



User Manual

M15AL01/ M15AL11

Notice

The illustrations in this user's manual are for reference only. Actual product specifications may vary with territories.

The information in this user's manual is subject to change without notice.

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Reverse engineering or disassembly is prohibited.

Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle.

For more information on the Waste from Electrical and Electronics Equipment (WEEE) regulations, visit http://ec.europa.eu/environment/waste/weee/index_en.htm

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Preface

■ 1.1 Regulations information

- FCC rules

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- CAN ICES-003(B) / NMB-003(B)

- CE compliance

This device is classed as a technical information equipment (ITE) in class A and is intended for use in commercial, transport, retailer, public, automation...field.

- RoHS Directive 2011/65/EU & (EU) 2015/863



WARNING

THIS PRODUCT CONTAINS A BUTTON BATTERY

If swallowed, a lithium button battery can cause severe or fatal injuries within 2 hours. Keep batteries out of reach of children.

If you think batteries may have been swallowed or placed inside any part of the body, seek immediate medical attention.



CAUTION: This product is intended for exclusive use and will not be used in places where children may come into contact with it.



CAUTION: Any changes or modifications not expressly approved by the guarantee of this device could void the user's authority to operate the equipment.

■ 1.2 Safety instructions

The following safety precautions will increase the life of the panel PC. Follow all Precautions and instructions.

Do not place this device underneath heavy loads or in an unstable position.

Do not use or expose this device around magnetic fields as magnetic interference may affect the performance of the device.

Do not expose this device to high levels of direct sunlight, high-humidity or wet conditions.

Do not block the air vents to this device or impede the airflow in any way.

Do not expose to or use near liquid, rain, or moisture.

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

- For CLASS I ME EQUIPMENT

The instructions for use shall include a warning statement to the effect: "WARNING: To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth."

- The user must not modify the internal circuit design.
Only the manufacturer may carry out modifications or maintenance work.
- The unit can be operated at an ambient temperature of max.40°C (104°F).
Do not subject it to temperatures below 0°C (32°F) or above 40°C (104°F).



CAUTION: Incorrectly replacing the battery may damage this computer. Replace only with the same or equivalent type recommended by the manufacturer. Disposal of used batteries according to the manufacturer's instructions.

■ 1.2 Consignes de sécurité

Les mesures de précaution suivantes servent à prolonger la durée de vie de l'ordinateur. Par conséquent, veuillez observer l'ensemble des mesures de précaution et des instructions.

Ne pas poser d'objets lourds sur l'appareil ou ne pas le mettre pas dans une position instable.

Ne pas exposer l'appareil à de forts champs magnétiques, puisque cela pourrait causer des interférences.

Ne pas exposer l'appareil directement aux rayons du soleil, à l'humidité ou ne pas le placer dans un endroit humide.

Ne pas couvrir la fente d'aération de l'appareil ou ne pas empêcher la circulation d'air de quelque sorte que ce soit.

Ne pas utiliser l'appareil à proximité de liquides, de pluie ou d'humidité.

Ne pas utiliser le modem pendant un orage.

- Pour l'ÉQUIPEMENT DE CLASSE I ME



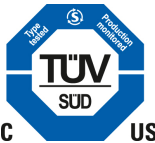



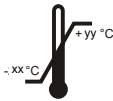




Les instructions d'utilisation doivent inclure un avertissement à l'effet : "AVERTISSEMENT : Pour éviter le risque de choc électrique, cet équipement doit uniquement être connecté à une alimentation secteur avec terre de protection."

- N'apportez pas de modifications à la conception du circuit interne de l'appareil. Seul le fabricant peut effectuer des modifications ou des travaux de maintenance.
- L'appareil peut être utilisé à une température ambiante maximum de 40°C (104°F). Ne pas exposer l'appareil à une température inférieure à 0°C (21°F) ou supérieure à 40°C (104°F).



ATTENTION : Ne pas replacer correctement la pile peut endommager l'ordinateur. La remplacer uniquement par un modèle identique ou un équivalent recommandé par fabricant. Débarrassez-vous des piles usagées d'après les instructions du constructeur.

■ 1.3 Explanation of symbols

On the device, you may find the following symbols (nonrestrictive list):	
	Indicates the device meets the requirements of the applicable EC directives/regulations.
	Indicates compliance with Part 18 of the FCC rules.
	US NRTL_cTUVus List mark
	Consult the Instructions For Use
	Caution
	Indicates this device must not be thrown in the trash but must be recycled, according to the European WEEE (Waste Electrical and Electronic Equipment) directive.
On the box of the device, you may find the following symbols (nonrestrictive list):	
	Indicates the temperature limits to which the device can be safely exposed when being stored.
	Indicates the range of humidity to which the device can be safely exposed when being stored.
	Indicates a device that can be broken or damaged if not handled carefully when being stored.
	Indicates a device that needs to be protected from moisture when being stored.
	Indicates the storage direction of the box. The box must be transported, handled and stored in such a way that the arrows always point upwards.

■ 1.4 Rechargeable Coin Cell Replacement Notice

- (1) Hazardous situation might develop by the incorrect polarity connection or replacement of a coin cell on the desired Control PCBA.
- (2) For Coin cell intended to be changed only by Service personnel with the use of soldering.
- (3) The terminals of Coin Cell have clear polarity design and the location for mounting the Coin cell has been designed to prevent accidental short circuiting and/or block ventilation.
- (4) Seek medical advice immediately if a coin cell has been swallowed.
- (5) Store batteries out of reach of children so that they are not accidentally swallowed.

■ 1.5 EMC notice



WARNING: Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.



WARNING: Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.





WARNING: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the M15AL01/ M15AL11, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result

■ 1.6 Model definition

1. M15AL01/ M15AL11 is Panel PC which regarded as Medical Device Data Systems(MDDS).It is used for transfer, store, convert formats, and display medical device data and can be used as a part of the medical system for diagnosis or monitoring. Complete diagnosis or monitoring capabilities are provided by the medical system. M15AL01/ M15AL11 do not modify the data or modify the display of the data, and it does not by itself control the functions or parameters of any other medical device.
2. M15AL01/ M15AL11 does not deliverer the energy to or extract the energy from the patient.
3. M15AL01/ M15AL11 does not deliver the substances to or extract the substances from the patient.
4. M15AL01/ M15AL11 does not supply sterile or intended to be sterilized by the user, or other applicable microbiological controls.
5. M15AL01/ M15AL11 is not intended to modify the patient environment.
6. M15AL01/ M15AL11 is not intended for use in conjunction with medicines.
7. M15AL01/ M15AL11 did not hold data critical to patient care.

■ 1.7 Notes for this manual

 CAUTION! Important information that must be followed for safe operation.

 WARNING: Describes hazards or dangers that might result in personal injury or death.

 NOTE: Information for special situations.


■ 1.8 Release history

Version	Revision note	Date
1.0	First released	05.2024

Getting to know the basics

■ 2.1 Product specification

This User's Manual provides instructions and illustrations on how to operate this panel PC. It is recommended to read this manual carefully before using this panel PC.

 NOTE: The product's specification will depend upon the actually shipped product.

