> </tr> <tr> <td>S4</td> <td>GND</td> <td>P4</td> <td>GND</td> <td>P12</td> <td>GND</td> </tr> <tr> <td>S5</td> <td>B-</td> <td>P5</td> <td>GND</td> <td>P13</td> <td>V12</td> </tr> <tr> <td>S6</td> <td>B+</td> <td>P6</td> <td>GND</td> <td>P14</td> <td>V12</td> </tr> <tr> <td>S7</td> <td>GND</td> <td>P7</td> <td>V5</td> <td>P15</td> <td>V12</td> </tr> <tr> <td></td> <td></td> <td>P8</td> <td>V5</td> <td></td> <td></td> </tr> </tbody> </table>	Signal Segment		Power Segment				Name	Type	Name	Type	Name	Type	S1	GND	P1	V3.3	P9	V5	S2	A+	P2	V3.3	P10	GND	S3	A-	P3	V3.3	P11	DAS/DSS	S4	GND	P4	GND	P12	GND	S5	B-	P5	GND	P13	V12	S6	B+	P6	GND	P14	V12	S7	GND	P7	V5	P15	V12			P8	V5		
Signal Segment		Power Segment																																																											
Name	Type	Name	Type	Name	Type																																																								
S1	GND	P1	V3.3	P9	V5																																																								
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S5	B-	P5	GND	P13	V12																																																								
S6	B+	P6	GND	P14	V12																																																								
S7	GND	P7	V5	P15	V12																																																								
		P8	V5																																																										
Type	7+15P Reverse MINI SATA Connector																																																												
Memo	2.5" SATAIII connection slot																																																												

07. Core-i3/i5 M/B connector pin map & Jumper Setting

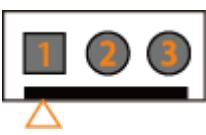
M. 2	NGFF ⑯																																																																																																																																																																																											
PIN Define																																																																																																																																																																																												
	<table border="1"> <thead> <tr> <th>1</th><th>CONFIG_3</th><th>2</th><th>+3.3V</th><th>41</th><th>PETNO /SATA-B+</th><th>42</th><th>GPIO_1</th><th></th></tr> </thead> <tbody> <tr> <td>3</td><td>GND</td><td>4</td><td>+3.3V</td><td>43</td><td>PETNO /SATA-B-</td><td>44</td><td>GPIO_2</td><td></td></tr> <tr> <td>5</td><td>GND</td><td>6</td><td>POWER_OFF</td><td>45</td><td>GND</td><td>46</td><td>GPIO_3</td><td></td></tr> <tr> <td>7</td><td>USBD+</td><td>8</td><td>W_DISABLE #1</td><td>47</td><td>PETNO /SATA-A-</td><td>48</td><td>GPIO_4</td><td></td></tr> <tr> <td>9</td><td>USBD-</td><td>10</td><td>GPIO_9 /DAS/DSS</td><td>49</td><td>PETNO /SATA-A+</td><td>50</td><td>PERST#</td><td></td></tr> <tr> <td>11</td><td>GND</td><td>12</td><td>Key</td><td>51</td><td>GND</td><td>52</td><td>CLKREQ#</td><td></td></tr> <tr> <td>13</td><td>Key</td><td>14</td><td>Key</td><td>53</td><td>REFCLKN</td><td>54</td><td>PEWake#</td><td></td></tr> <tr> <td>15</td><td>Key</td><td>16</td><td>Key</td><td>55</td><td>REFCLKP</td><td>56</td><td>NC</td><td></td></tr> <tr> <td>17</td><td>Key</td><td>18</td><td>Key</td><td>57</td><td>GND</td><td>58</td><td>NC</td><td></td></tr> <tr> <td>19</td><td>Key</td><td>20</td><td>GPIO_5</td><td>59</td><td>ATCTL0</td><td>60</td><td>COEX3</td><td></td></tr> <tr> <td>21</td><td>CONFIG_0</td><td>22</td><td>GPIO_6</td><td>61</td><td>ATCTL1</td><td>62</td><td>COEX2</td><td></td></tr> <tr> <td>23</td><td>GPIO_11</td><td>24</td><td>GPIO_7</td><td>63</td><td>ATCTL2</td><td>64</td><td>COEX1</td><td></td></tr> <tr> <td>25</td><td>GPIO_12</td><td>26</td><td>GPIO_10</td><td>65</td><td>ATCTL3</td><td>66</td><td>SIM Detect</td><td></td></tr> <tr> <td>27</td><td>GND</td><td>28</td><td>GPIO_8</td><td>67</td><td>Reset#</td><td>68</td><td>SUSCLK (32kHz)</td><td></td></tr> <tr> <td>29</td><td>PERN1 /USB3.0-RX-</td><td>30</td><td>UIM-RESET</td><td>69</td><td>CONFIG_2</td><td>70</td><td>+3.3V</td><td></td></tr> <tr> <td>31</td><td>PERN1 /USB3.0-RX+</td><td>32</td><td>UIM-CLK</td><td>71</td><td>GND</td><td></td><td>+3.3V</td><td></td></tr> <tr> <td>33</td><td>GND</td><td>34</td><td>UIM-DATA</td><td>73</td><td>GND</td><td></td><td>+3.3V</td><td></td></tr> <tr> <td>35</td><td>PETN1 /USB3.0-TX-</td><td>36</td><td>UIM-PWR</td><td>75</td><td>CONFIG_2</td><td></td><td></td><td></td></tr> <tr> <td>37</td><td>PETN1 /USB3.0-TX+</td><td>38</td><td>DEVSLP</td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>39</td><td>GND</td><td>40</td><td>GPIO_0</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>								1	CONFIG_3	2	+3.3V	41	PETNO /SATA-B+	42	GPIO_1		3	GND	4	+3.3V	43	PETNO /SATA-B-	44	GPIO_2		5	GND	6	POWER_OFF	45	GND	46	GPIO_3		7	USBD+	8	W_DISABLE #1	47	PETNO /SATA-A-	48	GPIO_4		9	USBD-	10	GPIO_9 /DAS/DSS	49	PETNO /SATA-A+	50	PERST#		11	GND	12	Key	51	GND	52	CLKREQ#		13	Key	14	Key	53	REFCLKN	54	PEWake#		15	Key	16	Key	55	REFCLKP	56	NC		17	Key	18	Key	57	GND	58	NC		19	Key	20	GPIO_5	59	ATCTL0	60	COEX3		21	CONFIG_0	22	GPIO_6	61	ATCTL1	62	COEX2		23	GPIO_11	24	GPIO_7	63	ATCTL2	64	COEX1		25	GPIO_12	26	GPIO_10	65	ATCTL3	66	SIM Detect		27	GND	28	GPIO_8	67	Reset#	68	SUSCLK (32kHz)		29	PERN1 /USB3.0-RX-	30	UIM-RESET	69	CONFIG_2	70	+3.3V		31	PERN1 /USB3.0-RX+	32	UIM-CLK	71	GND		+3.3V		33	GND	34	UIM-DATA	73	GND		+3.3V		35	PETN1 /USB3.0-TX-	36	UIM-PWR	75	CONFIG_2				37	PETN1 /USB3.0-TX+	38	DEVSLP						39	GND	40	GPIO_0					
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19	Key	20	GPIO_5	59	ATCTL0	60	COEX3																																																																																																																																																																																					
21	CONFIG_0	22	GPIO_6	61	ATCTL1	62	COEX2																																																																																																																																																																																					
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31	PERN1 /USB3.0-RX+	32	UIM-CLK	71	GND		+3.3V																																																																																																																																																																																					
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Type	M. 2 Key B Socket																																																																																																																																																																																											
Memo	m.2 SSD connection slot. Only SATAIII SSD is available. NVME is not supported.																																																																																																																																																																																											

07. Core-i3/i5 M/B connector pin map & Jumper Setting

MINI PCIE	MINI PCIE1 ⑯			
PIN Define				
Type	MINI PCIE Socket, H=9.9mm			
Memo	MINI PCIE Socket Customized PCB size, Support USB and PCIE Interface			

07. Core-i3/i5 M/B connector pin map & Jumper Setting

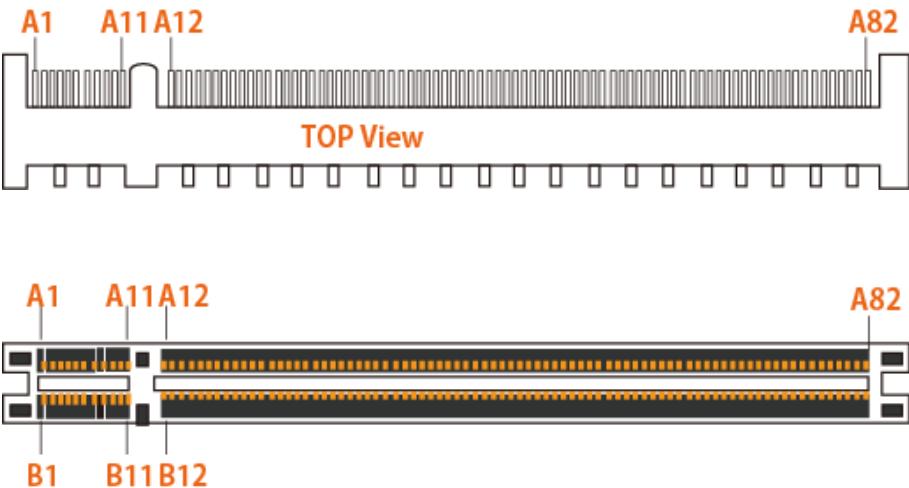
Amplifier	SPKR1 ⑯, SPKR2 ⑰																
PIN Define	 <table border="1"> <thead> <tr> <th colspan="2">SPR1(Left)</th> </tr> <tr> <th>PIN</th> <th>Assignment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SPKLN</td> </tr> <tr> <td>2</td> <td>SPKLP</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">SPR2 (Right)</th> </tr> <tr> <th>PIN</th> <th>Assignment</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SPKRN</td> </tr> <tr> <td>2</td> <td>SPKRP</td> </tr> </tbody> </table>	SPR1(Left)		PIN	Assignment	1	SPKLN	2	SPKLP	SPR2 (Right)		PIN	Assignment	1	SPKRN	2	SPKRP
SPR1(Left)																	
PIN	Assignment																
1	SPKLN																
2	SPKLP																
SPR2 (Right)																	
PIN	Assignment																
1	SPKRN																
2	SPKRP																
Type	1x2 Wafer PH=2.0																
Memo	Speaker connection connector Realtek ALC269 2.0W Class D Amplifier																

CPU_FAN	CPU_FAN ⑲						
PIN Define	 <table border="1"> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>+V12_FAN</td> </tr> <tr> <td>3</td> <td>CPUFAN_TAC</td> </tr> </table>	1	GND	2	+V12_FAN	3	CPUFAN_TAC
1	GND						
2	+V12_FAN						
3	CPUFAN_TAC						
Type	1x3 FAN Connector, PH=2.54mm						
Memo	CPU fan connector +V12_FAN Is Control by Bios setting						

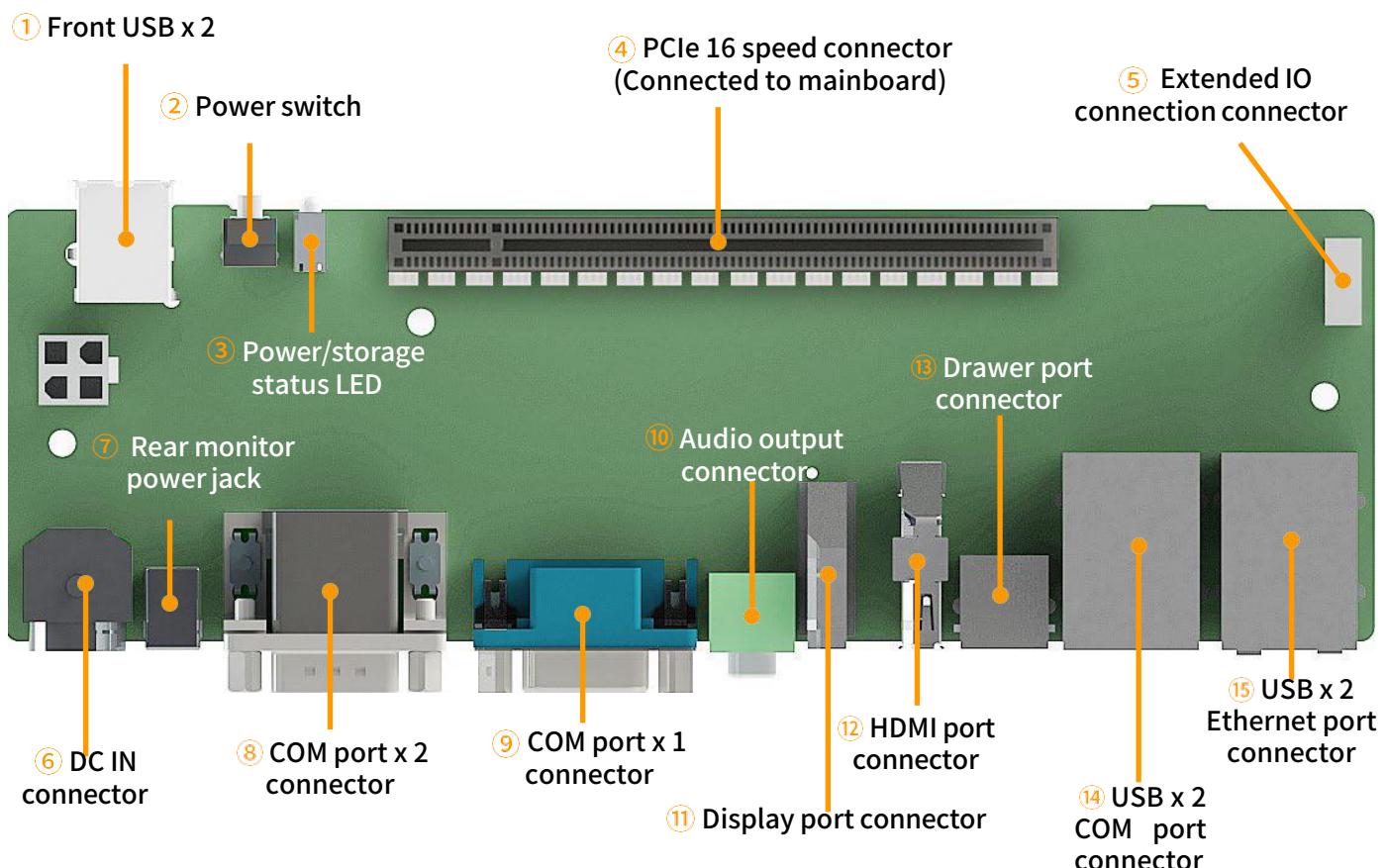
TEST	TEST ⑳				
PIN Define	 <table border="1"> <tr> <td>1</td> <td>+5VAL</td> </tr> <tr> <td>2</td> <td>GND</td> </tr> </table>	1	+5VAL	2	GND
1	+5VAL				
2	GND				
Type	1x2 DuPont Header PH=2.2.54mm				
Memo	Debugging header only				

07. Core-i3/i5 M/B connector pin map & Jumper Setting

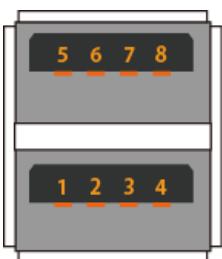
SYS_FAN	SYS_FAN1 ②②						
PIN Define	 <table border="1"> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>+V12_FAN</td> </tr> <tr> <td>3</td> <td>CPUFAN_TAC</td> </tr> </table>	1	GND	2	+V12_FAN	3	CPUFAN_TAC
1	GND						
2	+V12_FAN						
3	CPUFAN_TAC						
Type	1x3 FAN Connector, PH=2. 54mm						
Memo	System fan connector +V12_FAN is Control by Bios setting						

PCIE16X	PCIE16X1 ②③
PIN Define	
Type	PCIe 16X slot. This slot has been changed to match the pin map of this system. Standard PCIe 16X is not supported.

