User Manual

P15WL01/ P15AL01/ P15EL01

Notice

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

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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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English

■ 1.1 Regulations information

• 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.

• 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.

⚠ ⊕ **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: 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.

• 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.

• 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 Notes for this manual

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

☞ NOTE: Information for special situations.

■ 1.4 Release history

Version	Revision note	Date
1.0	First released	10.2023

English

■ 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	P15WL01	8th Gen. Intel® Whiskey Lake-U series Processors – Intel® Core™ i7-8665UE vPro Intel® Core™ i7-8565U Intel® Core™ i5-8365UE vPro Intel® Core™ i5-8265U Intel® Core™ i3-8145UE Intel® Celeron 4305UE
	P15EL01	Intel® Elkhart Lake CPU, Atom® x6425E, 4 Core, 1.5M Cache, 2.0GHz (3.0GHz), 12W (optional) Pentium® J6426, 4 Core, 1.5M Cache, 2.0GHz (3.0GHz), 10W (optional) Celeron® J6412, 4 Core, 1.5M Cache, 2.0GHz (2.6GHz), 10W (optional)
	P15AL01	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

Memory	P15WL01	2 x 260 pin SO-DIMM up to 64GB, Dual Channel 1.2 V DDR4 2400MHz
	P15EL01	2 x 260 pin SO-DIMM up to 32GB, Dual Channel 1.2 V DDR4 3200MHz
	P15AL01	2 x 262 pin SO-DIMM up to 64GB, Dual Channel 1.1 V DDR5 4800MHz

Display and Touch Screen	
Display	15.6" 1920x1080 Full HD LED with 10-Point Capacitive Multi-Touch
Brightness	250/350/450 nits (default 350nits)

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, Slidable design
	      1 x M.2 2280, M key, SSD SATA I/F, Fixed design
	      (Either one of above)

Audio	
Audio Codec	Realtek ALC6662

Network	
Ethernet	1 x Intel® 2.5 GbE 1 x Intel® GbE LAN or 2.5 GbE (optional) (Support Wake on Lan)
WLAN	1x M.2 2230, M key Realtek RTL8821C (optional) (802.11a/b/g/n/ac + Bluetooth 4.2 with 2x internal antenna (default) / 2x external antenna (optional))
I/O Interface	
LAN	1 x RJ-45 Gigabit Ethernet 1 x RJ-45 2nd Lan GbE or 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 x USB3.2 (Type A)
Audio	1 x Line-out 1 x Mic-in
Power	
Adapter	19V/ 4.7A 90W extenal adapter
Power	9-36V DC-in (Optional wide range board)
Watchdog Timer	
Watchdog Timer	255 Sec.
OS Support	
OS Support	Windows 11 64bit, Linux 64bi

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	
Operating Temperature	0 ~ 40°C
Storage Temperature	-20°C ~ 60°C
Relative Humidity	20% - 80% RH (non-condensing)
EMC	CE, FCC, BSMI,
Safety	CB, cTUVus,CEC, BSMI
RF	EU, US, Taiwan

CAUTION: MODEL P15WL01/ P15AL01/ P15EL01 IS DESIGNED TO USE WITH THE DC INPUT: (19Vdc / 4.74A) ADAPTERS.

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

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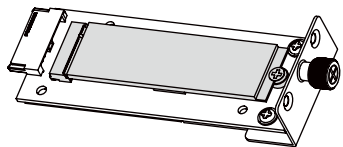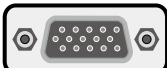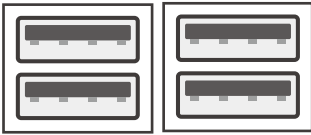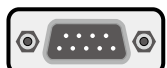
Refer to the following illustration to identify the components on this side of the panel PC. Features and configurations vary by model.

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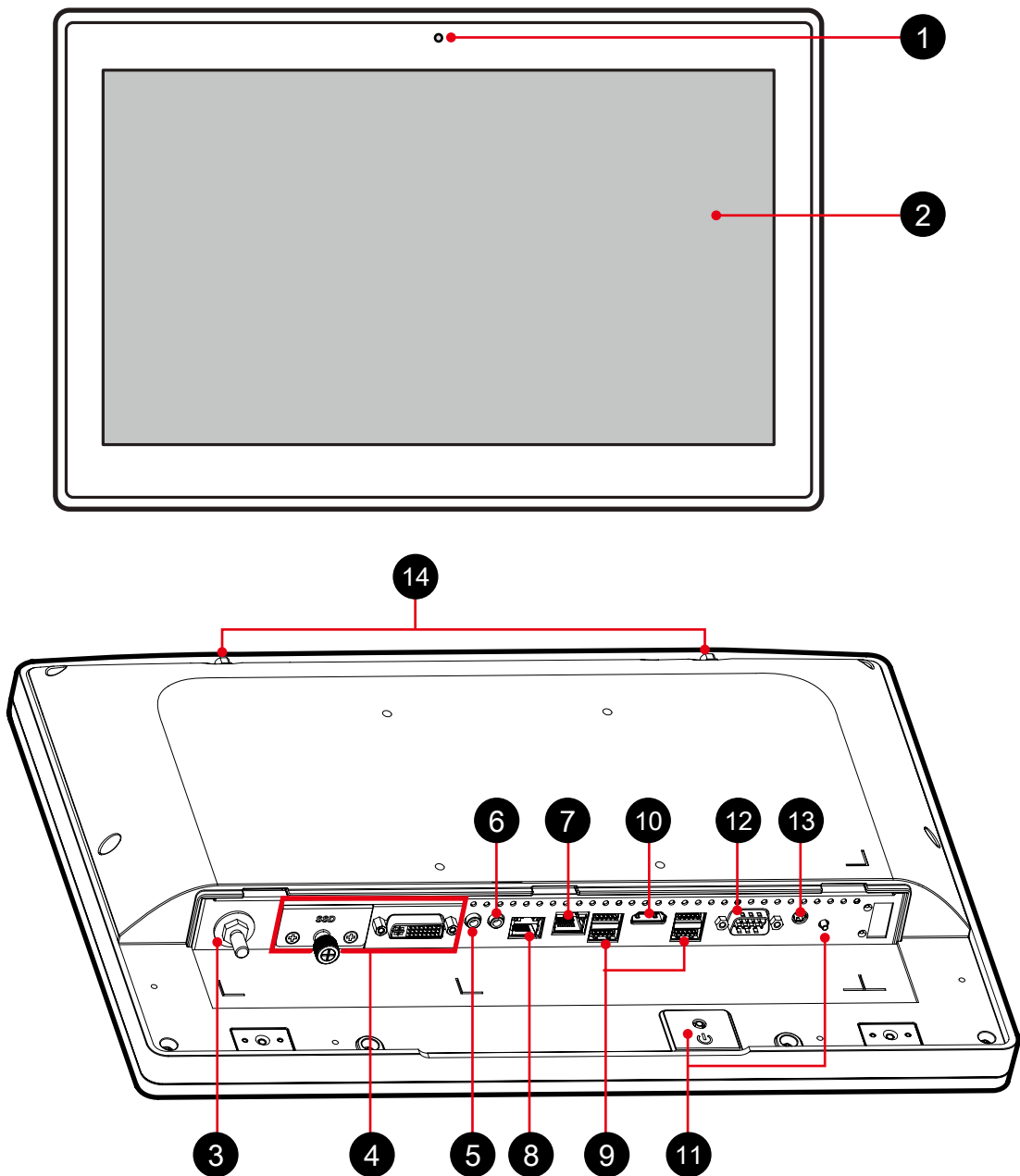
1 Webcam