System		
Processor	M15AL01	12th Gen. Intel® Alder Lake-U series Processors – Intel® Core™ i7-1265UE vPro Intel® Core™ i7-1255U vPro Intel® Core™ i5-1245UE vPro Intel® Core™ i5-1235U vPro Intel® Core™ i3-1215UE Intel® Core™ i3-1215U Intel® Celeron 7305E
	M15AL11	13th Gen. Intel® Raptor lake-U series Processors – Intel® Core™ i7-1365UE vPro Intel® Core™ i7-1355U vPro Intel® Core™ i5-1345UE vPro Intel® Core™ i5-1335U vPro Intel® Core™ i3-1315UE Intel® Core™ i3-1315U Intel® Core™ 5-120U Intel® Core™ 7-150U Intel® Processor U300
Memory	M15AL01	2 x 262 pin SO-DIMM up to 64GB, Dual Channel 1.1 V DDR5 4800MHz
	M15AL11	2 x 262 pin SO-DIMM up to 64GB, Dual Channel 1.1 V DDR5 5200MHz

Display and Touch Screen	
Display	15.6" 1920x1080 Full HD LED with 10-Point Capacitive Multi-Touch
Brightness	350 nits
Graphics	
Chipset	Intel® UHD Graphics
Display Interface	Supports two independent displays 1 x HDMI 1.4b: 4096 x 2160@30Hz 1 x DVI-I: 1920 x 1080@60Hz (Optional daughter board) 1 x VGA (Optional daughter board)
Storage	
Storage	1 x M.2 2280, M key (PCIe x4 or SATA, either one) Option: 1 x M.2 2280, M key, SSD SATA I/F
Audio	
Audio Codec	Realtek ALC888S-VD
OS Support	
OS Support	Windows 11 64bit, Linux 64bi
Network	
Ethernet	1 x Intel® 2.5 GbE 1 x Intel® 2.5 GbE (Optional) (Support Wake on Lan)

WLAN	Realtek RTL8821CE 802.11a/b/g/n/ac + Bluetooth 5.0 WLAN card M.2 2230 E key (Optional) Internal antenna x2 (default) External antenna (Dipole) x2 (Optional)		
I/O Interface			
LAN	1 x Intel® 2.5 GbE 1 x RJ-45 2nd Lan 2.5GbE (Optional)		
Serial Ports	1 x RS-232(DB-9) 2 x RS-232/422/485 (DB-9) (RS-232 with power supply: ring in/ 5V (standard) & 12V (with specific optional board))		
USB	4 ports USB 3.2 Gen 2 (Type A) 4 ports USB 2.0 (carte optionnelle)		
Audio	1 x Line-out, 1 x Mic-in		
Power			
Adapter	19V/ 4.74A 90 watts, 3 pin external adapter (Medical) (FSP GROUP/ FSP090M-DBB)		
Power	9-36V DC-in (Optional wide range board)		
Watchdog Timer			
Watchdog Timer	255 Sec.		
Mechanism			
IP Rating	IP65 Front Panel Protection		
Mounting	VESA Mount (100 x 100mm)		
Dimension (WxHxD)	394 x 256 x 48.9	Weight	4.6 Kg

Environment	
Packing accessory	M15AL01/ M15AL11 panel PC (1x) Power cord (1x), POAG cable (1x) 90W/19V medical adapter (1x)
Purpose	Will be used for general purpose in healthcare related field as an assisting device for data access and bedside terminal.
Operator	Is to assist clinicians to access and display medical data at the bedside. It connects to the internal database through the Ethernet and display the information to doctors, nurses, patients and so on. The doctors, nurses and patients can record data back to the hospital information system.
Atmospheric pressure	500 to 1060hPa
Transport / storage environment	Temperature: -20°C (-4°F) ~ 60°C (140°F)
	Humidity: 10% ~ 90%
Operating environment	Temperature: 0°C (32°F) ~ 40°C (104°F)
	Humidity: 10% ~ 90% relative humidity, non-condensing
Usage field	Hospital, medical institution
Product service life	Over 5 years
Manufacturer	Shuttle Inc. Address: No. 30 Lane. 76 ReiKuang Rd., Nei-Hu Dist., Taipei, Taiwan http://tw1.shuttle.com/ Tel: 886-2-8792-6168


CAUTION: MODEL M15AL01/ M15AL11 IS DESIGNED TO USE WITH THE
DC INPUT: (19Vdc / 4.74A) ADAPTERS. (FSP GROUP / FSP090M-DBB)

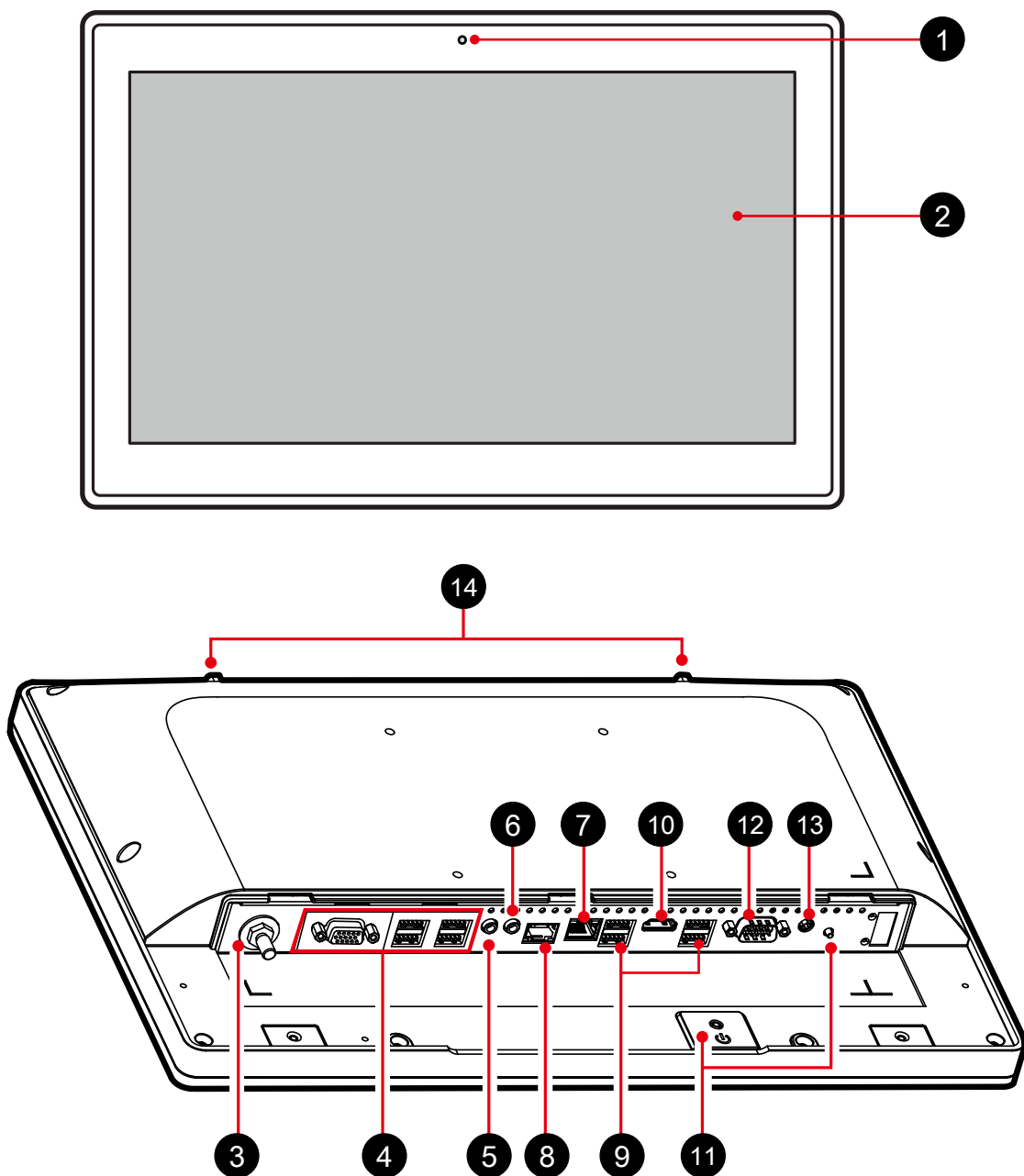


CAUTION! Adapter watt should follow default setting or refer to rating label information.