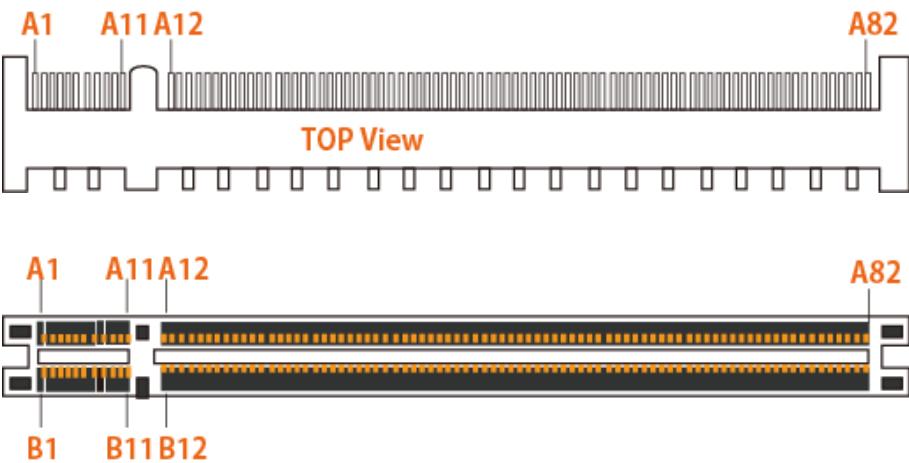
08. IO Board Layout

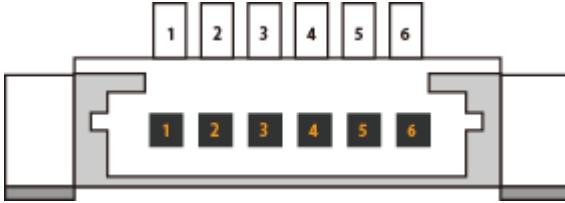


09. IO Board connector pin map & Jumper Setting

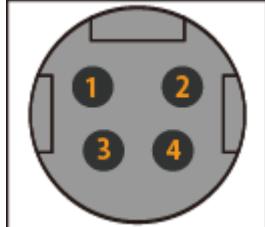
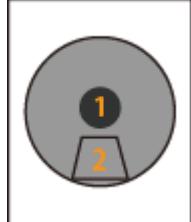
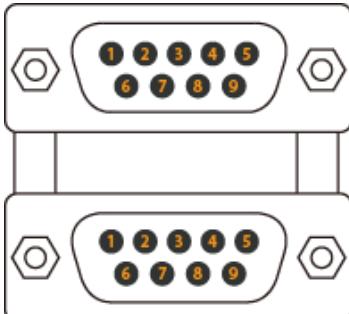
USB	USB3 ①																
PIN Define	 <table border="1"> <tbody> <tr> <td>1</td><td>Vbus</td> <td>5</td><td>Vbus</td> </tr> <tr> <td>2</td><td>D0-</td> <td>6</td><td>D1-</td> </tr> <tr> <td>3</td><td>D0+</td> <td>7</td><td>D1+</td> </tr> <tr> <td>4</td><td>GND</td> <td>8</td><td>GND</td> </tr> </tbody> </table>	1	Vbus	5	Vbus	2	D0-	6	D1-	3	D0+	7	D1+	4	GND	8	GND
1	Vbus	5	Vbus														
2	D0-	6	D1-														
3	D0+	7	D1+														
4	GND	8	GND														
Type	Standard USB 2.0 connector Standard Dual USB2.0 connector																
PWRBTN	PWRBUT ②																
PIN Define	 <table border="1"> <tbody> <tr> <td>1</td><td>PWRBTN+</td> </tr> <tr> <td>2</td><td>GND</td> </tr> </tbody> </table>	1	PWRBTN+	2	GND												
1	PWRBTN+																
2	GND																
Type	Power switch POWER BTN Switch																
LED	LED ③																
PIN Define																	
Type	LED																
Memo	<ol style="list-style-type: none"> 1. Red: HDD LED 2. Green: Power LED 3. UP : Power LED, Indicate Power status 4. Down : HDD LED, Indicate HDD status 																

09. IO Board connector pin map & Jumper Setting

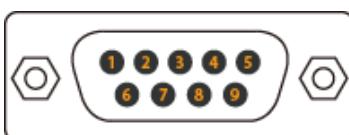
PCIE16X	PCIE16X1 ④
PIN Define	 <p>TOP View</p> <p>Component Side View</p>
Type	PCIe 16X slot. This slot has been changed to fit the pin map of this system. Standard PCIe 16X is not supported.

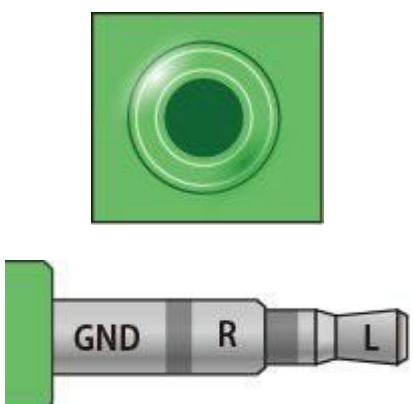
USB	JUSB1 ⑤												
PIN Define	 <table border="1"> <tr> <td>1</td> <td>Vbus</td> </tr> <tr> <td>2</td> <td>Vbus</td> </tr> <tr> <td>3</td> <td>Data-</td> </tr> <tr> <td>4</td> <td>Data+</td> </tr> <tr> <td>5</td> <td>GND</td> </tr> <tr> <td>4</td> <td>Gnd</td> </tr> </table>	1	Vbus	2	Vbus	3	Data-	4	Data+	5	GND	4	Gnd
1	Vbus												
2	Vbus												
3	Data-												
4	Data+												
5	GND												
4	Gnd												
Type	1x6PIN Wafer, PH=2.0mm												
Memo	Extended IO module connection connector												

09. IO Board connector pin map & Jumper Setting

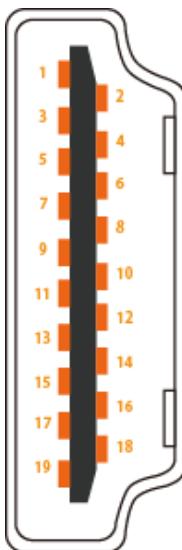
DCIN	DCIN1 ⑥																					
PIN Define		<table border="1"> <tr> <td>1-2</td><td>+12V</td></tr> <tr> <td>3-4</td><td>GND</td></tr> </table>	1-2	+12V	3-4	GND																
1-2	+12V																					
3-4	GND																					
Type	System input power jack. Standard DC Jack																					
DC_OUT	DCOUT ⑦																					
PIN Define		<table border="1"> <tr> <td>1</td><td>+12V_OUT</td></tr> <tr> <td>2</td><td>GND</td></tr> </table>	1	+12V_OUT	2	GND																
1	+12V_OUT																					
2	GND																					
Type	Output power jack for secondary display. DC JACK, PIN C=2.0mm																					
COM	COM2, COM3 ⑯																					
PIN Define		<table border="1"> <tr> <td>1</td><td>DCD</td><td>2</td><td>RXD</td></tr> <tr> <td>3</td><td>TXD</td><td>4</td><td>DTR</td></tr> <tr> <td>5</td><td>GND</td><td>6</td><td>DSR</td></tr> <tr> <td>7</td><td>RTS</td><td>8</td><td>CTS</td></tr> <tr> <td>9</td><td colspan="3">5V/12V/0</td></tr> </table>	1	DCD	2	RXD	3	TXD	4	DTR	5	GND	6	DSR	7	RTS	8	CTS	9	5V/12V/0		
1	DCD	2	RXD																			
3	TXD	4	DTR																			
5	GND	6	DSR																			
7	RTS	8	CTS																			
9	5V/12V/0																					
Type	Standard DSUB9 connector. Standard DB9 COM Connector																					
Memo	<ol style="list-style-type: none"> RS-232 interface connector BIOS setting allows 5V/12V power setting Top: COM3, Bottom: COM2 																					

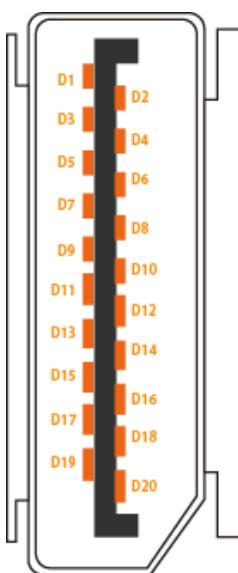
09. IO Board connector pin map & Jumper Setting

COM	COM1 ⑨																						
PIN Define		<table border="1"> <tr> <td>1</td><td>DCD-</td><td>2</td><td>RXD</td></tr> <tr> <td>3</td><td>TXD</td><td>4</td><td>DTR</td></tr> <tr> <td>5</td><td>GND</td><td>6</td><td>DSR</td></tr> <tr> <td>7</td><td>RTS</td><td>8</td><td>CTS</td></tr> <tr> <td>9</td><td>5V/12V/O</td><td></td><td></td></tr> </table>	1	DCD-	2	RXD	3	TXD	4	DTR	5	GND	6	DSR	7	RTS	8	CTS	9	5V/12V/O			
1	DCD-	2	RXD																				
3	TXD	4	DTR																				
5	GND	6	DSR																				
7	RTS	8	CTS																				
9	5V/12V/O																						
Type	Standard DSUB9 Connector Standard DB9 COM Connector																						
Memo	BIOS setting allows 5V/12V power setting																						

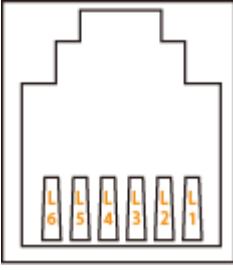
Audio	HP ⑩								
PIN Define		<table border="1"> <tr> <td>L</td><td>Audia L Channel</td></tr> <tr> <td>R</td><td>Audia R Channel</td></tr> <tr> <td>GND</td><td>GND</td></tr> </table>	L	Audia L Channel	R	Audia R Channel	GND	GND	
L	Audia L Channel								
R	Audia R Channel								
GND	GND								
Type	3.5mm stereo audio output jack Standard Single 3.5mm Audio jack								
Memo	Realtek ALC269 Audio Codec on board(Line-out Port and on the rear I/O)								

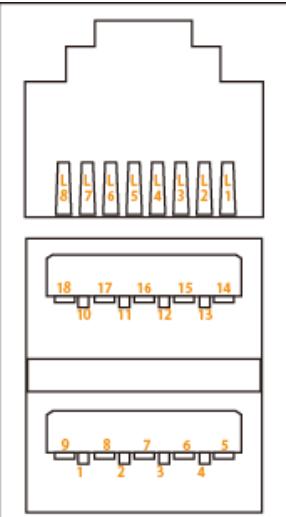
09. IO Board connector pin map & Jumper Setting

HDMI	HDMI ⑫																																										
PIN Define		<table border="1"> <tr><td>1</td><td>D2+</td><td>2</td><td>GND</td></tr> <tr><td>3</td><td>D2-</td><td>4</td><td>D1+</td></tr> <tr><td>5</td><td>SSRX1-</td><td>6</td><td>D1-</td></tr> <tr><td>7</td><td>D0+</td><td>8</td><td>GND</td></tr> <tr><td>9</td><td>D0-</td><td>10</td><td>CK+</td></tr> <tr><td>11</td><td>GND</td><td>12</td><td>CK-</td></tr> <tr><td>13</td><td>CEC</td><td>14</td><td>RSVD</td></tr> <tr><td>15</td><td>SCL</td><td>16</td><td>SDA</td></tr> <tr><td>17</td><td>GND</td><td>18</td><td>+5V</td></tr> <tr><td>19</td><td>HPD</td><td></td><td></td></tr> </table>	1	D2+	2	GND	3	D2-	4	D1+	5	SSRX1-	6	D1-	7	D0+	8	GND	9	D0-	10	CK+	11	GND	12	CK-	13	CEC	14	RSVD	15	SCL	16	SDA	17	GND	18	+5V	19	HPD			
1	D2+	2	GND																																								
3	D2-	4	D1+																																								
5	SSRX1-	6	D1-																																								
7	D0+	8	GND																																								
9	D0-	10	CK+																																								
11	GND	12	CK-																																								
13	CEC	14	RSVD																																								
15	SCL	16	SDA																																								
17	GND	18	+5V																																								
19	HPD																																										
Type	Standard HDMI output connector																																										

DP	DP ⑪																																										
PIN Define		<table border="1"> <tr><td>D1</td><td>TX0+</td><td>D2</td><td>GND</td></tr> <tr><td>D3</td><td>TX0-</td><td>D4</td><td>TX1+</td></tr> <tr><td>D5</td><td>GND</td><td>D6</td><td>TX1-</td></tr> <tr><td>D7</td><td>TX2+</td><td>D8</td><td>GND</td></tr> <tr><td>D9</td><td>TX2-</td><td>D10</td><td>TX3+</td></tr> <tr><td>D11</td><td>GND</td><td>D12</td><td>TX3-</td></tr> <tr><td>D13</td><td>MODE</td><td>D14</td><td>CEC</td></tr> <tr><td>D15</td><td>AUXP</td><td>D16</td><td>GND</td></tr> <tr><td>D17</td><td>AUXN</td><td>D18</td><td>HPD</td></tr> <tr><td>D19</td><td>GND</td><td>D20</td><td>PWR</td></tr> </table>	D1	TX0+	D2	GND	D3	TX0-	D4	TX1+	D5	GND	D6	TX1-	D7	TX2+	D8	GND	D9	TX2-	D10	TX3+	D11	GND	D12	TX3-	D13	MODE	D14	CEC	D15	AUXP	D16	GND	D17	AUXN	D18	HPD	D19	GND	D20	PWR	
D1	TX0+	D2	GND																																								
D3	TX0-	D4	TX1+																																								
D5	GND	D6	TX1-																																								
D7	TX2+	D8	GND																																								
D9	TX2-	D10	TX3+																																								
D11	GND	D12	TX3-																																								
D13	MODE	D14	CEC																																								
D15	AUXP	D16	GND																																								
D17	AUXN	D18	HPD																																								
D19	GND	D20	PWR																																								
Type	Standard DP output connector																																										

09. IO Board connector pin map & Jumper Setting

CASH	CASH ⑯														
PIN Define		<table border="1"> <tr><td>1</td><td>GND</td></tr> <tr><td>2</td><td>DRAWER1</td></tr> <tr><td>3</td><td>DRAWER_SWITCH</td></tr> <tr><td>4</td><td>DRAWER_VOLTAGE</td></tr> <tr><td>5</td><td>DRAWER2</td></tr> <tr><td>6</td><td>GND</td></tr> </table>	1	GND	2	DRAWER1	3	DRAWER_SWITCH	4	DRAWER_VOLTAGE	5	DRAWER2	6	GND	
1	GND														
2	DRAWER1														
3	DRAWER_SWITCH														
4	DRAWER_VOLTAGE														
5	DRAWER2														
6	GND														
Type	Standard RJ11 connector Standard Single RJ11 connector														
Memo	BIOS settings allows 12V/24V power setting DRAWER_VOLTAGE is 12V/24V, Set by BIOS														