2 15" 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
M.2 SSD	1		M.2 2280 M key slot
D-Sub (VGA) port	1		Max. resolution: D-Sub (VGA): 1920x1080
DVI-I port	1		DVI-I (Single Link): 1920x1080
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)

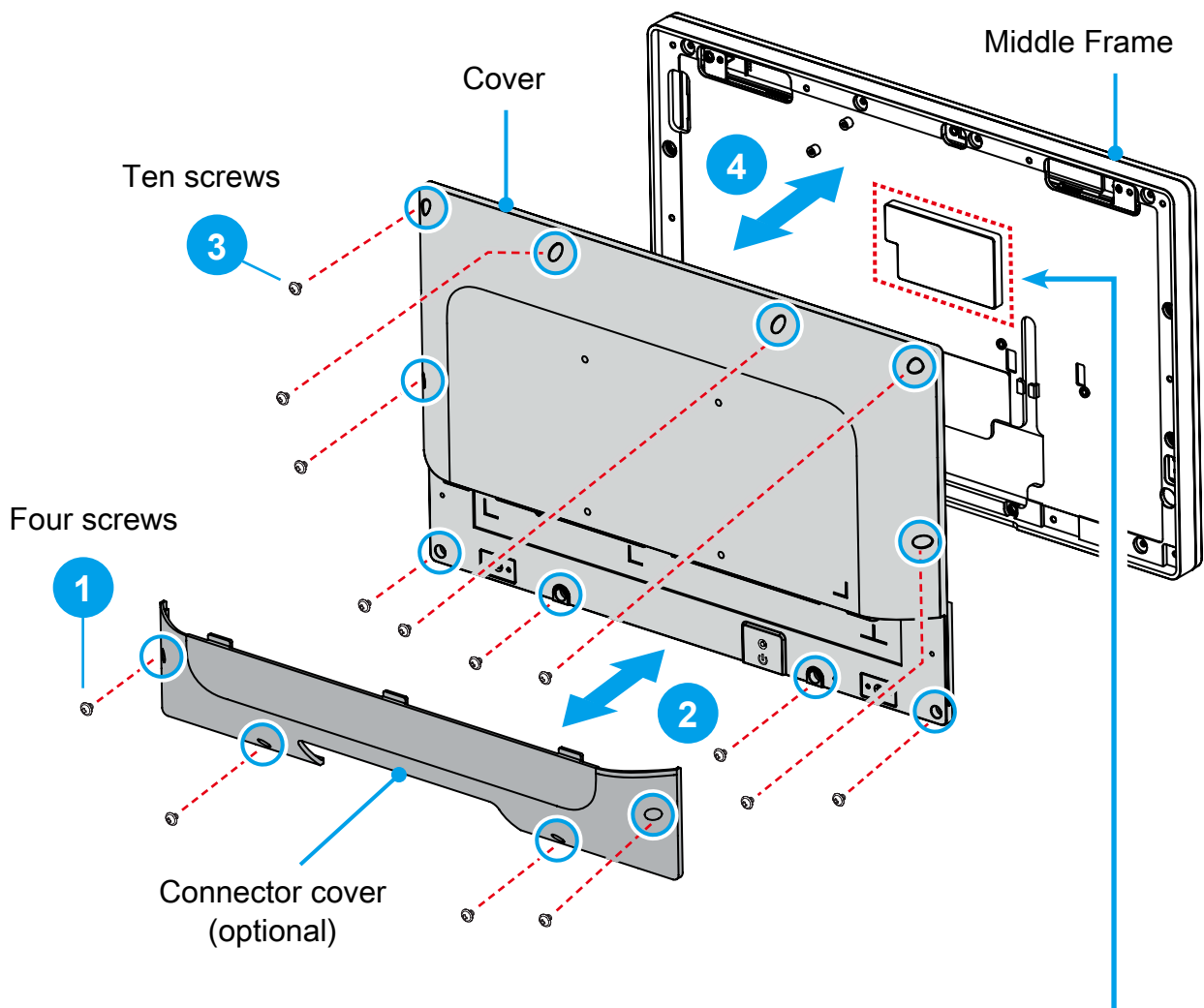(14) Connector for external antenna (optional)