■ 2.2 Product overview

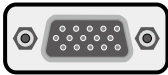



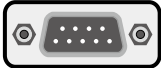
Refer to the following illustration to identify the components on this side of the panel PC. Features and configurations vary by model.

 NOTE: The product's color, I/O port, indicator location will depend upon the actually shipped product.



- ① Webcam
- ② 15.6" FHD LCD display (True-Flat PCAP touch)
- ③ Potential equalization pin (POAG) (optional)

- ④  Optional I/O ports are available depending on the specs of the actually shipped product.

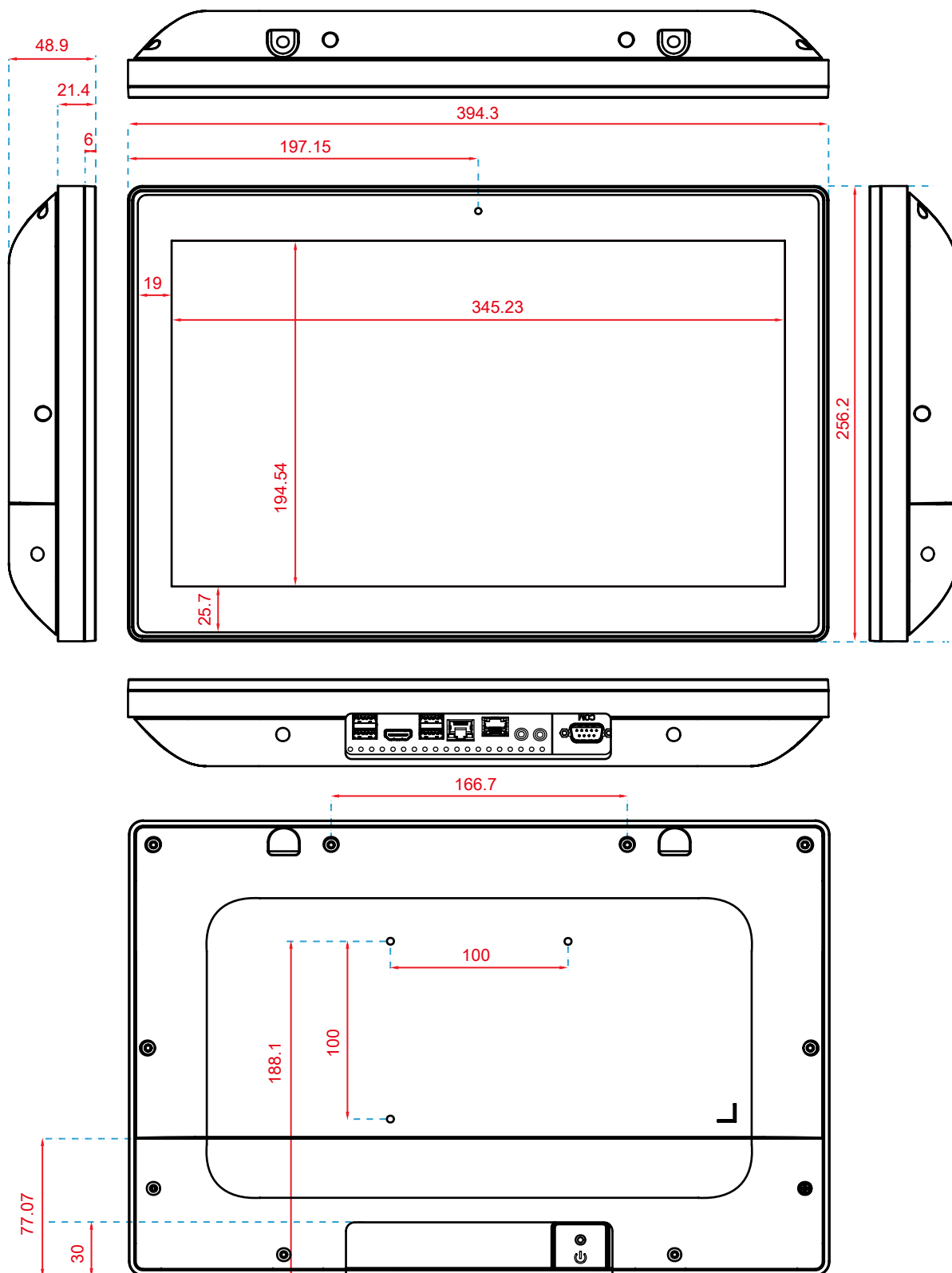
Optional I/O Port	Occupied Sections	Specifications / Limitations
D-Sub (VGA) port	1 	Max. resolution: D-Sub (VGA): 1920x1080 DVI-I (Single Link): 1920x1080 HDMI: 4096x2160@60Hz
DVI-I port	1 	
HDMI port	1 	
USB 2.0 Ports	1 	USB 2.0 x 4pcs
COM Port	1 	RS232 only

- ⑤ Headphone / Line-out jack
- ⑥ Microphone jack

-
- 7 LAN (RJ45) port: 1st LAN on MB
 - 8 LAN (RJ45) port: 2nd LAN via optional daughter board
(support wake on LAN)
 - 9 USB 3.2 Type-A ports
 - 10 HDMI port
 - 11 Power button
 - 12 COM 1 port (RS232 only)
 - 13 Power jack (DC-IN)
 - 14 Connector for external antenna (optional)

