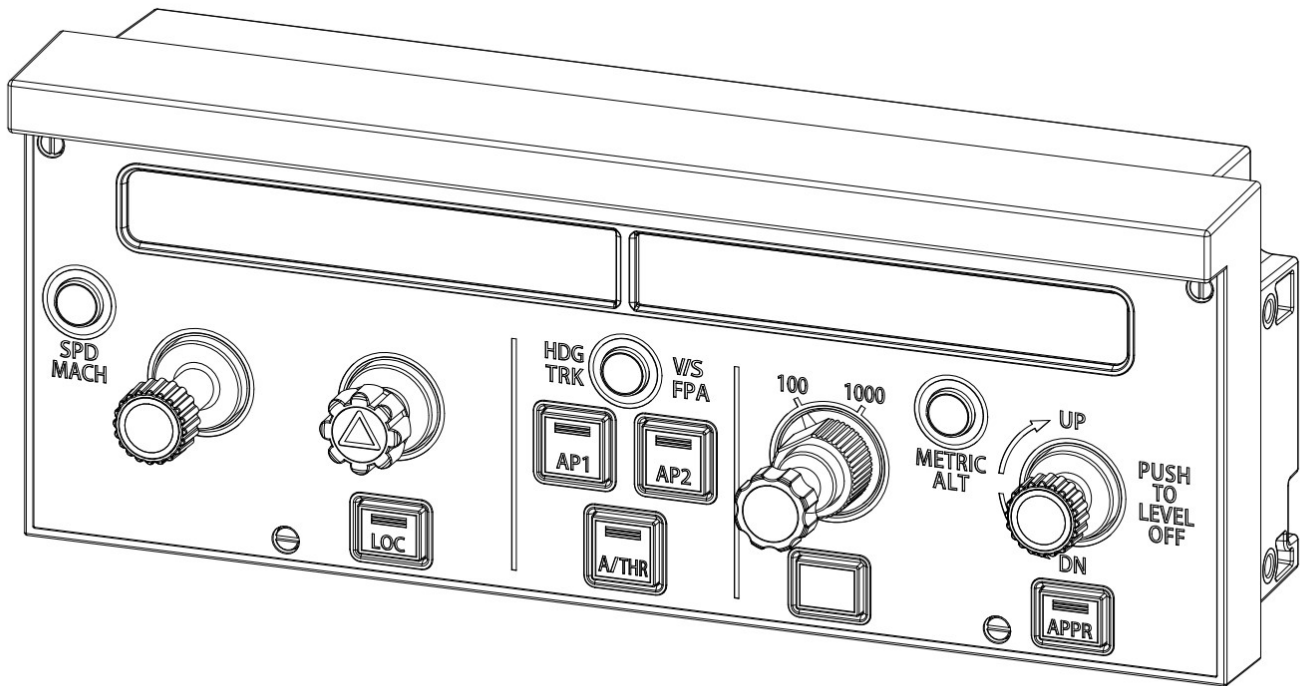


WINWING SIM

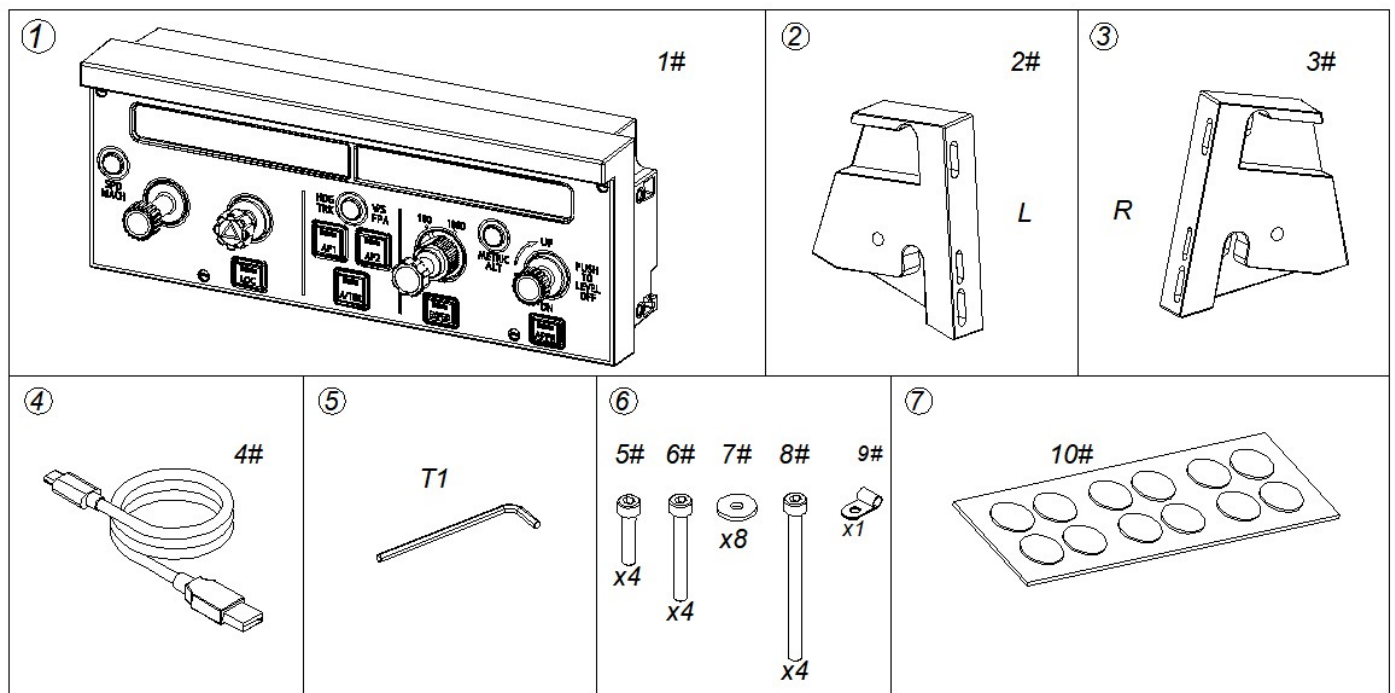
FCU

User Manual

V2.1 2024.11



Packing List



①1#)	1
② Mounting Bracket-Left (2#)	1
③ Mounting Bracket-Right (3#)	1
④ Data Cable (4#)	1
⑤ Tool Bag (T1)	1
⑥ Accessory Bag 1 (5#~9#)	1

5#	Socket Cap Screw M5*16	6#	Socket Cap Screw M5*22
7#	Flat Washer M5*10*1	8#	Socket Cap Screw M5*40
9#	R Shape Cable Clip UC-0.5		

⑦ Nano Double Sided Adhesive Dots (10#)	
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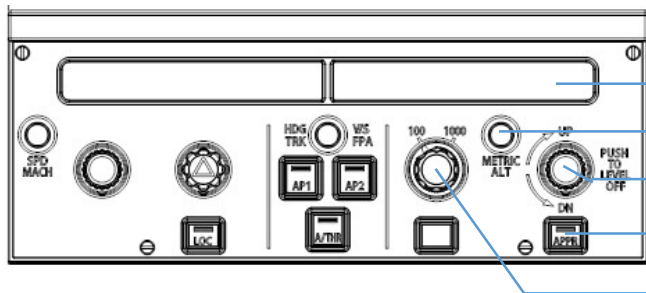
* NOTE: The above is the packing list for the new FCU Unit 1, which differs from the previous version. Please refer to the actual items received.

Catalog

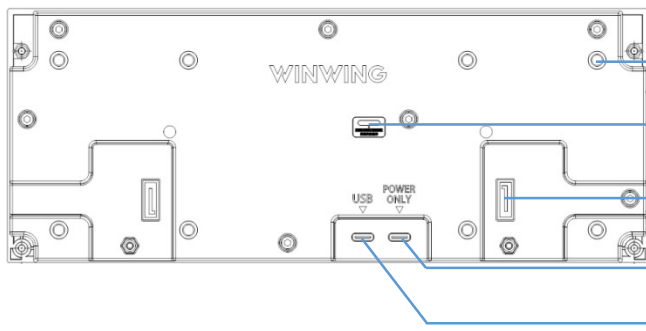
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1. Product Profile

1.1 Parts Diagram

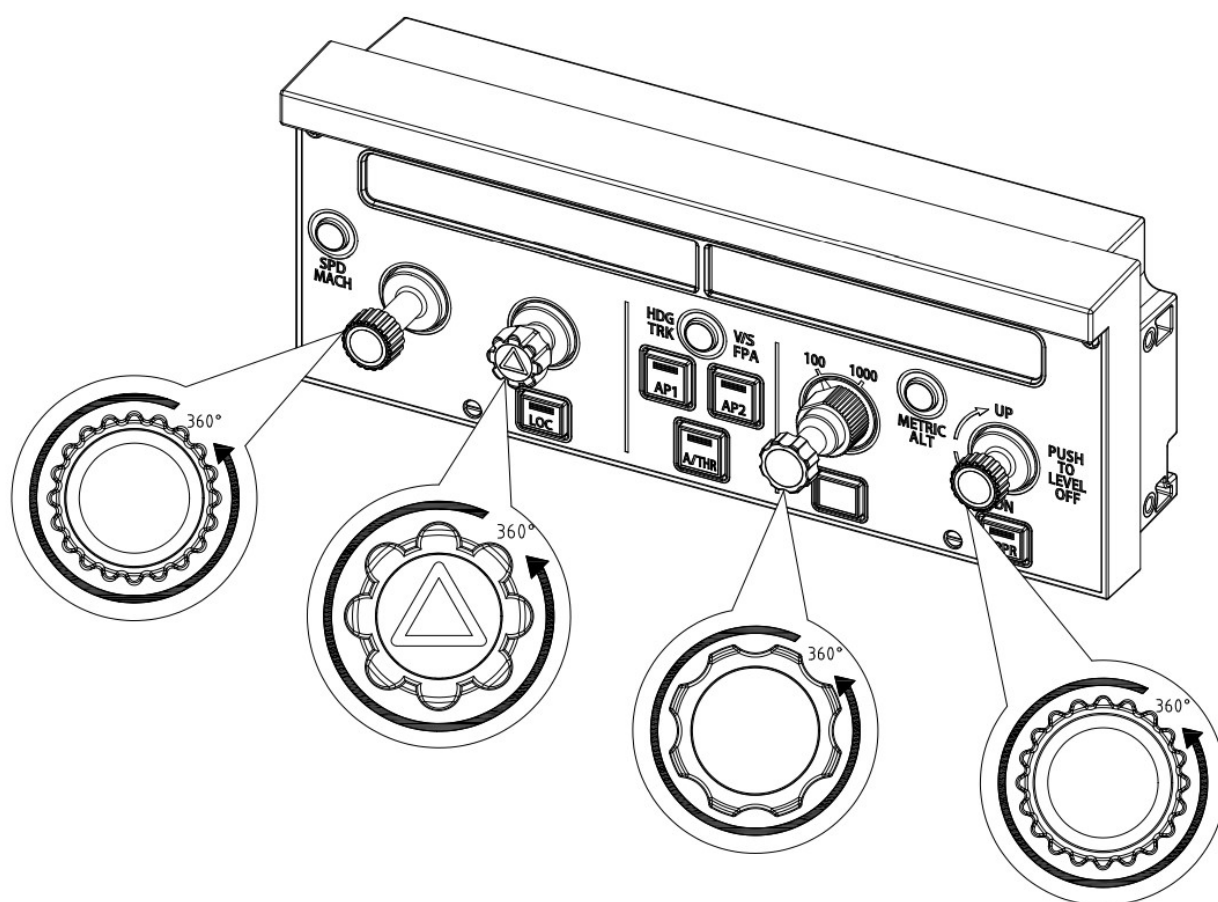
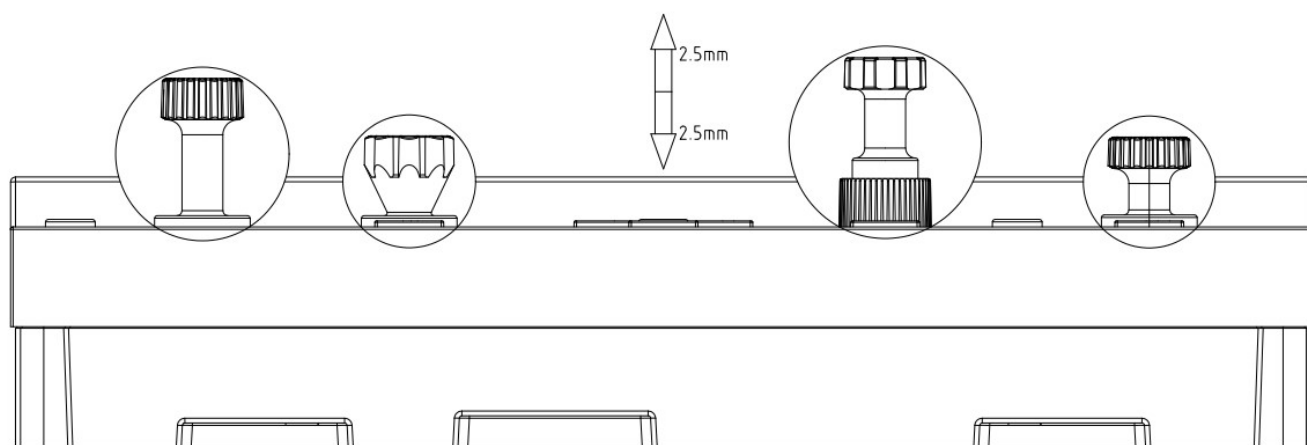


- ① Display
- ② Push Button
- ③ Push-Pull Rotary Switch
- ④ Two-Position Push-Pull Rotary Switch