# ■ 2.3 Product dimensions

Unit: mm
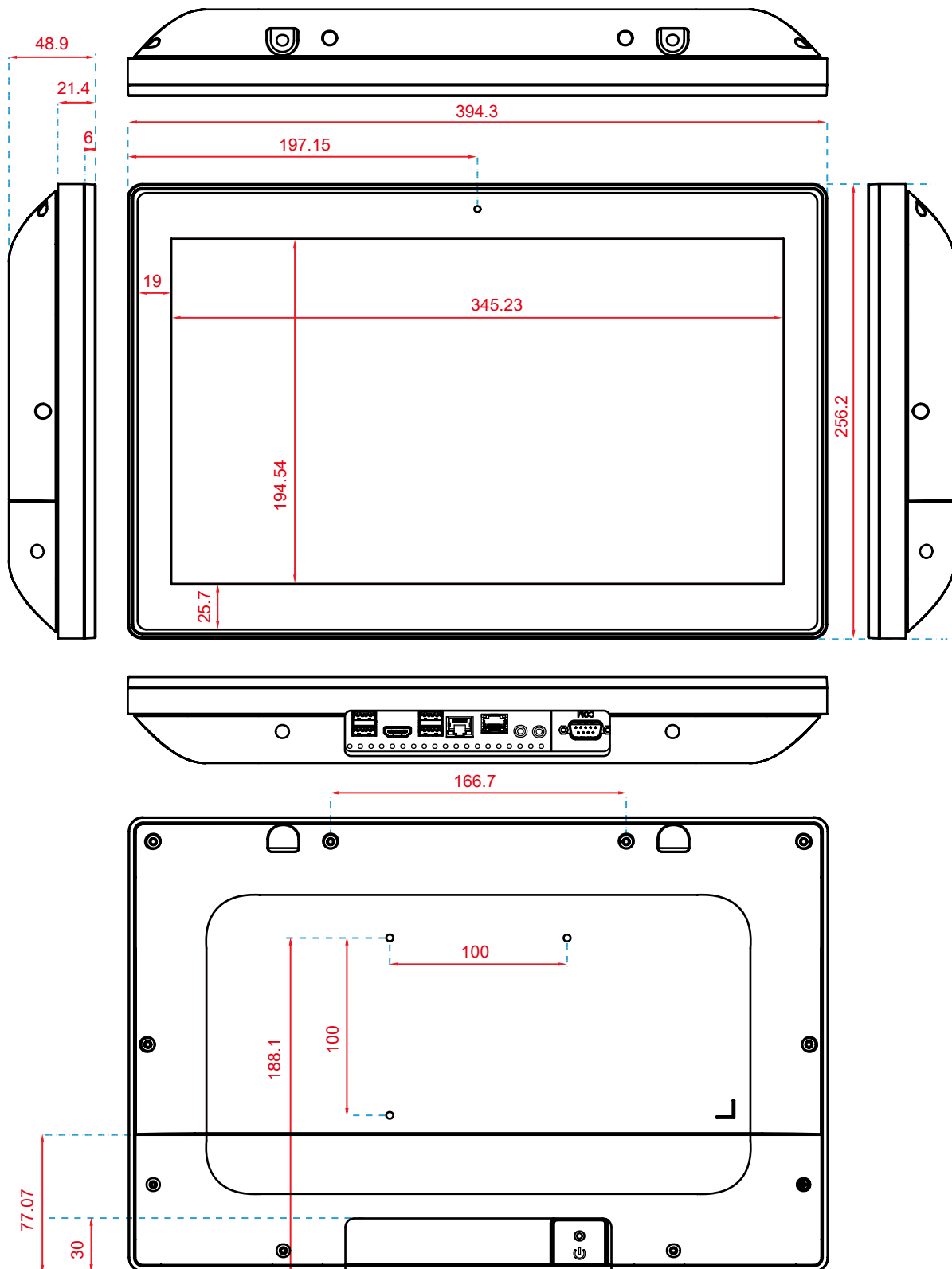
Getting Started

⚠️ 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.

Middle Frame

Cover

Ten screws

3

4

Four screws

1

2

Connector cover
(optional)

➢ 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.
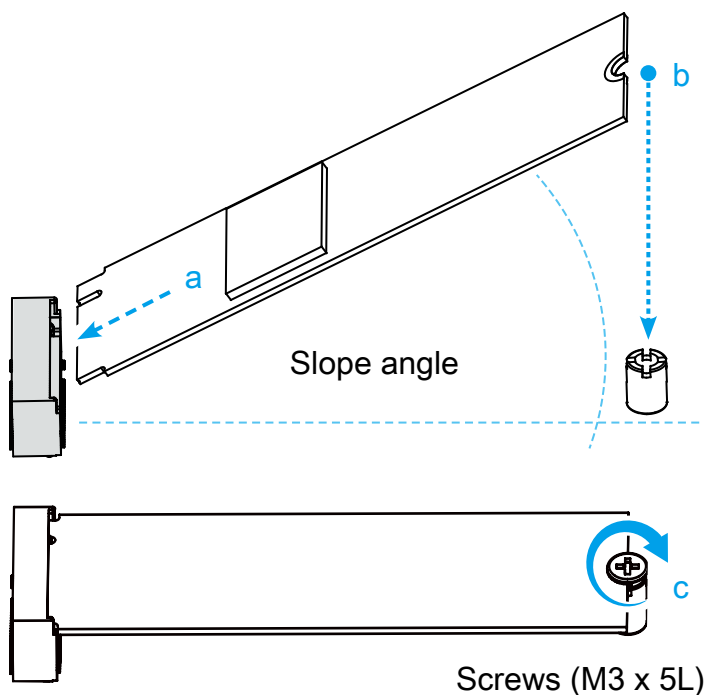
Thermal Pad
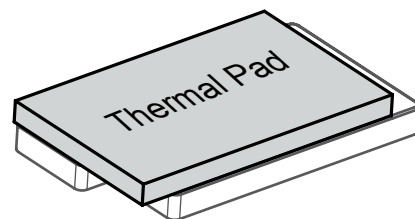
■ 3.1 M.2 Device Installation

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

SO-DIMM slot   M.2 2280 M key slot

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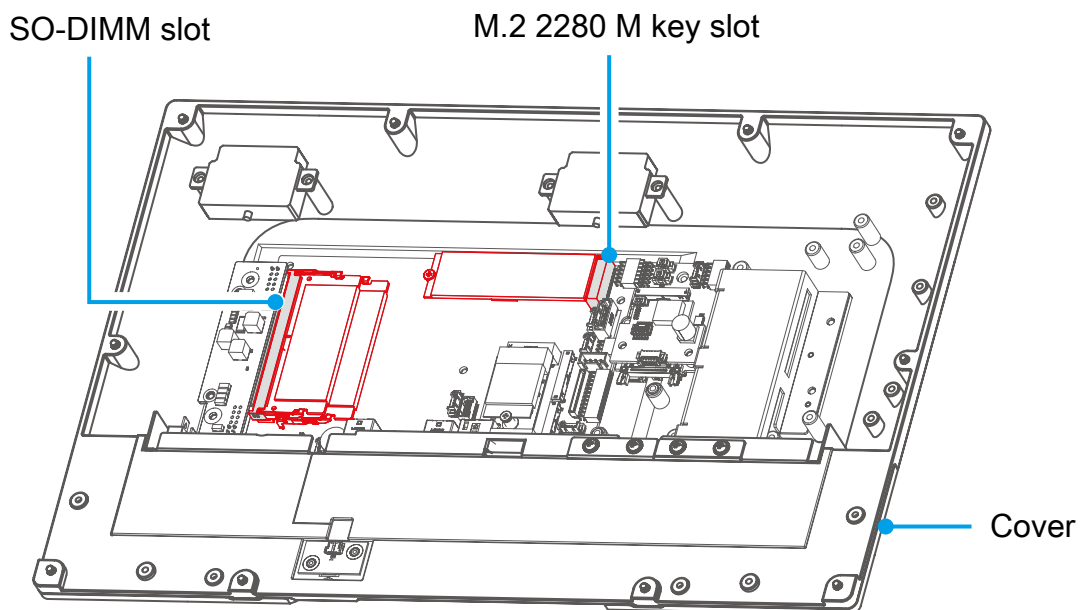
2. Install the M.2 device into the M.2 slot and secure with the screw.

