

Frozen Tote

User Manual

Model: FT33-001

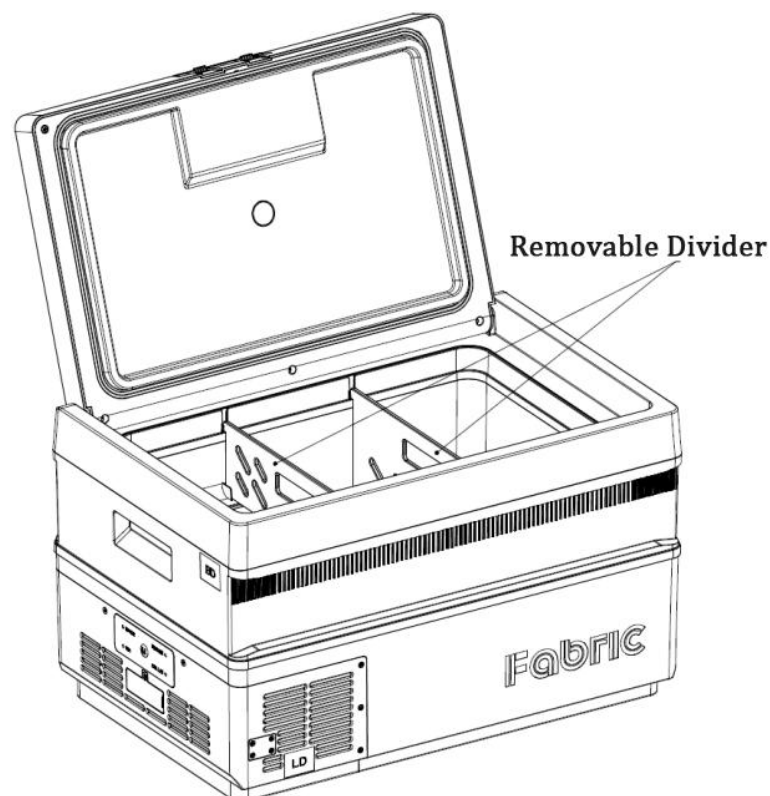
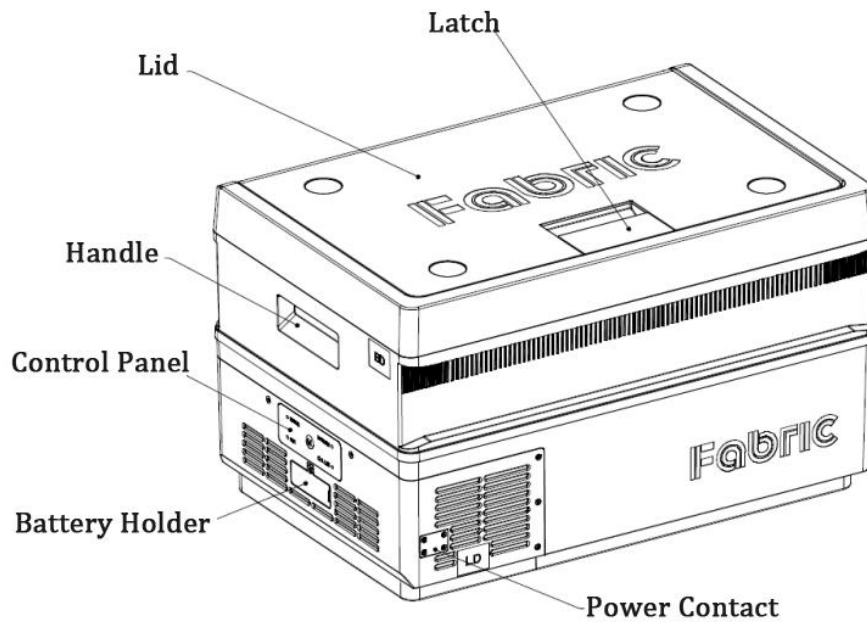


Guangdong Sumi IoT Technology Co., Ltd
Version: 1.0

Before Use

Before using this product, please read this user manual carefully and operate the product strictly in accordance with the instructions provided. Please keep this manual in a safe place for future reference. If the product is transferred to another user, this manual must be handed over together with the product.