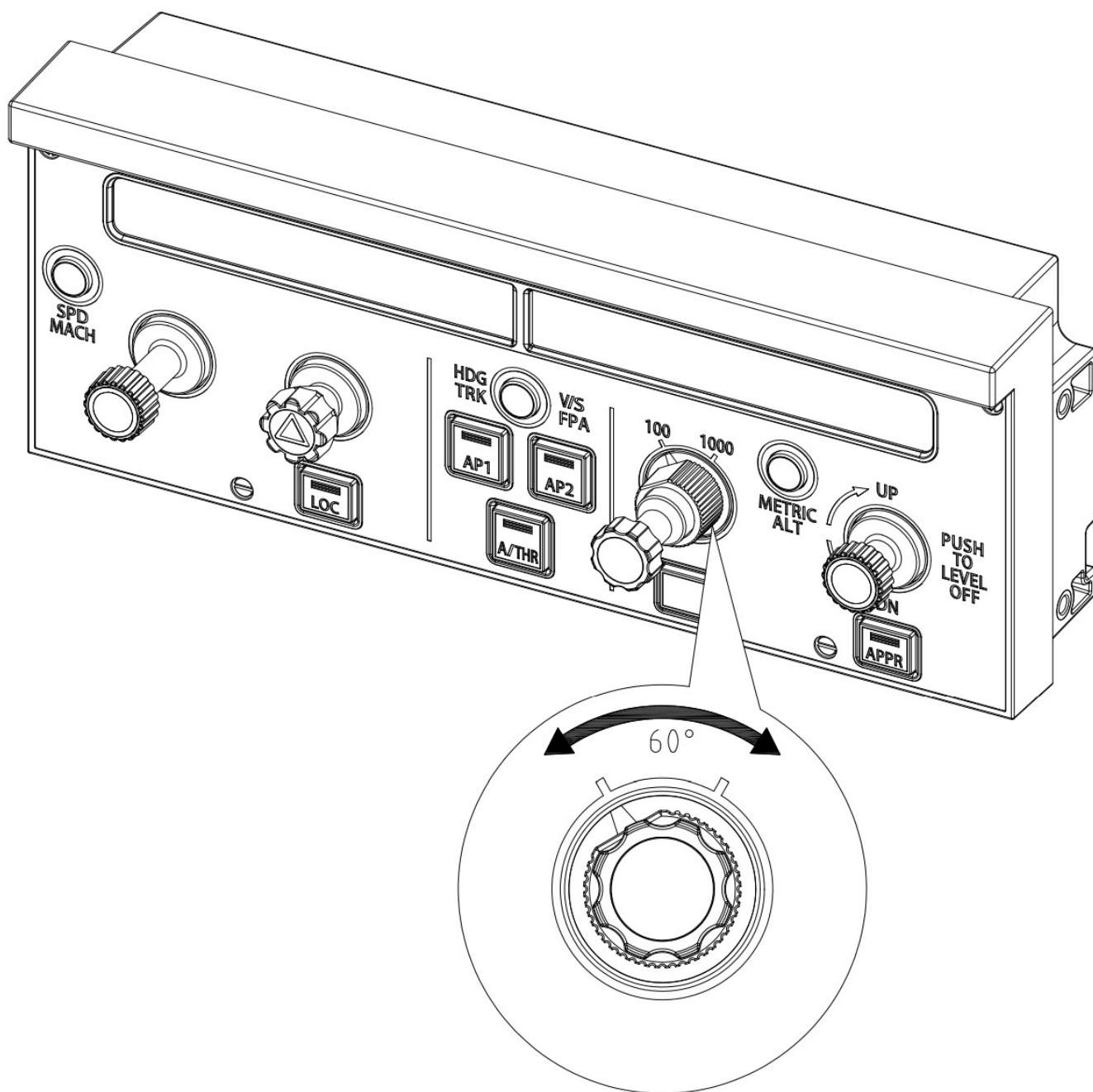
- ⑤ Mounting Holes for Included Brackets
- ⑥ LED Indicator
- ⑦ SATA Port (Inter-Device Connection Port)
- ⑧ POWER ONLY Port (5V Voltage)
- ⑨ USB Data Port

1.2 Performance Specifications



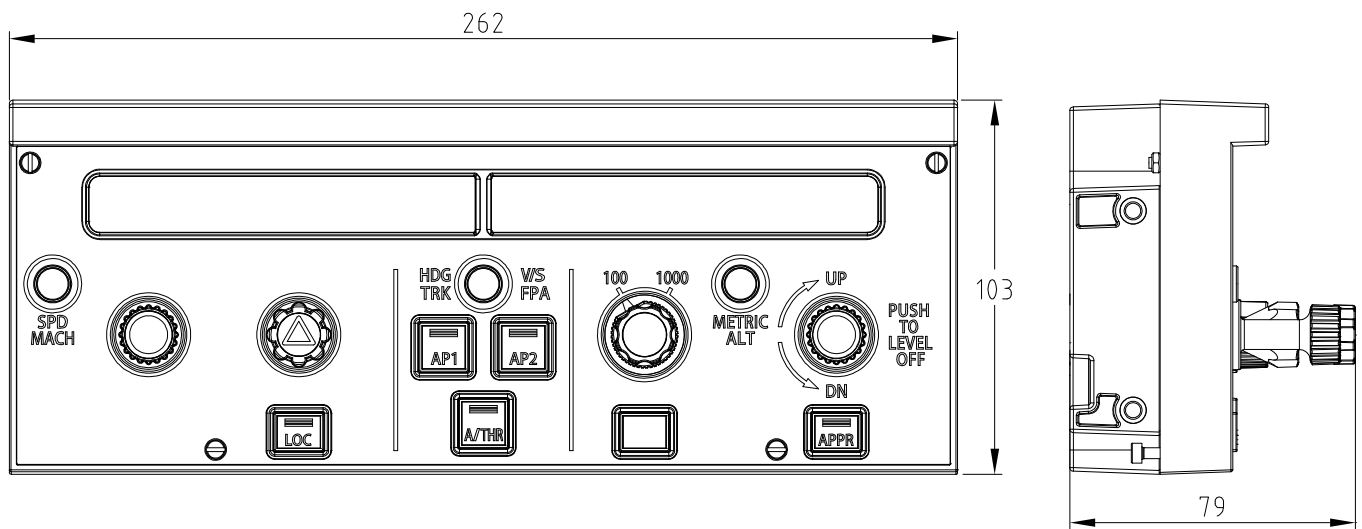
- 4 knobs, with push/pull travel of 2.5mm and a rotation angle of 360° (no detent). *

NOTE: Only push/pull and rotate are allowed. Do not bend. Bending force limit: 500gf; maximum rotational torque: 150gf·cm; maximum push/pull force: 1200gf.

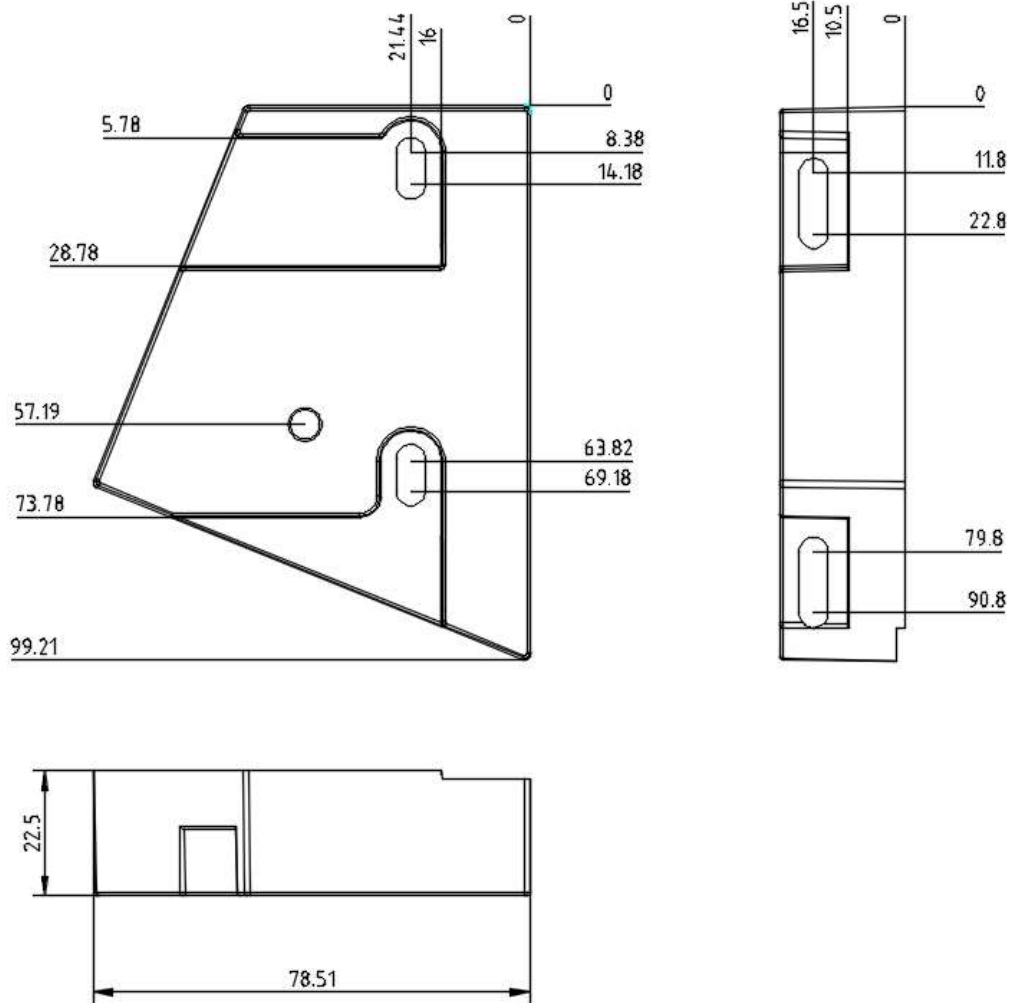


① The rotation angle for this position is 60°. * NOTE: Only rotation is allowed. Do not pull. Pulling force limit: 300gf.

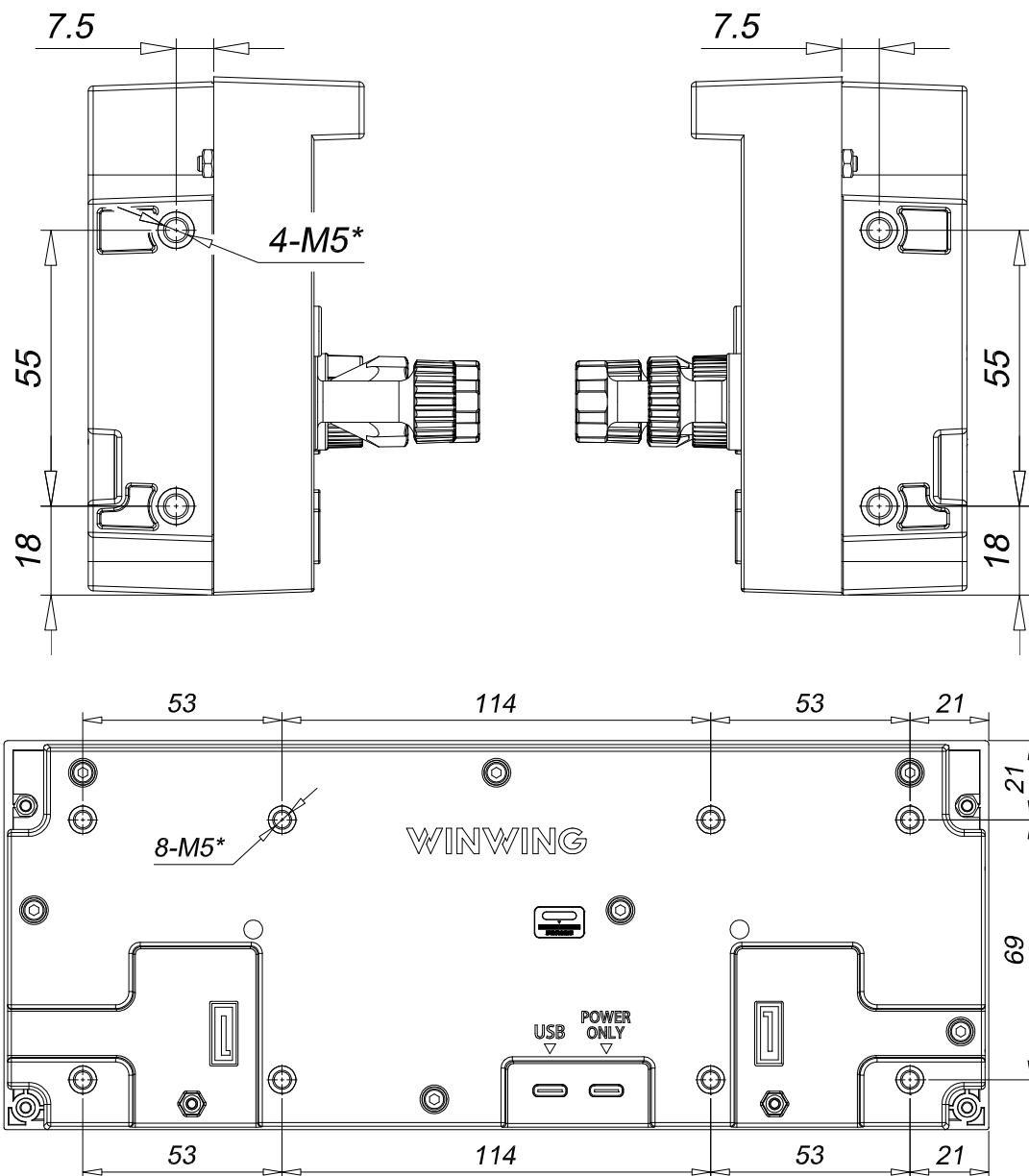
1.3 Product Dimensions



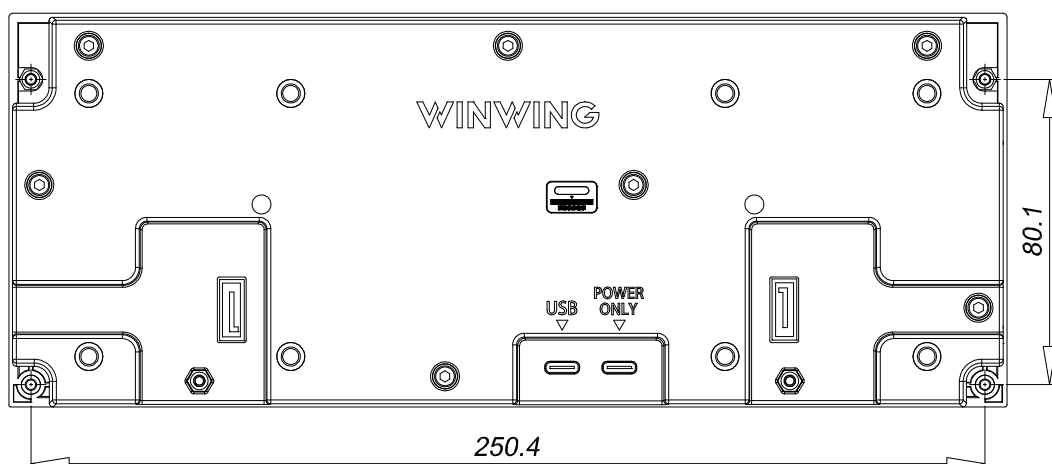
- L x W x H: 262mm x 103mm x 79mm; weight: 0.5kg (1.1lb).
- Bracket Dimensions (Hole diameter supports M5 screws)