➢ M.2 2280 M key slot

b

a

Slope angle

c

Screws (M3 x 5L)

■ 3.2 Memory Module Installation

P15WL01	2 x 260 pin SO-DIMM up to 64GB, Dual Channel 1.2 V DDR4 2400MHz
P15EL01	2 x 260 pin SO-DIMM up to 32GB, Dual Channel 1.2 V DDR4 3200MHz
P15AL01	2 x 262 pin SO-DIMM up to 64GB, Dual Channel 1.1 V DDR5 4800MHz With thermal pad *4

1. Locate the SO-DIMM and paste the thermal pad on the motherboard, which can effectively reduce its temperature. (P15AL01 only)

DIMMA1 (Bottom)   DIMMB1 (Top)

Thermal pad (50x15x3 mm) for single-sided DRAM

Thermal pad (50x15x2.25 mm) for double-sided DRAM

Thermal Pad (P15AL01 only)
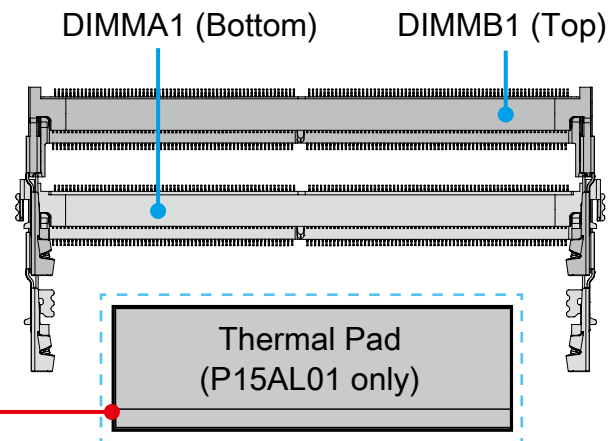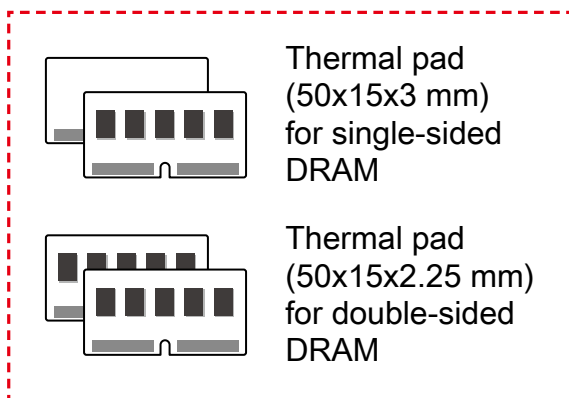
2. Install the 1st memory module into the DIMMA1 slot.

3. Align the notch of the memory module with the one of the relevant memory slot.

Notch

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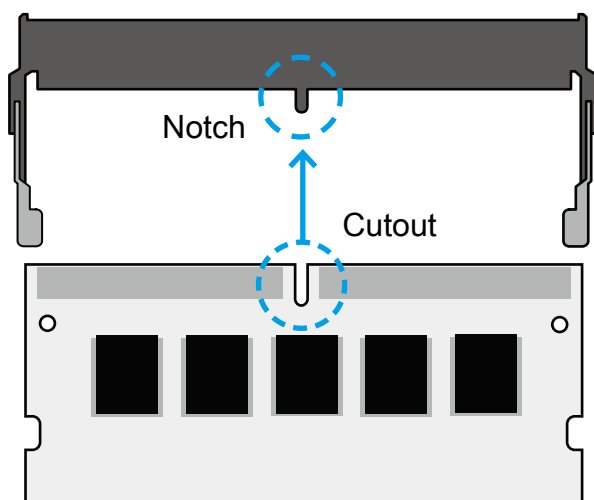
4. Gently insert the module into the slot in a 45-degree angle.

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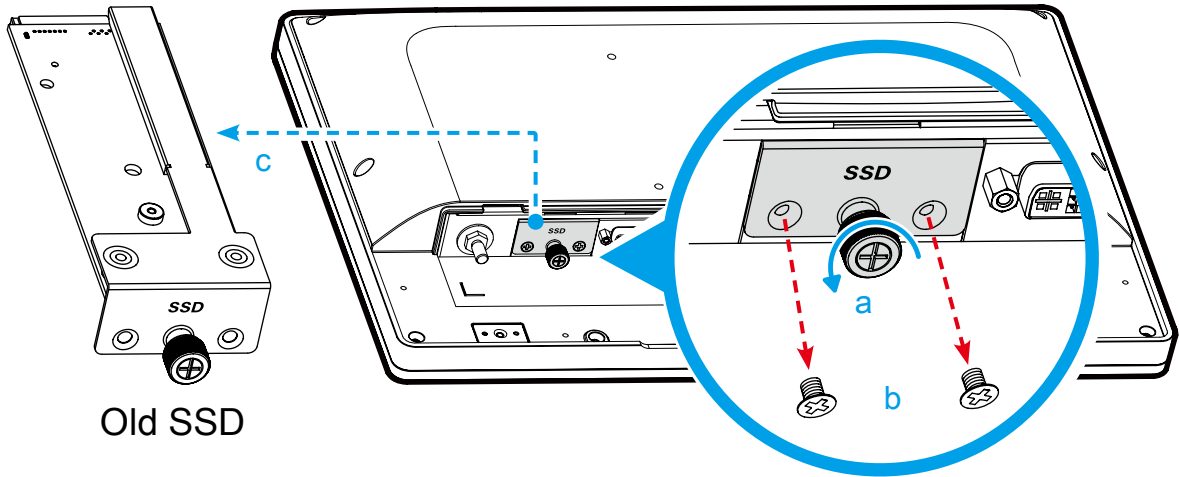
a

b

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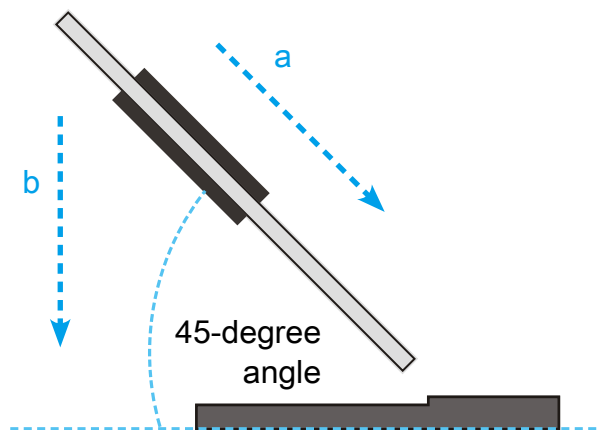
6. Install the 2nd memory module into the DIMMB1 slot (proceed with steps B3 to B5).

7. Paste the thermal pad (50*20*7.5 mm), as shown. (P15AL01 only)

Thermal Pad

d

Thermal Pad *2 (50*20*7.5 mm) (P15AL01 only)

