5. 产品保养

5.1 托盘，驱动轮及辅助轮

保持托盘的整洁，请至少一周检查清洁一次。用干净的棉布进行擦拭，当底部轮子被缠住或者杂物粘连，需要抬起机器人进行清理。

5.2 传感器保养

顶部定位传感器和立体避障传感器请至少一周检查清洁一次，如遇突发污损，务必立即处理，以免遮挡传感器造成机器运行异常；请用柔软纸巾或其他镜头清洁用品进行清洁。

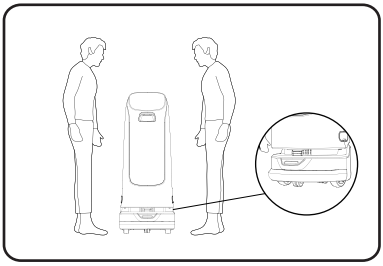
5.3 机身维护

保持机身的整洁，用干净的棉布进行擦拭。禁止抬、爬、撞、推、掰机器人，往机身堆放杂物等。机器如出现故障， 在未受到我方允许或者指导下， 禁止擅自拆上面的螺丝或者打开盖子维修。

5.4 搬运机器人

机器运输过程，需要满足 GB/T 4857.23-2012 关于钢簧减振卡车公路运输进行搬运要求，搬运时请使用叉车等搬运工具。

机器人为贵重设备，当需要人为搬动机器人时，请严格按照下列说明如图所示，机器人底盘上方为可受力部位（如图所示），您可以通过该部分上抬机器人。请双人左右同时提起机器人，注意保持平衡，搬运过程中请使用保持机器人的直立姿态，严禁通过提托盘或箱体进行搬运操作。



5.5 标识维护

在标识正下方不能有悬挂其他物体（比如气球，铁丝网，标语等物体），不能在离标识很近的地方悬挂广告牌或者安全出口指示牌等物体 ; 日常天花板清理、维护过程中注意不能损坏标识，标识位置不能移动、旋转。

6. 故障排除

6.1 开机自检不通过

确保机器人电量充足情况下，在定位标记下方重启机器人，如果还是自检不通过请及时联系售后服务人员。

6.2 机器人在运行过程中停车

1. 单击界面出现暂停页，机器人暂停运行，再次单击即可正常运行。
2. 语音提示“让一下”，点击屏幕暂停机器人，将机器人对正道路，再点击继续即可。

6.3“信号丢失“提示

机器人界面提示“我迷路了请把我推到定位标记的正下方”，此时机器会发出语音提示求助，请将机器人推到定位标记正下方。

6.4 机器人不能正常开机

1. 检查急停开关是否被按下或损坏，如损坏请联系客服人员进行处理。
2. 电量不足，请通过适配器连接机器人充电。
3. 其他原因请联系客服人员进行处理。

7. 售后服务

7.1 免费保修服务

公司承诺符合以下情况，自产品收货之日起，在产品有效保修期内（产品的不同部件保修期限有所不同），符合如下情况的将提供免费的产品保修服务。

- 自购买产品在规定的产品保修期限内正常使用，出现非人为的质量问题；
- 无擅自拆机、无非官方说明书指引的改装或加装、其它非人为引起的故障；
- 产品序列号、出厂标签及其他标示无撕毁、涂改迹象；
- 提供有效的购买证明、单据及单号；
- 免费保修期内更换的损坏备件属公司所有，应按公司要求寄回。

7.2 保修范围外的售后服务

对于不在免费保修范围内的售后服务（超出保修期或者在保修期内不符合免费保修条款），公司提供收费售后服务；

- 公司官方提供线上和远程技术支持渠道，客户需配合技术工程师进行问题诊断和故障处理；
- 经技术工程师诊断必须上门解决问题的，指派专业技术人员提供上门服务；
- 不在免费保修范围内的售后服务，需按照要求填写《售后服务记录表》；
- 服务费用包含：售后维护费用以及备件费用。

7.3 售后服务咨询

如果您有任何问题需要咨询，请联系普渡科技客服热线：400-0826-660。
普渡科技售后人员服务工作时间是：每周一至周六，上午 9：30 至 12：00，下午 13：30 至 18：30。