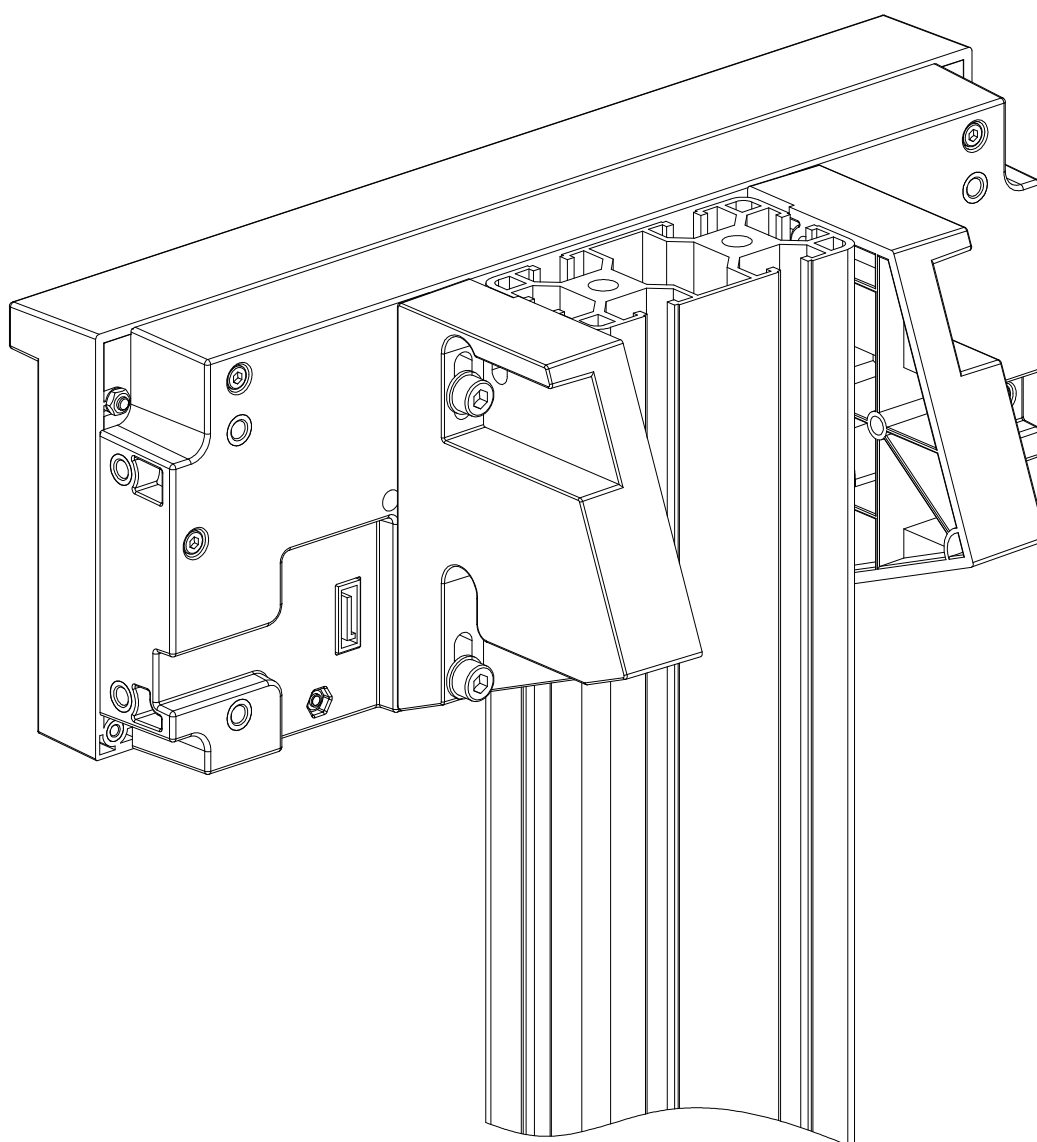
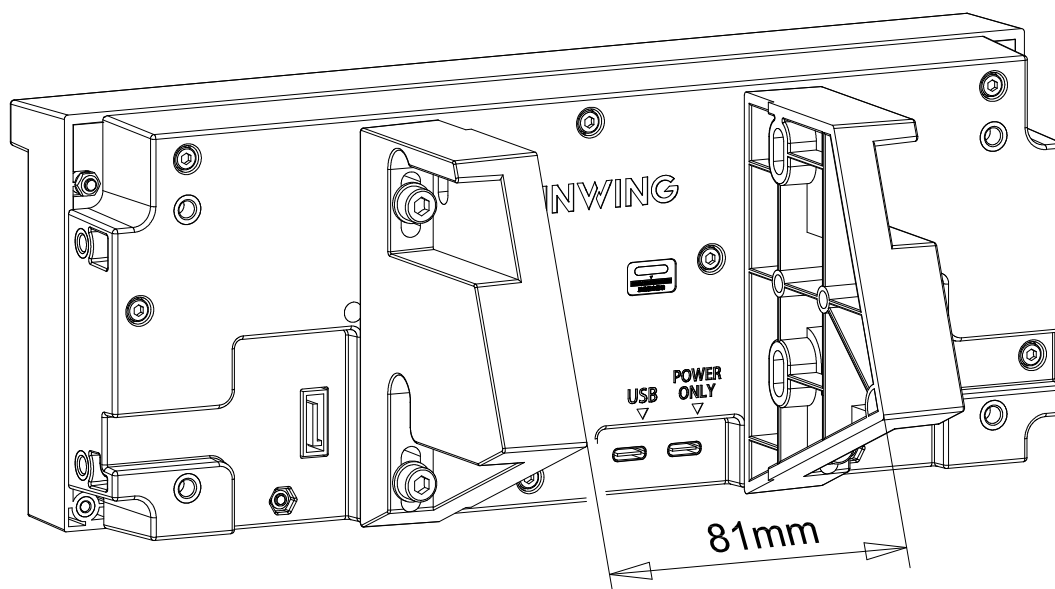
1.4 Installation Dimensions



- 4 x M5, 8 x M5 with a maximum depth of 5mm.



- Diagrams for the mounting dimensions of the cockpit panel.



- Diagrams for the mounting dimensions and method for the 4080 profile (profile and accessories are not included; refer to 4.2 Profile Mounting for the required accessory specifications).

1.5 Installation Compatibility

- Can be used independently.
- Can be mounted in combination with various control panels using brackets (see upcoming products for details).
- Can be mounted with the MP1 bracket. * NOTE: Only compatible with the new FCU bracket, listed as items 2# and 3# in the Packing List. The transition between the new and old FCU will be subject to the received product. The MP1 bracket is sold separately.
- Supports installation on 4080 profiles (profile and related accessories need to be supplied separately).

2 First Use

2.1 Software Installation

- Download SimAppPro

Download URL:

Mainland China Download Link

<https://cn.winwingsim.com/view/simapppro.html>

Overseas Download Link

<https://winwingsim.com/view/simapppro.html>

- Install SimAppPro

Please follow the instructions to install the software, then run the program.

The product can be customized within SimAppPro. (For more details, refer to the SimAppPro User Manual.)

- When using the product, please run SimAppPro first before entering the game (the product will automatically adapt to supported games and aircraft modules, plug-and-play. For more details, refer to the SimAppPro User Manual).

SimAppPro User Manual Download Link:

Chinese User Manual

<https://cn.winwingsim.com/view/regular.html#manual-130>

English User Manual

<https://winwingsim.com/view/regular.html#manual-132>

2.2 Parts Installation

- Install the bracket in a suitable position according to your needs (see Section 4 Installation Methods for details).
- use (see Section 4 Installation Methods for details).

2.3 How to Use

- Device Connection

The product connects to the computer via the included data cable. For details on the interfaces, refer to Section 3.3 Data Interface.

How to Connect

- Insert the included data cable (4#) into the product's USB data interface (⑨) and connect it to your computer. * NOTE: If your computer has insufficient power, you will need to connect the product to the 5V Power Only interface (⑧) via a TYPE-C cable for external power supply. Please prepare the required cable separately.

- For products requiring assembly, only the USB interface supports hot-swapping. For other interfaces, ensure that the product is properly connected before connecting to the computer.

*Important: If you need to connect other interfaces such as PS2, SATA, or aviation connectors, make sure to disconnect the USB cable before proceeding.

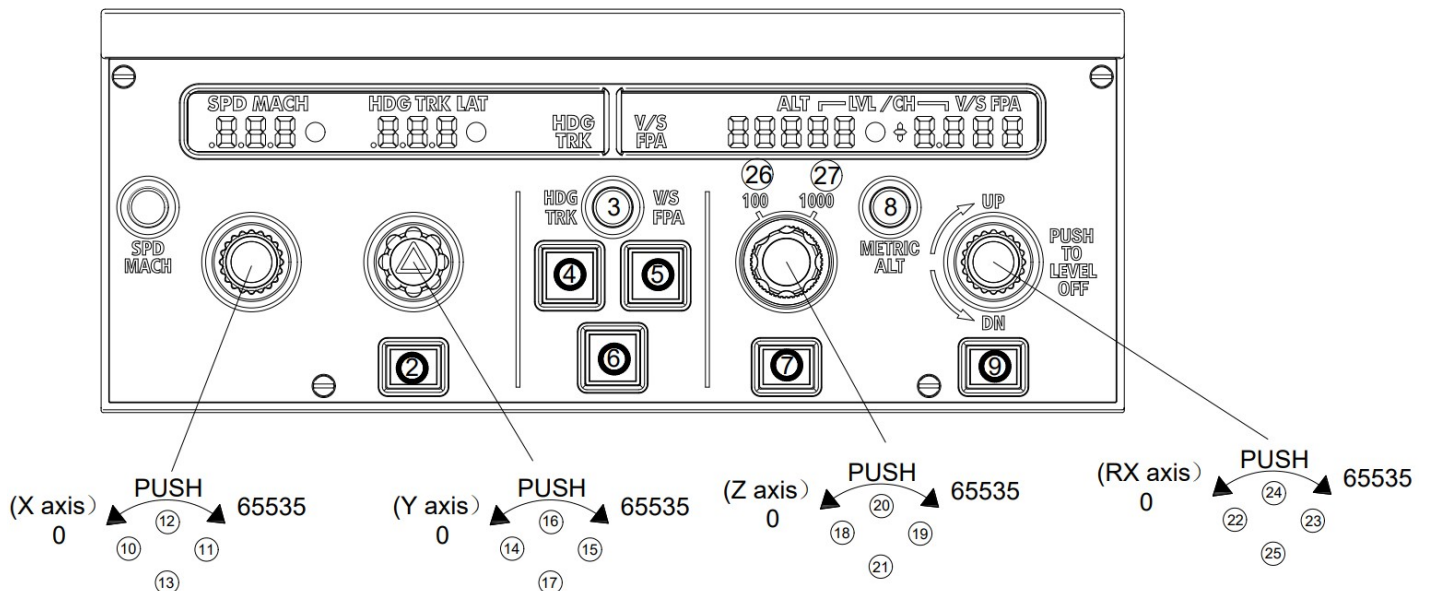
- After connecting the product to the computer, secure the cable within the designated clip to prevent damage to the product's interface.

3 Function

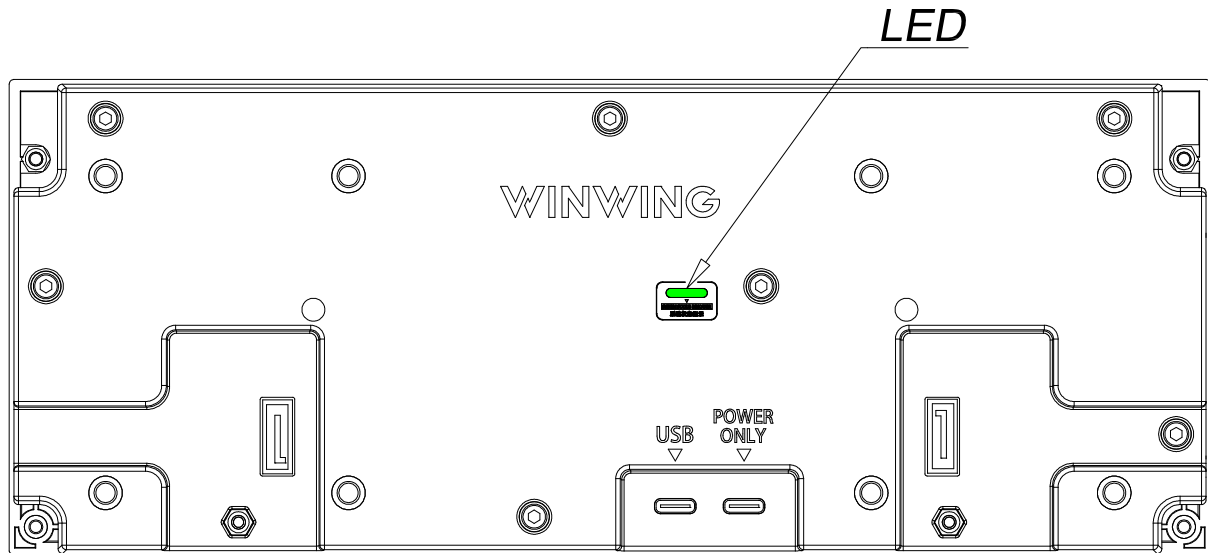
3.1 Mechanical and Special Features

/

3.2 Buttons



The Z axis and keys 26 and 27 cannot rotate simultaneously. When operating keys 26 and 27, the Z axis rotation signal will be automatically blocked.



LED Status Display:

- Green steady slow flash (1s interval) — BOOT Mode
- Green slow flash (1s interval) for 5 times, then steady on — Operation Mode
- Green slow flash (1s interval) for 5 times, then off — Power-Only Mode

3.3 Data Interface

- ⑦ SATA Port (Inter-Device Connection Port)

Used for connecting other devices for communication (hot-swapping is not supported)

- ⑧ POWER ONLY Port (5V Voltage)

When only the ⑨ USB Data Port is connected, some computers may experience insufficient power supply, which could result in low screen brightness, failure to display properly, or the device not being recognized. Using this TYPE-C interface to connect an additional 5V power supply can provide independent power to the device.

- ⑨ USB Data Port

Used for communication and power supply between the product and the computer. Simply connect this cable to use the product.