Latch

c

d

DIMMB1 (Top)

c

Latch
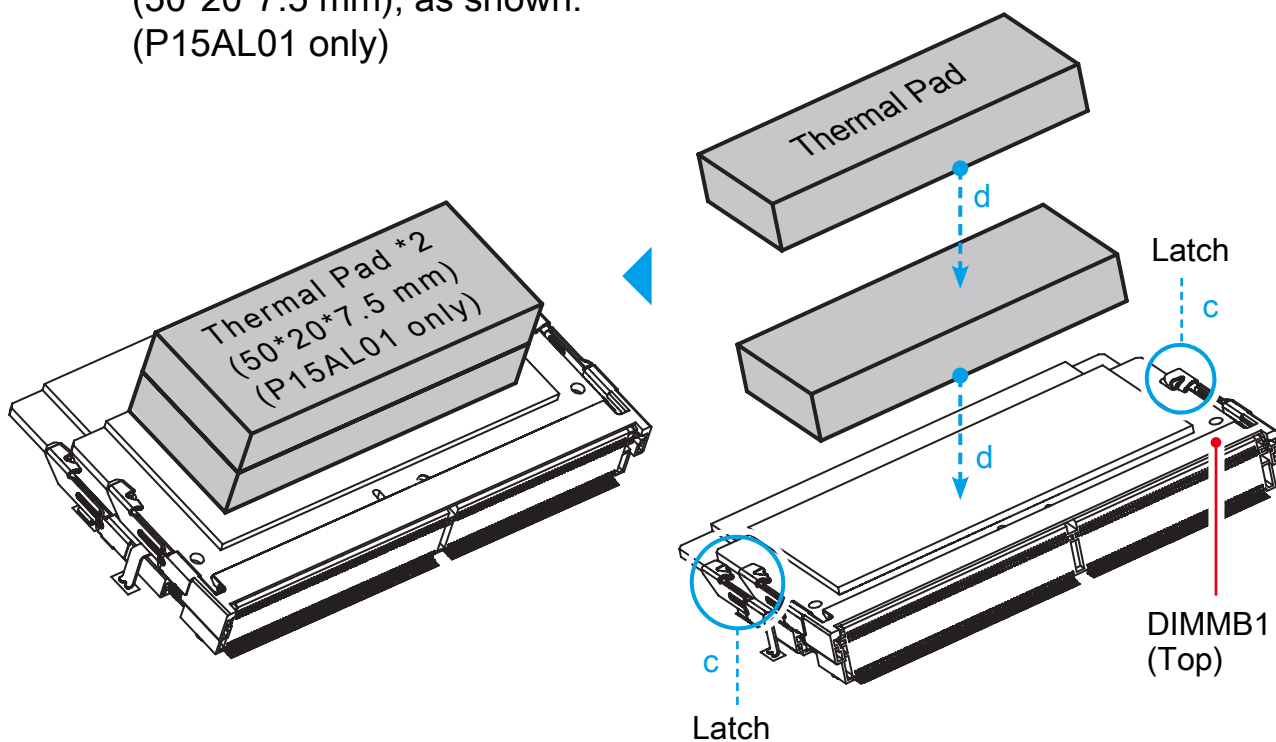
■ 3.3 How to replace the M.2 SSD

1. If you want to replace the M.2 SSD, unscrew the thumbscrew and two screws of the bracket and remove it.

SSD

a

b

c

Old SSD

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

b

a

Slope angle

M.2 2280 M key slot

New SSD

c
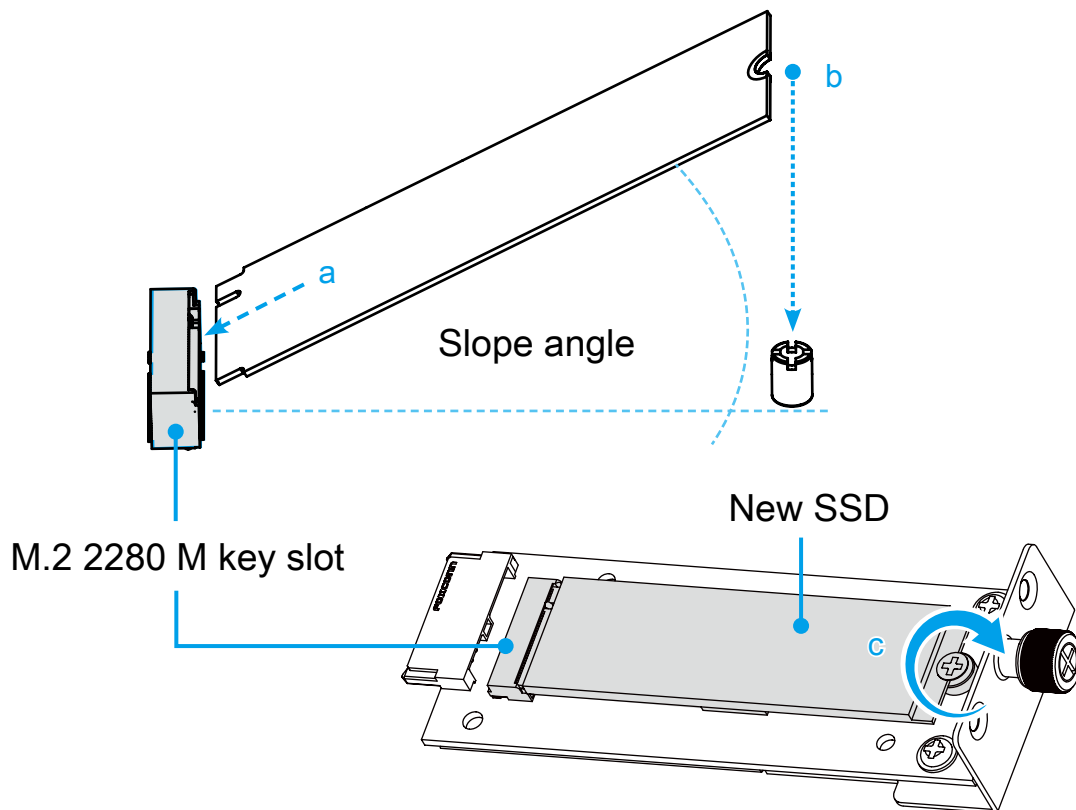
3. Slide the bracket back into the chassis and tighten the thumbscrew and two screws.

New SSD
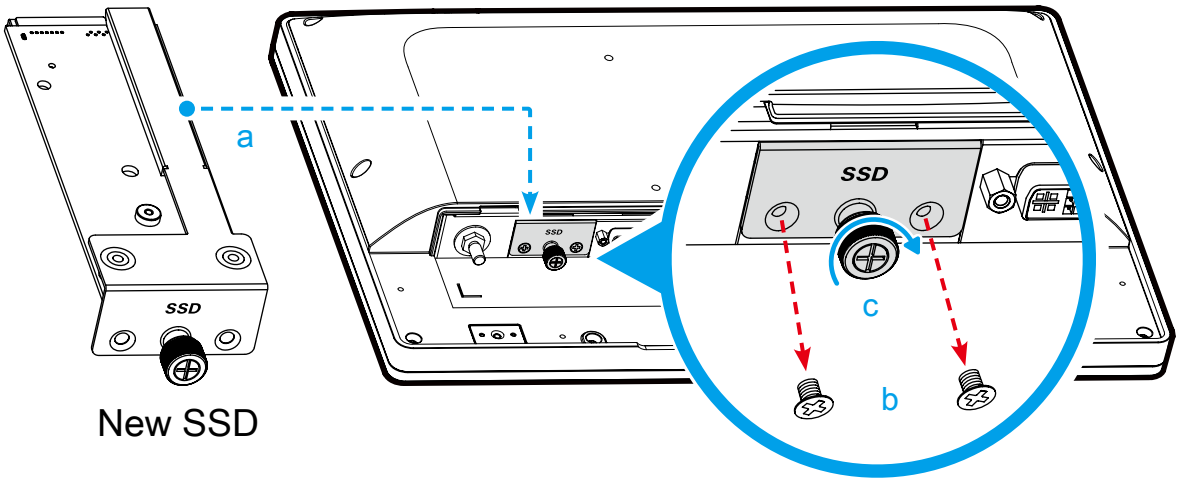
⚠ CAUTION: The thumbscrews should be tightened with a tool after both initial installation and subsequent access to the panel PC.