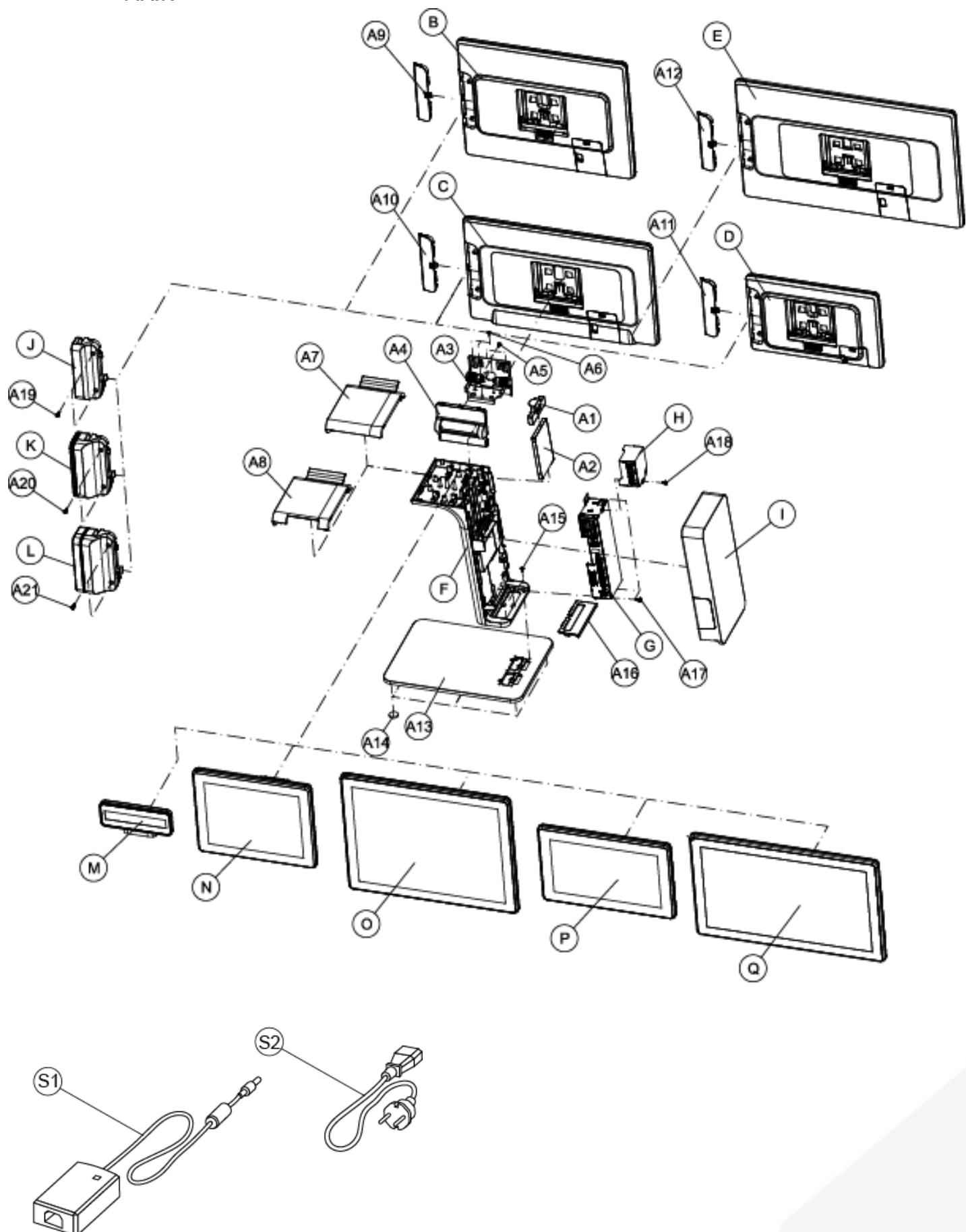
COM_USB	COM_USB1 ⑰																																																						
PIN Define		<table border="1"> <tr><td>1</td><td>Vbus</td><td>2</td><td>D1-</td></tr> <tr><td>3</td><td>D1+</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>SSRX1-</td><td>6</td><td>SSRX1+</td></tr> <tr><td>7</td><td>GND</td><td>8</td><td>SSTX1-</td></tr> <tr><td>9</td><td>SSTX1+</td><td>10</td><td>Vbus</td></tr> <tr><td>11</td><td>D2-</td><td>12</td><td>D2+</td></tr> <tr><td>13</td><td>GND</td><td>14</td><td>SSRX2-</td></tr> <tr><td>15</td><td>SSRX2+</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>SSTX2-</td><td>18</td><td>SSTX2+</td></tr> <tr><td>L1</td><td>5V/12V</td><td>L2</td><td>DSR</td></tr> <tr><td>L3</td><td>TXD</td><td>L4</td><td>RXD</td></tr> <tr><td>L5</td><td>RTS</td><td>L6</td><td>CTS</td></tr> <tr><td>L7</td><td>GND</td><td>L8</td><td>DTR</td></tr> </table>	1	Vbus	2	D1-	3	D1+	4	GND	5	SSRX1-	6	SSRX1+	7	GND	8	SSTX1-	9	SSTX1+	10	Vbus	11	D2-	12	D2+	13	GND	14	SSRX2-	15	SSRX2+	16	GND	17	SSTX2-	18	SSTX2+	L1	5V/12V	L2	DSR	L3	TXD	L4	RXD	L5	RTS	L6	CTS	L7	GND	L8	DTR	
1	Vbus	2	D1-																																																				
3	D1+	4	GND																																																				
5	SSRX1-	6	SSRX1+																																																				
7	GND	8	SSTX1-																																																				
9	SSTX1+	10	Vbus																																																				
11	D2-	12	D2+																																																				
13	GND	14	SSRX2-																																																				
15	SSRX2+	16	GND																																																				
17	SSTX2-	18	SSTX2+																																																				
L1	5V/12V	L2	DSR																																																				
L3	TXD	L4	RXD																																																				
L5	RTS	L6	CTS																																																				
L7	GND	L8	DTR																																																				
Type	COM4(RJ-45)/USB 3.0 connector																																																						
Memo	J1900 system: Work with USB 2.0 J6412, Core i3/i5: Work with USB 3.0																																																						

09. IO Board connector pin map & Jumper Setting

LAN_USB	LAN_USB1 ⑯																																																						
PIN Define	<table border="1"> <tr><td>1</td><td>Vbus</td><td>2</td><td>D1-</td></tr> <tr><td>3</td><td>D1+</td><td>4</td><td>GND</td></tr> <tr><td>5</td><td>SSRX1-</td><td>6</td><td>SSRX1+</td></tr> <tr><td>7</td><td>GND</td><td>8</td><td>SSTX1-</td></tr> <tr><td>9</td><td>SSTX1+</td><td>10</td><td>Vbus</td></tr> <tr><td>11</td><td>D2-</td><td>12</td><td>D2+</td></tr> <tr><td>13</td><td>GND</td><td>14</td><td>SSRX2-</td></tr> <tr><td>15</td><td>SSRX2+</td><td>16</td><td>GND</td></tr> <tr><td>17</td><td>SSTX2-</td><td>18</td><td>SSTX2+</td></tr> <tr><td>L1</td><td>A+</td><td>L2</td><td>A-</td></tr> <tr><td>L3</td><td>B+</td><td>L4</td><td>C+</td></tr> <tr><td>L5</td><td>C-</td><td>L6</td><td>B-</td></tr> <tr><td>L7</td><td>D+</td><td>L8</td><td>D-</td></tr> </table>	1	Vbus	2	D1-	3	D1+	4	GND	5	SSRX1-	6	SSRX1+	7	GND	8	SSTX1-	9	SSTX1+	10	Vbus	11	D2-	12	D2+	13	GND	14	SSRX2-	15	SSRX2+	16	GND	17	SSTX2-	18	SSTX2+	L1	A+	L2	A-	L3	B+	L4	C+	L5	C-	L6	B-	L7	D+	L8	D-		
1	Vbus	2	D1-																																																				
3	D1+	4	GND																																																				
5	SSRX1-	6	SSRX1+																																																				
7	GND	8	SSTX1-																																																				
9	SSTX1+	10	Vbus																																																				
11	D2-	12	D2+																																																				
13	GND	14	SSRX2-																																																				
15	SSRX2+	16	GND																																																				
17	SSTX2-	18	SSTX2+																																																				
L1	A+	L2	A-																																																				
L3	B+	L4	C+																																																				
L5	C-	L6	B-																																																				
L7	D+	L8	D-																																																				
Type	1Gb Ethernet(RJ-45)/ USB 3.0 connector																																																						
Memo	J1900 System: Work with USB 2.0 J6412, Core i3/i5: Work with USB 3.0																																																						

10. Part list

- MAIN



10. Part list

- MAIN

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
A1	JK72-21162A	PMO-HOLDER SSD	1	Y	
A2	-	SSD /HDD 2.5inch	1	Y	
A3	JK75-40020A	ASSY-HINGE TILT	1	Y	
A4	JK72-21122A	PMO-COVER HINGE, WHITE	1	Y	
	JK72-21122B	PMO-COVER HINGE, BLACK			
A5	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
A6	S600100039A	SCREW-MACHINE:PWH,M4,L8	3	Y	
A7	JK72-21124A	PMO-COVER TOP STAND_BASIC, GOLD	1	Y	BASIC
	JK72-21124B	PMO-COVER TOP STAND_BASIC, SILVER			
	JK72-21124C	PMO-COVER TOP STAND_BASIC, BLACK			
A8	JK72-21125A	PMO-COVER TOP STAND_DUAL, GOLD	1	Y	DUAL DISPLAY
	JK72-21125B	PMO-COVER TOP STAND_DUAL, SILVER			
	JK72-21125C	PMO-COVER TOP STAND_DUAL, BLACK			
B	-	15inch Main Display	1	Y	
A9	JK72-21137A	PMO-DUMMY MSR_15, WHITE	1	Y	
	JK72-21137B	PMO-DUMMY MSR_15, BLACK			
C	-	15.6inch Main Display	1	Y	
A10	JK72-21167A	PMO-DUMMY MSR_15.6, WHITE	1	Y	
	JK72-21167B	PMO-DUMMY MSR_15.6, BLACK			
D	-	10.1inch Main Display	1	Y	
A11	JK72-21142A	PMO-DUMMY MSR_10.1, WHITE	1	Y	
	JK72-21142B	PMO-DUMMY MSR_10.1, BLACK			
E	-	15.6inch Main Display	1	Y	
A12	JK72-21191A	PMO-DUMMY MSR_18.5, WHITE	1	Y	
	JK72-21191B	PMO-DUMMY MSR_18.5, BLACK			
F	-	MAIN BODY	1	N	
A13	JK70-20484A	IPR-PLATE BOTTOM, GOLD	1	Y	
	JK70-20484B	IPR-PLATE BOTTOM, SILVER			
	JK70-20484C	IPR-PLATE BOTTOM, BLACK			
A14	JK73-11023A	RMO-FOOT RUBBER	5	Y	
A15	S600300005A	SCREW-TAPTITE:PWH,M4,L8	5	Y	
A16	JK72-21123A	PMO-COVER STAND BOTTOM, GOLD	1	Y	
	JK72-21123B	PMO-COVER STAND BOTTOM, SILVER			
	JK72-21123C	PMO-COVER STAND BOTTOM, BLACK			
G	SA91-20085A	I/O Module, DP	1	Y	J1900
	SA91-20085B	I/O Module, DP+HDMI			J6412, i3/i5
A17	S600300005A	SCREW-TAPTITE:PWH,M4,L8	3	Y	
H	EXB-FZS	Expansion I/O Module, SERIAL 1+1	1	Y	D-sub9 + RJ45
	EXB-FZU	Expansion I/O Module, USB 2x2			USB 2.0 x 4
	EXB-FZP	Expansion I/O Module, Parallel			Parallel
A18	S600200028A	SCREW-TAPPING:PWH,M3,L6	1	Y	

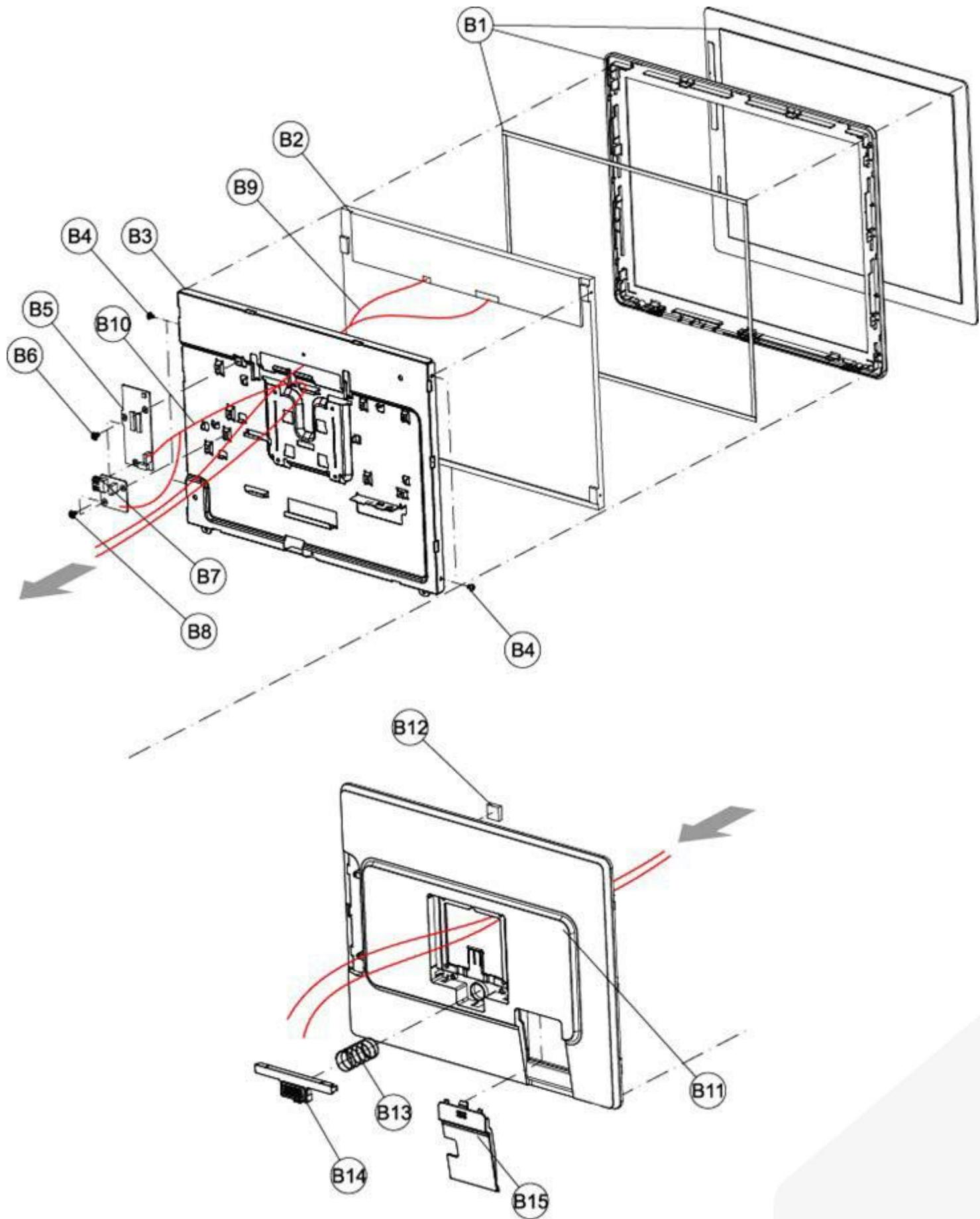
10. Part list

- MAIN

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
I	-	I/O Cover	1	N	
J	QMR-TFZ0NW	MSR Reader, WHITE	1	Y	
	QMR-TFZ0NB	MSR Reader, BLACK			
A19	S600200014A	SCREW-TAPPING:PWH,M3,L12	2	Y	
K	-	MSR & IC Reader	1	Y	
A20	S600200014A	SCREW-TAPPING:PWH,M3,L12	2	Y	
L	QMR-TFZ0DW	MSR & DALLAS, WHITE	1	Y	
	QMR-TFZ0DB	MSR & DALLAS, BLACK			
	QMR-TFZ0FW	MSR & FINGER PRINTER, WHITE			
	QMR-TFZ0FB	MSR & FINGER PRINTER, BLACK			
A21	S600200014A	SCREW-TAPPING:PWH,M3,L12	2	Y	
M	FCD-L40	2Line Display	1	Y	
N	FCD-100	9.7inch Dual Display	1	Y	Touch Available
O	FCD-150	15inch Dual Display	1	Y	Touch Available
P	FCD-101	10.1inch Dual Display	1	Y	Touch Available
S1	JK44-10032A	POWER SMPS:12V/5A,60W	1	Y	
S2	JK39-20004A	CBF POWER CORD	1	Y	EUROPE
	JK39-20004B				USA
	JK39-20004C				UK
	JK39-20004D				AUTRALIA
	JK39-20004E				KOREA
	JK39-20004F				SOUTH AFRICA