Communication Protocol: HID

3.4 Adjustment Method

- The device itself does not require adjustment.
- When mounted with the MP1 Bracket, panel angle adjustment can be made (for detailed information, please refer to the MP1 User Manual).

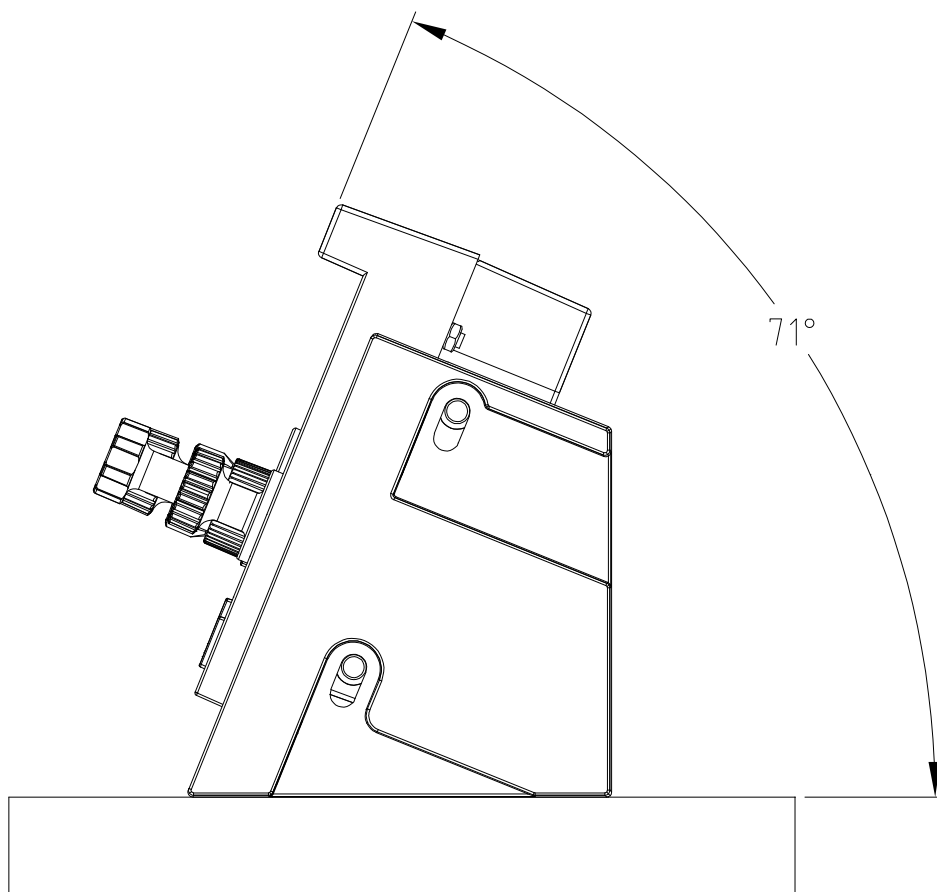
* NOTE: Only compatible with the new FCU bracket, listed as items 2# and 3# in the Packing List. The transition between the new and old FCU will be subject to the received product. The MP1 bracket is sold separately.

4 Installation Methods

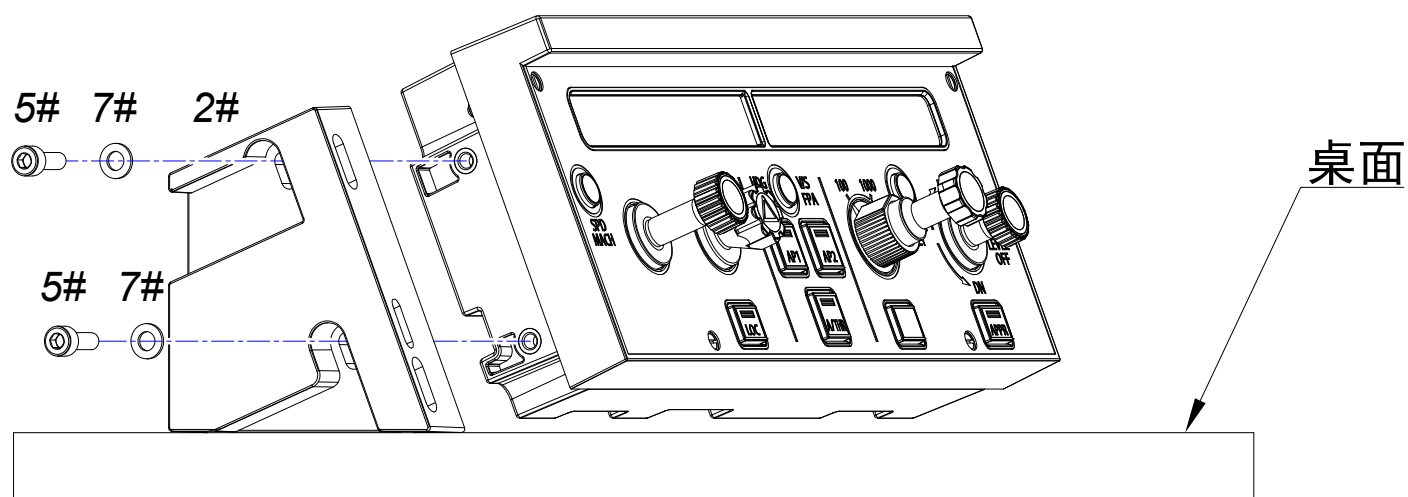
4.1 Bracket Installation

4.1.1 Desktop Mounting Method 1 (Recommended for Desktop Mounting)

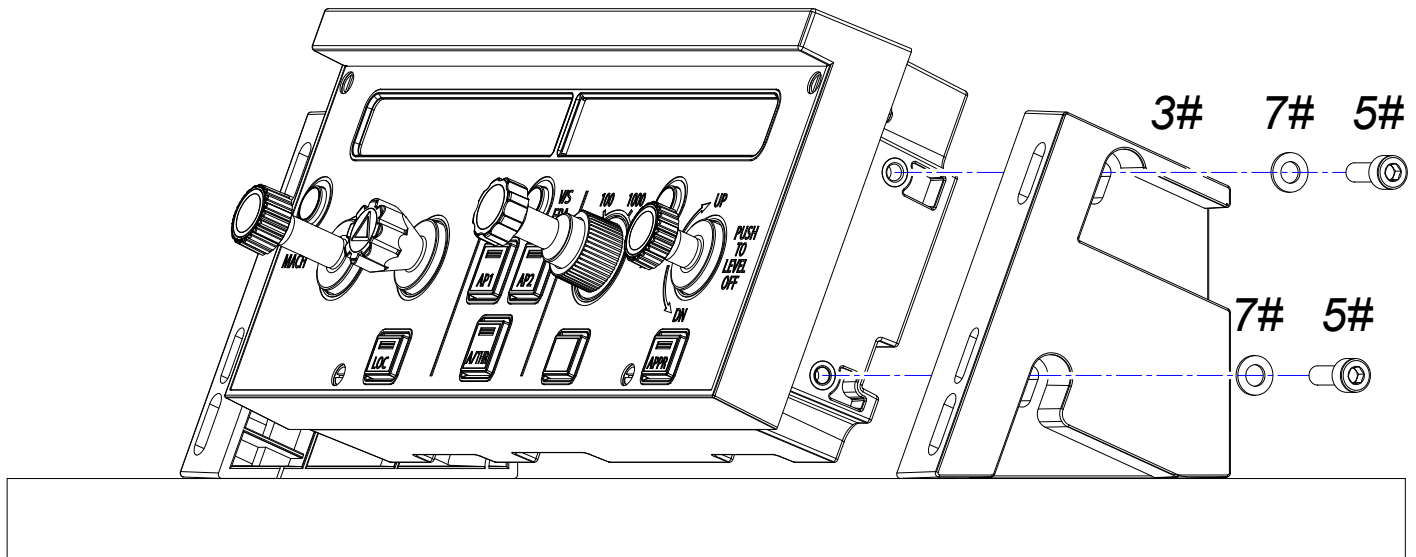
- Bracket Mounting Position: Install the bracket at a 71-degree angle relative to the desktop (the same as the real aircraft view).



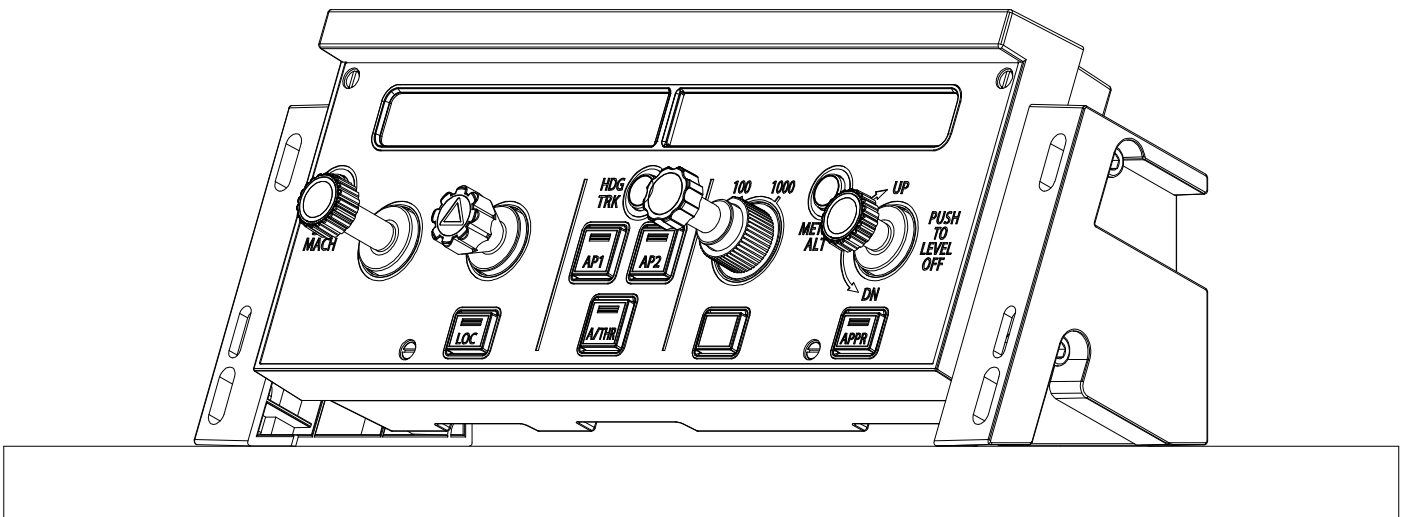
- Left and Right Brackets Mounting Method



- Screw in the screws, but do not tighten them yet.



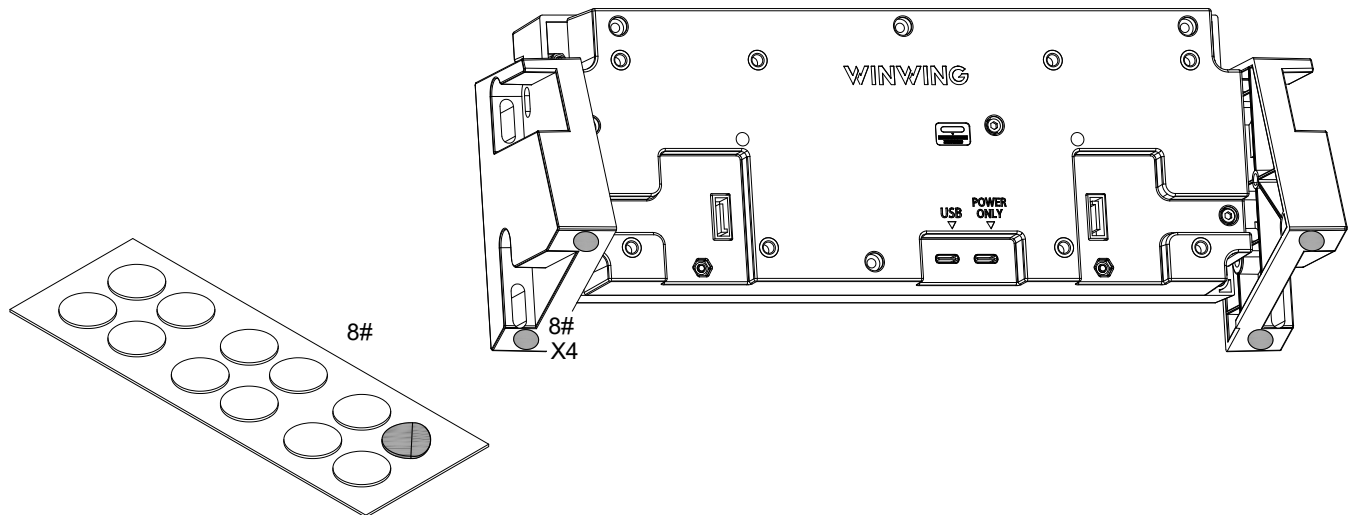
- Screw in the screws, but do not tighten them yet.



- Adjust the bracket position up and down until it is stable on the desktop, then tighten the screws.

- Tighten the screws until there is no wobbling; over-tightening may cause damage.

- Apply the Nano Double Sided Adhesive Dots (8#).