The manufacturer shall not be liable for any damage to the equipment or any related losses caused by use, operation, or maintenance not in accordance with this manual.



Safety Guidelines

Please read and follow the safety guidelines below before using this product. These guidelines are summarized from the operating and maintenance instructions provided in this manual.

1. Before First Use

- Remove all packaging materials and carefully inspect the tote, power cable, and plug. If any abnormality is found, do not power on the device.

2. Electrical Safety

- Use only the specified DC 24V power supply and the designated power adapter FT33-001-PS .
- Disconnect the power supply before cleaning, maintenance, or servicing.
- Do not operate the product if the power cable or connector is damaged.

3. Installation and Placement Safety

- Place the tote on a stable and level surface.
- Do not tilt the product more than 30° during operation.
- Ensure adequate ventilation and maintain a minimum clearance of 100 mm around all ventilation openings.
- Do not place the product near heat sources such as ovens, radiators, or other heat-generating equipment.
- The plug shall remain readily accessible after installation.

4. Operation Safety

- Do not store flammable, explosive, or volatile substances inside the tote.
- Do not block ventilation openings during operation.
- Do not disassemble, modify, or repair the product without authorization.

5. Maintenance and Battery Safety

- Always power off the device before cleaning or maintenance.
- Use only the specified 18650 lithium battery for replacement.
- Replace the battery only when the device is powered off.
- If the product will not be used for an extended period, reinstall the insulation tab or remove the battery.