■ 2.3 Product dimensions

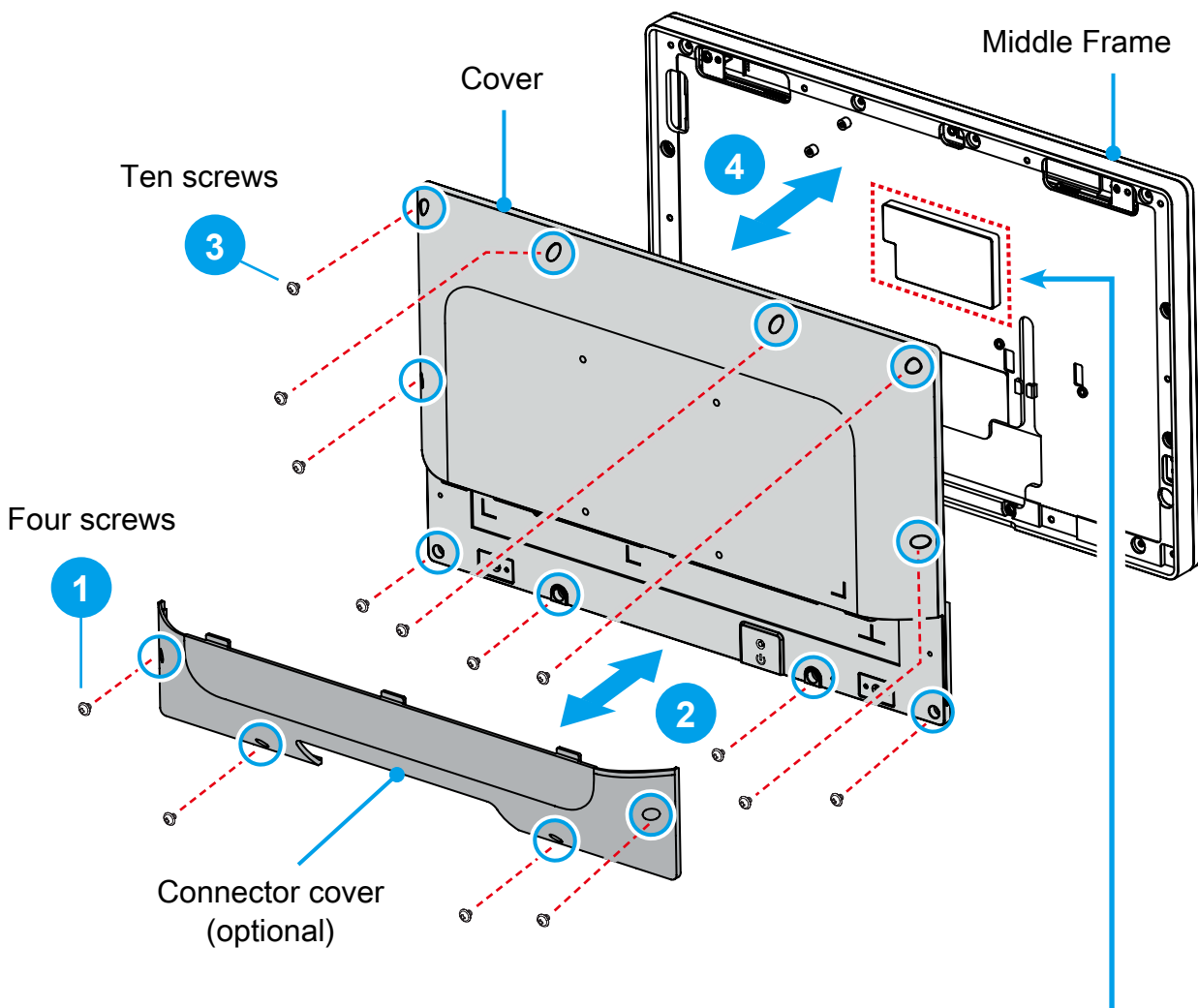
Unit: mm



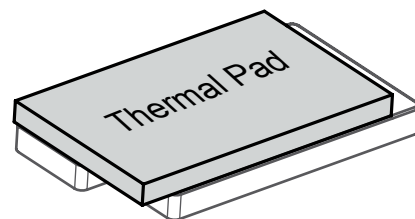
Getting Started

CAUTION: For safety reasons, please ensure that the power cord is disconnected before opening the case.

- Follow the steps 1 → 4 to remove the cover.
- Follow the steps 4 → 1 to install the cover.

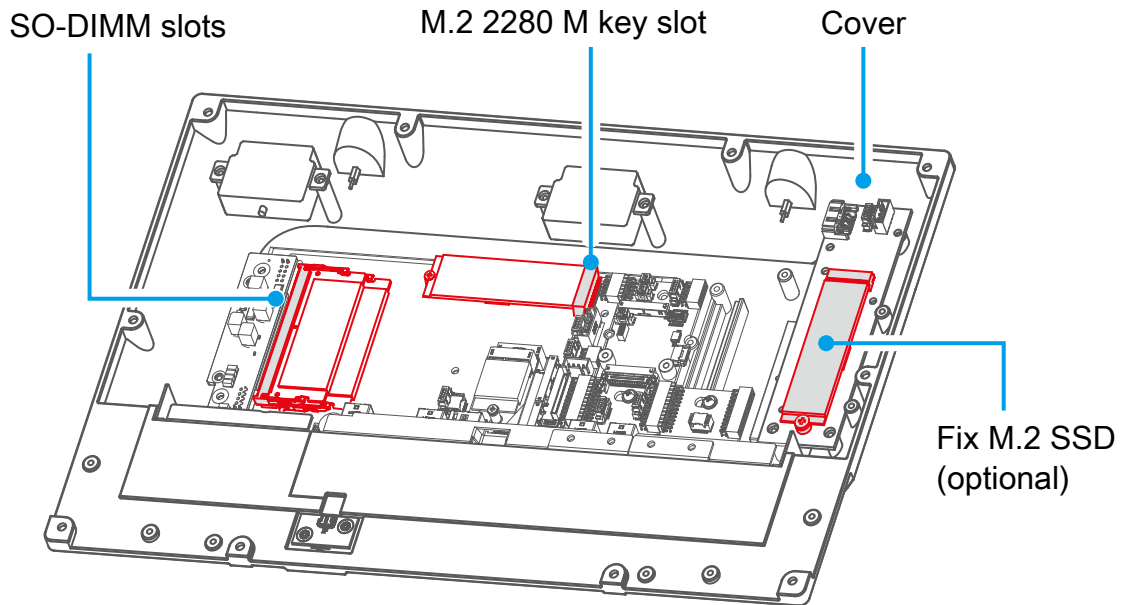


- If you install the M.2 SSD, please paste a thermal pad (73*46*5.5 mm) on the middle frame can effectively reduce its temperature.



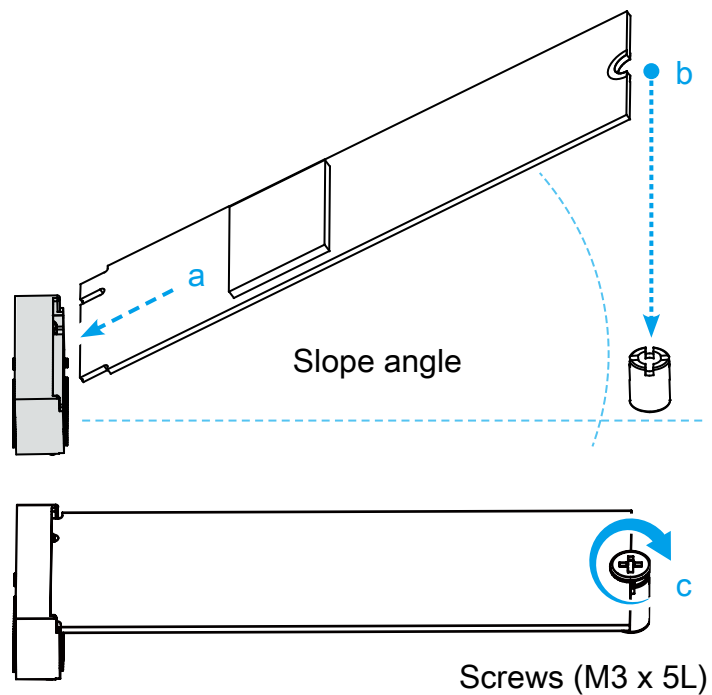
■ 3.1 M.2 Device Installation

1. Locate the M.2 2280 M key slot on the motherboard, unfasten the screw first.



2. Install the M.2 device into the M.2 slot and secure with the screw.

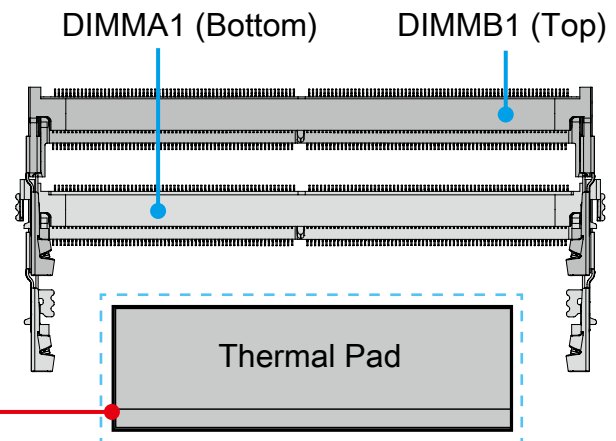
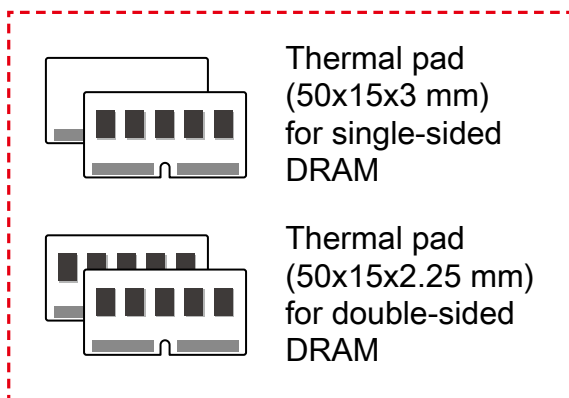
- M.2 2280 M key slot