■ 3.4 Optional installation of WLAN antennas (appropriate chassis version required)
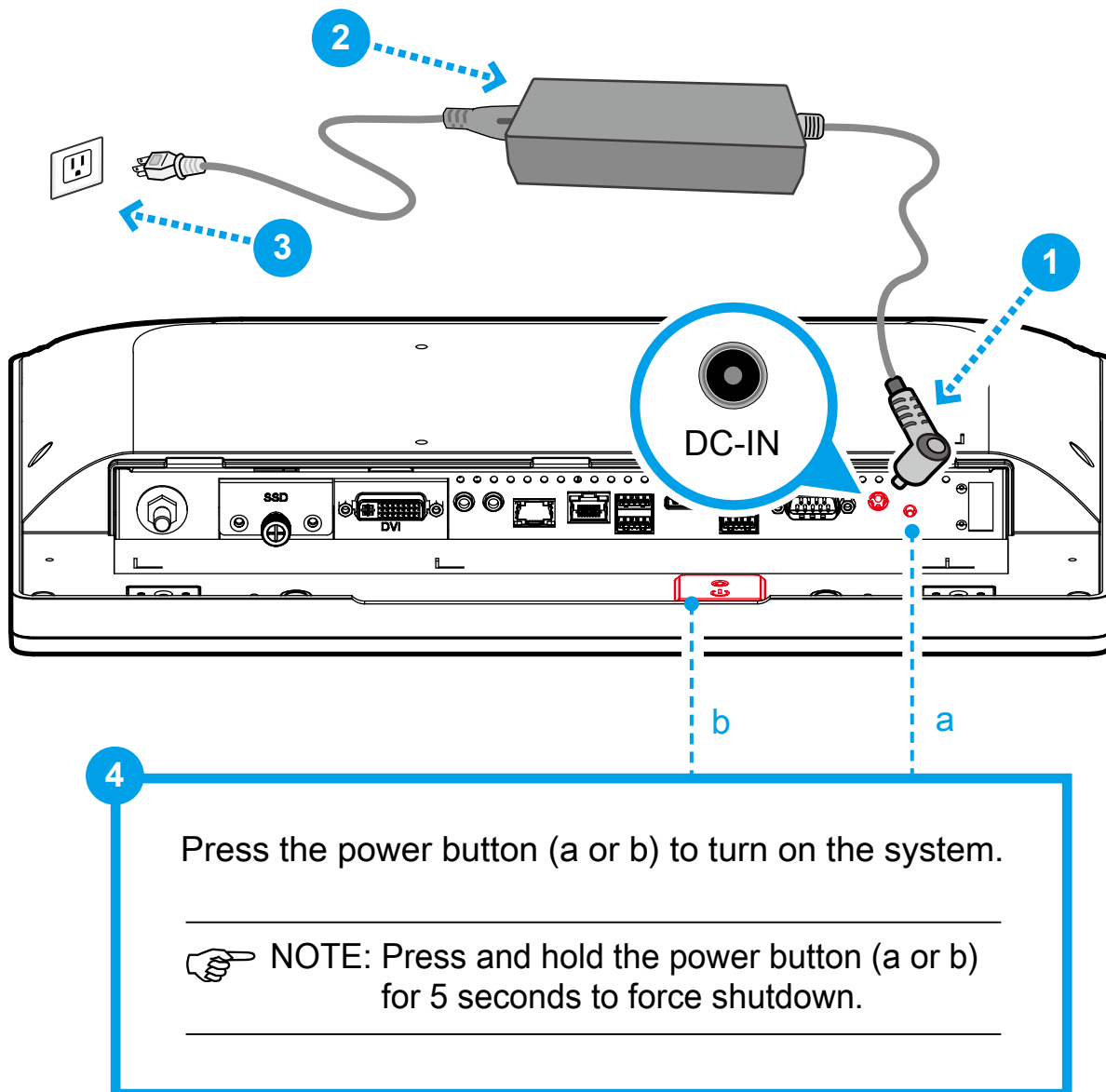
Take the two antennas out of the accessory box.
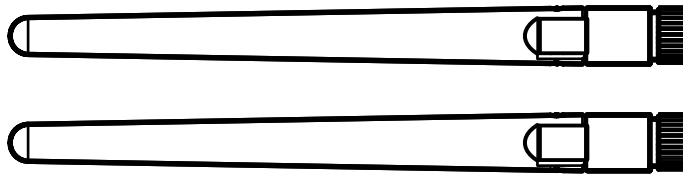
Screw the antennas on to the appropriate connectors on the back panel. Make sure the antennas are aligned vertically or horizontally to achieve the best possible signal reception.
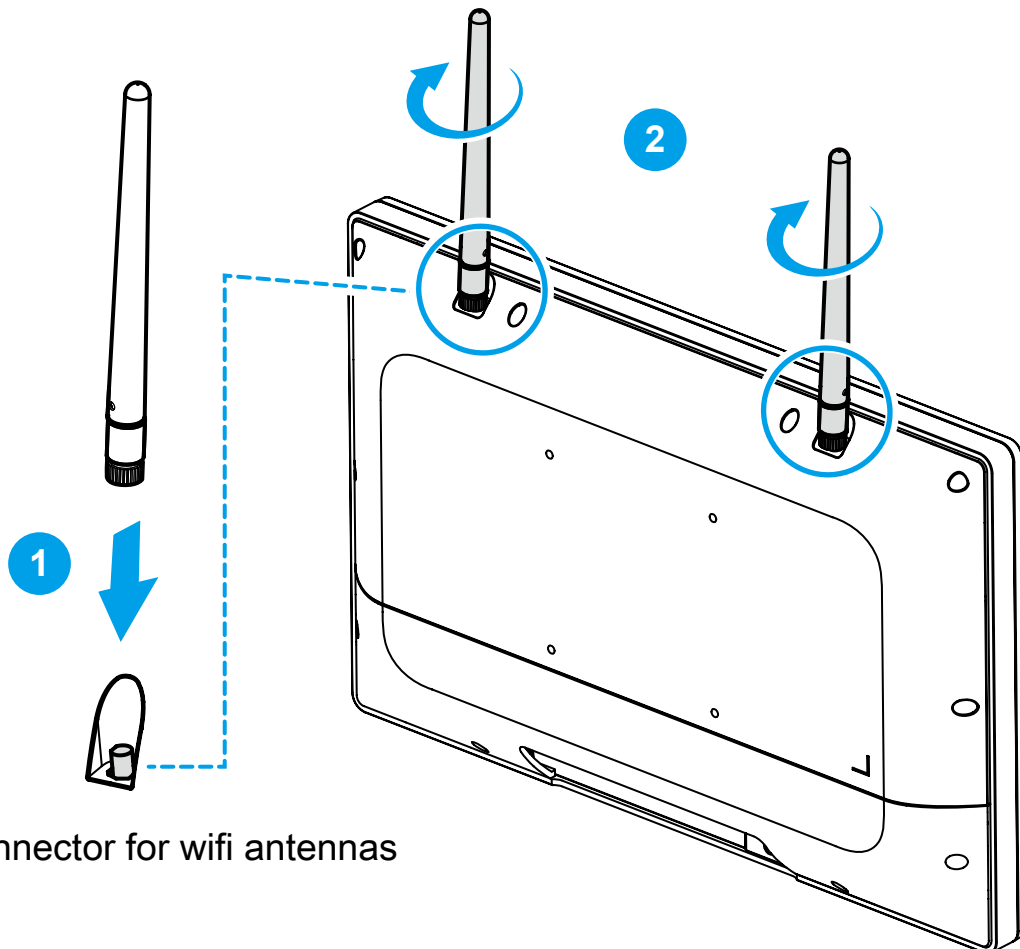
Connector for wifi antennas