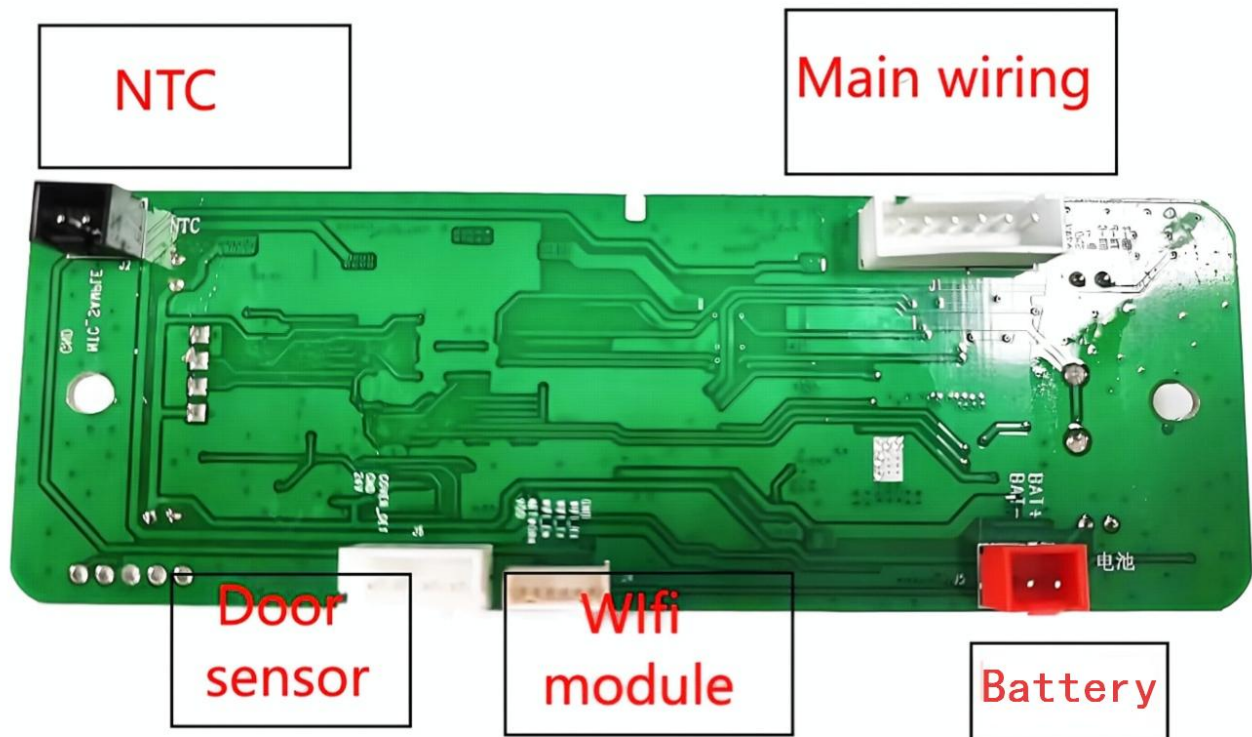
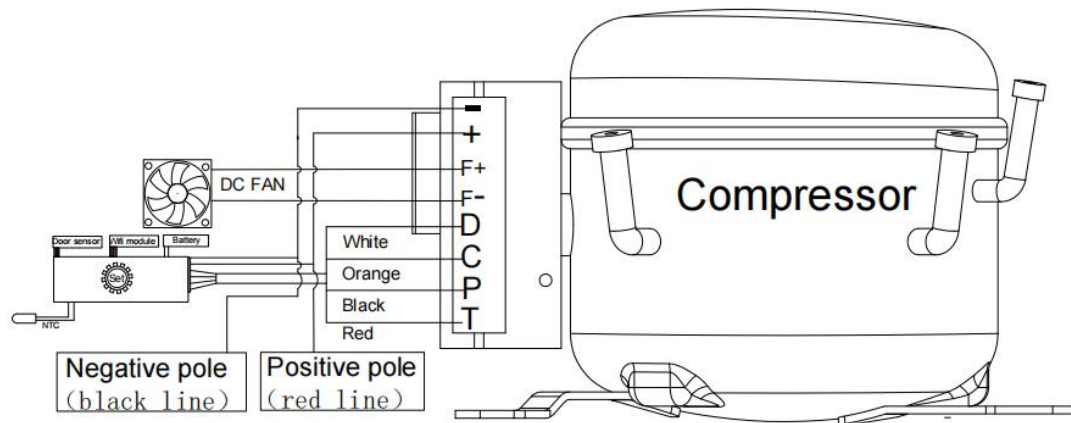
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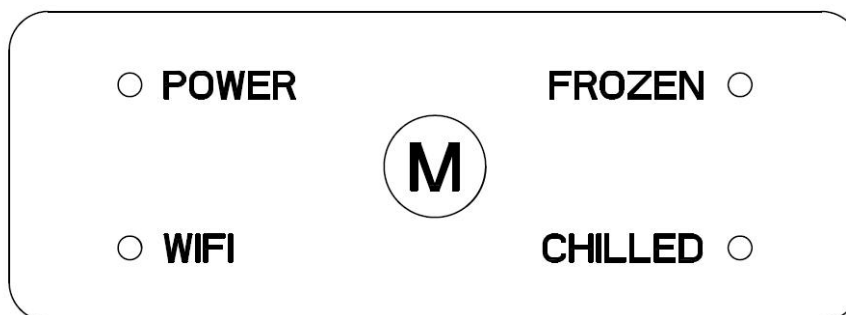
1. Product Specifications

Parameter	Frozen Mode	Chilled Mode
Product Model	FT33-001	
Overall Dimensions (L × W × H)	596.6x398x356.5mm	
Package Dimensions	655x453x410mm	
Net Weight	12kg (T0 weight)	
Internal Volume	33L	
Cooling Method	Compressor cooling	
Refrigerant/Charge	R-1234yf/30g	
Temperature Accuracy	±2°C	
Foaming Agent	Cyclopentane polyurethane	
Rated Power	55W	
Max Input Power / Peak Power	DC24V*3A=72W	
Starting Current	3.0A	
Input Voltage	DC24V	
Set Temperature Modes	≤ -18°C	4°C
Pull-down Time (at 25°C ambient)	≤180mins	≤60mins
Actual Power Consumption (at 25°C ambient)	≈ 0.959 kWh/24h	≈ 0.275kwh/24h
Battery Type	18650 lithium battery, 2600 mAh / 9.6 Wh	
Power Adaptor	Only compatible with FT33-001-PS power adaptor	
Certifications	cTÜVus , FCC, CE (In progress)	

2. Basic Scheme Connection



3. Function and Operation Instructions



POWER: Power indicator. When DC 24 V power is connected, the red indicator stays on. When power is not connected, the red indicator flashes.