Statement

Contents

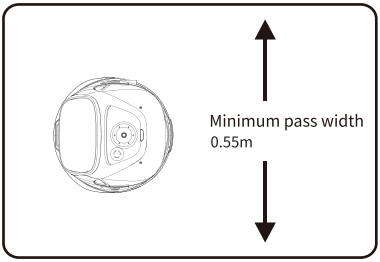
1.Safety Instructions

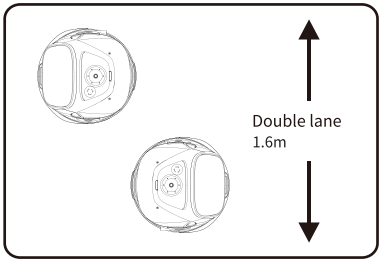
1.1 Instructions for Use

- This wheeled robot can only be used indoors on flat surfaces such as wood floors, ceramic tiles, and thin carpets. Using in outdoor space (for example, open balcony), on the rugged ground (for example, stairs), in a temperature above 40°C or below 0°C , or on surfaces covered with fluid or gooey stuff is not allowed.
- Items on the tray must not be of excessive weight. A maximum of 10 kg per tray is recommended. Tap Done and the robot will perform the next delivery task immediately. Please finish picking up the dishes and then tap Done.
- Do not pick and place dishes while the robot is moving. If necessary, tap on the screen to pause before picking and placing any dish. The pausing time is 20s in cruise mode and 10s in other modes. The robot will resume moving after the pausing time expires.
- If the robot accidentally enters into any incorrect position due to blocking and some other reason, please suspend the task promptly and push the robot to the correct route before continuing the task.
- Do not pull the robot while it is working. If you need to push or move the robot, tap on the screen to stop it from moving first.
- Do not push the robot backward when the power is on.
- Do not block the robot components or overfill the tray. Otherwise, the robot may fail to move properly or get lost.
- Do not pat the device or press or tap hard on the screen, or damages may be caused.
- Do not overload the robot or put open-flame stoves or any flammable solid, gas, or liquid on the tray.
- Do not adjust the load when the robot is moving. It is only allowed after the robot is paused by touching the screen.
- Do not clean or maintain the robot when the power is on.
  Cables on the ground should be put away in advance to prevent the robot from dragging them. All sharp-edge objects (such as decoration wastes, glasses, nails) should be removed from the ground to prevent damage to the robot chassis.
- A maximum speed of 0.8m/s is recommended for safe operation. No playing is allowed in front of the robot to avoid unnecessary harm. Although the robot features automatic obstacle avoidance, there is a blind spot. Blocking the robot moving at a high speed may cause accidents.
- Delivering soups is not recommended without special customization. If the soup is delivered, stay alert to spilling and scalds. Give way to robots delivering hot tableware and soup pots to prevent collisions and scalds.

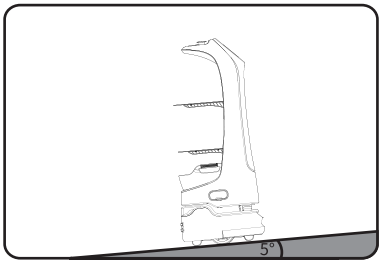
1.2 Environmental Instructions

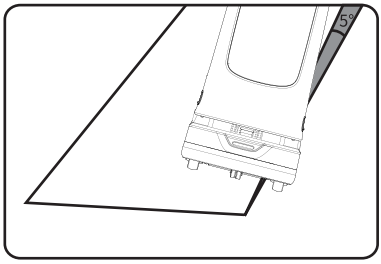
- This robot is suitable for use in flat grounds, such as wood floors, ceramic tiles, and thin carpets, and not suitable for environments that come with steps, large slopes, and are too compact.
- It is not recommended to use the robot on any ground that is wet or with obvious standing water.
- Put away any wire or other objects on the ground to prevent the robot from being tripped or dragging them around.
- Using this product with obvious protrusions, such as thresholds, on the ground may cause dishes to be spilled. Make sure that the protrusions are no more than 0.5cm high.
- The aisle should be at least 0.55m wide for the robot to pass. In the case of a long aisle, a width of 0.6m is recommended for smooth moving. A width of 1.6m allows two robots to move in two directions (The required width depends on the technician’ s evaluation of the scene).



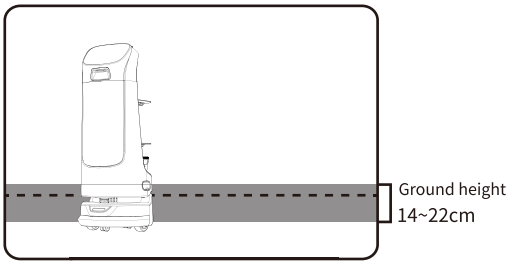


- The maximum possible slope is 5° for the robot. To prevent spilling, the suggested slope should be less than 4°, and the limit of 5° should not be exceeded. To prevent sliding, the robot should not be paused when moving uphill. To prevent falling, the slope should be at least 0.8m wide, and the roll angle should not exceed 5° .