■ 3.5 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.

DC-IN

b   a

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.

■ 3.6 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.

Potential equalization pin (POAG)

Potential equalization cable
(with 2 POAG-plugs)

Other devices
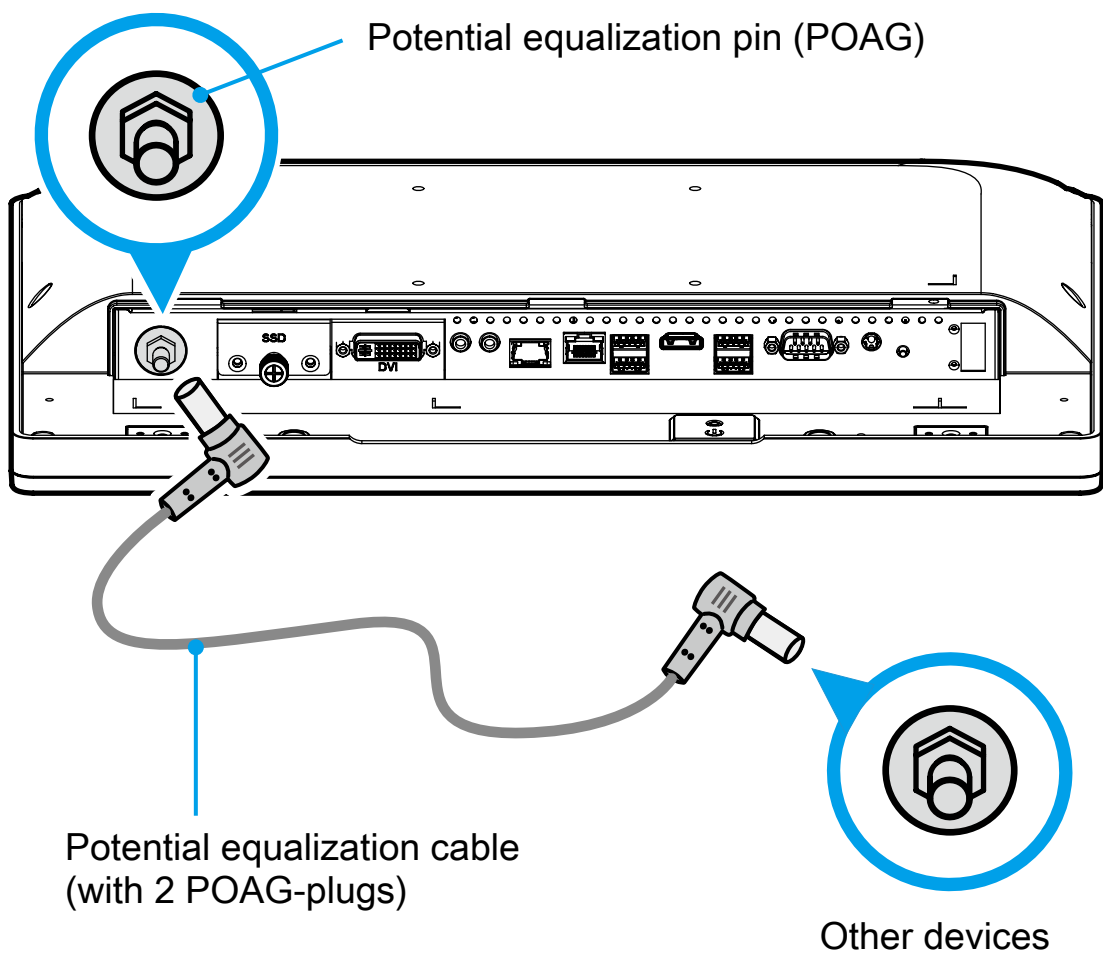
■3.7 VESA mounting to the wall (optional)

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

Support

VESA Mount
100 x 100 mm

Screws
M4x6L*4pcs
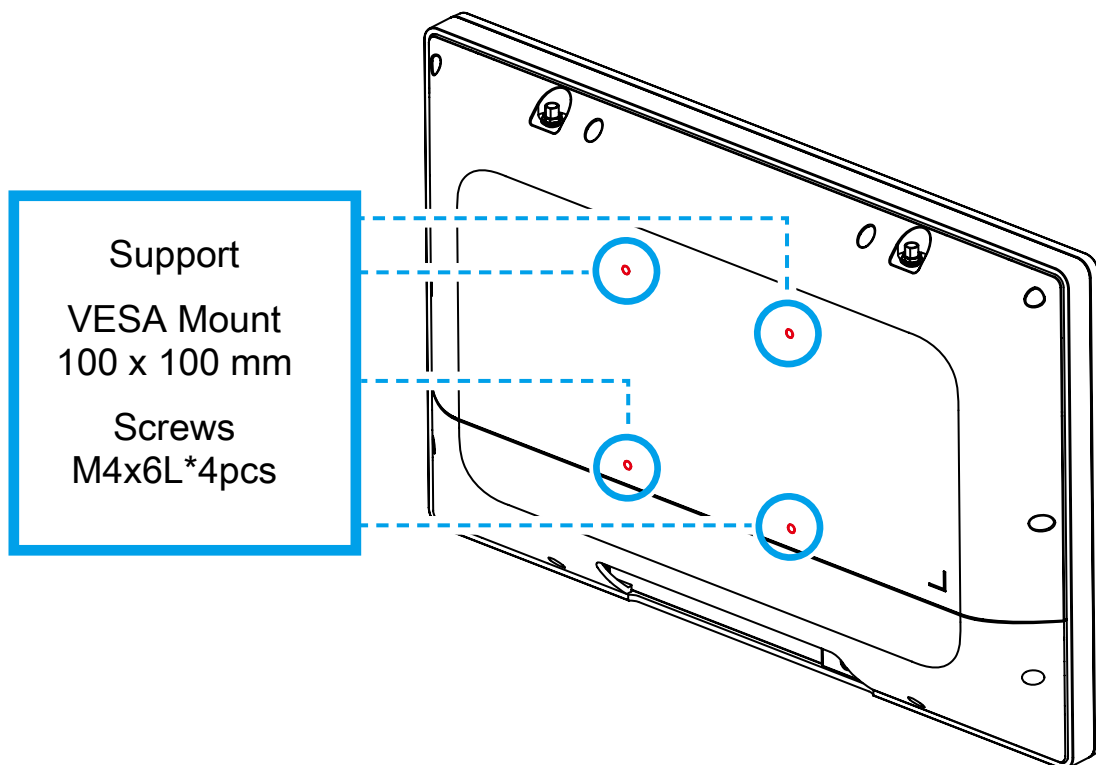
☞ NOTE: The Panel PC can be wall-mounted using a VESA compatible 100 mm x 100 mm wall / arm bracket. The maximum load capacity is 10 kg and mounting suitable in heights of ≤ 2 m only. The metal thickness of the VESA mount must be between 1.6 and 2.0 mm.