WIFI: WiFi indicator. When connected to WiFi, the blue indicator stays on. When not connected, the blue indicator flashes.

FROZEN: Operating mode indicator. Indicates the temperature is set to -18°C . The white indicator stays on.

CHILLED: Operating mode indicator. Indicates the temperature is set to 4°C . The white indicator stays on.

M (Mode Button):

Short press: switch between FROZEN and CHILLED modes.

Long press: restore WiFi to initial AP mode.

Double press: power on/off

3.1 Power ON / OFF Function

When cooling is required, the compressor starts operating and the corresponding temperature indicator lights up in white.

The fan will start operating with a 5-second delay.

3.2 Lid Open/Close Detection

When the lid is not closed properly (gap $> 2\text{mm}$), a warning will be triggered in the backend (IoT management interface).

3.3 Troubleshooting

Fault Code	Description	Possible Cause	Recommended Action	
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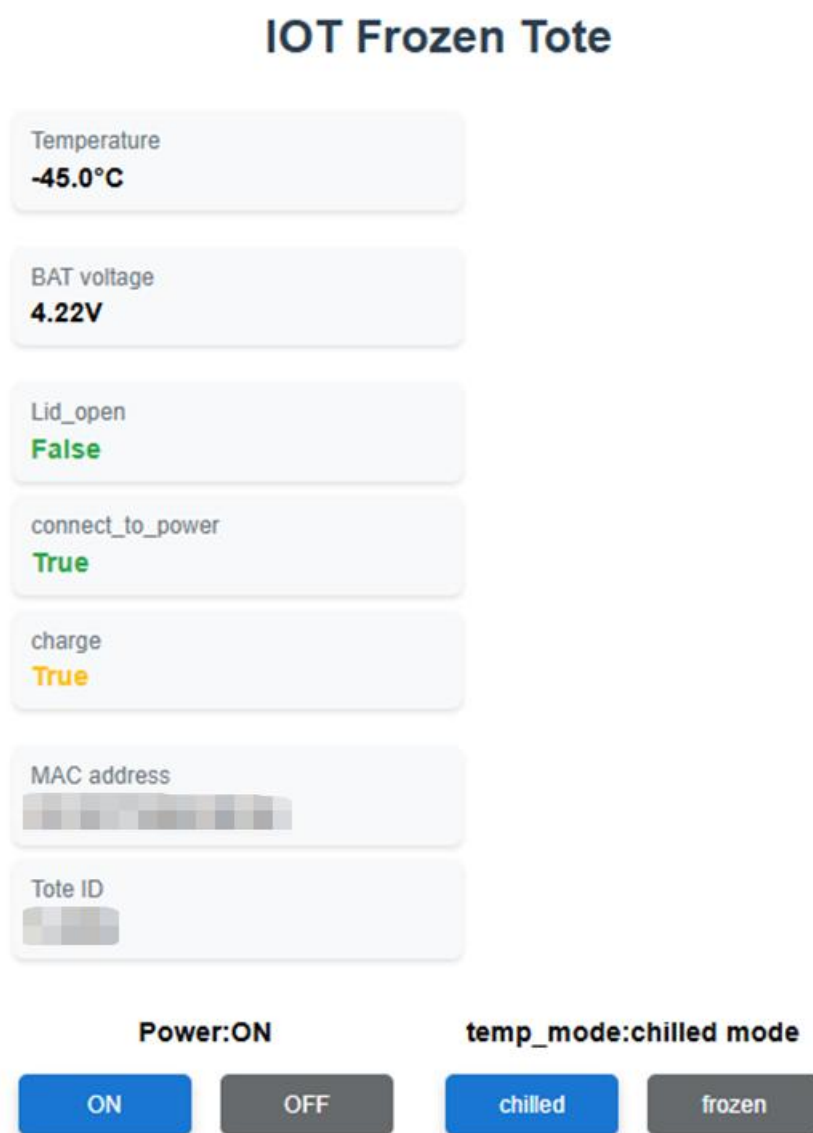
0xf1	The temperature sensor is malfunctioning	1. Loose wiring or poor soldering 2. PCB issue, NTC issue	Power off the device for at least 1 minute, then restart. If the issue persists, replace the NTC cable. If this still not work, check whether connector is loose , or the board issue	
0xf2	Power voltage protection	1. Abnormal power supply	Check whether the power supply is in the rage of 23~31V DC. If not, replace the power supply.	
		2. Power supply input wire is loose	Check whether the voltage is low	
		3. Power contacts connection not good enough	Check power contacts connection	
0xf3	External fan over-current protection	Fan not working or abnormal operation	Turn off the device for at least 5 minutes and restart it. If the issue persists, replacement of the fan is recommended	
0xf4	Compressor start failure	1. High ambient temperature exceeding 50℃ or poor heat dissipation causes excessive internal pipeline pressure and blockage, or abnormal compressor operation	Lower ambient temperature, shut down the tote for at least 5 minutes, restart, and check fan operation	
		2.Wiring loose from the compressor controller	Reconnect the wiring securely	
		3.Fan abnormal	Replace the fan	
		4.Compressor controller works abnormally	Replace the compressor controller	
		5. Main board malfunction	Replace the main board	
0xf5	Low speed	1. High ambient	Lower ambient	