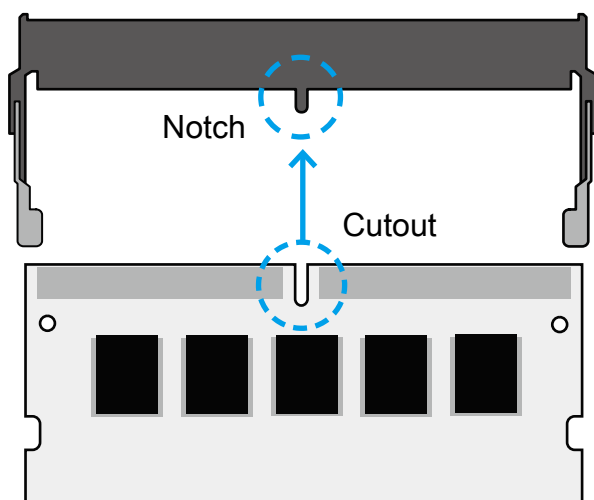
■ 3.2 Memory Module Installation

M15AL01	2 x 262 pin SO-DIMM up to 64GB, Dual Channel 1.1 V DDR5 4800MHz With thermal pad *4
M15AL11	2 x 262 pin SO-DIMM up to 64GB, Dual Channel 1.1 V DDR5 5200MHz, With thermal pad *4

1. Locate the SO-DIMM and paste the thermal pad on the motherboard, which can effectively reduce its temperature.

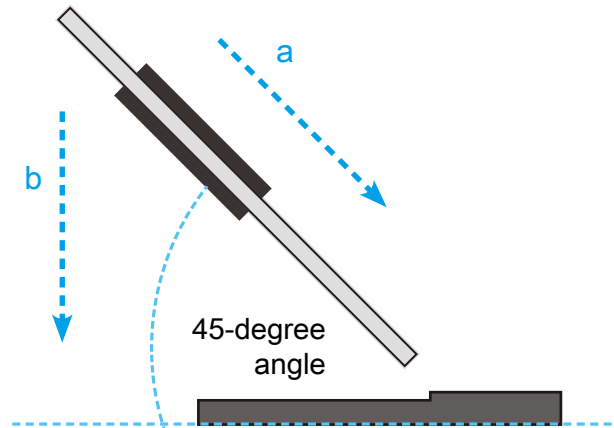


2. Install the 1st memory module into the DIMMA1 slot.
3. Align the notch of the memory module with the one of the relevant memory slot.



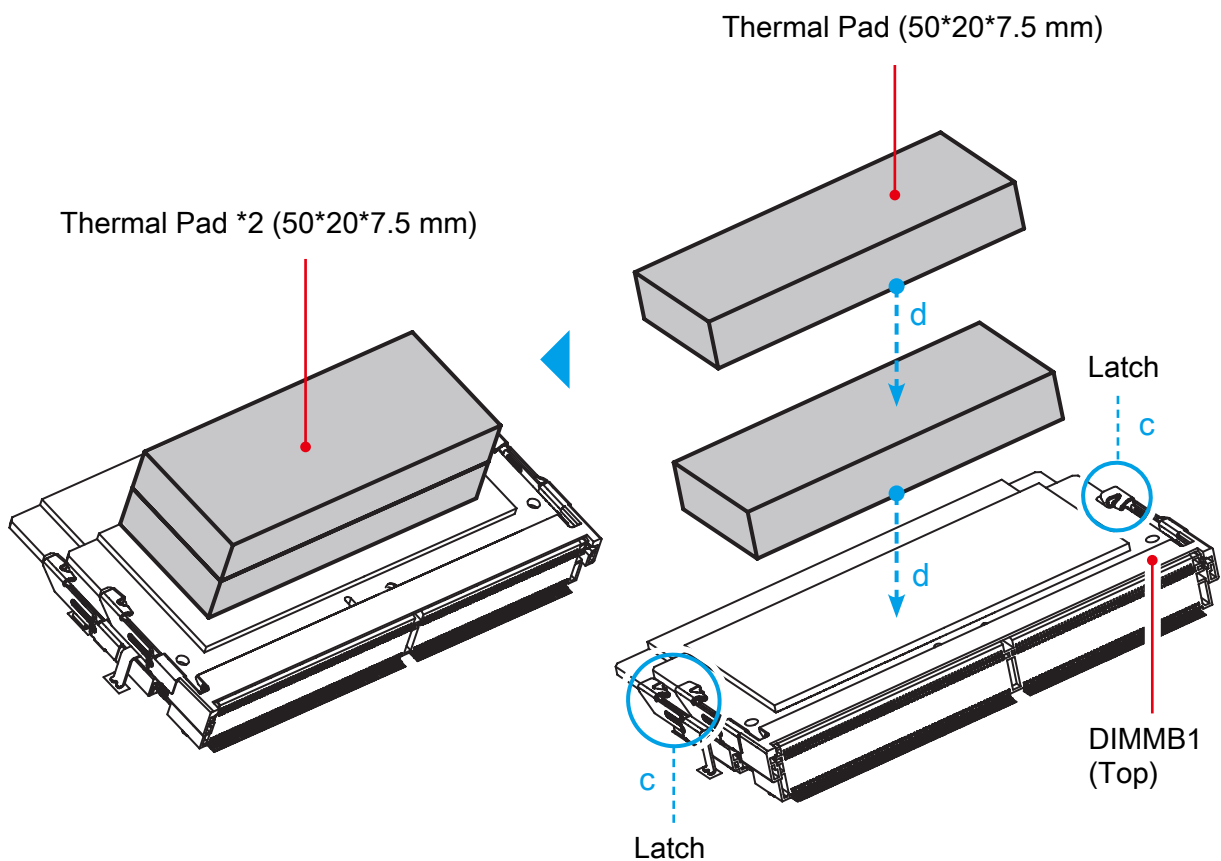
4. Gently insert the module into the slot in a 45-degree angle.