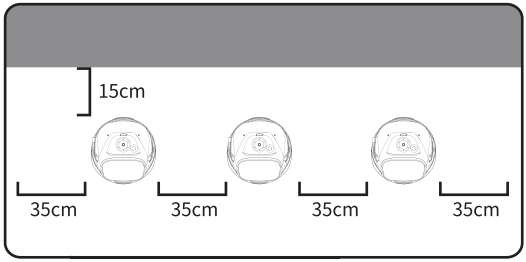




- Rails or other protective structures should be put in place at the edge of stairs, the entrance of downward slopes, and other locations where the robot may fall.
- Things that are black (for example, skirting line), polished (for example, wall), or transparent (for example, French window) at a height of 14 to 22cm or below may interfere with the radar and cause abnormal moving of the robot. Such sites should be modified to allow proper radar reflection (e.g., posting stickers).



- The kitchen entrance should be at least 1.2m wide, otherwise, robots and the staff may block each other.
- Robots in the waiting area should be 35cm apart from each other, 15cm from the back wall, and 35cm from the sidewall.



1.3 Instructions on Power Supply and Power Usage

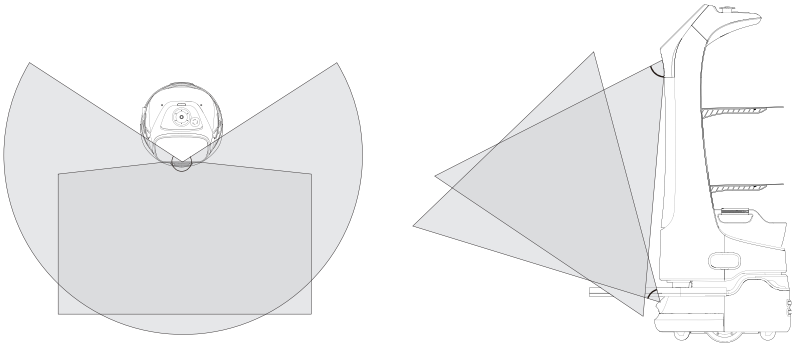
- Please charge the battery to 100% when you start to use the robot for the first time.
- When the battery drops to 20%, the robot should be charged timely. Running at a low battery for a long time may impair battery life.
- When the battery is fully recharged, the cable should be timely disconnected.
- If the robot is not going to be used for a long time, power it off in time so as to protect the battery.

- Always use exclusively original rechargeable batteries and chargers. Do not charge your robot using non-original chargers.
- Charge the robot according to the power voltage indicated on the charger nameplate.
- Make sure that the power voltage matches the voltage indicated on the charger, or it may cause damages to the charger.
- Take care to protect the power cord from being pulled or pinched.
- Someone should be designated to take over the charging. Unwatched charging of the robot or batteries is forbidden.
- Robots should not be charged in locations near flammable and explosive materials.
- Robots should be stored and charged in a dry location with a constant temperature no higher than 40°C . Both the robot and the charger should be protected from water.
- The charger should be protected from collision damage.
- In the case of abnormal charging currents or any other damage, replace the charger immediately.
- When the robot sends an alarm, disconnect the charger immediately.

1.4 Safety Instructions

- Do not put open-flame stoves or any flammable solid, gas, or liquid on the tray.
- Do not clean or maintain the robot when the power is on.
- A maximum speed of 0.8m/s is recommended for safe operation. No playing is allowed in front of the robot to avoid unnecessary harm.
- Do not adjust the load on the tray when the robot is moving. It is only allowed after the robot is paused by touching the screen.
- When the robot arrives at the designated table, wait until the robot stops completely before you serve the food or do something else. This is to avoid any food loss and personal injury caused by accidental collision.
- If the robot walks randomly, operations on the screen do not work, or any other emergency occurs, press the emergency stop switch.
- Cables on the ground should be put away in advance to prevent the robot from dragging them.
- Use All sharp-edge objects (such as decoration wastes, glasses, nails) should be removed from the ground before use to prevent damage to the robot chassis.
- Do not pull or transport the robot while it is working. If you need to do so, tap on the screen to stop it from moving first.
- Do not spill any liquid into the product.
- Do not place any non-transportable objects (including children and pets) on the robot, regardless of whether the robot is stationary or in motion.
- Although the robot features automatic obstacle avoidance, blocking the robot abruptly from moving at a high speed may cause accidents.

- The robot is equipped with a downward sensor, and the recognition area is as shown in the figure below:



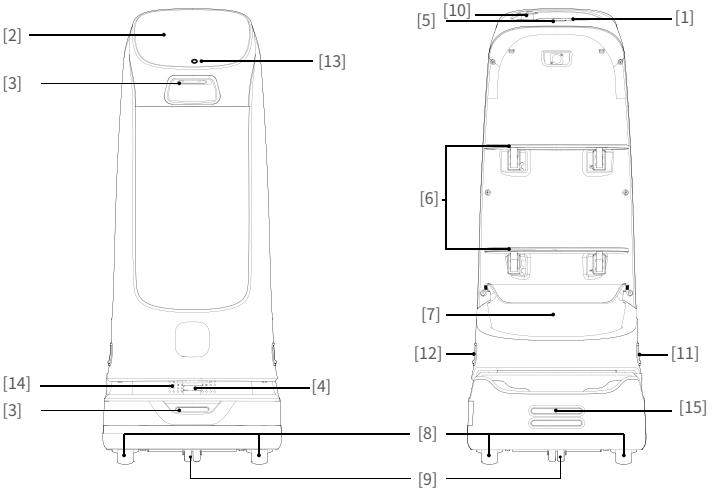
* The features are updated from time to time. More information on the features can be found at www.pudurobotics.com.