	startup of the compressor failed	temperature exceeding 50 °C or poor heat dissipation causes excessive internal pipeline pressure and blockage, or abnormal compressor operation	temperature, shut down the tote for at least 5 minutes, restart, and check fan operation	
		2. Wiring loose from the compressor controller	Reconnect the wiring securely	
		3. Fan abnormal	Replace the fan	
		4. Compressor controller works abnormally	Replace the compressor controller	
0xf6	Controller overheating protection	1. Too high ambient temperature	Power off the device for at least 30 minutes or move to a cooler location before restarting.	
		2. Air vent blocked or insufficient clearance	Clear air vents and maintain sufficient surrounding clearance	
		3. Fan abnormal	Check fan operation and follow 0xf3 handling method	
0xf7	Power disconnected	1. Disconnect the power supply actively	Normal operation, no need for handling	
		1. The contact point of the power supply metal spoon is not properly connected to the metal plate.	Adjust the position of the metal spoon and the metal plate so that they make good contact.	
		2. The vibration causes a momentary loosening between the contact power supply and the metal plate, resulting in a brief power outage.	It can recover by itself and doesn't require any handling. This is recorded as the reason for the refrigerator's shutdown.	
		3. Overload protection of the adapter caused by frequent start-stop operations of the compressor	The excessively high environmental temperature causes frequent power on/off cycles. Therefore, the	

			environmental temperature needs to be lowered to below 40 degrees Celsius.	
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3.4 IoT Function

When a computer or mobile device is connected to the same local network as the tote WiFi, enter the IP address in a web browser to access the web interface for data monitoring and parameter settings.



3.5 Lithium Battery Charge and Discharge Protection

Charging: The backend displays the battery status. Charging will stop when battery reaches 4.2V.

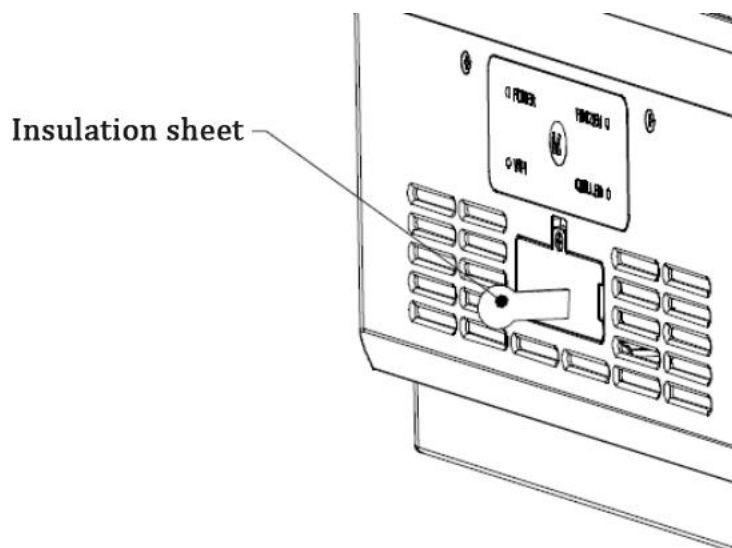
Discharging: The backend displays the battery voltage.