☞ 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.

■ 3.8 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
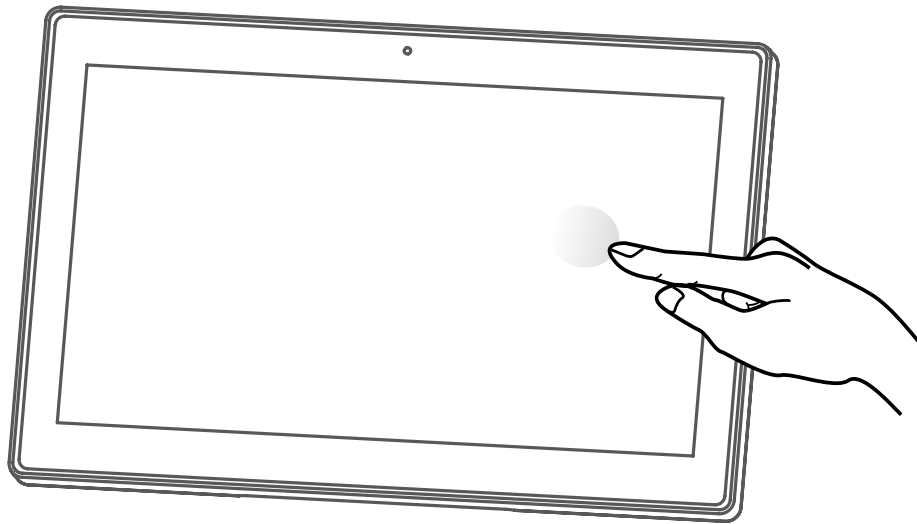
■ 3.9 Cleaning the screen

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.

■ 3.10 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.

2 Screws M4 x 10L * 4pcs

1 Screws M4 x 12L * 4pcs
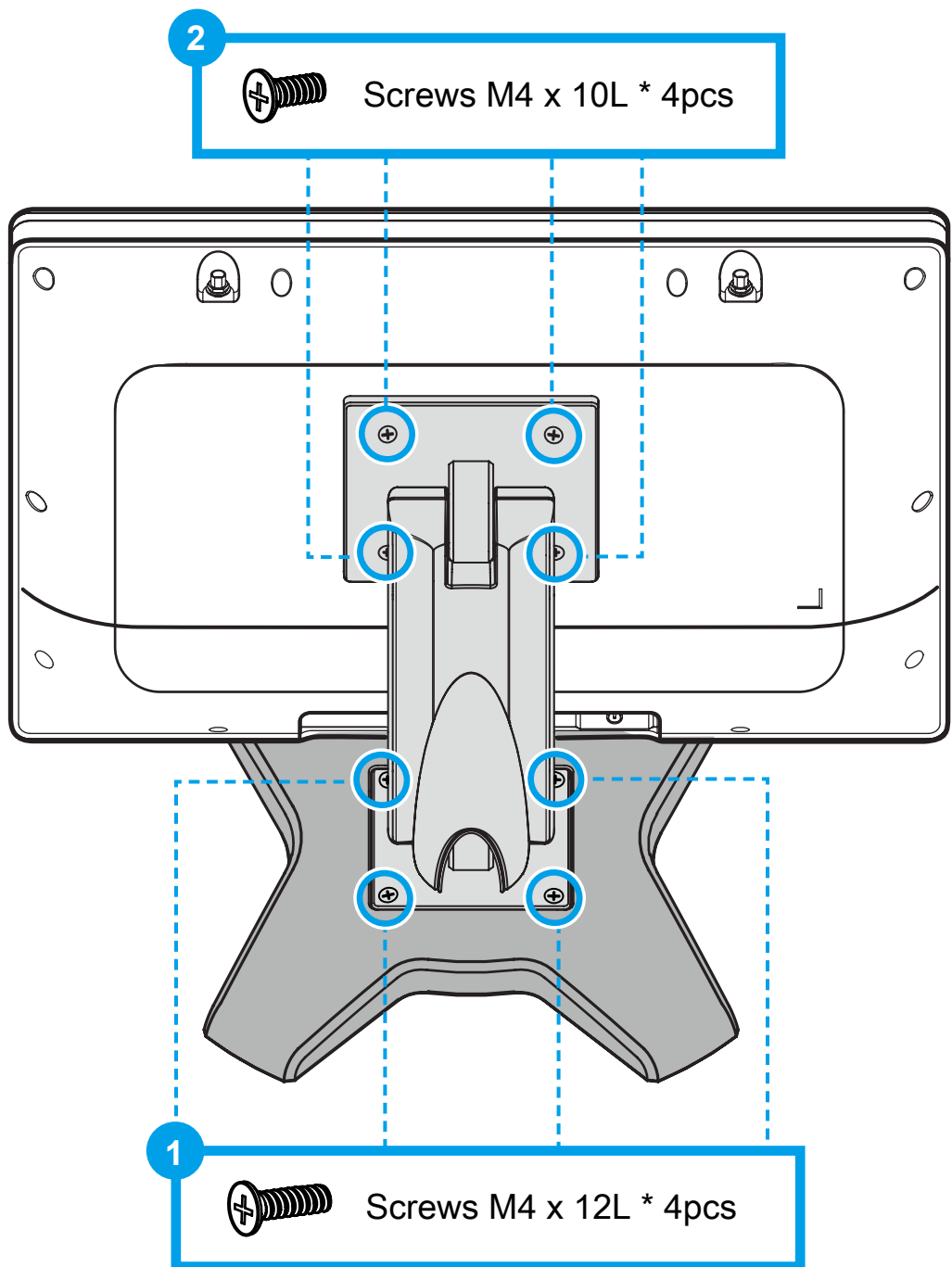
BIOS Setup

■ 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 panel 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).