2. In the Box

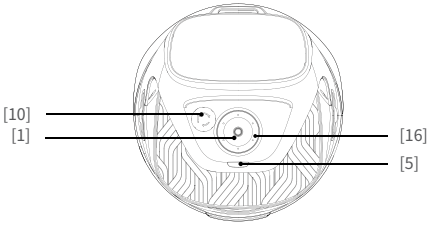
2.1 Packing List

Robot × 1, KettyBot User Manual × 1, Certificate × 1, Warranty Card × 1, Charger × 1, QR Code Stickers × 100, Power Key × 2.

2.2 Components

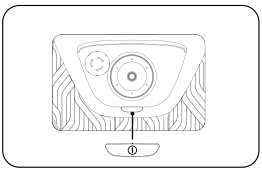


Front View Back View

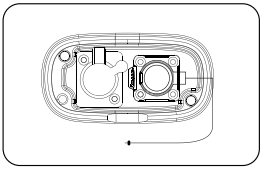


Top View

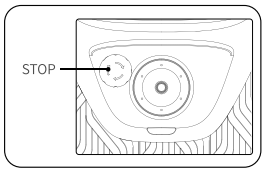
[1] Visual sensor
[2] Screen
[3] Depth Sensor
[4] Laser Radar
[5] Power Switch
[6] Tray
[7] Collection Box
[8] Driving Wheel
[9] Auxiliary Wheel
[10] Emergency Stop Switch
[11] Charging Port
[12] Key Switch
[13] Front camera
[14] Audio equipment
[15] Rechargeable pole
[16] Microphone array



Power Button



Charging Cable

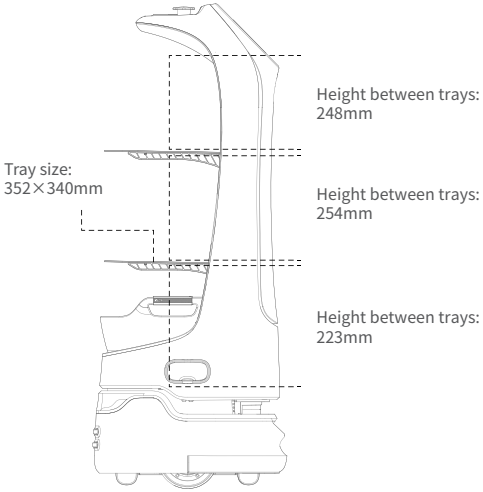


Emergency Stop Switch

2.3 Specifications

Feature	Description
Model	PNT
Working voltage	DC 23-29V
Power input	AC 100-240V, 50/60Hz
Power output	29V-8A
Charging time	4.5h
Battery life	>8h
Cruise speed	Adjustable between 0.5~0.9m/s
No. of trays	Two trays+one storage basket
Tray load	10kg/tray
Climbing angle	Max 5°
Machine material	ABS/Aviation Grade Aluminum Alloy
Battery capacity	25.6Ah
Robot weight	38kg
Robot dimensions	435*450*1120 (mm)
Screen size	10.1-inch HD color touch screen
Speaker power	2 × 20W stereo speakers
Design life span	5 years
Working temperature	0~40°C
Storage temperature	-10~60°C
Charging mode	Charging with manual charging, automatic self-charging supported
Working humidity	Relative humidity 0~95% (without condensation)
Ad screen size	409.8mm*230.4 mm
ESP32	Frequency range: 2.4 GHz ~ 2.5 GHz
WIFI	2.4G, Frequency range: 2.400 GHz ~ 2.497 GHz (2.4 GHz ISM Band); 5G, Frequency range: 4.900 GHz ~ 5.845 GHz (5.0 GHz ISM Band)
Working altitude	Below 2000m
Working environment	Indoor environment, flat and smooth ground
IP grade	IP20

2.4 Tray Size and Height between Trays



3. How to Use

3.1 Charging Instructions

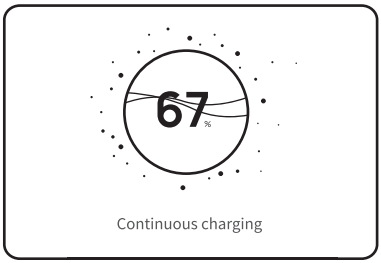
How to charge:

Plug the charging cable into the charging port of the robot. When successfully connected, the robot will display a prompt.