- When the discharge current exceeds 2A, the discharge protection circuit will disconnect;
- When voltage drops to $\leq 3.0V$, the protection circuit will disconnect to prevent over-discharge and protect the battery.

4. Battery Use and Replacement

To ensure data transmission capability when the product is powered off, a lithium battery is built into the product. Before first use, please remove the insulation tab.

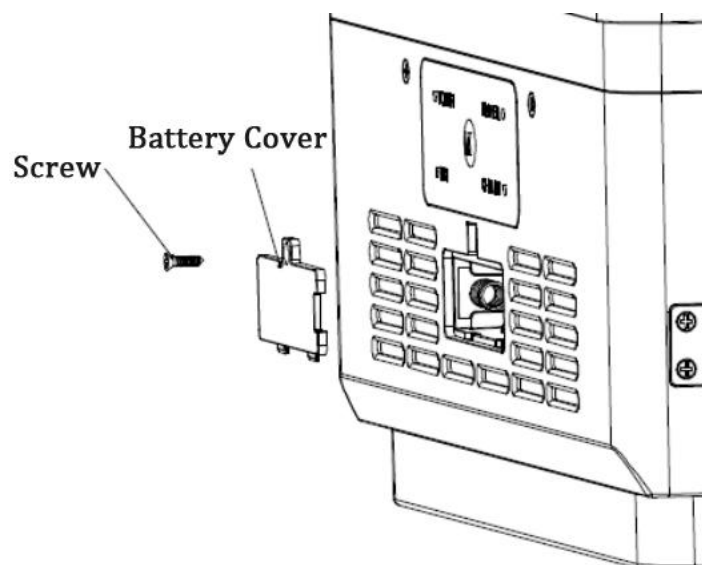
If the product will not be used for an extended period, reinstall the insulation tab or remove the battery.



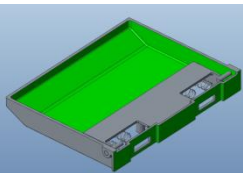
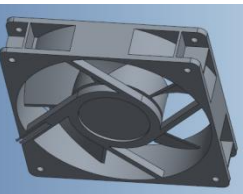
If the battery is damaged, an 18650 lithium battery may be purchased and replaced by the user.

Replacement steps:

1. Unscrew the battery cover
2. Pry off the cover
3. Remove and replace the battery.



5. Spare Parts List

Child P/N	Child Name	Specification	Quantity	Picture
2002.000.0215	CFT Main PCBA	Size: 110.8*40.8*12, with WiFi function	1pcs	
2005.000.0615	Lid Latch Assembly	Material: ABS + PC Color: Pantone 3005U sky blue color masterbatch Include: Assembly screws, Pivot, Lock Latch, Spring	1pcs	
4010.001.0073	Lithium Battery	18650 lithium battery, 3.7V, 2500mAh, single cell, without protection board	1pcs	
3004.003.0385	Sealing Strip	Material: EPDM Cross-section size: 6*6.9mm	1.6m	
4012.002.0410	NTC Wire (Temp sensor)	1. 5 × 25 mm stainless steel housing 2. Ceramic resistor, R25 = 10K ±1%, B25/85 = 3435 3. Wire UL3398, 26AWG × 2C parallel wire 4. Cable length 600 mm, with 500 mm PVC sleeve 5. XHB2.54-2P black terminal connector 6. Waterproof treatment	1pcs	
2002.000.0216	WiFi PCBA	Size 50*35.6*6, with WiFi module, with antenna	1pcs	
3004.004.0205	DC Fan 12025	Type: Dual ball bearing fan Model: D12BM-12 Voltage/Current: DC12V/0.14A Dimensions: 120mm x 120mm x 25mm RPM: 2000±10% Noise Level: <45dB Lifespan: ≥50,000 hours	1pcs	

6. Important Notes

6.1 Before First Use

Remove all packaging materials and carefully inspect the tote, power cable, and plug.