10. Part list

- 15inch Main Display



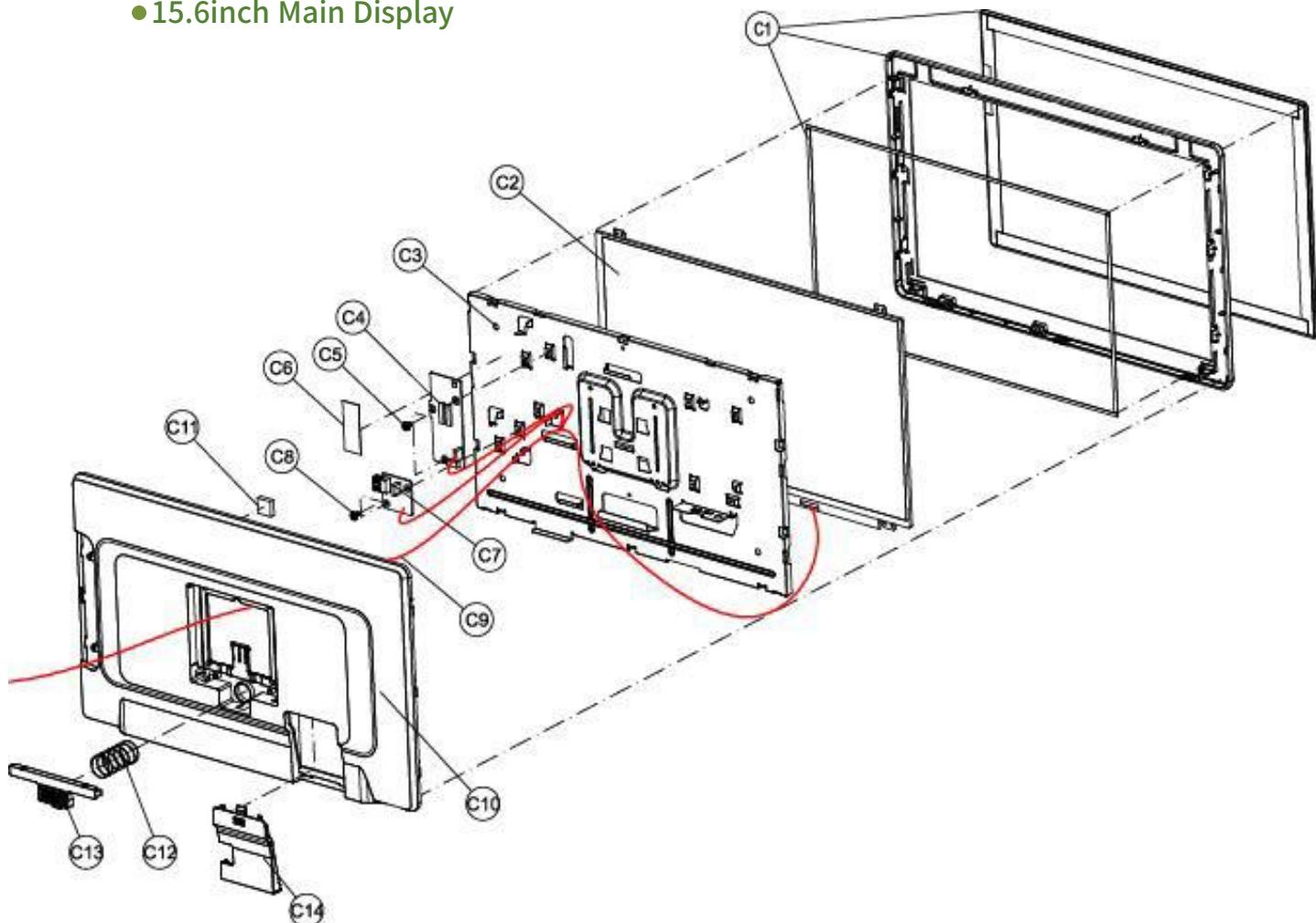
10. Part list

- 15inch Main Display

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
B	FMD-150/RRH6NWN	ASSY MAIN DISPLAY_15,WHITE	1	Y	Include DUMMY MSR (A9)
	FMD-150/RRH6NBN	ASSY MAIN DISPLAY_15,BLACK			
B1	SA95-70889A	ASSY FRONT DISPLAY_15, WHITE	1	Y	LOGO
	SA95-70889B	ASSY FRONT DISPLAY_15, BLACK			
	SA95-70889E	ASSY FRONT DISPLAY_15, WHITE			NO LOGO
	SA95-70889F	ASSY FRONT DISPLAY_15, BLACK			
B2	SA95-70567B	LCD:LED PANEL,15inch	1	Y	
B3	JK70-20485A	IPR-BRKT DISPLAY_15	1	Y	
B4	S600100044A	SCREW-MACHINE:BH,M3,L5	4	Y	
B5	SA95-70760E	TOUCH CONTROLLER	1	Y	
B6	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
B7	JK92-10232A	MSR BOARD	1	Y	
B8	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
B9	JK39-80123A	HARNESS-LVDS+BACKLIGHT	1	Y	MAIN BOARD (F3)
B10	JK39-80124A	HARNESS-PCT+MSR	1	Y	MAIN BOARD (F3)
B11	JK72-21135A	PMO-FRONT DISPLAY_15:w/o Hole, WHITE	1	Y	
	JK72-21135C	PMO-FRONT DISPLAY_15:w/o Hole, BLACK			
B12	JK73-10013A	RPR-PAD:15x15xT5	1	Y	
B13	JK70-30061A	SPRING-LEVER	1	Y	
B14	JK72-21148A	PMO-HINGE LEVER, WHITE	1	Y	
	JK72-21148B	PMO-HINGE LEVER, BLACK			
B15	JK72-21136A	PMO-COVER WIRE_15, WHITE	1	Y	

10. Part list

- 15.6inch Main Display



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
C	FMD-156/RRH6NWN	ASSY MAIN DISPLAY_15,WHITE	1	Y	Include DUMMY MSR (A10)
	FMD-156/RRH6NBN	ASSY MAIN DISPLAY_15,BLACK			
C1	SA95-70909A	ASSY FRONT DISPLAY_15.6, WHITE	1	Y	LOGO
	SA95-70909B	ASSY FRONT DISPLAY_15.6, BLACK			
	SA95-70909E	ASSY FRONT DISPLAY_15.6, BLACK			NO LOGO
	SA95-70909F	ASSY FRONT DISPLAY_15.6, BLACK			
C2	JK07-70021A	LCD:LED PANEL,15.6inch	1	Y	
C3	JK70-20519B	IPR-BRKT DISPLAY_15.6,DP+HDMI	1	Y	
C4	SA95-70760E	TOUCH CONTROLLER	1	Y	
C5	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
C6	S020300030A	TAPE CONDUCTIVE	1	Y	
C7	JK92-10232A	MSR BOARD	1	Y	
C8	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
C9	JK39-80139A	HARNESS-EDP:MAIN(30P)-F(8P-4P30P)	1	Y	MAIN BOARD (F3)
C10	JK72-21165A	PMO-REAR DISPLAY_15.6:w/o Hole, WHITE	1	Y	
	JK72-21165C	PMO-REAR DISPLAY_15.6:w/o Hole, BLACK			

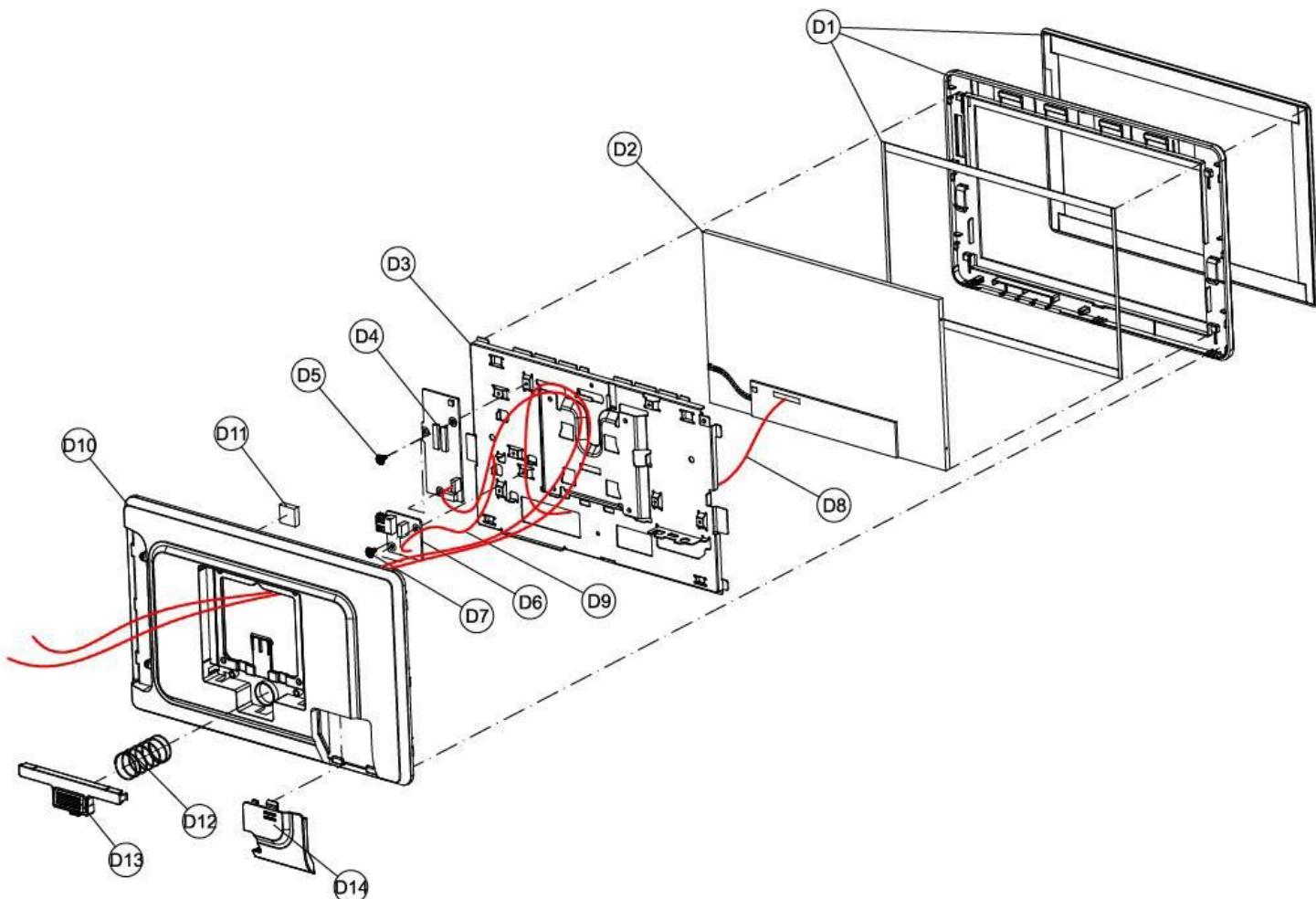
10. Part list

- 15.6inch Main Display

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
C10	JK72-21165A	PMO-REAR DISPLAY_15.6:w/o Hole, WHITE	1	Y	
	JK72-21165C	PMO-REAR DISPLAY_15.6:w/o Hole, BLACK			
C11	JK73-10013A	RPR-PAD:15x15xT5	1	Y	
C12	JK70-30061A	SPRING-LEVER	1	Y	
C13	JK72-21148A	PMO-HINGE LEVER, WHITE	1	Y	
	JK72-21148B	PMO-HINGE LEVER, BLACK			
C14	JK72-21166A	PMO-COVER WIRE_15.6, WHITE	1	Y	

10. Part list

- 10.1inch Main Display



NO	PART CODE	PARTS NAME	Q'TY	Serviceable	REMARK
D	FMD-101/RRH6NWN	ASSY MAIN DISPLAY_15,WHITE	1	Y	Include DUMMY MSR (A11)
	FMD-101/RRH6NBN	ASSY MAIN DISPLAY_15,BLACK			
D1	SA95-70892A	ASSY FRONT DISPLAY_10.1,WHITE	1	Y	LOGO
	SA95-70892B	ASSY FRONT DISPLAY_10.1,BLACK			
	SA95-70892C	ASSY FRONT DISPLAY_10.1,WHITE			NO LOGO
	SA95-70892D	ASSY FRONT DISPLAY_10.1,BLACK			
D2	JK07-70019A	LCD:LED PANEL,10.1inch	1	Y	
D3	JK70-20486A	IPR-BRKT DISPLAY_10.1	1	Y	
D4	SA95-70760E	TOUCH CONTROLLER	1	Y	
D5	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
D6	JK92-10232A	MSR BOARD	1	Y	
D7	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	

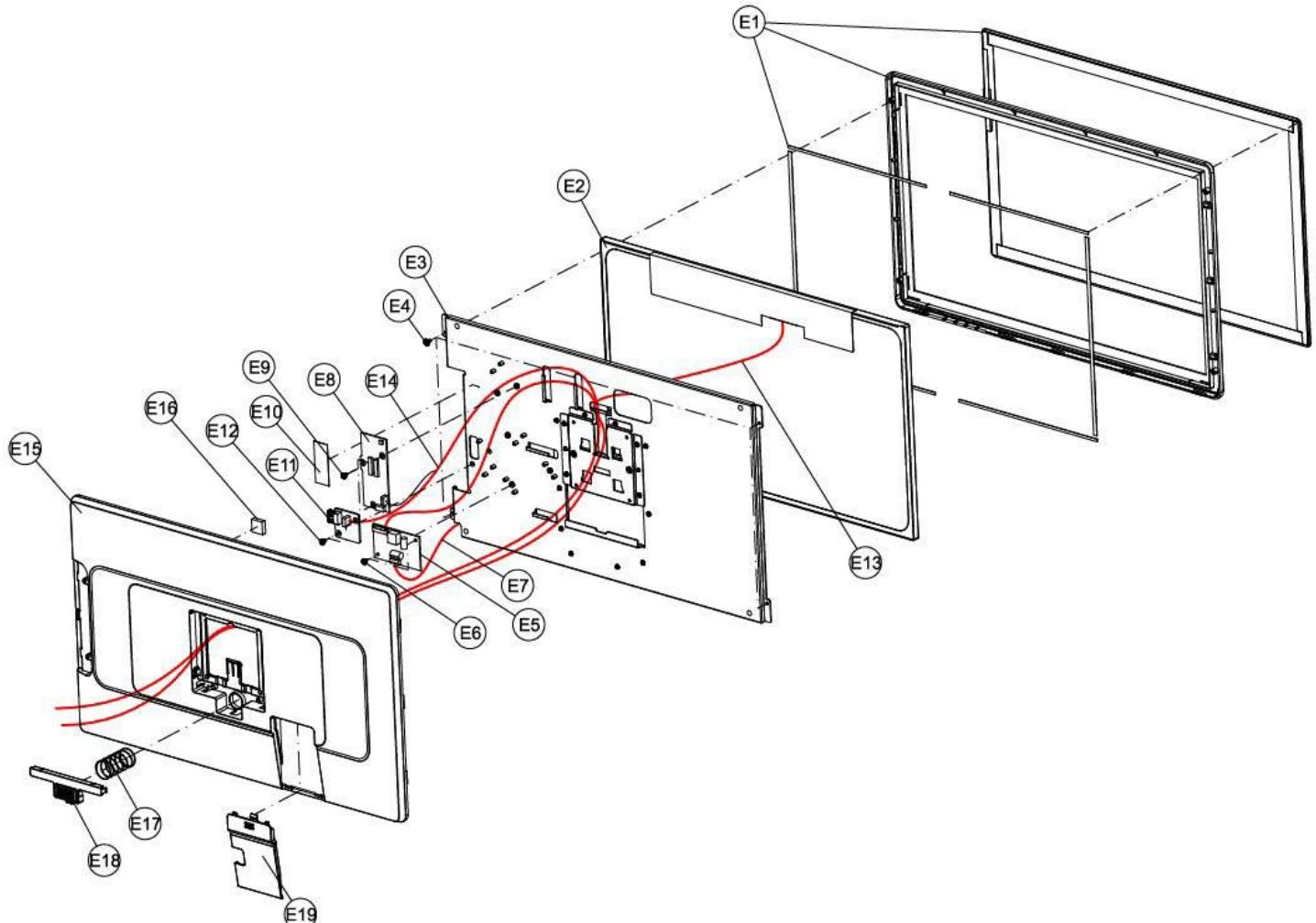
10. Part list

- 10.1inch Main Display

NO	PART CODE	PARTS NAME	Q'TY	Serviceable	REMARK
D8	JK39-80141A	HARNESS-LCD	1	Y	MAIN BOARD (F3)
D9	JK39-80124A	HARNESS-PCT+MSR	1	Y	MAIN BOARD (F3)
D10	JK72-21140A	PMO-REAR DISPLAY_10.1:w/o Hole, WHITE	1	Y	
	JK72-21140C	PMO-REAR DISPLAY_10.1:w/o Hole, BLACK			
D11	JK73-10013A	RPR-PAD:15x15xT5	1	Y	
D12	JK70-30061A	SPRING-LEVER	1	Y	
D13	JK72-21148A	PMO-HINGE LEVER, WHITE	1	Y	
	JK72-21148B	PMO-HINGE LEVER, BLACK			
D14	JK72-21141A	PMO-COVER WIRE_10.1, WHITE	1	Y	
	JK72-21141B	PMO-COVER WIRE_10.1, BLACK			