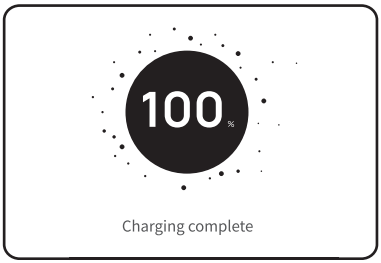
Notes for charging:

1) To maximize the efficiency and battery life of the robot, always keep the battery level above 10%.
2) A battery level lower than 10% means that the robot will soon run out of power and needs to be charged as quickly as possible.
3) A battery level lower than 2% means that the battery is under protection. In this case, the robot will be unable to perform tasks and must be charged before it can be used again.

3.2 Charging screens



This screen appears indicating the robot is charging.

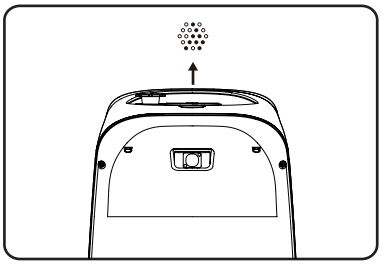


This screen appears indicating the charging cycle is complete and the battery is fully charged.

3.3 Power On, Shut Down, Pause, and Start

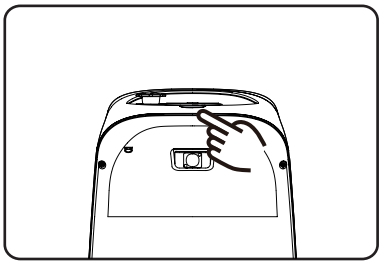
Before power on

Before turning on the power, place the robot below the visual mark, verify that the key switch is turned on.



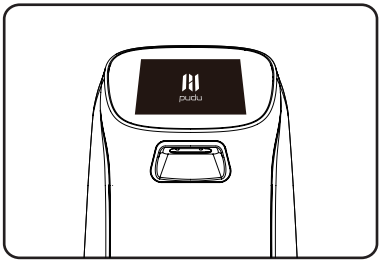
Power on

Press and hold the power button for about 0.5 seconds, and the bottom light strip will appear in blue.



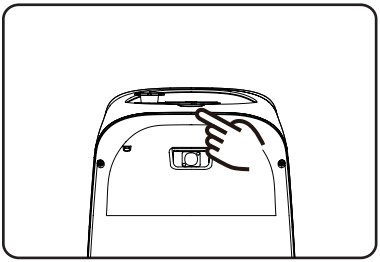
Powering on

The screen enters the working mode, indicating that the robot is successfully powered on.



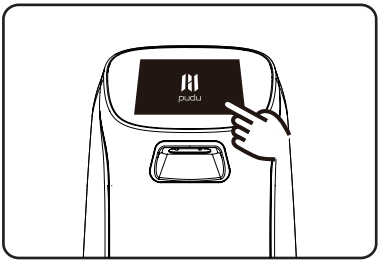
Power Off

Press and hold the power button for 3 seconds, and the screen will indicate the robot is shutting down. The screen turns black, indicating a successful shutdown. Press and hold the power button for 8 seconds, and the robot can be forcibly powered off and shut down. (This function is not recommended unless anything abnormal happens to the robot.)



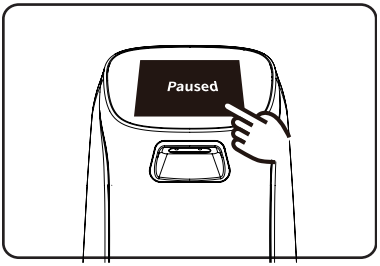
Pause

When the robot is moving, touch the screen to pause the robot.



Paused

The screen shows “Paused”.



Start

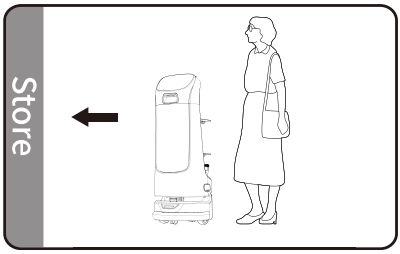
Touch the screen again for the robot to move again. Paused robots will automatically resume moving if there are no operations in 10 seconds (Cruise Mode) or 10 seconds (other modes).

3.4 Mode Options

* The Queuing Mode is only available on robots within mainland China.