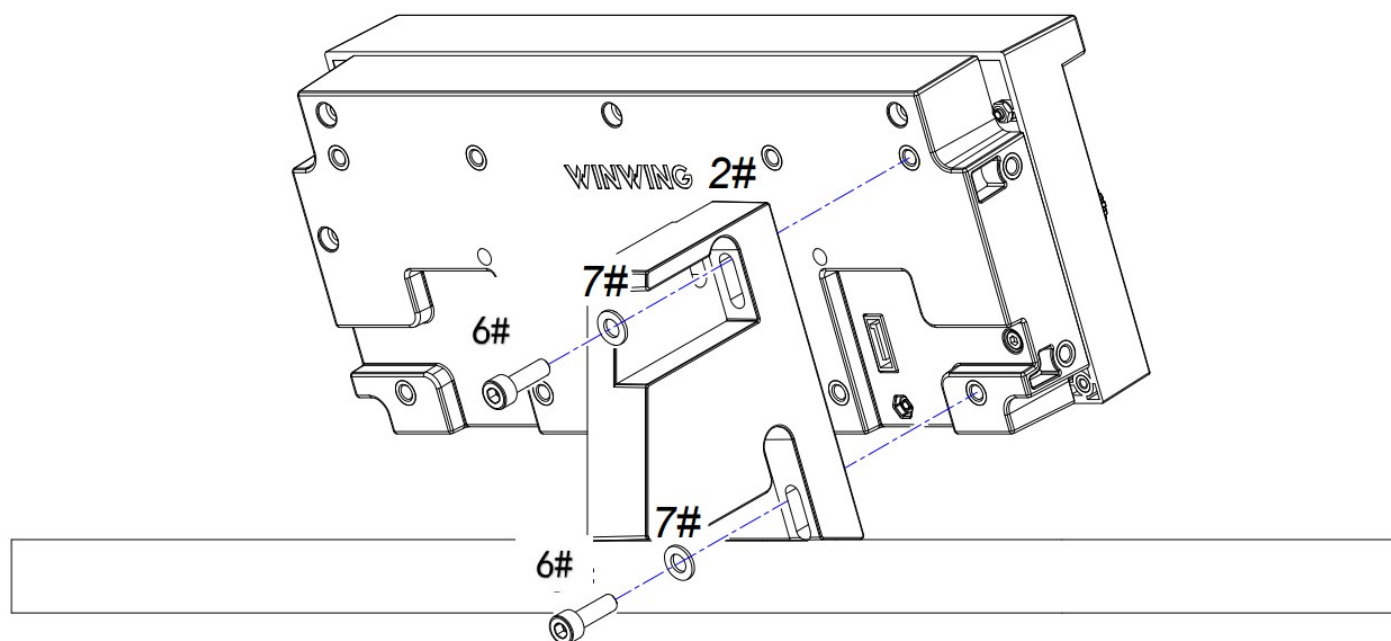
Clean the dust off the bracket surface before mounting.

Press firmly for at least 10 seconds during application and let it sit for 30 minutes to ensure the best adhesive effect.

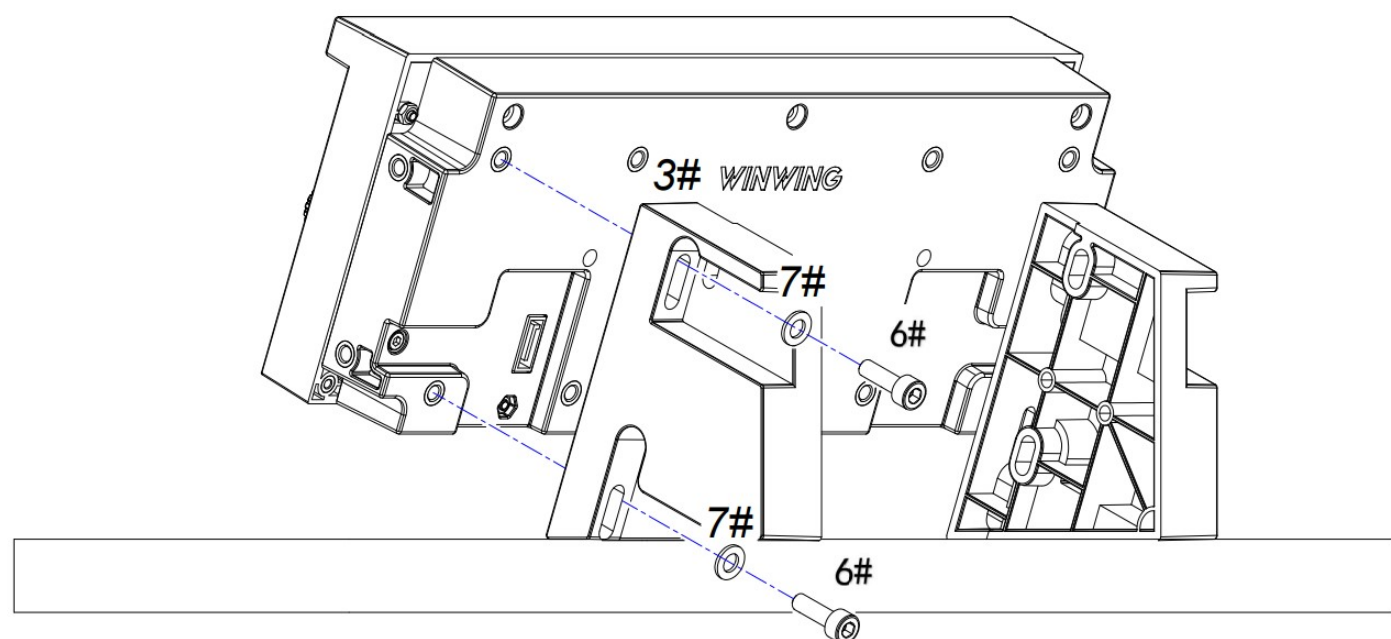
For single-use application only on clean, smooth surfaces. Do not apply to surfaces with wax, oil, water stains, dust, dirt, or rough textures to avoid improper adhesion and potential detachment.

The ideal temperature for application is between -10°C and 40°C.

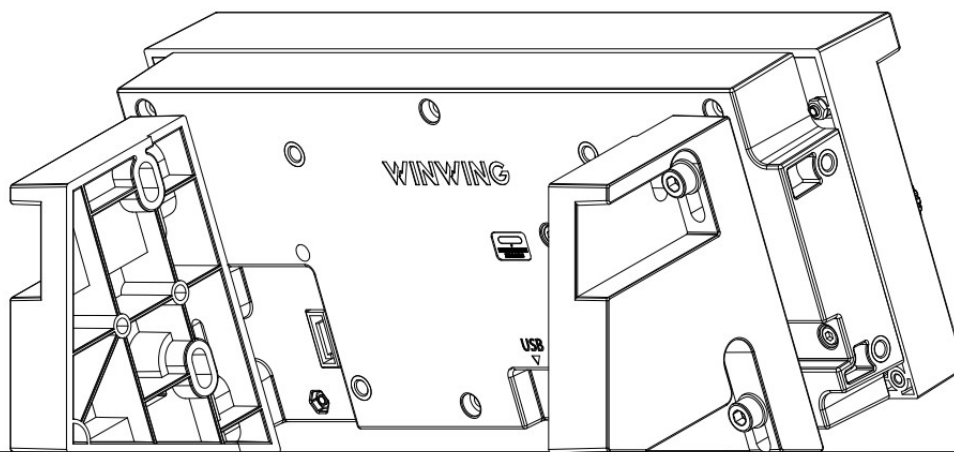
4.1.2 Desktop Mounting Method 2



- Screw in the screws, but do not tighten them yet.



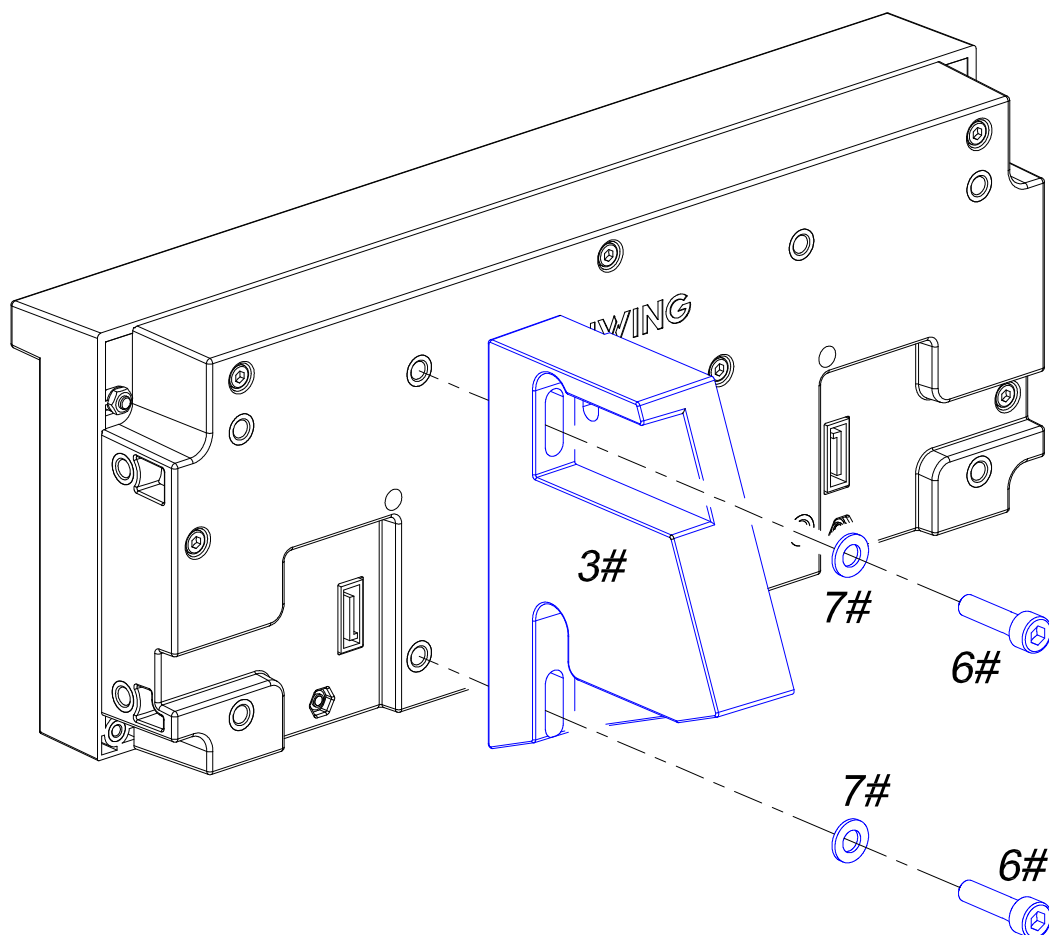
- Screw in the screws, but do not tighten them yet.

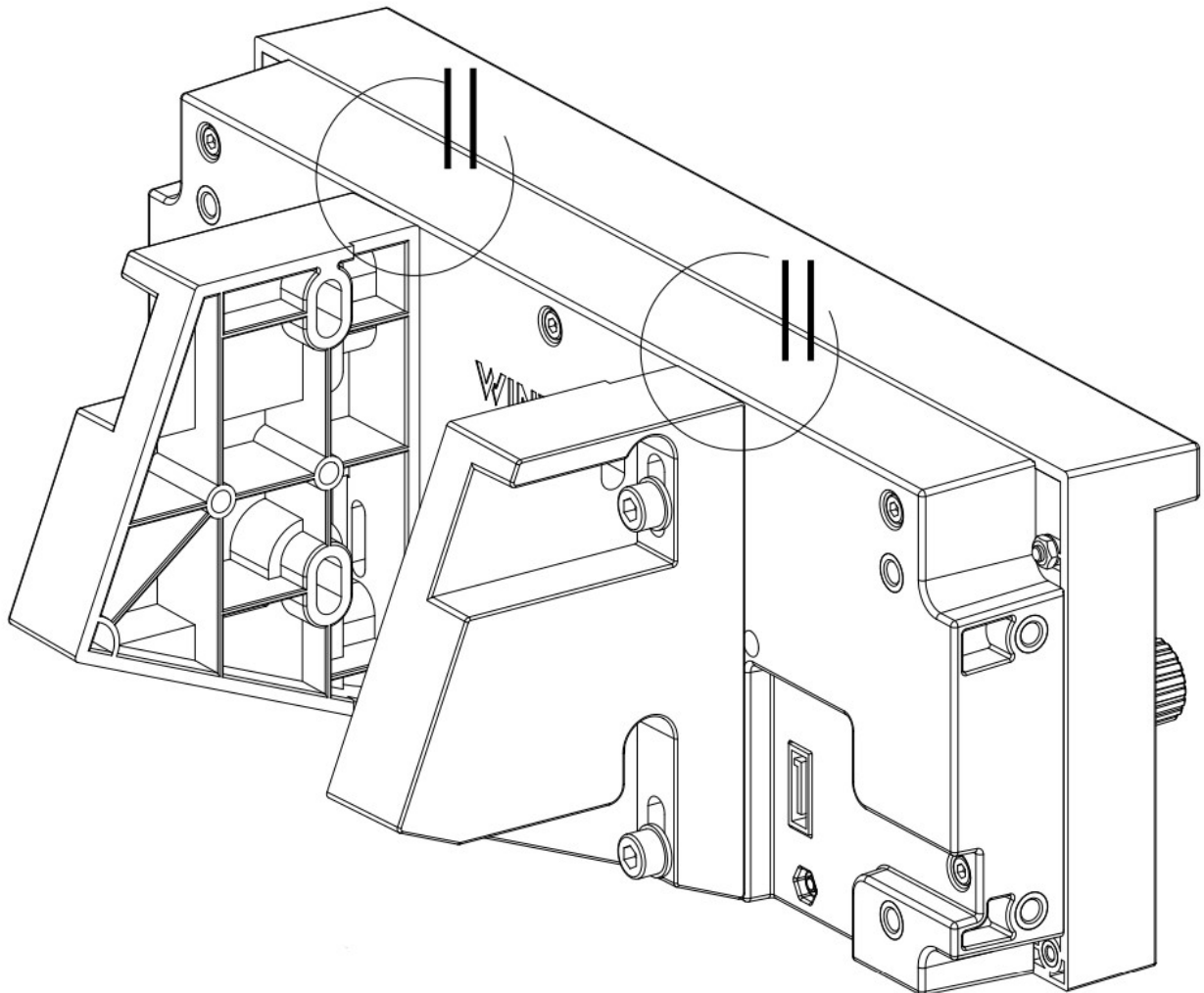
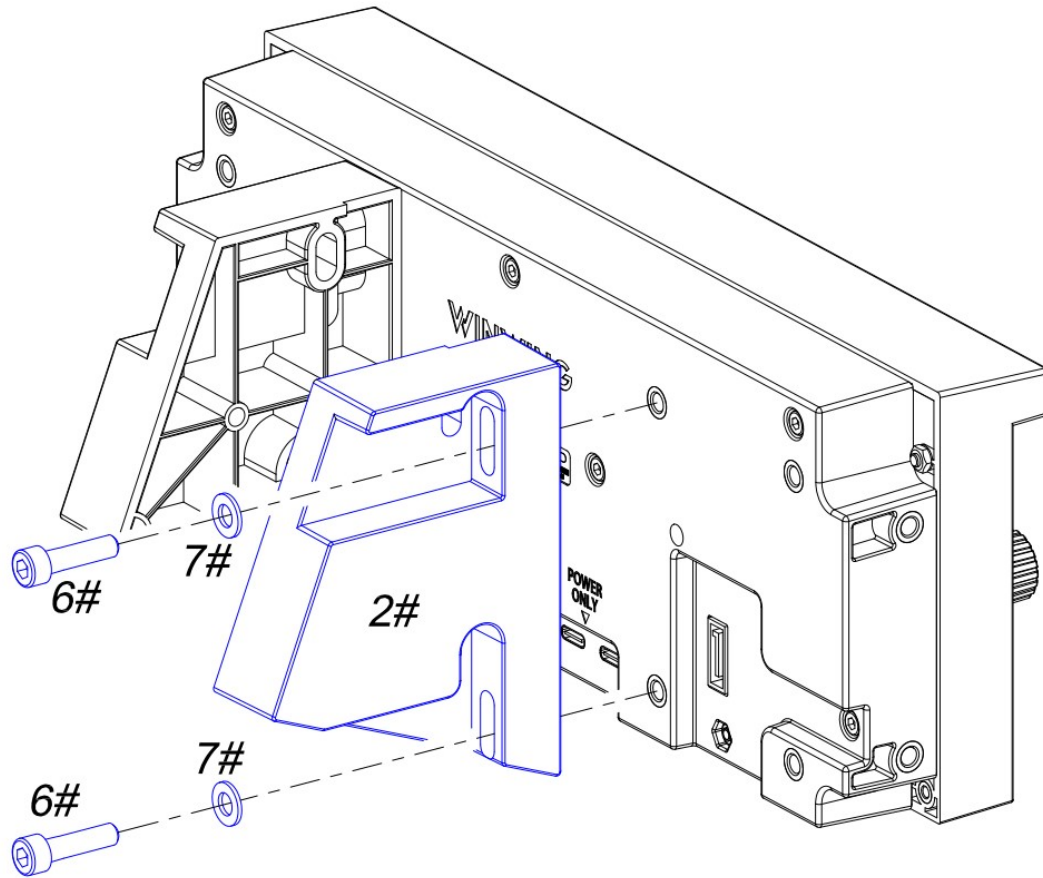


- Adjust the bracket position up and down until it is stable on the desktop, then tighten the screws.
- Tighten the screws until there is no wobbling; over-tightening may cause damage.
- Apply the Nano Double Sided Adhesive Dots (8#) to the bottom of the bracket.
- * The mounting methods for other mounting holes is the same as above.