10. Part list

- 18.5inch Main Display



NO	PART CODE	PARTS NAME	Q'TY	Serviceable	REMARK
E	FMD-185/RRH6NWN	ASSY MAIN DISPLAY_18.5,WHITE	1	Y	Include DUMMY MSR (A12)
	FMD-185/RRH6NBN	ASSY MAIN DISPLAY_18.5,BLACK			
E1	JK95-70932A	ASSY FRONT DISPLAY_18.5, WHITE	1	Y	LOGO
	JK95-70932B	ASSY FRONT DISPLAY_18.5, BLACK			
	JK95-70932C	ASSY FRONT DISPLAY_18.5, WHITE			NO LOGO
	JK95-70932D	ASSY FRONT DISPLAY_18.5, BLACK			
E2	JK07-70022A	LCD:LED PANEL,18.5inch	1	Y	
E3	JK70-20520A	IPR-BRKT DISPLAY_18.5, MAIN	1	Y	
E4	S600200028A	SCREW-TAPPING:PWH,M3,L6	4	Y	
E5	SA95-70940A	BACKLIGHT CONTROLLER	1	Y	
E6	S600100016A	SCREW-MACHINE:PWH,M3,L4	2	Y	
E7	JK39-80083A	HARNESS-LED DRIVER HARNESS	1	Y	
E8	SA95-70760E	TOUCH CONTROLLER	1	Y	
E9	S600100016A	SCREW-MACHINE:PWH,M3,L4	2	Y	
E10	S020300030A	TAPE CONDUCTIVE	1	Y	
E11	JK92-10232A	MSR BOARD	1	Y	

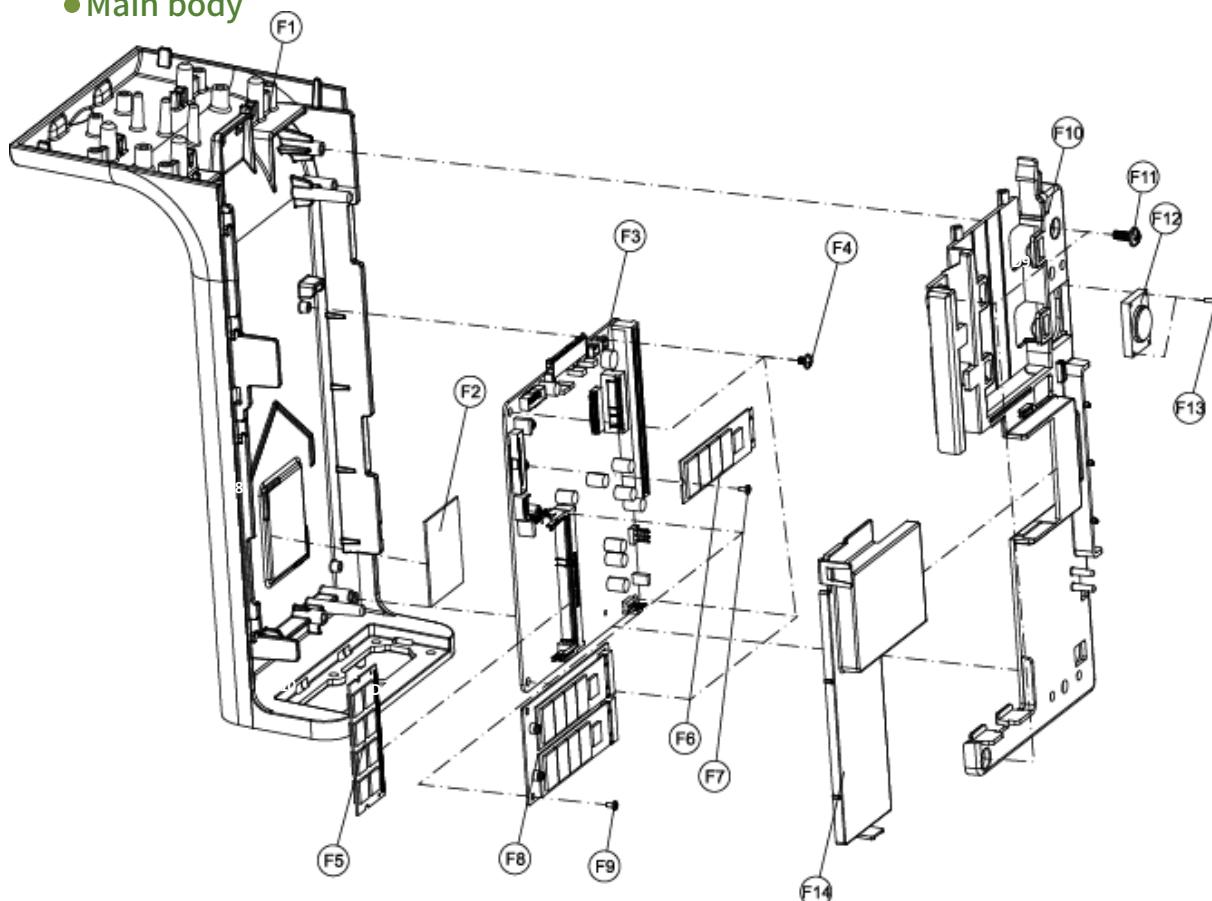
10. Part list

- 18.5inch Main Display

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
E11	JK92-10232A	MSR BOARD	1	Y	
E12	S600100016A	SCREW-MACHINE:PWH,M3,L4	2	Y	
E13	JK39-80138A	HARNESS-LVDS+BACKLIGHT	1	Y	MAIN BOARD (F3)
E14	JK39-80124A	HARNESS-PCT+MSR	1	Y	MAIN BOARD (F3)
E15	JK72-21189A	PMO-REAR DISPLAY_18.5:w/o Hole, WHITE	1	Y	
	JK72-21189C	PMO-REAR DISPLAY_18.5:w/o Hole, BLACK			
E16	JK73-10013A	RPR-PAD:15x15xT5	1	Y	
E17	JK70-30061A	SPRING-LEVER	1	Y	
E18	JK72-21148A	PMO-HINGE LEVER, WHITE	1	Y	
	JK72-21148B	PMO-HINGE LEVER, BLACK			
E19	JK70-21190A	PMO-COVER WIRE_18.5, WHITE	1	Y	
	JK70-21190B	PMO-COVER WIRE_18.5, BLACK			

10. Part list

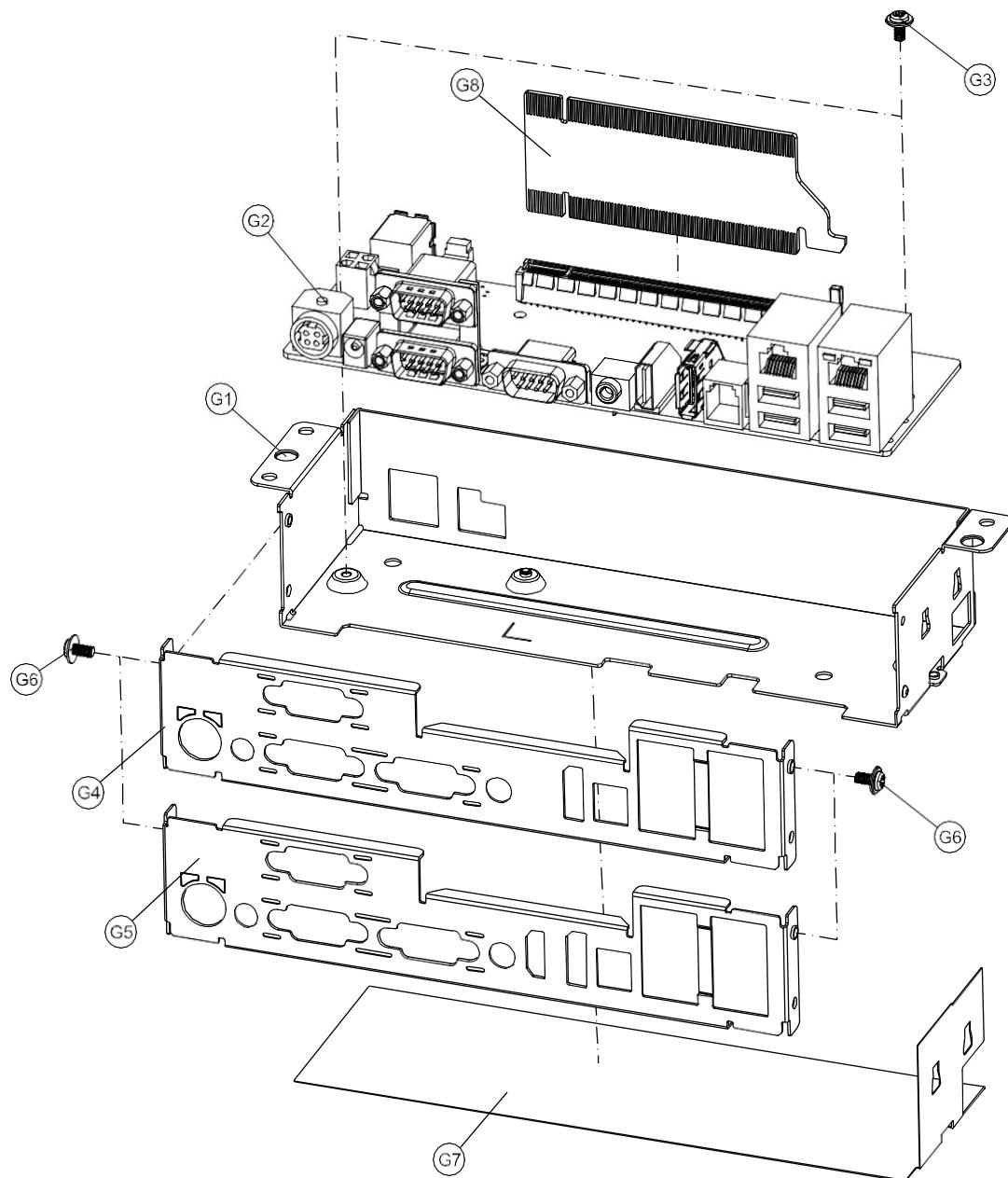
- Main body



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
F1	JK70-20483A	IPR-STAND BODY, GOLD	1	Y	
	JK70-20483B	IPR-STAND BODY, SILVER			
	JK70-20483C	IPR-STAND BODY, BLACK			
F2	JK73-11083A	RMO-THERMAL PAD	1	Y	
F3	SA95-70903A	MAIN BOARD : Celeron, J1900	1	Y	
	SA95-70904A	MAIN BOARD : Core i3, 7100U			
	SA95-70905A	MAIN BOARD : Core i5, 7200U			
	SA95-70989A	MAIN BOARD : Celeron, J6412			
F4	S600200028A	SCREW-TAPPING:PWH,M3,L6	4	Y	
F5	-	RAM : DDR3	1	Y	J1900
		RAM : DDR4	1 or 2	Y	J6412, i3/i5
F6	-	M.2 SSD	1	Y	
F7	S600100021A	SCREW-MACHINE:RH,M2,L4	1	Y	
F8	EXB-FZR**	M.2 RAID	1	Y	**Capacity
F9	S600100021A	SCREW-MACHINE:RH,M2,L4	2	Y	
F10	JK72-21126A	PMO-CASE INNER	1	Y	
F11	S600300005A	SCREW-TAPTITE:PWH,M4,L8	3	Y	
F12	S300400005A	UNIT-SPEAKER	1	Y	
F13	S600200032A	SCREW-TAPPING:PH,M2,L8	2	Y	
F14	JK72-21127A	PMO-COVER MAIN BOARD	1	Y	

10. Part list

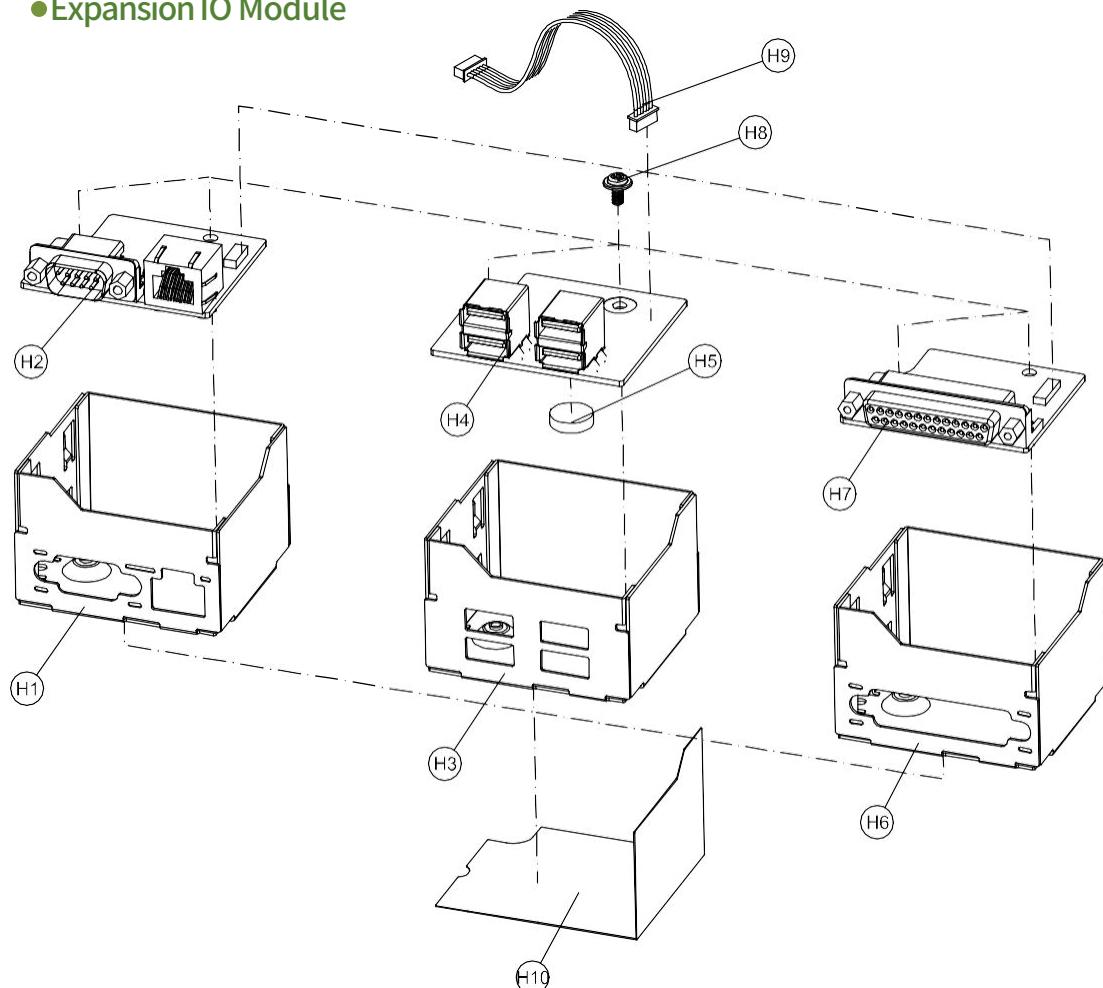
- IO module



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
G	SA91-20085A	ASSY BOX IO_DP	1	Y	J1900
	SA91-20085B	ASSY BOX IO_DP+HDMI			J6412, i3/i5
G1	JK70-20492A	IPR-BRKT CASE IO	1	Y	
G2	JK49-10030A	UNIT-IO BOARD	1	Y	
G3	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
G4	JK70-20491A	IPR-BRKT INTERFACE:DP	1	Y	J1900
G5	JK70-20491B	IPR-BRKT INTERFACE:DP+HDMI			J6412, i3/i5
G6	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
G7	JK68-40368A	LABEL(R)-INTERFACE	1	Y	
G8	JK49-10031A	UNIT-PCIE:BRIDGE	1	Y	