5. Carefully push down the memory module until it snaps into the locking mechanism.



6. Install the 2nd memory module into the DIMMB1 slot (proceed with steps B3 to B5).

7. Paste the thermal pad (50*20*7.5 mm), as shown.

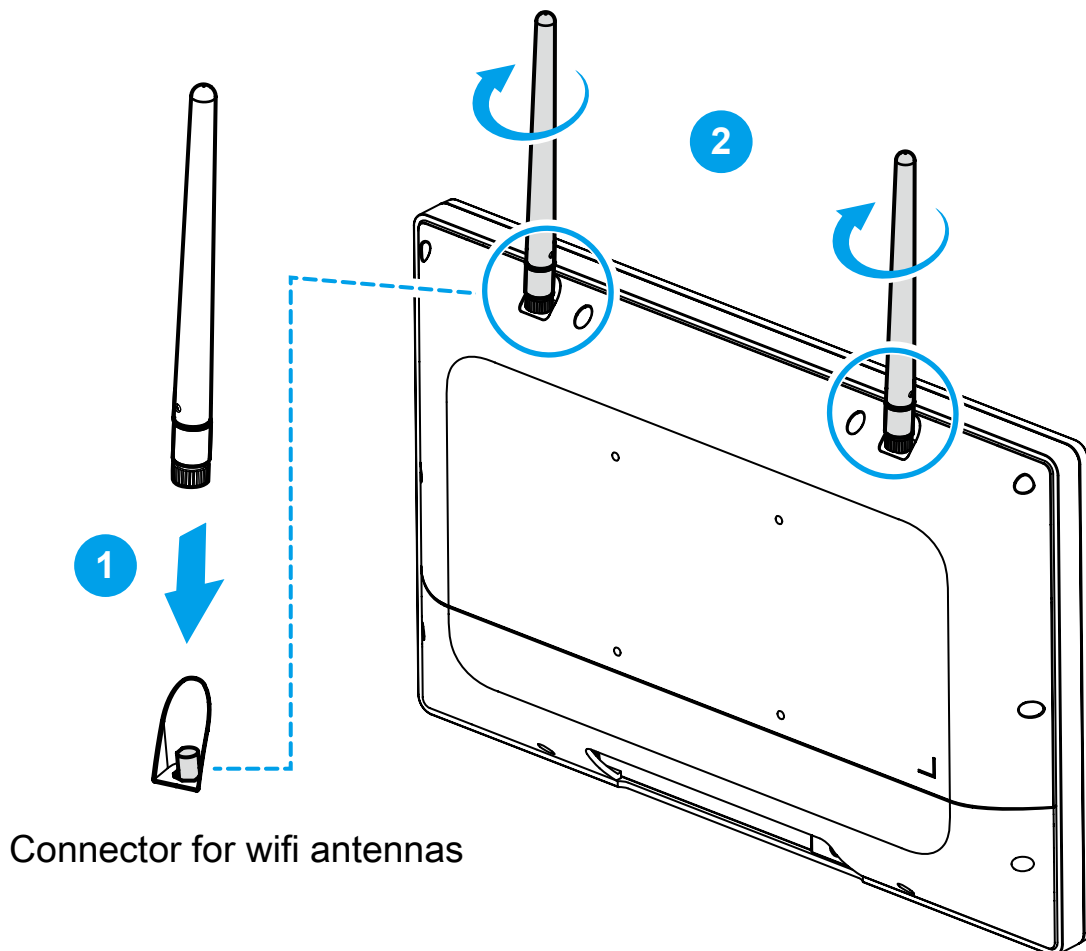


■ 3.3 Optional installation of WLAN antennas (appropriate chassis version required)

Take the two antennas out of the accessory box.

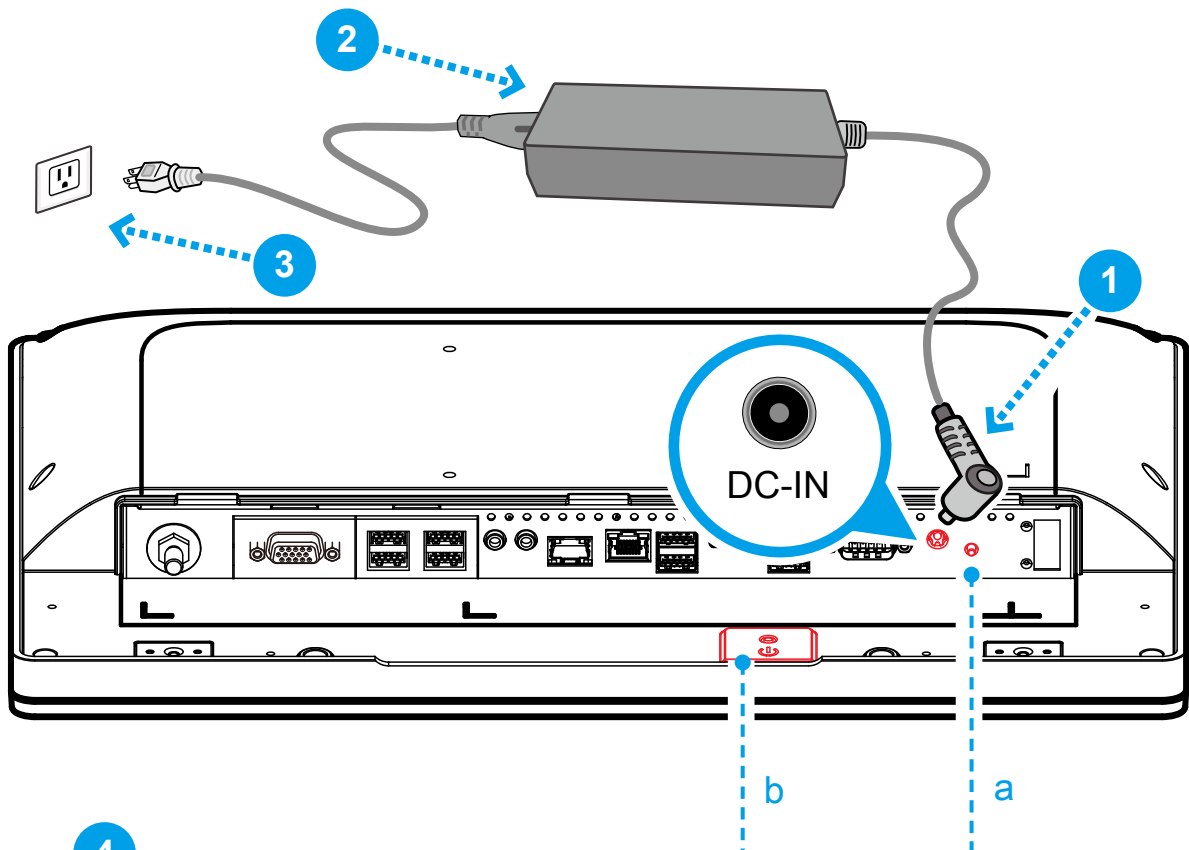


Screw the antennas on to the appropriate connectors on the back panel. Make sure the antennas are aligned vertically or horizontally to achieve the best possible signal reception.





■ 3.4 Powering on the system

Follow the steps (1-3) below to connect the AC adapter to the power jack (DC-IN). Press the power switch/button (4) to turn on the system.