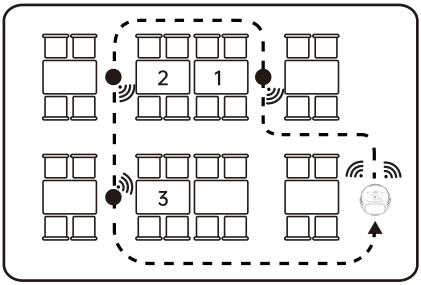
Customer Attraction Mode:

The robot can sense passers-by in the attraction area and play speech to attract customers. Customers can talk to the robot, view information such as discounts and special dishes, and choose to be led by the robot to the restaurant.



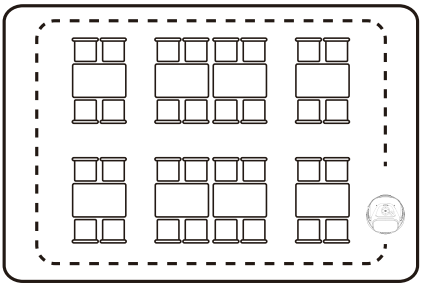
Escorting Mode:

The robot can sense passers-by in the attraction area and play speech to attract customers. Customers can talk to the robot, view information such as discounts and special dishes, and choose to be led by the robot to the restaurant.



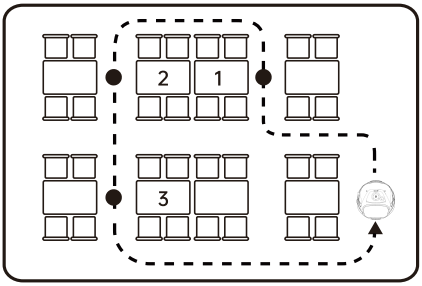
Cruise Mode:

The robot circulates along a predetermined path with self-service drinks, desserts or napkins, and recommends them to customers by voice. You can also turn on the interaction switch to make the robot cruise around the door to attract customers.



Delivery Mode:

The robot delivers food to multiple tables at the same time. After the dishes ordered by different customers are placed on the trays and the table numbers are entered, the robot automatically plans the best route for delivery. After that, the robot automatically returns to its home base.

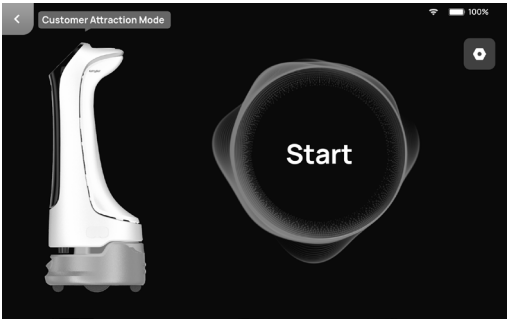


Birthday Mode:

The robot delivers birthday cake or gifts to guests, with a birthday song automatically played during delivery.

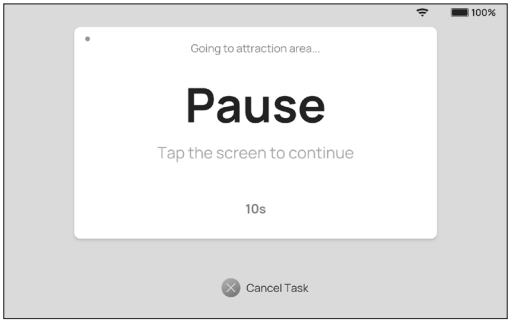
3.5 Customer Attraction Mode

The robot stands at the door to attract potential customers, talks to them about what’ s unique about its restaurant, and finally persuades them into dining here.

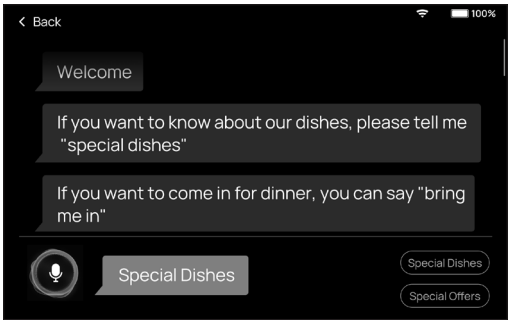


1. Select Customer Attraction Mode on the home screen.
2. On the Customer Attraction screen that appears, tap Settings to select a location for customer attraction and compose the speech.
3. Tap Go, and the robot will go to the location and start attracting customers proactively.

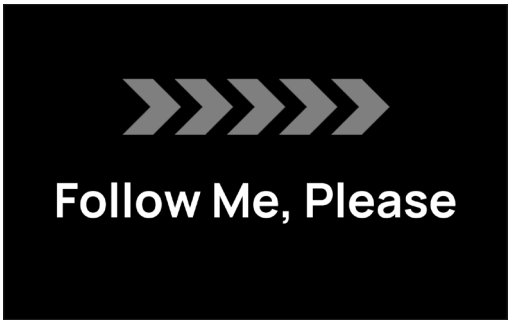
4. Tap on the screen to pause the task, and tap again to resume. You can also select Cancel Task to cancel the task.