10. Part list

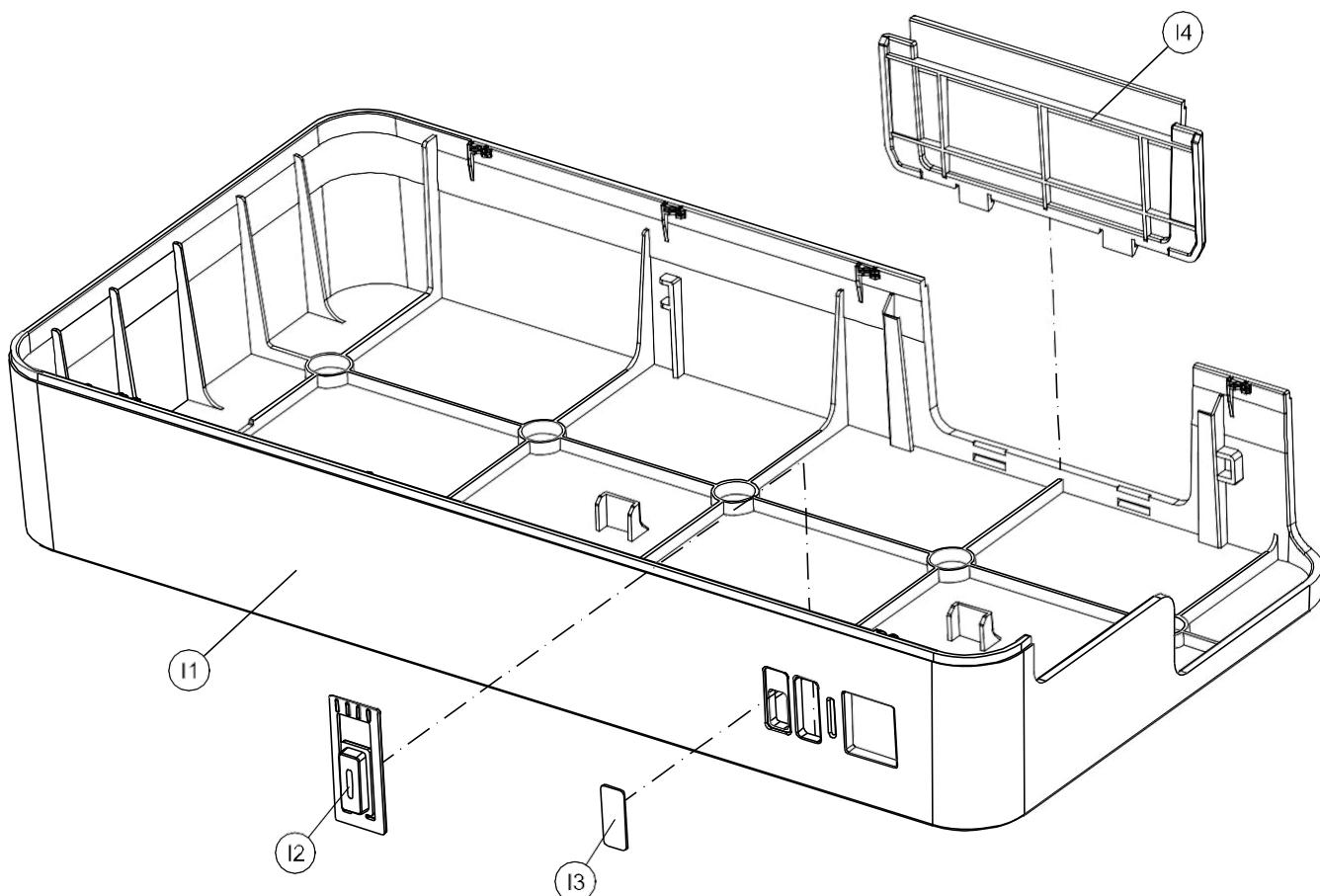
● Expansion IO Module



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
H	EXB-FZS	Expansion I/O Module, SERIAL 1+1	1	Y	D-sub9 + RJ45
	EXB-FZU	Expansion I/O Module, USB 2x2			USB 2.0 x4
	EXB-FZP	Expansion I/O Module, Parallel			Parallel
H1	JK70-20493A	IPR-BRKT CASE EXTEND IO : SERIAL	1	Y	D-sub9 + RJ45
H2	JK48-10046A	UNIT-EXT COM BD : SERIAL	1	Y	D-sub9 + RJ45
H3	JK70-20493B	IPR-BRKT CASE EXTEND IO : USB	1	Y	USB 2.0 x4
H4	JK48-10047A	UNIT-EXT COM BD : USB	1	Y	USB 2.0 x4
H5	JK73-11080A	RMO-FOOT RUBBER	1	Y	USB 2.0 x4
H6	JK70-20493C	IPR-BRKT CASE EXTEND IO : Parallel	1	Y	Parallel
H7	JK48-10048A	UNIT-EXT COM BD : Parallel	1	Y	Parallel
H8	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
H9	JK39-80129A	HARNESS-EXT BD : 6P	1	Y	
H10	JK68-40369A	LABEL(R)-EXTEND IO : SERIAL	1	Y	D-sub9 + RJ45
	JK68-40369B	LABEL(R)-EXTEND IO : USB			USB 2.0 x4
	JK68-40369C	LABEL(R)-EXTEND IO : Parallel			Parallel

10. Part list

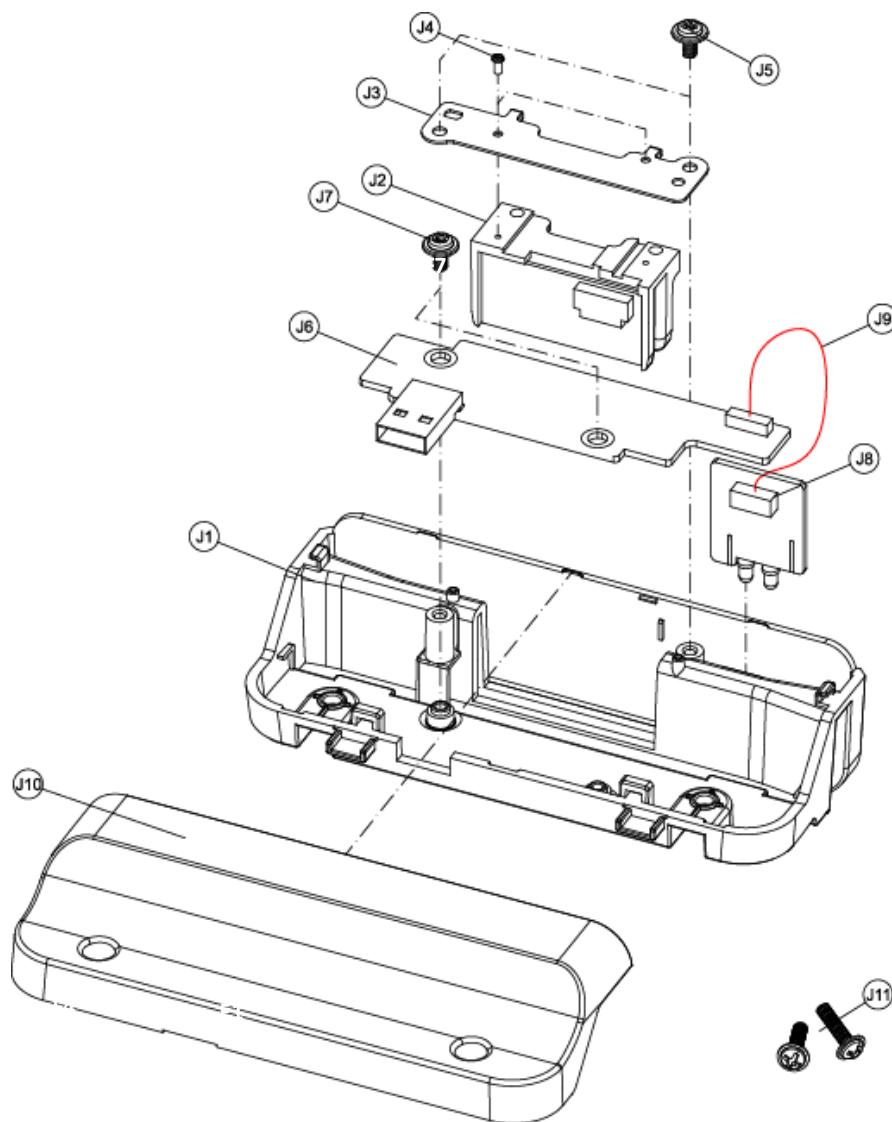
- IO Cover



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
I1	JK72-21130A	PMO-COVER IO, WHITE	1	Y	LOGO
	JK72-21130B	PMO-COVER IO, BLACK			
	JK72-21130F	PMO-COVER IO, WHITE			NO LOGO
	JK72-21130E	PMO-COVER IO, BLACK			
I2	JK72-21132A	PMO-BUTTON POWER, WHITE	1	Y	
	JK72-21132B	PMO-BUTTON POWER, BLACK			
I3	JK68-40370A	LABEL(R)-LED	1	Y	
I4	JK72-21131A	PMO-DUMMY IO, WHITE	1	Y	
	JK72-21131B	PMO-DUMMY IO, BLACK			

10. Part list

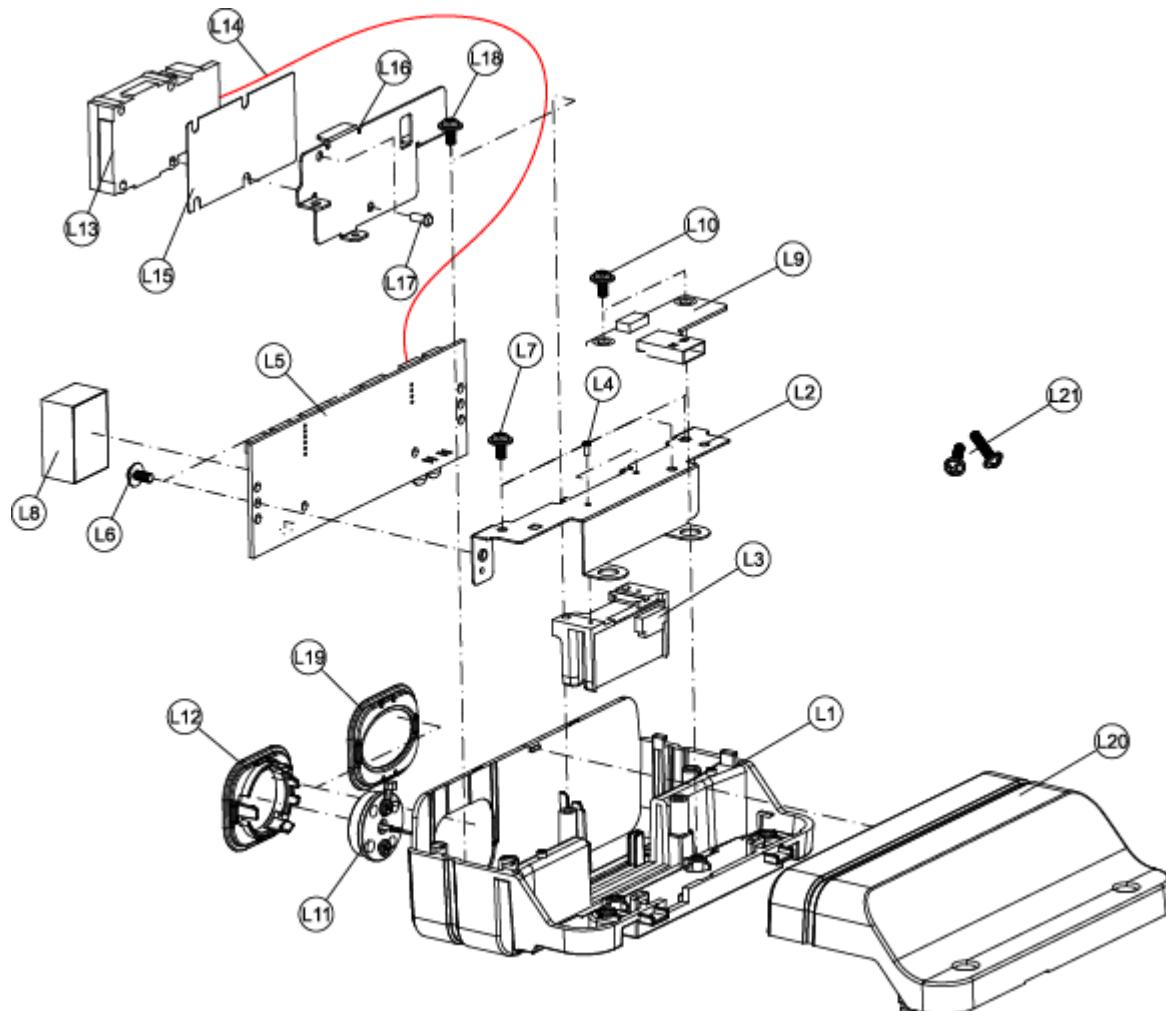
- MSR



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
J	QMR-TFZ0NW	MSR Reader, WHITE	1	Y	
	QMR-TFZ0NB	MSR Reader, BLACK			
J1	JK72-21150A	PMO-MSR UPPER, WHITE	1	Y	
	JK72-21150B	PMO-MSR UPPER, BLACK			
J2	JK48-10049A	MSR MODULE	1	Y	
J3	JK70-20488A	IPR-BRKT MSR	1	Y	
J4	S600300026A	SCREW-DELTA PT:M1.7,L3.5	2	Y	
J5	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
J6	JK92-10234A	MSR BOARD:3TRACK	1	Y	
J7	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
J8	JK92-10237A	LED BOARD	1	Y	
J9	JK39-80131A	HARNESS-LED	1	Y	
J10	JK72-21151A	PMO-MSR LOWER, WHITE	1	Y	
	JK72-21151B	PMO-MSR LOWER, BLACK			
J11	S600200014A	SCREW-TAPPING:PWH,M3,L12	2	Y	