4.2 Profile Installation

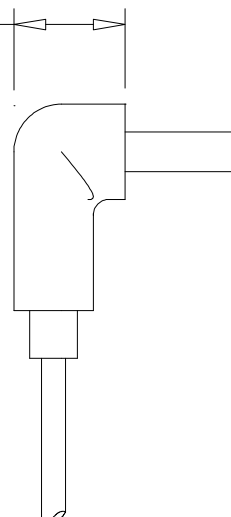
(*Profile rails and related accessories are required and not included.)



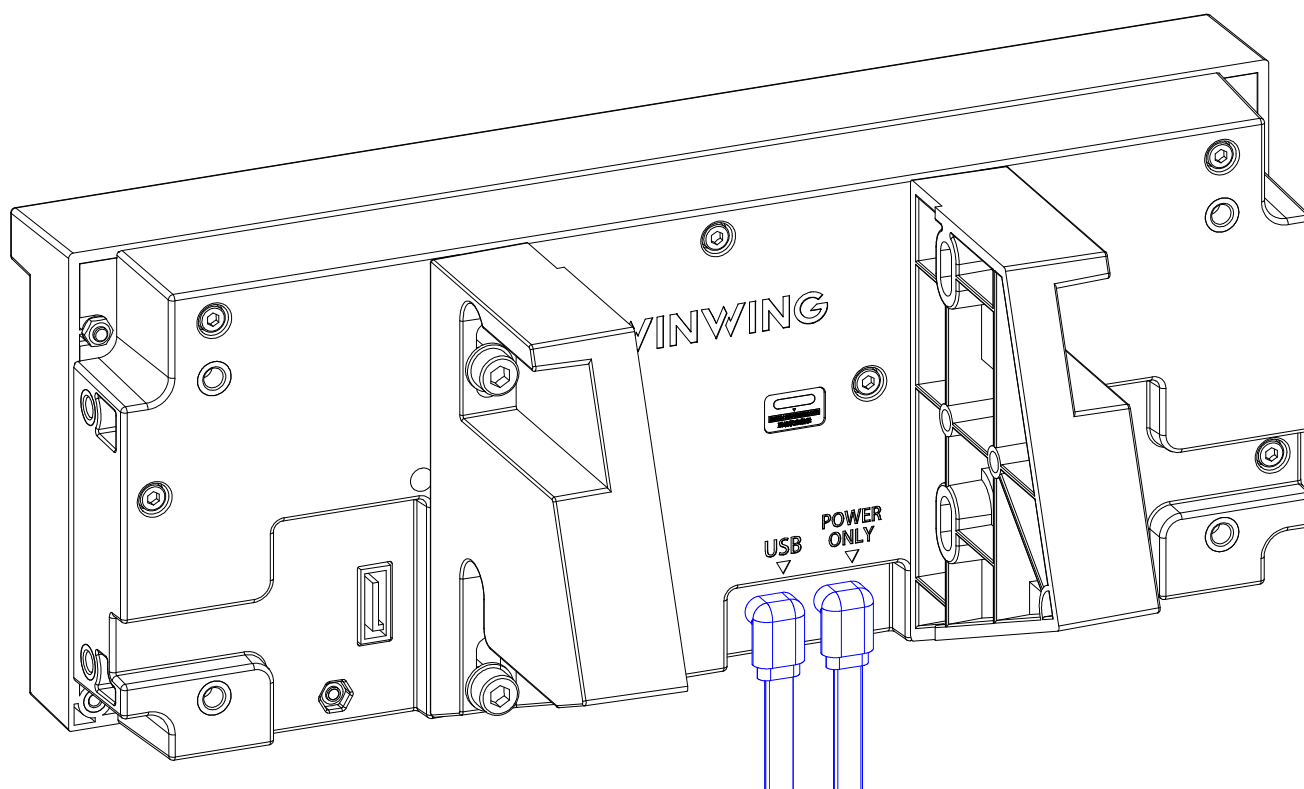


● Recommended Specifications for Self-Prepared Accessories $\leq 8mm$

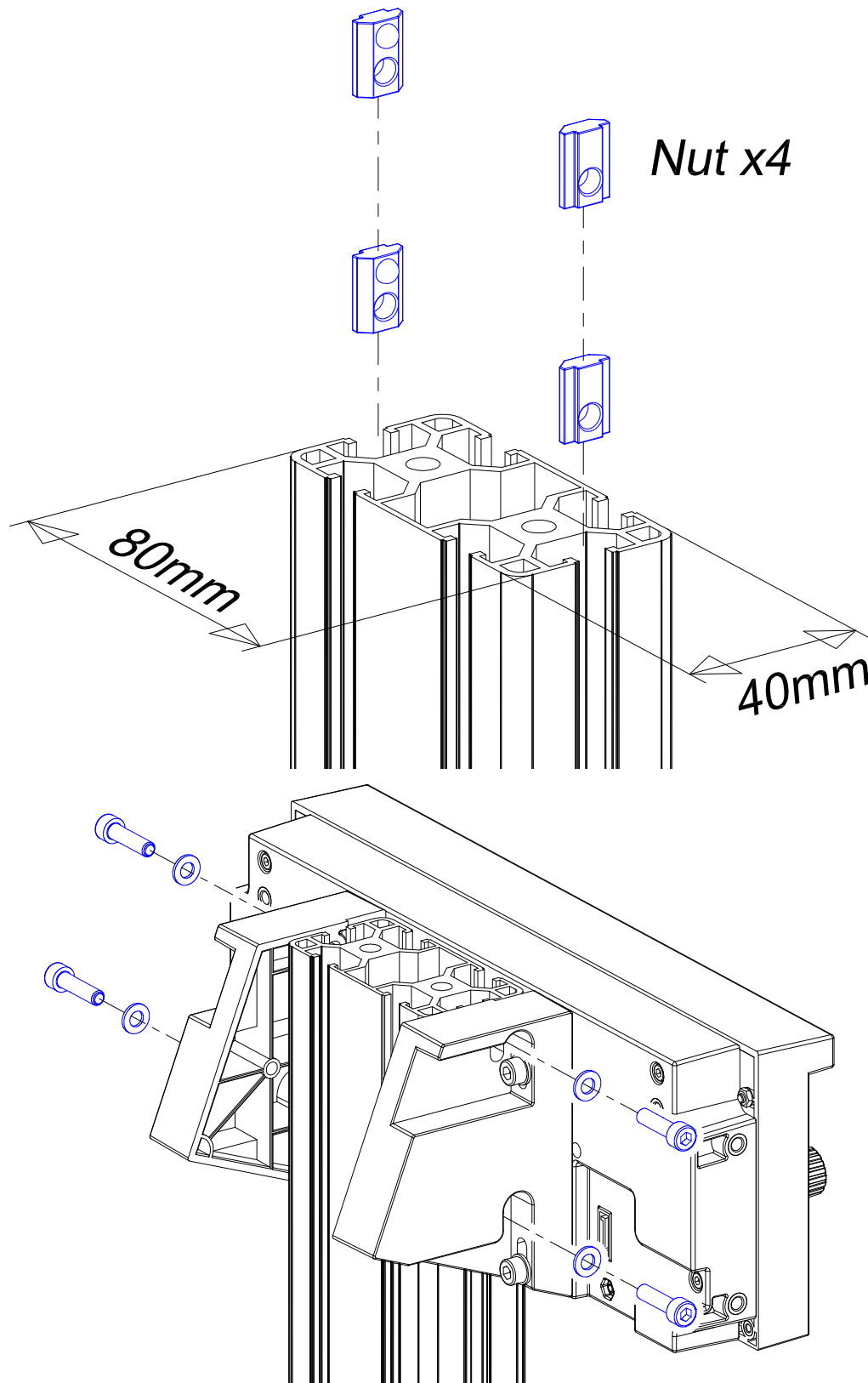
Item	Specifications	Quantity (Minimum)
Profile	EU Standard 4080	1
Profile Nut	40 Series - M5	4
Socket Cap Screw	M5*20	4
Flat Washer	$\phi 5$	4
Data Cable*	TYPE-C USB	1



*The specification of the TYPE-C data cable connector at the angled position should be $\leq 8mm$ (as shown on the right).



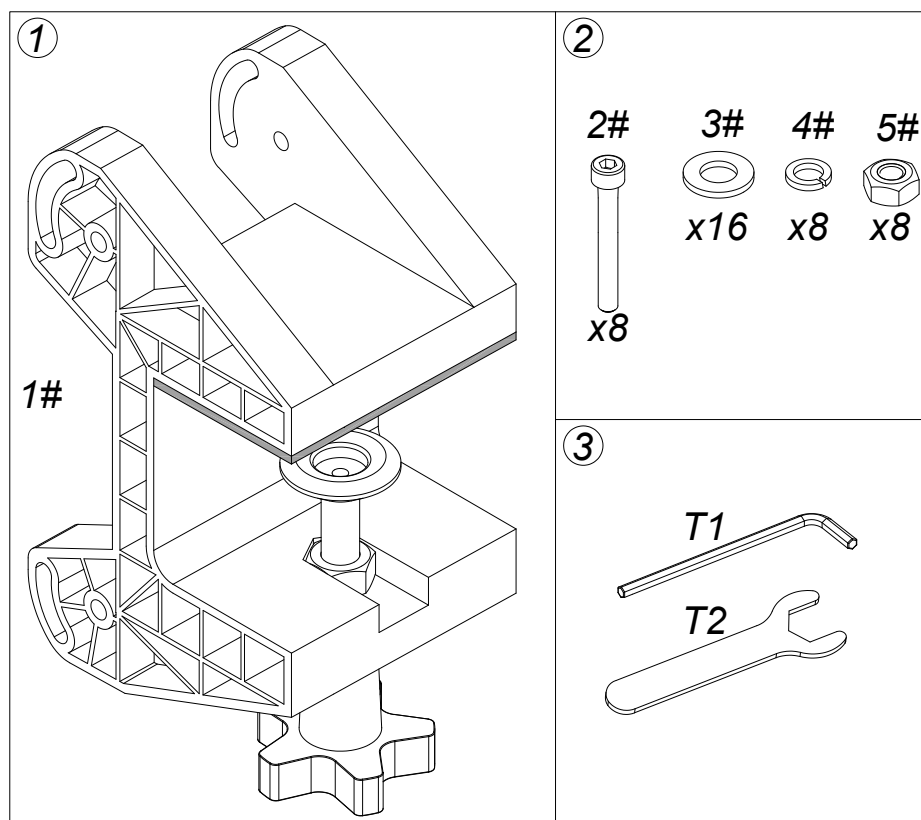
- Insert the data cables.



4.3 Integrated Device Installation

- Can be cascaded with various control panels for installation, see upcoming products for details. (Optional)
- Install with the Panel Mounting Bracket (MP1). * The Panel Mounting Bracket (MP1) is sold separately.