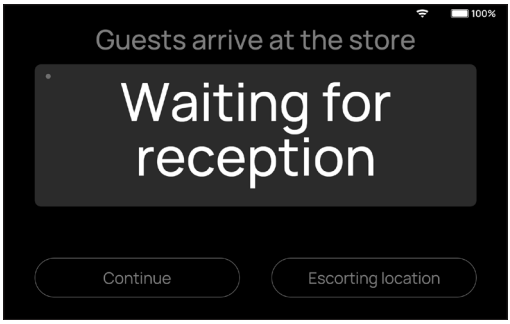
5. Upon arrival at the specified location, the robot plays the speech and automatically switches to the interaction screen when it detects someone coming near.



6. Customers can talk to the robot, check the special dishes, and choose to be led by the robot to the restaurant.



7. When it has led the guests to the store, the robot can go back to attract more customers or escort the customers to their table.

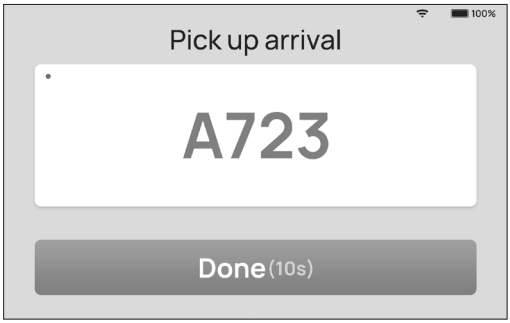


3.6 Escorting Mode

This mode is used to get the robot to escort customers to their table. Perform the following steps Escorting Mode:

1. Select Escorting Mode on the home screen.
2. Tap the table number that requires escorting, and the robot plays the escorting speech and leads the guests to their table.

3. Tap on the screen to pause the task, and tap again to resume. You can also select Cancel Task or Return to Escorting Location.

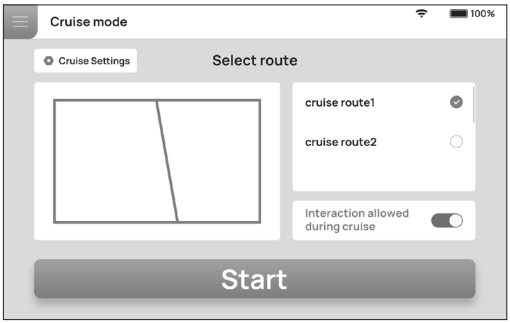


4. Once the customers sit down, tap Done for the robot to return to the escorting location, or the robot automatically returns in 10 seconds.

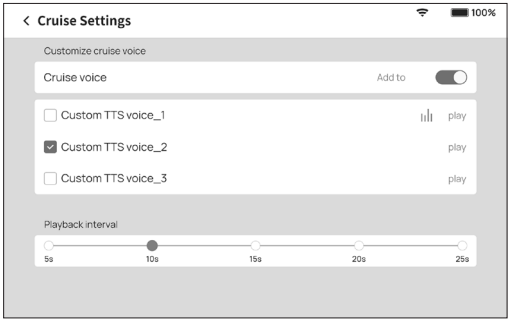
3.8 Cruise Mode

A commonly used mode in which the robot cruises in a specific environment, gives away snacks, or attracts customers. Perform the following steps for the Cruise Mode:

1. Select Cruise Mode on the home screen.



2. Select an automatic cruise route. After the interaction switch is turned on, the robot can lead customers to the restaurant during the cruise.

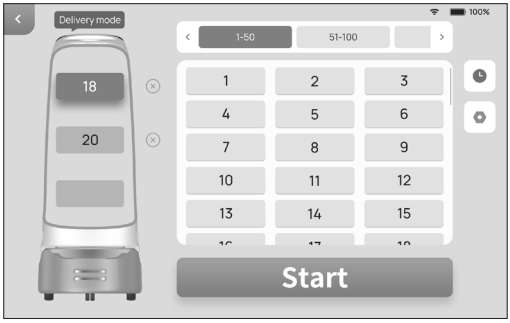


3. For cruise settings, you can set the cruise speech and interval.
4. Select Go, and the robot starts cruising.

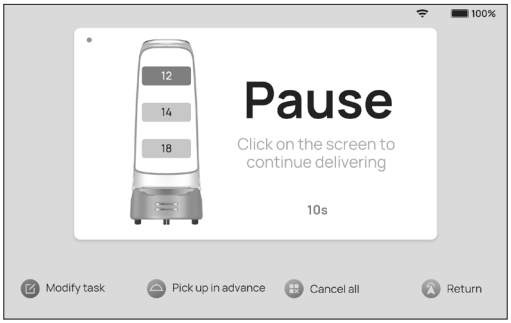
3.9 Delivery Mode

A commonly used mode in which the robot makes task-based delivery to designated locations. Perform the following steps for Delivery Mode;

1. Select the delivery function on the home screen.



2. Put the dishes on the tray.
3. Tap the tray which holds the dishes, and select the desired table number. The top tray is automatically selected by default, simply select the desired table number.
4. Tap Go, and the robot starts performing the task.