10. Part list

- MSR+Dallas / Finger Printer



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
L	QMR-TFZ0DW	MSR & DALLAS, WHITE	1	Y	FPR Module Not Included
	QMR-TFZ0DB	MSR & DALLAS, BLACK			
	QMR-TFZ0FW	MSR & FINGER PRINTER, WHITE			
	QMR-TFZ0FB	MSR & FINGER PRINTER, BLACK			
L1	JK72-21154A	PMO-MSR DALLAS UPPER, WHITE	1	Y	
	JK72-21154B	PMO-MSR DALLAS UPPER, BLACK			
L2	JK70-20489A	IPR-BRKT MSR IC	1	Y	
L3	JK48-10049A	MSR MODULE	1	Y	
L4	S600300026A	SCREW-DELTA PT:M1.7,L3.5	2	Y	
L5	JK95-70930A	ASSY-DALLAS BOARD	1	Y	
L6	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
L7	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
L8	JK73-11034A	RMO-PDA(D)	0.5	Y	

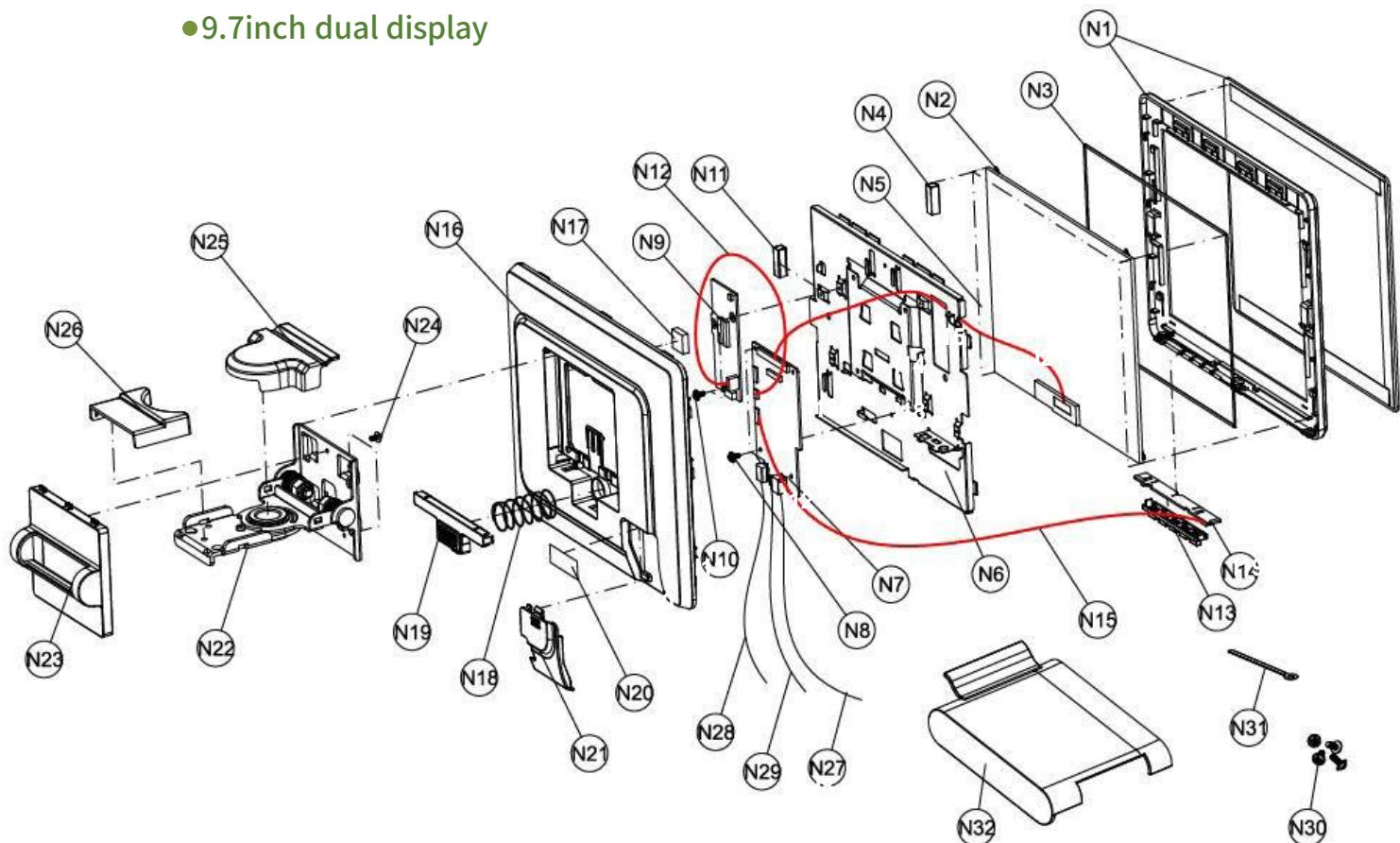
10. Part list

- MSR+Dallas / Finger Printer

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
L9	JK92-10233A	PBA-SUB:IC CARD	1	Y	
L10	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
L11	JK95-70134C	UNIT-DALLAS MODULE	1	Y	DALLAS
L12	JK72-20403A	PMO-CAP DALLAS, BLACK	1	Y	DALLAS
	JK72-20403C	PMO-CAP DALLAS, WHITE			
L13	-	FPR : U.are.U 4500 Module	1	N	Separate sale
L14	JK39-40820A	HARNESS-FINGER PRINT:5P,140mm	1	Y	
L15	JK68-40165A	LABEL(R)-INSULATION	1	Y	
L16	JK70-20490A	IPR-BRKT MSR FPR	1	Y	FINGER PRINTER
L17	S600100048A	SCREW-MAHCINE:PH,M2,L14	2	Y	FINGER PRINTER
L18	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	
L19	JK72-20402A	PMO-CAP FPR, BLACK	1	Y	FINGER PRINTER
	JK72-20402C	PMO-CAP FPR, WHITE			
L20	JK72-21155A	PMO-MSR DALLAS LOWER, WHITE	1	Y	
	JK72-21155B	PMO-MSR DALLAS LOWER, BLACK			
L21	S600200014A	SCREW-TAPPING:PWH,M3,L12	2	Y	

10. Part list

- 9.7inch dual display



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
N	FCD-100/DFZ6P*N	9.7" DUAL DISPLAY, TOUCH	1	Y	*COLOR
	FCD-100/DFZNP*N	9.7" DUAL DISPLAY, NON TOUCH			
N1	SA95-70895A	ASSY FRONT DISPLAY_9.7,TOUCH,WHITE			TOUCH
	SA95-70895B	ASSY FRONT DISPLAY_9.7,TOUCH,BLACK	1	Y	
	SA95-70895C	ASSY FRONT DISPLAY_9.7,WHITE			NONE TOUCH
	SA95-70895D	ASSY FRONT DISPLAY_9.7,BLACK			
N2	JK07-70020A	LCD:LED PANEL,9.7INCH	1	Y	
N3	JK73-11031C	RMO-RUBBER TAPE LCD(S)	2	Y	
	JK73-11031D	RMO-RUBBER TAPE LCD(L)	2	Y	
N4	JK68-40377A	LABEL(R)-EMI FABRIC_DUAL	4	Y	
N5	JK39-70018A	CABLE-FFC:LVDS,9.7	1	Y	
N6	JK70-20487A	IPR-BRKT DISPLAY_9.7	1	Y	
N7	JK49-10026A	UNIT-AD BOARD:DP	1	Y	
N8	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
N9	JK48-10039B	UNIT-PCT CONTROLLER	1	Y	TOUCH
N10	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	TOUCH
N11	JK68-40377A	LABEL(R)-EMI FABRIC_DUAL	1	Y	TOUCH
N12	JK39-80127A	HARNESS-PCT:4P-4P	1	Y	TOUCH
N13	JK72-21149A	PMO-BUTTON OSD,WHITE	1	Y	
	JK72-21149B	PMO-BUTTON OSD,BLACK			
N14	JK49-10032A	UNIT-OSD BOARD	1	Y	

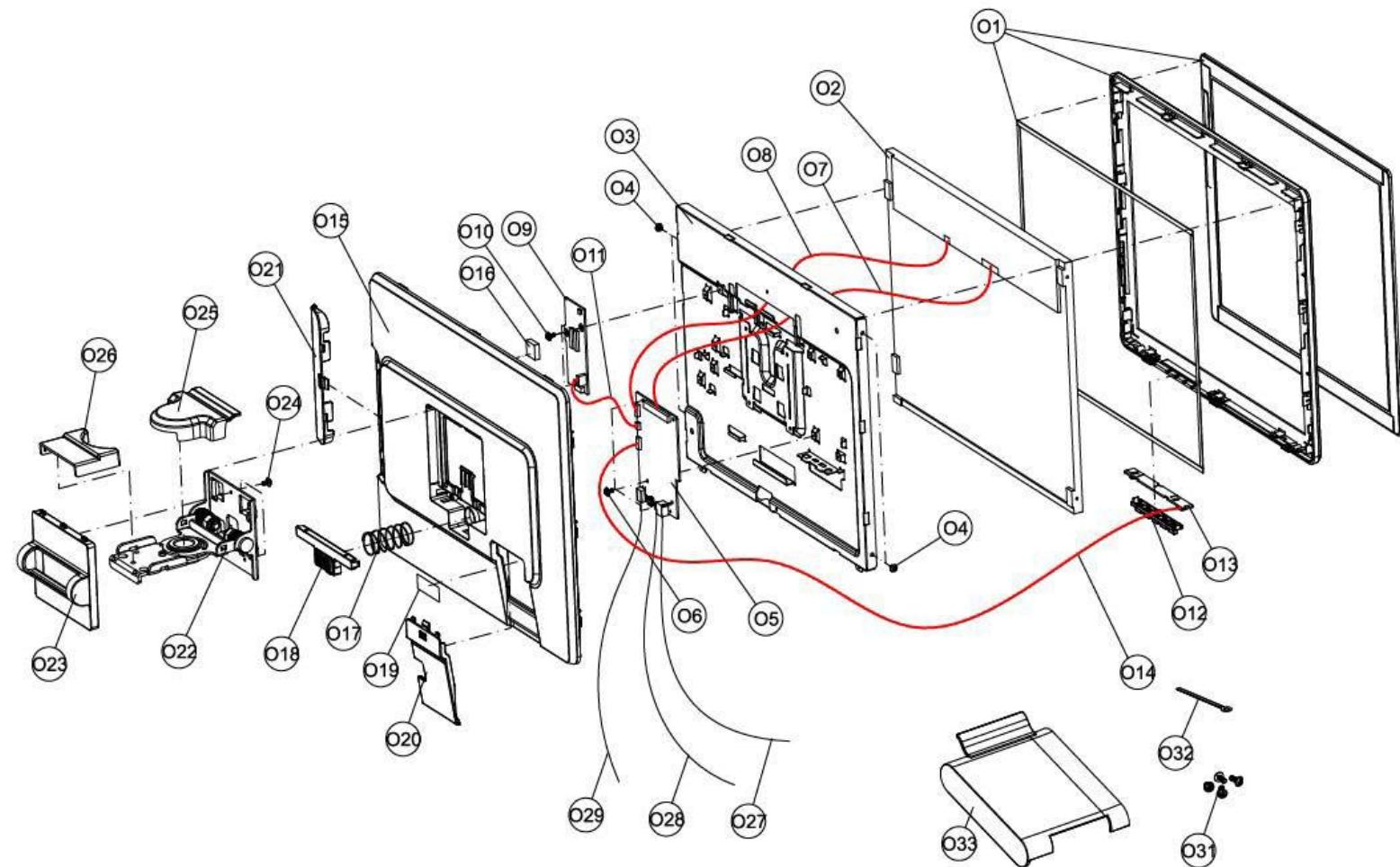
10. Part list

- 9.7inch dual display

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
N15	JK39-80128A	HARNESS-OSD:8P-7P	1	Y	
N16	JK72-21154A	PMO-REAR DISPLAY_9.7,WHITE	1	Y	TOUCH
	JK72-21154B	PMO-REAR DISPLAY_9.7,BLACK			
N17	JK73-10013A	RMO-PAD:SPONGE	1	Y	
N18	JK70-30061A	SPRING-LEVER	1	Y	
N19	JK72-21148A	PMO-HINGE LEVER, WHITE	1	Y	
	JK72-21148B	PMO-HINGE LEVER, BLACK			
N20	JK68-40371A	LABEL(R)-DUAL DISPLAY:DP	1	Y	
N21	JK72-21146A	PMO-COVER WIRE_9.7, WHITE	1	Y	
	JK72-21146B	PMO-COVER WIRE_9.7, BLACK			
N22	JK75-40021A	ASSY-HINGE TILT&SWIVLE	1	Y	
N23	JK72-21122A	PMO-COVER HINGE, WHITE	1	Y	
	JK72-21122B	PMO-COVER HINGE, BLACK			
N24	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
N25	JK72-21128A	PMO-COVER SWIVEL FRONT,WHITE	1	Y	
	JK72-21128B	PMO-COVER SWIVEL FRONT,BLACK			
N26	JK72-21129A	PMO-COVER SWIVEL REAR,WHITE	1	Y	
	JK72-21129B	PMO-COVER SWIVEL REAR,BLACK			
N27	JK39-90047A	CABLE-DC	1	Y	
N28	JK39-90045A	CABLE-mini DP - DP	1	Y	
N29	JK39-90048A	CABLE-USB	1	Y	TOUCH
N30	S600300005A	SCREW-TAPTITE:PWH,M4,L8	4	Y	
N31	S650200009A	CABLE CORD CLAMP	1	Y	
N32	JK72-21125A	PMO-COVER TOP STAND_DUAL, GOLD	1	Y	

10. Part list

- 15inch dual display



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
O	FCD-150/DFZ6H*N FCD-150/DFZNH*N	15" DUAL DISPLAY, TOUCH, DP+HDMI 15" DUAL DISPLAY, NON TOUCH, DP+HDMI	1	Y	*COLOR
O1	SA95-70889A SA95-70889B SA95-70889C SA95-70889D	ASSY FRONT DISPLAY_15,TOUCH,WHITE ASSY FRONT DISPLAY_15,TOUCH,BLACK ASSY FRONT DISPLAY_15,WHITE ASSY FRONT DISPLAY_15,BLACK	1	Y	TOUCH NONE TOUCH
O2	SA95-70567B	LCD:LED PANEL,15INCH	1	Y	
O3	JK70-20458B	IPR-BRKT DISPLAY_15,DP+HDMI	1	Y	
O4	S600100044A	SCREW-MACHINE:BH,M3,L5	4	Y	
O5	JK49-10033A	UNIT-AD BOARD:DP+HDMI	1	Y	
O6	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
O7	JK39-80125A	HARNESS-LVDS	1	Y	
O8	JK39-80126A	HARNESS-BACKLIGHT	1	Y	