If any abnormality is found, do not power on the device.

6.2 Placement and Ventilation

The tote must be placed horizontally. The maximum allowable tilt angle is 30°.

Ensure at least 100 mm clearance around all ventilation openings.

Do not place the tote near ovens, radiators, or other heat sources.

6.3 Frost Management

Do not allow excessive frost buildup inside the compartment, as it may affect cooling performance.

For defrosting, power off the unit, allow frost to melt naturally, and wipe away water.

6.4 No Disassembly or Modification

Do not disassemble, modify, or repair the tote without authorization, as this may cause damage or safety hazards.

6.5 Prohibited Items

Do not store flammable or explosive items, such as aerosol sprays or volatile chemicals, inside the tote.

6.6 Power Disconnection

Always disconnect the power supply before cleaning or maintenance to avoid electric shock or damage to electrical components.

7. Cleaning & Maintenance

Recommended Maintenance Cycle

- Defrost every 2 months to maintain optimal cooling performance.
- Clean the inner compartment every 2 weeks to prevent odors.

7.1 Exterior Cleaning

- Wipe with a soft cloth using warm water or neutral detergent.
- Dry with a clean soft cloth.

- If surface coating damage is found, promptly treat rust and apply waterproof protection.

7.2 Interior Cleaning

- Shelves and racks should be removed and cleaned regularly.
- Ensure all parts are completely dry before reinstallation.

7.3 Prohibited Cleaning Agents

Do not use the following substances:

- Alkaline or weak alkaline detergents
- Scouring powder, laundry detergent, abrasive paste
- Petroleum products or boiling water
- Acids, organic solvents, toothpaste, etc.

If oil contamination occurs, wipe it off immediately.

Oil residue may cause aging or cracking of plastic components.

8. Environmental Warning



Correct disposal of this product:

This symbol indicates that the product should not be disposed of with household waste.

Proper disposal helps prevent environmental pollution and protects human health, while enabling recycling of valuable materials and conservation of resources.

9. After-Sales Service and Warranty

This product is a customized device, and after-sales service shall be provided in accordance with the project agreement and related after-sales documents confirmed by both parties.

9.1 Warranty Period

Under normal use conditions, the product is covered by a 12-month limited warranty, starting from the shipment date.

9.2 Warranty Coverage

During the warranty period, if quality issues arise due to design, materials, or manufacturing, the manufacturer will provide corresponding technical support, repair, or replacement recommendations. Specific handling shall follow the agreed RMA / DOA procedures.

9.3 Exclusions from Warranty

The following cases are not covered by the warranty:

- Damage caused by improper use, maintenance, or storage
- Damage caused by unauthorized disassembly, modification, or use of non-specified parts
- Damage caused by transportation, drops, or external impact
- Damage caused by force majeure events (e.g., natural disasters)
- Products beyond the warranty period

9.4 After-Sales and Repair Method

Inspection and repair are normally performed by the client on-site.

The manufacturer will provide necessary remote technical support, including but not limited to:

- Fault analysis and troubleshooting guidance
- Troubleshooting checklist support
- Spare parts and consumable parts information

Unauthorized modification of the product structure or key components is prohibited.

The manufacturer shall not be liable for any quality issues or safety incidents resulting from unauthorized operations.

9.5 Out-of-Warranty Service

After the warranty period, paid technical support or repair services may be provided upon mutual agreement.

The manufacturer reserves the right of final interpretation of the above warranty and after-sales terms.

10. Regulatory Compliance Information

10.1 FCC Compliance Statement

10.1.1 Device Compliance

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC ID: 2BUP3-FT33**9.1.2 RF Exposure Information (SAR Information)**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator (the Wi-Fi antenna inside the device) and your body.