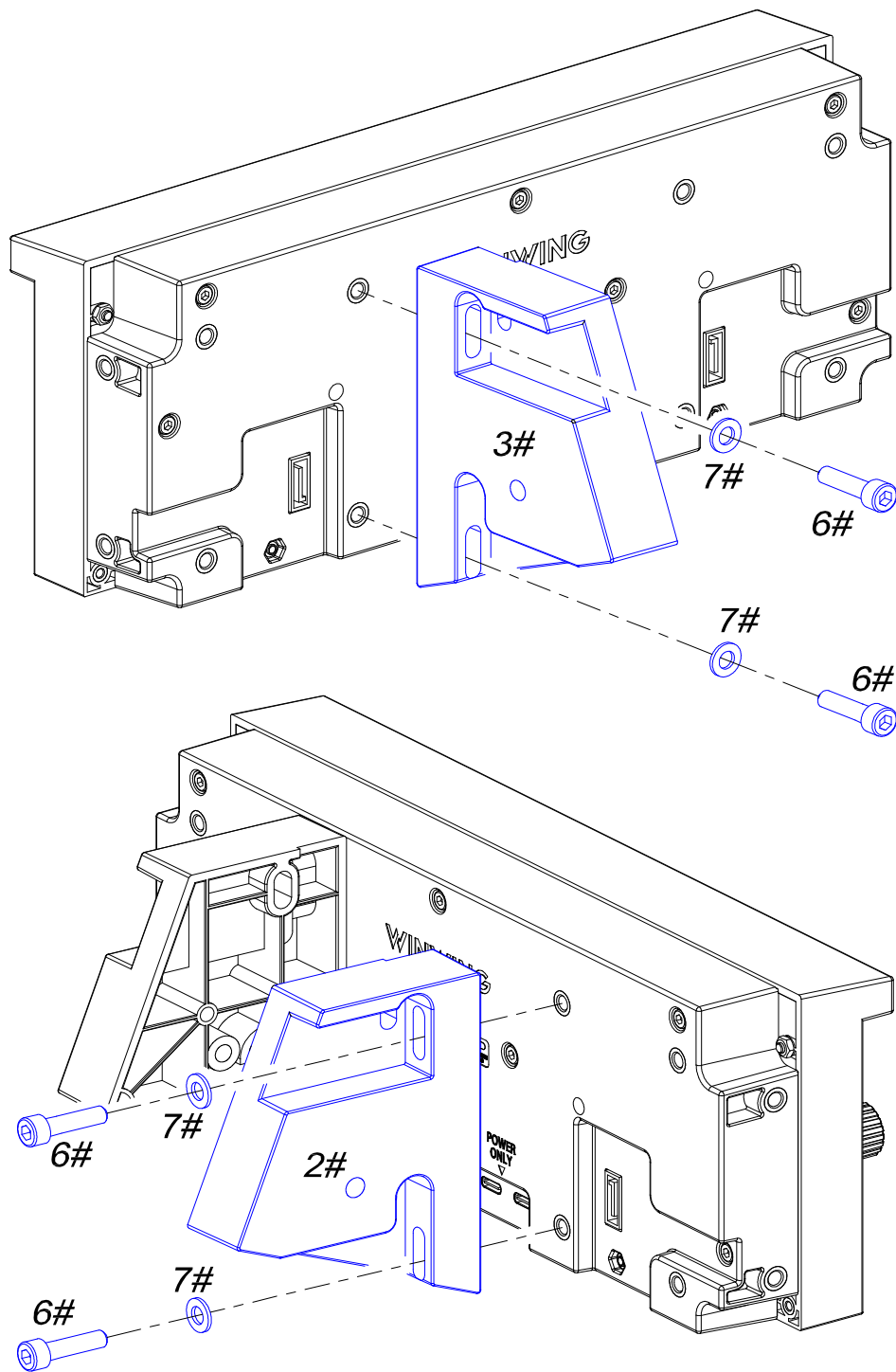
Panel Mounting Bracket (MP1) List (Sold separately, refer to the MP1 User Manual for detailed specifications.)

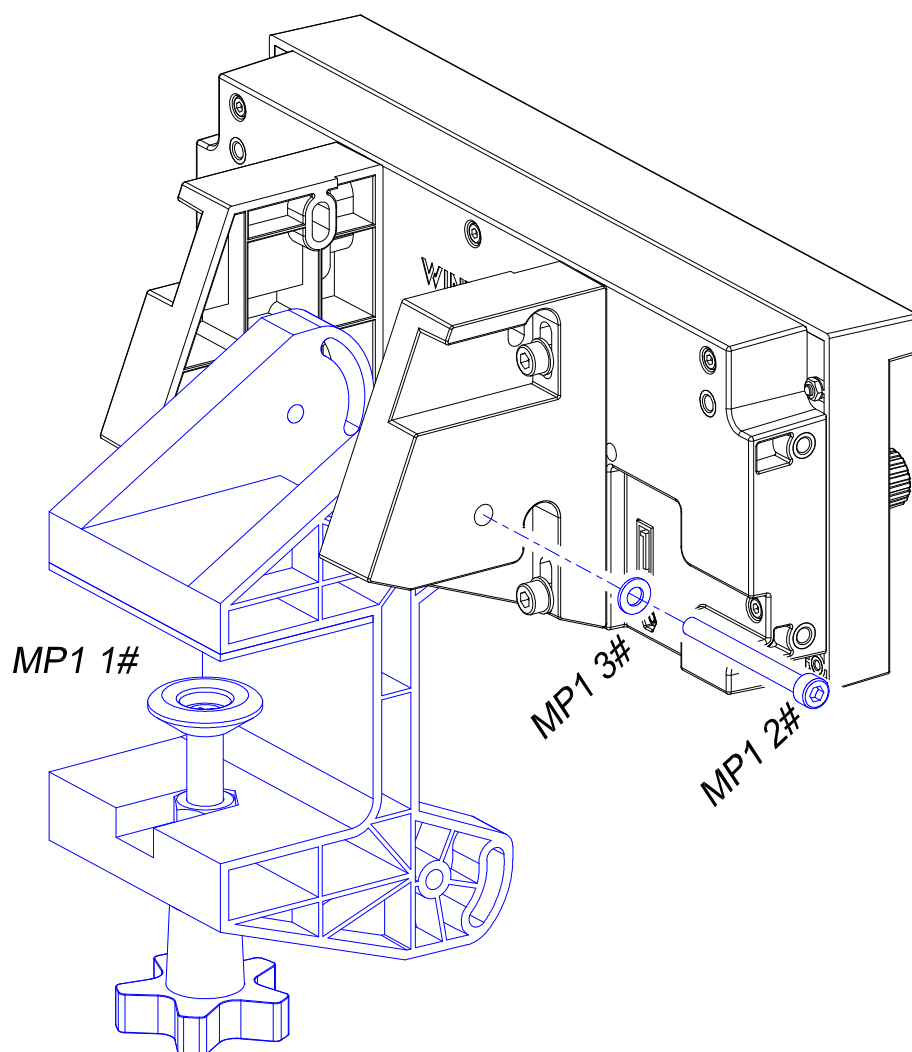
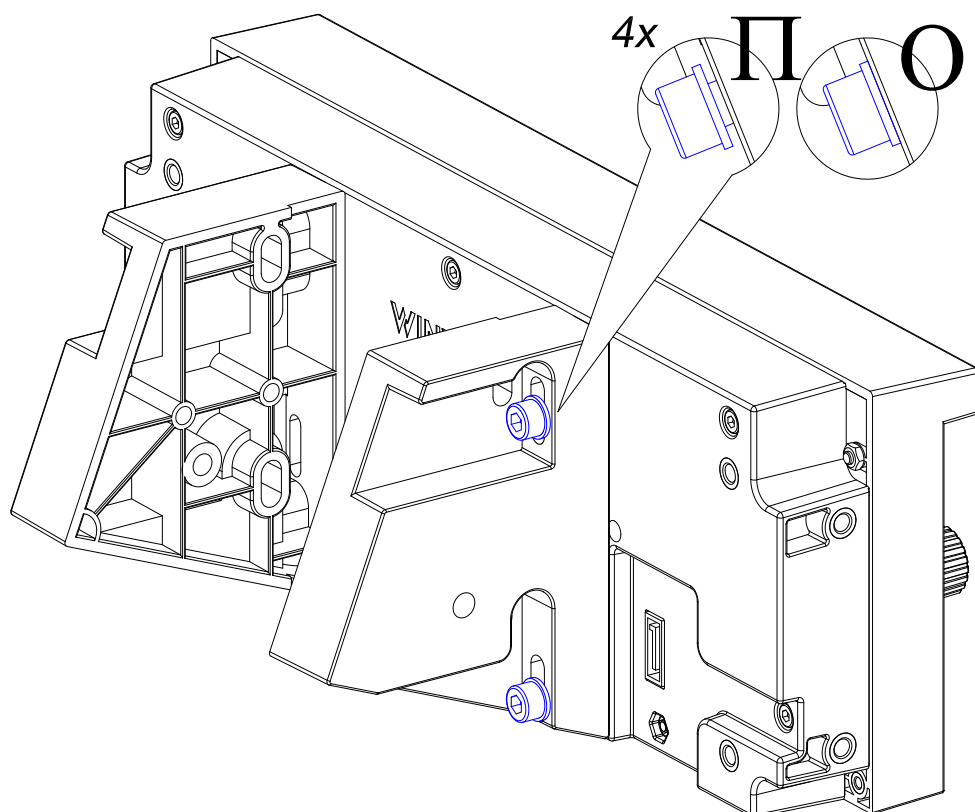


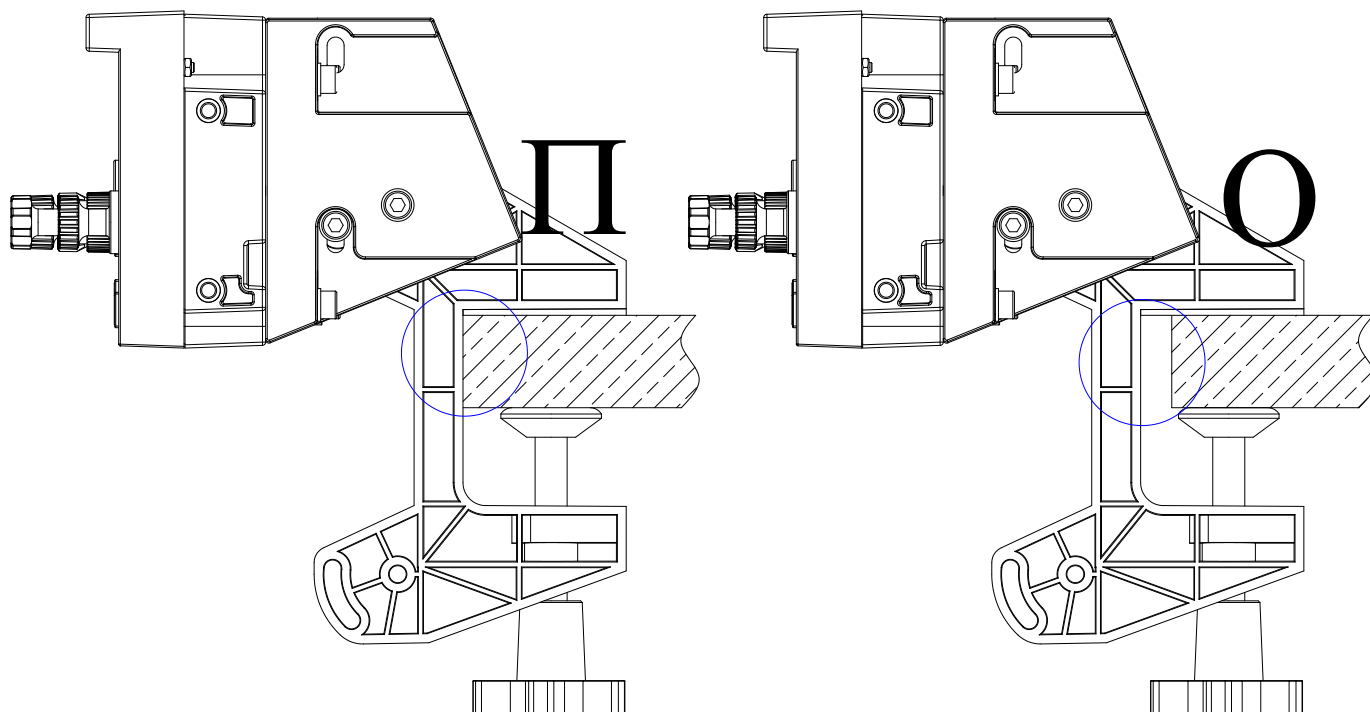
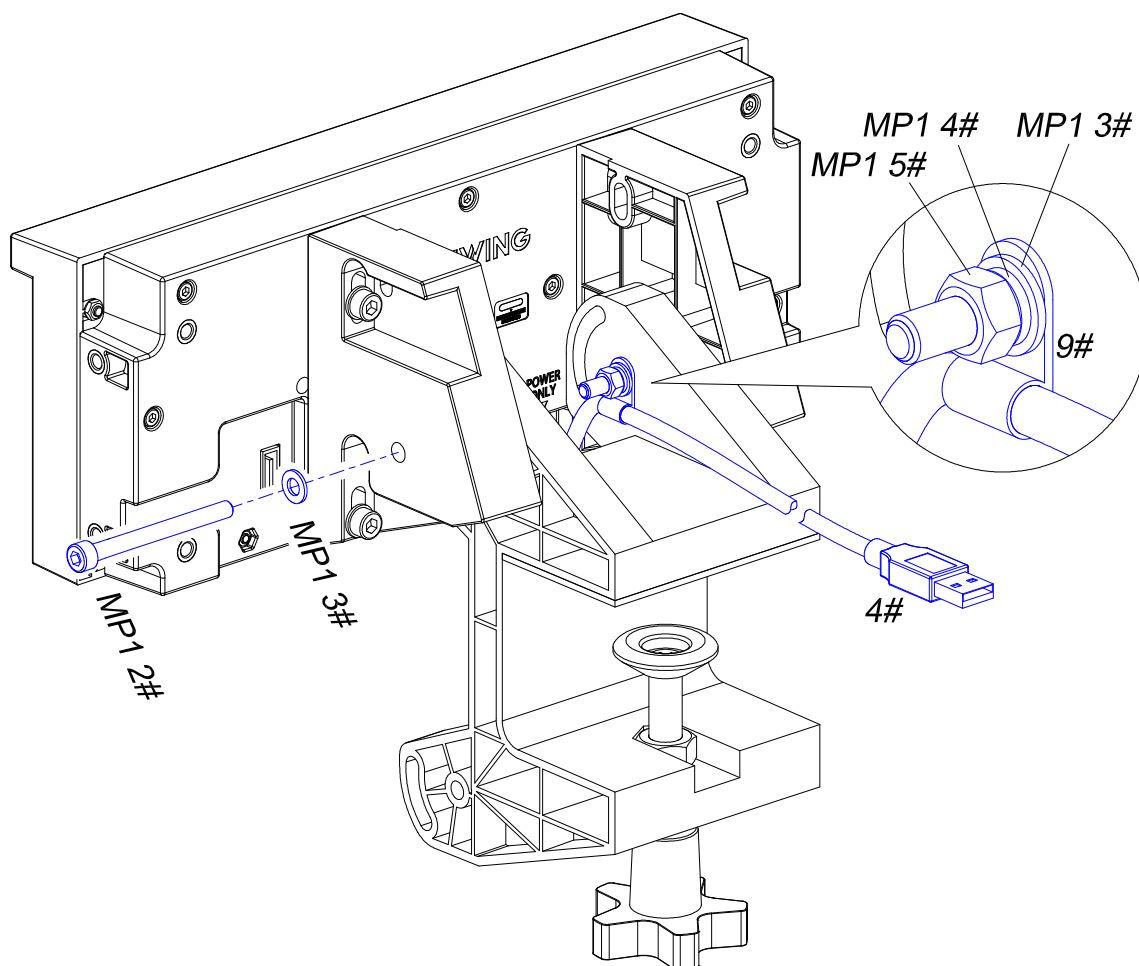
In this section, the materials shown in the figure will be described respectively as

“MP1+NUMBER” (such as MP11#, MP12#, MP13#).