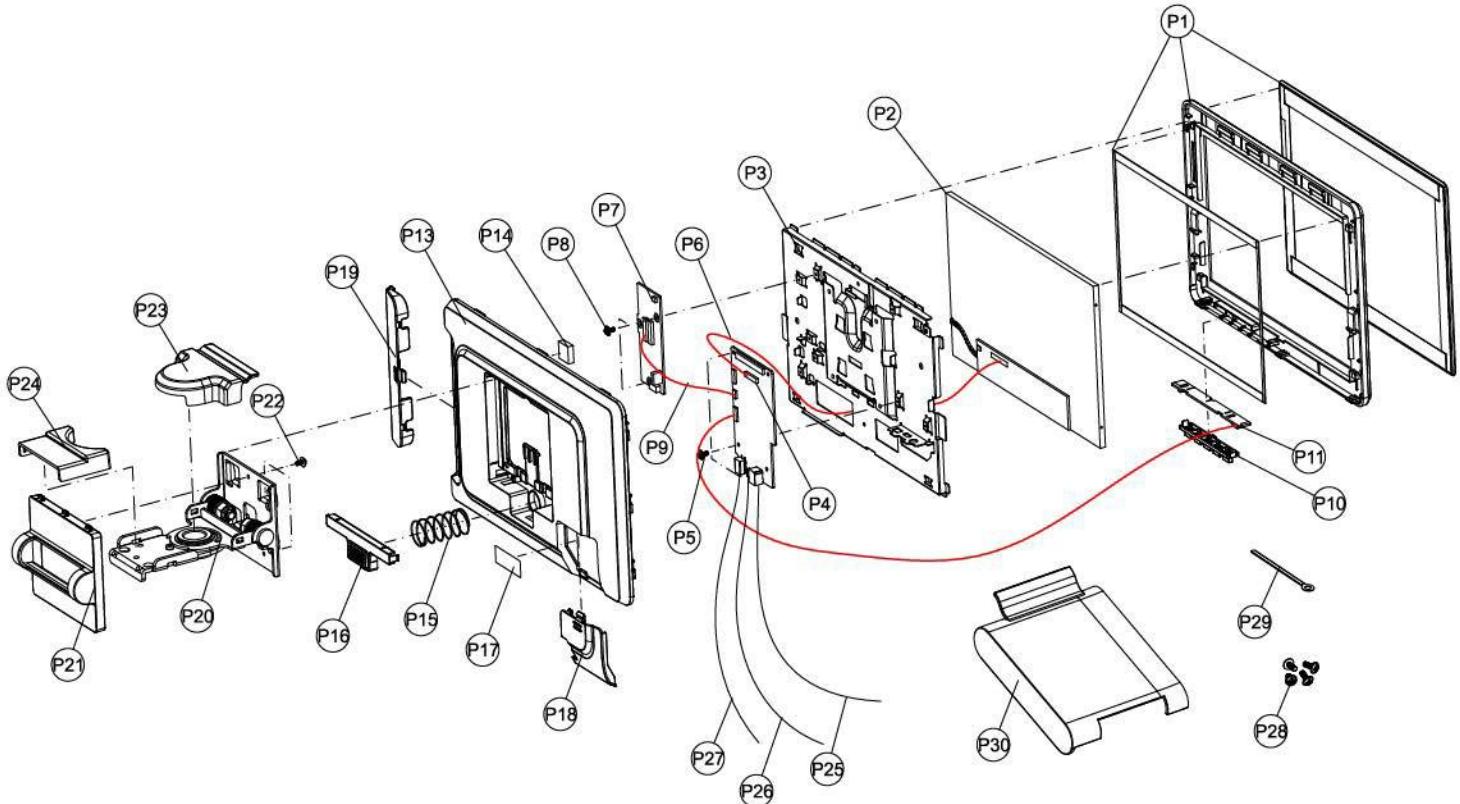
10. Part list

- 15inch dual display

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
09	JK48-10039B	UNIT-PCT CONTROLLER	1	Y	TOUCH
010	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	TOUCH
011	JK39-80127A	HARNESS-PCT:4P-4P	1	Y	TOUCH
012	JK72-21149A	PMO-BUTTON OSD,WHITE	1	Y	
	JK72-21149B	PMO-BUTTON OSD,BLACK			
013	JK49-10032A	UNIT-OSD BOARD	1	Y	
014	JK39-80128A	HARNESS-OSD:8P-7P	1	Y	
015	JK72-21135B	PMO-REAR DISPLAY_15,with HOLE, WHITE	1	Y	
	JK72-21135D	PMO-REAR DISPLAY_15,with HOLE, BLACK			
016	JK73-10013A	RMO-PAD:SPONGE	1	Y	TOUCH
017	JK70-30061A	SPRING-LEVER	1	Y	
018	JK72-21148A	PMO-HINGE LEVER, WHITE	1	Y	
	JK72-21148B	PMO-HINGE LEVER, BLACK			
019	JK68-40371B	LABEL(R)-DUAL DISPLAY:DP+HDMI	1	Y	
020	JK72-21136A	PMO-COVER WIRE_15, WHITE	1	Y	
	JK72-21136B	PMO-COVER WIRE_15, BLACK			
021	JK72-21137A	PMO-DUMMY MSR_15, WHITE	1	Y	
	JK72-21137B	PMO-DUMMY MSR_15, BLACK			
022	JK75-40021A	ASSY-HINGE TILT&SWIVLE	1	Y	
023	JK72-21122A	PMO-COVER HINGE, WHITE	1	Y	
	JK72-21122B	PMO-COVER HINGE, BLACK			
024	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	

10. Part list

- 10.1inch dual display



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
P	FCD-101/DFZ6P*N	10.1" DUAL DISPLAY, TOUCH	1	Y	*COLOR
	FCD-101/DFZNP*N	10.1" DUAL DISPLAY, NON TOUCH			
P1	SA95-70892A	ASSY FRONT DISPLAY_10.1,TOUCH,WHITE	1	Y	TOUCH
	SA95-70892B	ASSY FRONT DISPLAY_10.1,TOUCH,BLACK			TOUCH
	SA95-70892C	ASSY FRONT DISPLAY_10.1,WHITE			NONE TOUCH
	SA95-70892D	ASSY FRONT DISPLAY_10.1,BLACK			NONE TOUCH
P2	JK07-70019A	LCD:LED PANEL,10.1INCH	1	Y	
P3	JK70-20486A	IPR-BRKT DISPLAY_10.1	1	Y	
P4	JK49-10026A	UNIT-AD BOARD:DP	1	Y	
P5	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
P6	JK39-80134A	HARNESS-LVDS	1	Y	
P7	JK48-10039B	UNIT-PCT CONTROLLER	1	Y	TOUCH
P8	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	TOUCH

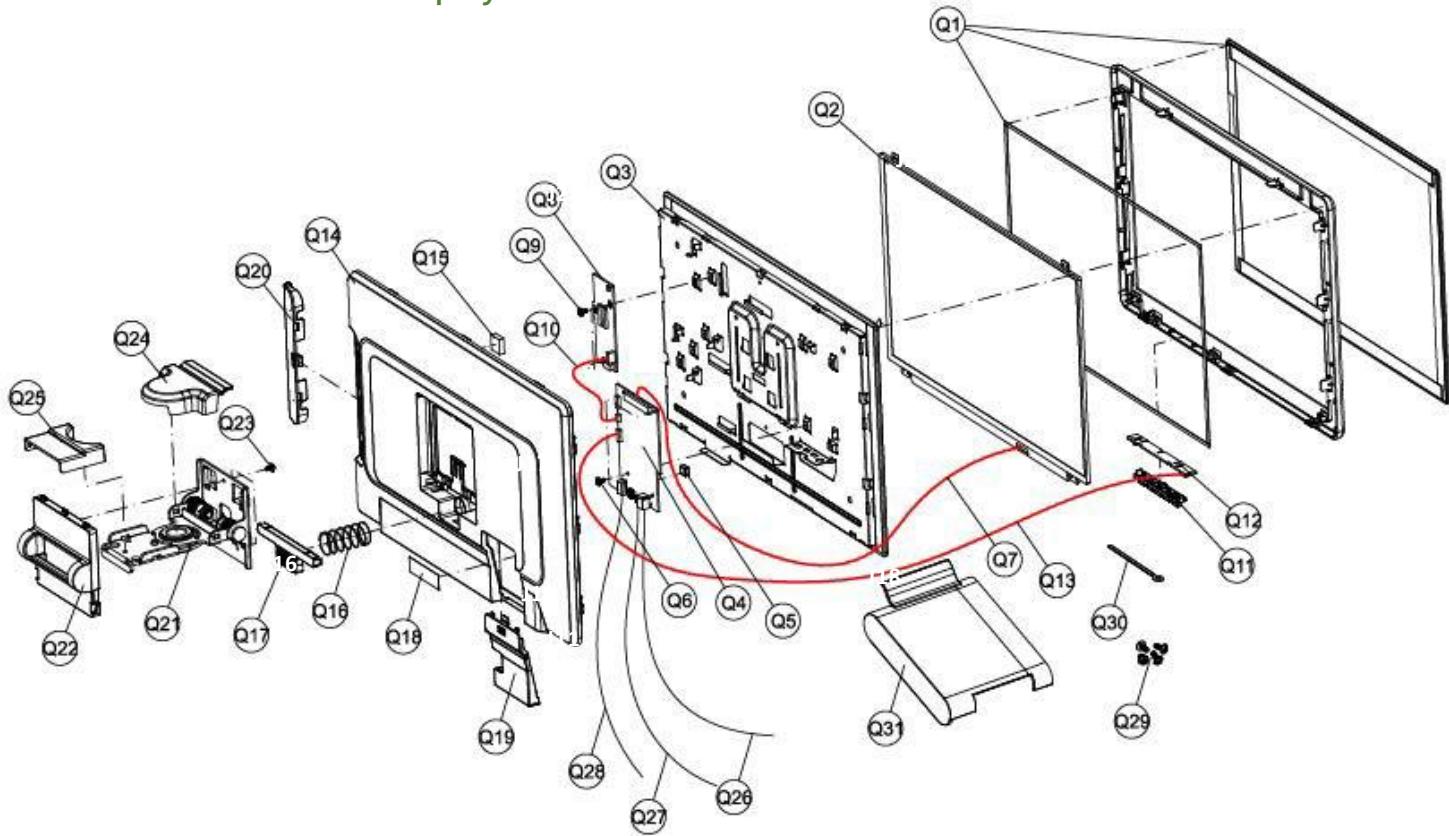
10. Part list

- 10.1inch dual display

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
P9	JK39-80127A	HARNESS-PCT:4P-4P	1	Y	TOUCH
P10	JK72-21149A	PMO-BUTTON OSD,WHITE	1	Y	
	JK72-21149B	PMO-BUTTON OSD,BLACK			
P11	JK49-10032A	UNIT-OSD BOARD	1	Y	
P12	JK39-80128A	HARNESS-OSD:8P-7P	1	Y	
P13	JK72-21140B	PMO-REAR DISPLAY_10.1,with HOLE, WHITE	1	Y	
	JK72-21140D	PMO-REAR DISPLAY_10.1,with HOLE, BLACK			
P14	JK73-10013A	RMO-PAD:SPONGE	1	Y	TOUCH
P15	JK70-30061A	SPRING-LEVER	1	Y	
P16	JK72-21148A	PMO-HINGE LEVER, WHITE	1	Y	
	JK72-21148B	PMO-HINGE LEVER, BLACK			
P17	JK68-40371A	LABEL(R)-DUAL DISPLAY:DP	1	Y	
P18	JK72-21141A	PMO-COVER WIRE_10.1, WHITE	1	Y	
	JK72-21141B	PMO-COVER WIRE_10.1, BLACK			
P19	JK72-21142A	PMO-DUMMY MSR_10.1, WHITE	1	Y	
	JK72-21142B	PMO-DUMMY MSR_10.1, BLACK			
P20	JK75-40021A	ASSY-HINGE TILT&SWIVLE	1	Y	
P21	JK72-21122A	PMO-COVER HINGE, WHITE	1	Y	
	JK72-21122B	PMO-COVER HINGE, BLACK			
P22	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
P23	JK72-21128A	PMO-COVER SWIVEL FRONT,WHITE	1	Y	
	JK72-21128B	PMO-COVER SWIVEL FRONT,BLACK			
P24	JK72-21129A	PMO-COVER SWIVEL REAR,WHITE	1	Y	
	JK72-21129B	PMO-COVER SWIVEL REAR,BLACK			
P25	JK39-90047A	CABLE-DC	1	Y	
P26	JK39-90048A	CABLE-USB	1	Y	TOUCH
P27	JK39-90045A	CABLE-mini DP - DP	1	Y	
P28	S600300005A	SCREW-TAPTITE:PWH,M4,L8	4	Y	
P29	S650200009A	CABLE CORD CLAMP	1	Y	
P30	JK72-21125A	PMO-COVER TOP STAND_DUAL, GOLD	1	Y	
	JK72-21125B	PMO-COVER TOP STAND_DUAL, SILVER			
	JK72-21125C	PMO-COVER TOP STAND_DUAL, BLACK			

10. Part list

- 15.6inch dual display



NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
Q	FCD-156/DFZ6H*N	15.6" DUAL DISPLAY, TOUCH	1	Y	*COLOR
	FCD-156/DFZNH*N	15.6" DUAL DISPLAY, NON TOUCH			
Q1	SA95-70909A	ASSY FRONT DISPLAY_15,TOUCH,WHITE	1	Y	TOUCH
	SA95-70909B	ASSY FRONT DISPLAY_15,TOUCH,BLACK			
	SA95-70909C	ASSY FRONT DISPLAY_15,WHITE			NONE TOUCH
	SA95-70909D	ASSY FRONT DISPLAY_15,BLACK			
Q2	JK07-70023A	LCD:LED PANEL,15.6INCH	1	Y	
Q3	JK70-20519B	IPR-BRKT DISPLAY_15.6,DP+HDMI	1	Y	
Q4	JK49-10033A	UNIT-AD BOARD:DP+HDMI	1	Y	
Q5	JK68-40388A	LABEL(R)-EMI FABRIC_AD BD	1	Y	
Q6	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
Q7	JK39-80142A	HARNESS-LVDS,BACKLIGHT	1	Y	
Q8	JK48-10039B	UNIT-PCT CONTROLLER	1	Y	TOUCH
Q9	S600200028A	SCREW-TAPPING:PWH,M3,L6	2	Y	TOUCH
Q10	JK39-80127A	HARNESS-PCT:4P-4P	1	Y	TOUCH
Q11	JK72-21149A	PMO-BUTTON OSD,WHITE	1	Y	
	JK72-21149B	PMO-BUTTON OSD,BLACK			

10. Part list

- 15.6inch dual display

NO	PART CODE	PART NAME	Q'TY	Serviceable	REMARK
Q12	JK49-10032A	UNIT-OSD BOARD	1	Y	
Q13	JK39-80128A	HARNESS-OSD:8P-7P	1	Y	
Q14	JK72-21165B	PMO-REAR DISPLAY_15.6,with HOLE, WHITE	1	Y	
	JK72-21165D	PMO-REAR DISPLAY_15.6,with HOLE, BLACK			
Q15	JK73-10013A	RMO-PAD:SPONGE	1	Y	TOUCH
Q16	JK70-30061A	SPRING-LEVER	1	Y	
Q17	JK72-21148A	PMO-HINGE LEVER, WHITE	1	Y	
	JK72-21148B	PMO-HINGE LEVER, BLACK			
Q18	JK68-40371B	LABEL(R)-DUAL DISPLAY:DP+HDMI			
Q19	JK72-21166A	PMO-COVER WIRE_15.6, WHITE	1	Y	
	JK72-21166B	PMO-COVER WIRE_15.6, BLACK			
Q20	JK72-21167A	PMO-DUMMY MSR_15.6, WHITE	1	Y	
	JK72-21167B	PMO-DUMMY MSR_15.6, BLACK			
Q21	JK75-40021A	ASSY-HINGE TILT&SWIVLE	1	Y	
Q22	JK72-21122A	PMO-COVER HINGE, WHITE	1	Y	
	JK72-21122B	PMO-COVER HINGE, BLACK			
Q23	S600200028A	SCREW-TAPPING:PWH,M3,L6	3	Y	
Q24	JK72-21128A	PMO-COVER SWIVEL FRONT,WHITE	1	Y	
	JK72-21128B	PMO-COVER SWIVEL FRONT,BLACK			
Q25	JK72-21129A	PMO-COVER SWIVEL REAR,WHITE	1	Y	
	JK72-21129B	PMO-COVER SWIVEL REAR,BLACK			
Q26	JK39-90047A	CABLE-DC	1	Y	
Q27	JK39-90048A	CABLE-USB	1	Y	TOUCH
Q28	JK39-90045A	CABLE-mini DP - DP	1	Y	
Q29	S600300005A	SCREW-TAPTITE:PWH,M4,L8	4	Y	
Q30	S650200009A	CABLE CORD CLAMP	1	Y	
Q31	JK72-21125A	PMO-COVER TOP STAND_DUAL, GOLD	1	Y	
	JK72-21125B	PMO-COVER TOP STAND_DUAL, SILVER			
	JK72-21125C	PMO-COVER TOP STAND_DUAL, BLACK			