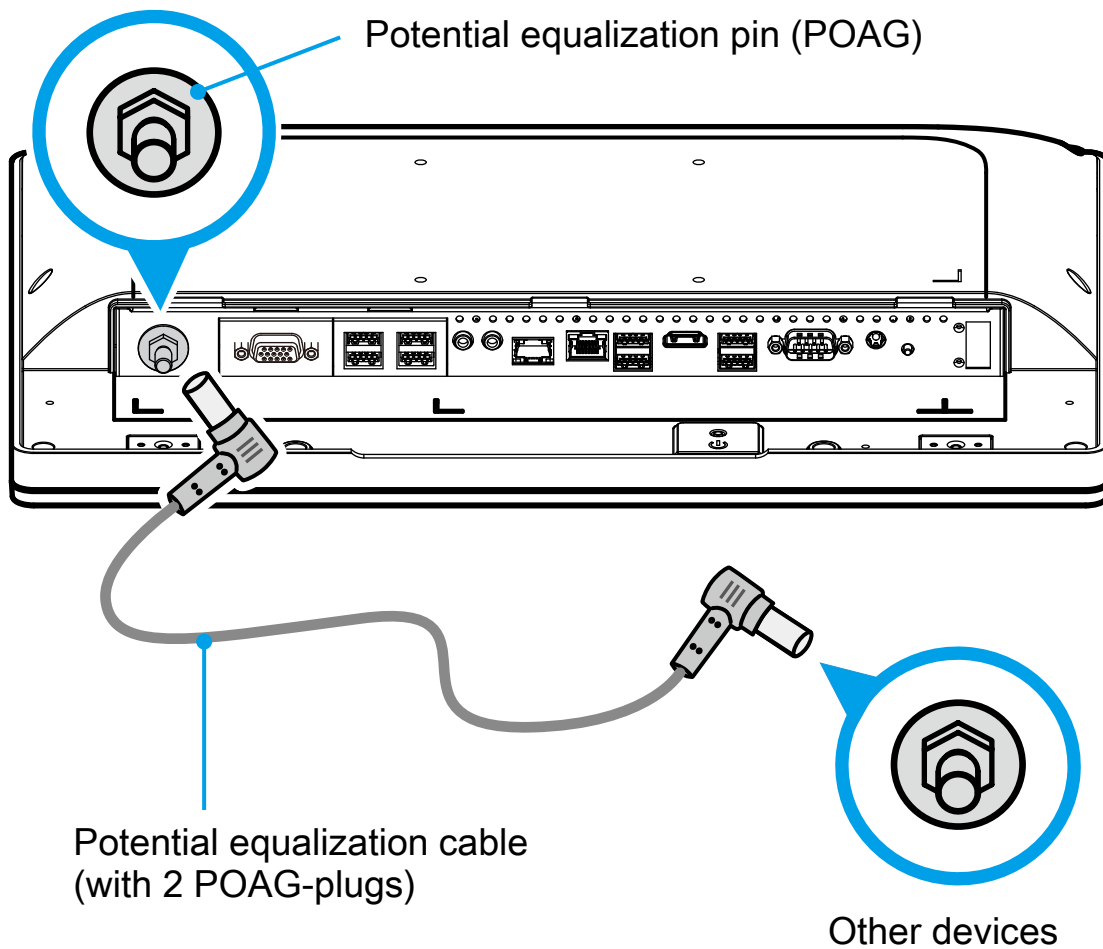
4 Press the power button (a or b) to turn on the system.

 **NOTE:** Press and hold the power button (a or b) for 5 seconds to force shutdown.

 **CAUTION:** Do not use inferior extension cords as this may result in damage to your panel PC. The panel PC comes with its own AC adapter. Do not use a different adapter to power the panel PC and other electrical devices.

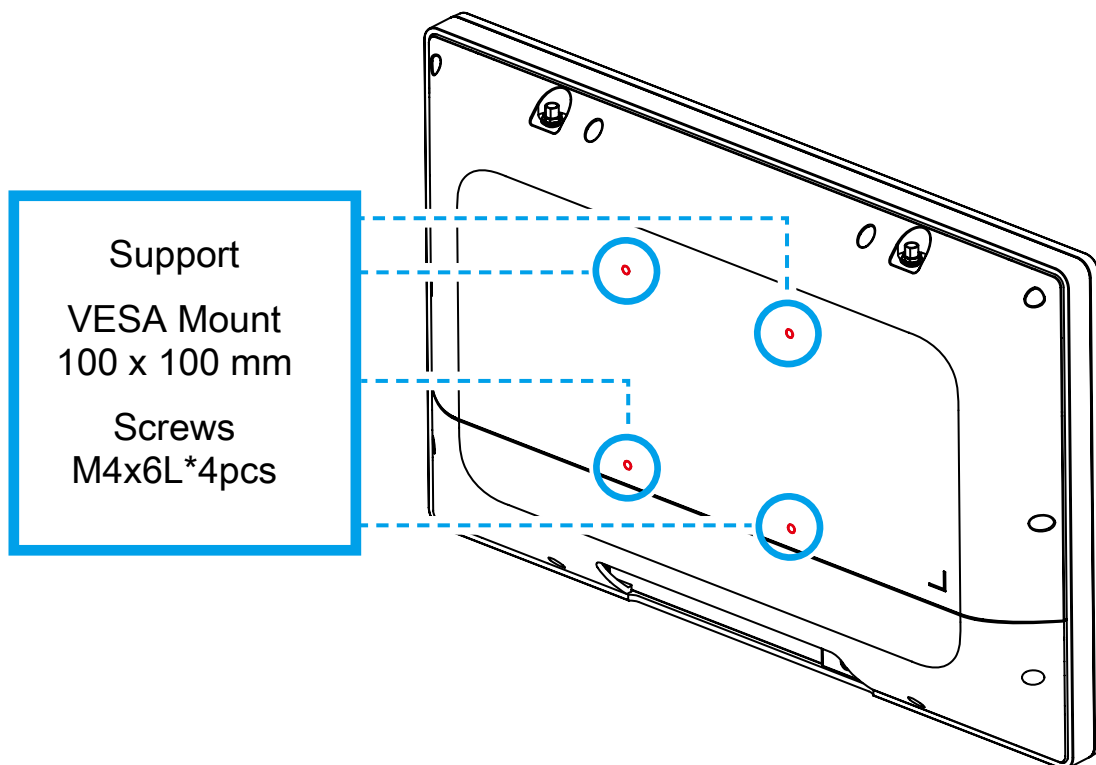
■ 3.5 Potential equalization (optional)


When potential equalization between the panel PC and other devices is required then connect the potential equalization pin (POAG) to the potential equalization terminal of the equipment.




■ 3.6 VESA mounting to the wall (optional)

The standard VESA openings show where an arm / wall mount kit which is available separately can be attached.



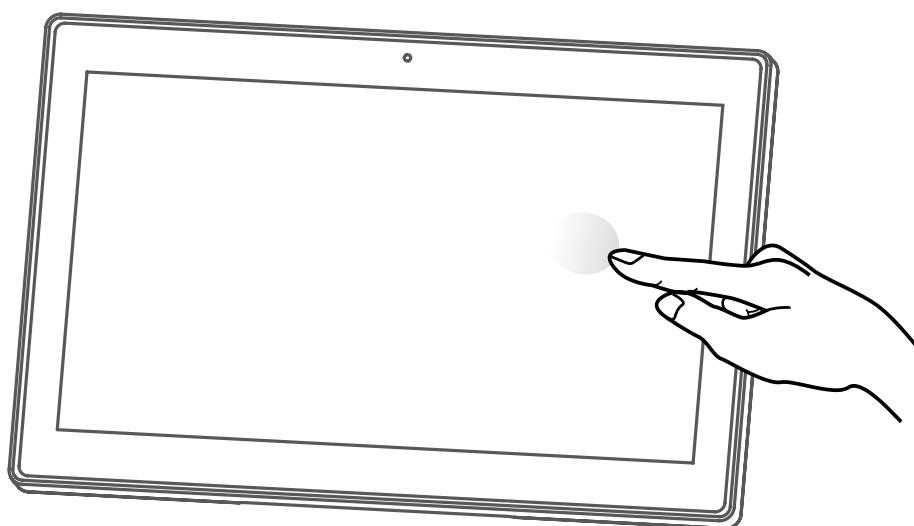
 **NOTE:** The Panel PC can be wall-mounted using a VESA compatible 100 mm x 100 mm wall / arm bracket. The maximum load capacity is 10 kg and mounting suitable in heights of ≤ 2 m only. The metal thickness of the VESA mount must be between 1.6 and 2.0 mm.

 **REMARQUE:** Le Panel PC peut être fixé au mur ou à un bras à l'aide d'un support VESA 100x100 mm. Le support doit être conçu pour une charge d'au moins 10 kg et ne doit pas être situé à plus de 2 m de hauteur. L'épaisseur du support de montage VESA doit être comprise entre 1,6 et 2,0 mm.