Mounting Method:





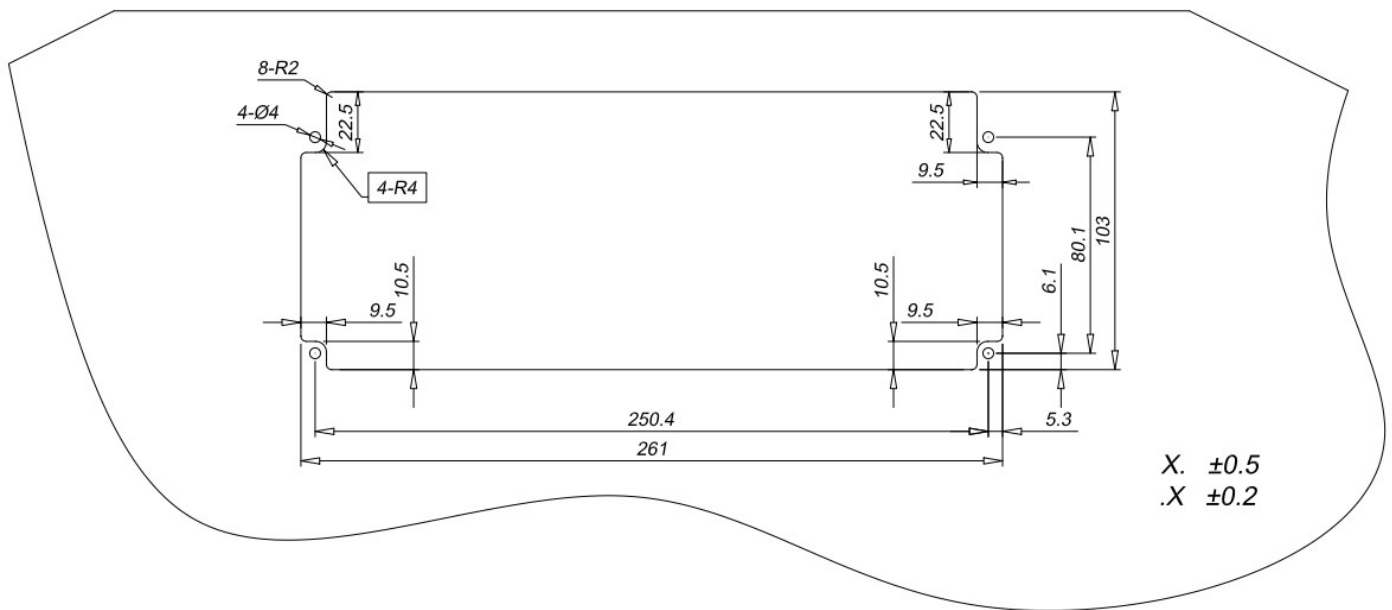


- Game Seat Mounting

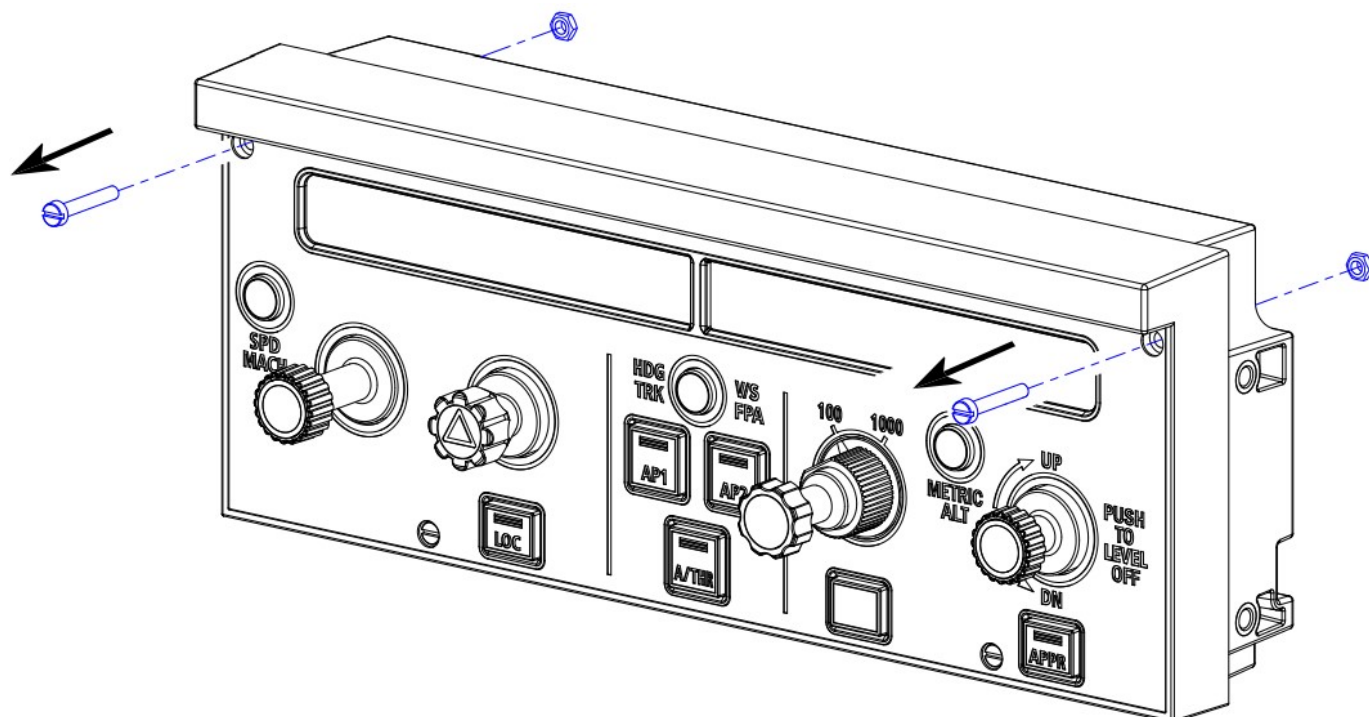
(/)

- Cockpit Mounting

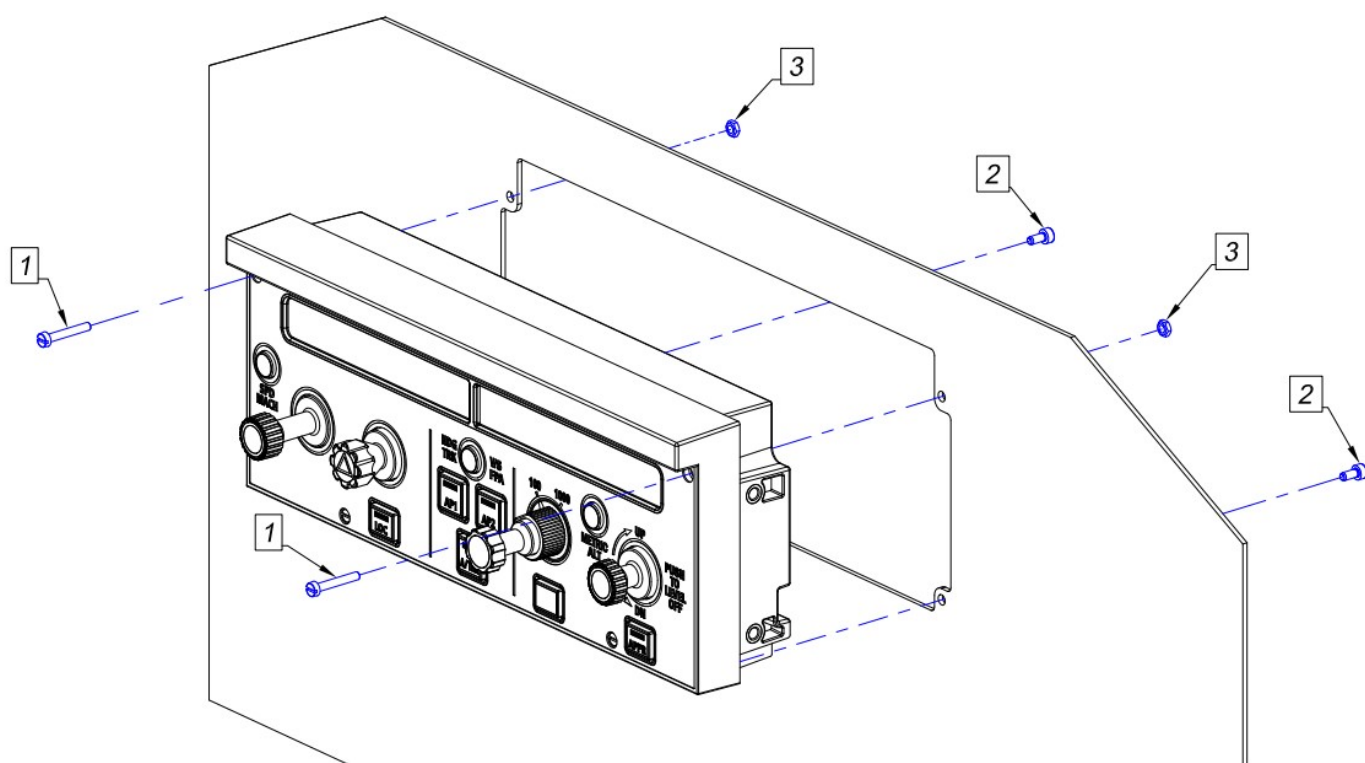
Cockpit frame and mounting screws need to be self-prepared.



Cockpit Frame Drilling Diagram



Remove the screws here and keep the nuts.



Install FCU1 on the cockpit frame; screw specifications are listed below:

1	Screw Specification: M3, Length = (22-25) + Cockpit frame thickness
2	Hexagon Socket Screw M3, Length = (5-8) + Cockpit frame thickness

3	Hexagon Nut M3
---	----------------

5 Maintenance and Care

5.1 Firmware Upgrade

- Firmware Upgrade via SimAppPro

- Before upgrading, ensure the product's wiring is securely connected and follow the instructions on the SimAppPro interface.
- If you encounter issues during the upgrade, try restarting SimAppPro and reconnecting the device's USB Data Port. * NOTE: Other interfaces, such as PS2, SATA, or aviation connectors, do not support hot-swapping. If you need to connect these interfaces, please disconnect the USB cable first.
- If the upgrade still cannot be completed, please contact Customer Service on WINWING website for technical support.

5.2 Cleaning and Maintenance

- To prevent sand, dust, and dirt from accidentally entering the product, this product features a dust-resistant design. However, it cannot completely prevent dirt, dust, water, or salt from entering the internal components. Avoid allowing dirt, dust, water, or salt to fall onto the product, and keep it clean.
- It is recommended to clean the product after use. Allowing dirt, dust, water, or salt to remain on the product may cause malfunction.

- Do not place the product near objects with strong magnetic fields, such as magnets or electric motors. Strong magnetic fields may cause abnormal data in the product.
- Do not place the product in high-temperature areas, such as inside a car exposed to direct sunlight. High temperatures may cause product malfunction.
- The product contains precision electronic circuits. Do not disassemble the product.
- Do not touch the product's electronic contacts with your fingers to avoid corrosion. Corroded contacts may lead to product malfunction.
- If the product suddenly moves from a low-temperature environment to a warm room, condensation may form on the surface and internal components. To prevent condensation, place the product in a sealed plastic bag and wait for the temperature to gradually rise before removing it from the bag.
- If condensation occurs on the product, do not use it to avoid damage. Wait for all moisture to evaporate before continuing to use the product. Even after the product is fully dried, the internal components may still be at a low temperature.
- Avoid storing the product in chemical laboratories or areas with chemicals that may cause rust or corrosion.
- Use only original accessories for maintenance and replacement.

5.3 Frequently Asked Questions and After-Sales Service

Frequently Asked Questions

- If the product is experiencing abnormalities, please check if the firmware and SimAppPro version are up to date and perform an upgrade if necessary.
- If you experience signal instability or drift during use, try recalibrating within SimAppPro or clearing the game controller data in Windows.
- If the product is having issues with unstable connection or is not recognized by the computer, try switching to a different USB port (it is recommended to use a USB port directly on the motherboard or a three-prong USB hub with independent power and proper grounding). Also, try cleaning the data cable's connectors with alcohol or replacing the cable to see if the signal stabilizes.

* NOTE: If you need to connect other interfaces, such as PS2, SATA, or aviation connectors, please disconnect the USB cable first before proceeding.

- After connecting the product to the computer, make sure to secure the cables in the fixed clips to prevent damage to the product's connectors.
- When assembling and connecting the product and accessories, ensure that the screws are tightened correctly and that no components are loose or over-tightened. Incorrect

handling may cause unusual sounds during operation.

- When using a USB hub to connect the product, ensure that the three-prong hub has independent power supply and proper grounding. Otherwise, the product's signal may be unstable.

6 Safety Precautions

For safe use of the product, please be sure to read these precautions.

Please follow these precautions to prevent harm or injury to the user or others.

- Keep the product out of the reach of children.
- Swallowing product parts or accessories is extremely dangerous. If swallowed accidentally, seek medical attention immediately.
- Use only the power supply specified in the product user manual that is intended for use with this product.
- Do not disassemble or modify the product.
- Do not subject the product to strong impacts or vibrations.
- Do not touch any exposed internal components.
- If the product emits smoke, an unusual odor, or exhibits any abnormal behavior, stop using it immediately.

- Do not clean the product surface with organic solvents such as alcohol, gasoline, or paint thinner.
- Do not get the product wet, and do not insert foreign objects or pour liquids into the product.
- Do not use the product in environments where flammable gases may be present, as static electricity may cause explosions or fires.
- During thunderstorms, do not touch the product connected to a power outlet, as this may result in electric shock.

Disclaimer

Please read and understand the contents of the product user manual carefully. Failure to follow the instructions may result in personal injury or damage to the product.

Ensure that all personnel using this product are familiar with and understand the user manual to maximize the product's value.

Any personal injury, property damage, or product damage resulting from improper use or failure to follow the user manual will be the sole responsibility of the user. The company will not be held liable for such incidents.

When users are using the product:

Users should install, handle, store, use, maintain, and dispose of the product according to the product guidelines, relevant laws, regulations, and safety standards, without violating any applicable laws.

Since the conditions and methods in which the user uses this product are beyond the control of the company, the company is not liable for any consequences arising from the following situations. The responsibility lies solely with the user:

- Personal injury, property damage, or product damage caused by improper user operation, failure to follow the product user manual, or other uncertain factors.
- Changes in the product's technical specifications, data, or content of the user manual due to improvements in reliability, functionality, design, or other reasons, without prior notice.

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