■ 3.7 How to use the Touch Panel

Touch panel brings digital life for an easy touch experience. Experience the ease of managing your digital life with a few touches. Your touch functions like a mouse device and all you need to interact with the touch panel.

1. Touch = left-click on the mouse
2. Touch and hold = right-click on the mouse



■ 3.8 Cleaning the screen

Follow these rules for cleaning the outside and handling your screen on the panel PC :

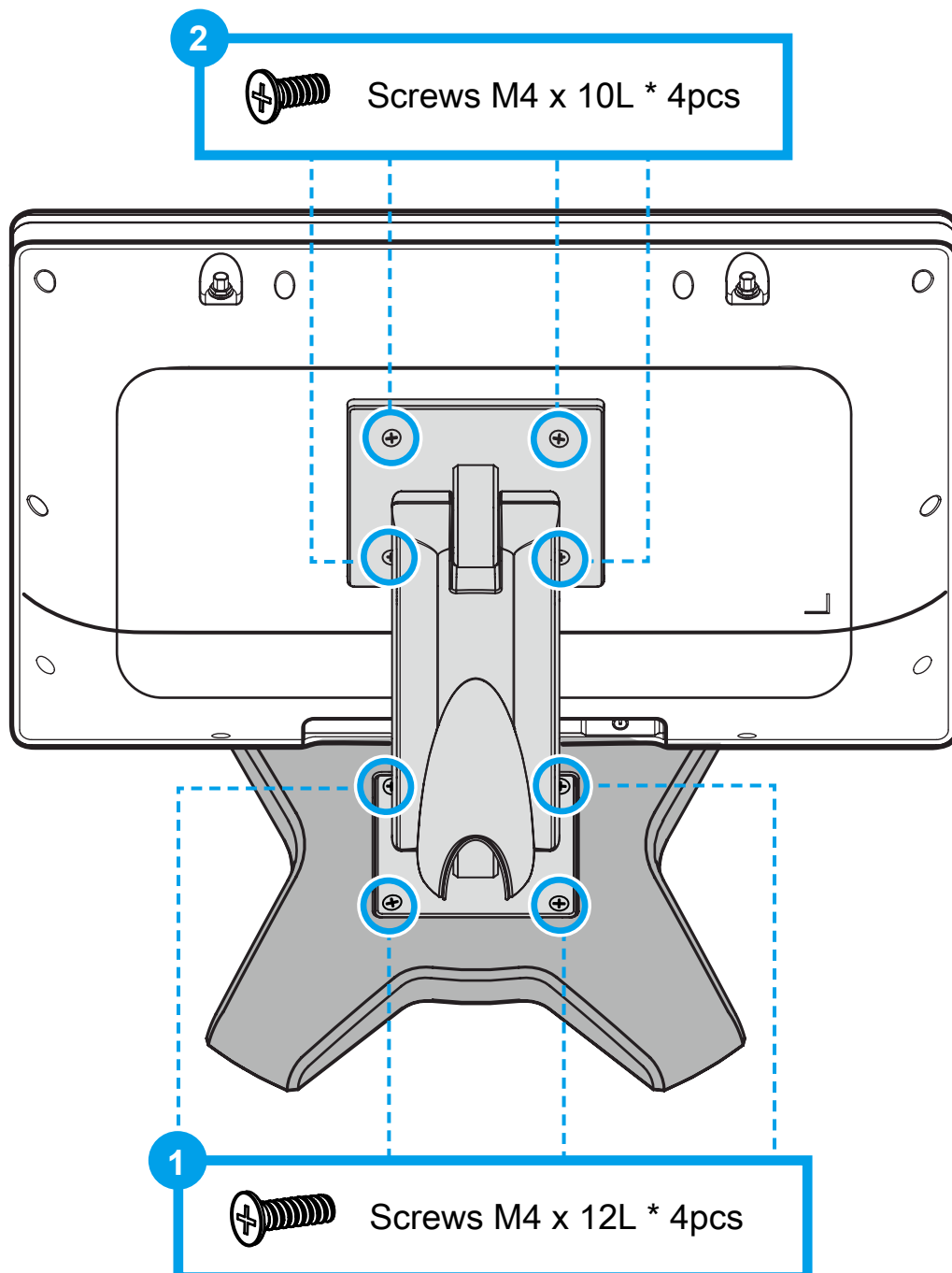
1. Moisten a soft cloth with a little water or alcohol (max. 75%) to clean the screen. Please never spray alcoholic cleaning agents directly onto the touchscreen.
2. Note that only the front side is IP65 protected. Be sure to avoid moisture on the other components.




CAUTION: Do not use or spray strong solvents such as benzine, thinner or any other solvent.

■ 3.9 Using the Vertical Stand (optional)

1. Tighten the vertical stand securely with four screws (M4 x 12L)
2. Properly tighten the vertical stand with four screws (M4 x 10L) at the rear of the Panel PC.



BIOS Setup

 **NOTE:** Please check your current BIOS version. If your system is not running the latest version, it may pose security risks. Please download and update the BIOS from the **Shuttle official** website.

Please run BIOSCheckerSetup (download the application from the Shuttle website https://image.shuttle.com/ResourceCenter/download_file.jsp?file_id=33992) to detect your BIOS version.

BIOSChecker is Shuttle's automatic support tool that scans your system for BIOS updates and provides download links.

Installing it helps keep your system up to date for best performance.

Steps:

1. Search **BIOSChecker** in the **Start** menu and open it.
2. The tool will automatically check for available updates.
3. If a new version is found, it will show "**New version available**" and provide a link to the Shuttle support site to download the BIOS for your model.

For detailed instructions, visit:

<https://global.shuttle.com/support/faqDetail?faqId=1891>

■ 4.1 About BIOS Setup

The default BIOS (Basic Input/Output System) is already properly configured and optimized, there is normally no need to run this utility.

■ 4.1.1 When to Use BIOS Setup ?

You may need to run the BIOS Setup when:

- An error message appears on the screen during the system booting up and is requested to run SETUP.
- You want to change the default settings for customized features.
- You want to reload the default BIOS settings.



CAUTION! We strongly recommend that you change the BIOS settings only with the help of a trained service personnel.

■ 4.1.2 How to run BIOS Setup ?


To run the BIOS Setup Utility, turn on the Box-PC and press the [Del] or [F2] key during the POST procedure.

If the message disappears before you respond and you still wish to enter Setup, either restart the system by turning it OFF and ON, or simultaneously pressing [Ctrl]+[Alt]+[Del] keys to restart.


The setup function only can be invoked by pressing [Del] or [F2] key during POST that provide an approach to change some setting and configuration the user prefer, and the changed values will save in the NVRAM and will take effect after the system rebooted.

Press [F7] key for Boot Menu.

· When OS support is Windows 11 :

1. Click the "Start  menu" and select "Settings".
2. Select "Windows Update" and Click "Advanced options".
3. Click "Recovery".
4. Under "Advanced startup", click "Restart now".
The system will restart and show the Windows 11 boot menu.
5. Select "Troubleshoot".
6. Choose "Advanced options".
7. Select "UEFI Firmware Settings".
8. Click "Restart" to restart the system and enter UEFI (BIOS).

· When OS support is Windows 10 :

1. Click the "Start  menu" and select "Settings".
2. Select "Update and Security".
3. Click "Recovery".
4. Under "Advanced startup", click "Restart now".
The system will restart and show the Windows 10 boot menu.
5. Select "Troubleshoot".
6. Choose "Advanced options".
7. Select "UEFI Firmware Settings".
8. Click "Restart" to restart the system and enter UEFI (BIOS).