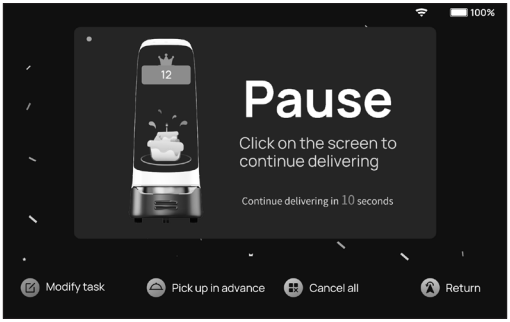


5. The robot quickly arrives at the designated location by moving along the predetermined path. During delivery, touch the stop command on the screen and the robot will immediately stop and wait. If the command is not touched again in 10 seconds, the robot will restart to continue the task.

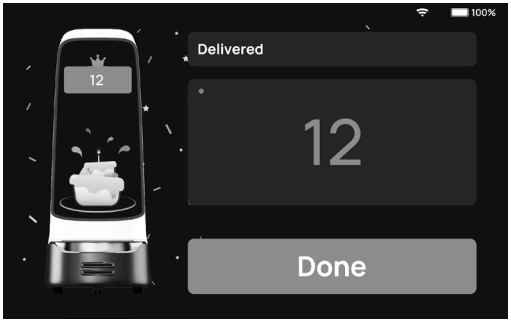
3.10 Birthday Mode

Deliver gifts and play birthday songs for customers who are celebrating their birthdays. Perform the following steps for Birthday Mode:
1. Select Birthday Mode on the home screen.

2. Place the gift on the tray, and the gift can only be delivered to one location at a time.
3. Select the desired table number.
4. Tap Go, and the robot starts performing the task. The robot plays songs in the set playlist for Birthday Mode.
5. The robot quickly arrives at the designated location by moving along the predetermined path. During delivery, touch the stop command on the screen and the robot will immediately stop and wait. If the command is not touched again in 5 seconds, the robot will restart to continue the task. On the paused screen, you can Modify Task, Pick Up in Advance, Cancel All, and Return.



6. Tap Done upon arrival at the designated location, and the robot will return to the pickup location.



3.11 Warning Prompts

If any of the following circumstances occurs, the robot will stop working and sound an alarm, and certain prompt messages will appear on the screen. The robot will need your help at this point.

Prompt	Solution
Low battery	Push the robot back for charging (Figure 1)
Loss of location information	Move the robot below the visual mark (Figure 2)
Driving or auxiliary wheel stuck or entangled	Clean the driving or auxiliary wheel
Suspended, off the ground	Place the robot on flat ground

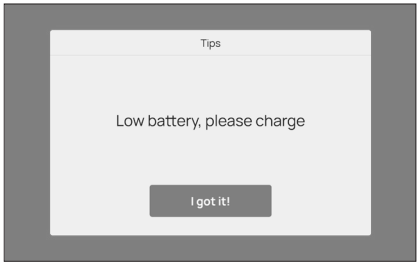


Figure 1

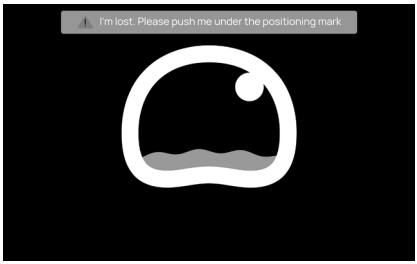
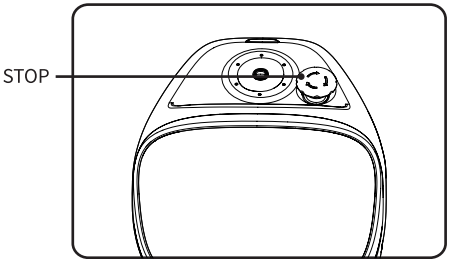
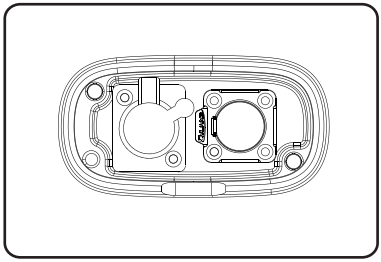


Figure 2

3.11 Emergency Handling

When the robot is not working properly or in any other emergency that may cause harm to the surrounding environment, you can stop the robot by pressing the emergency stop switch on the top.

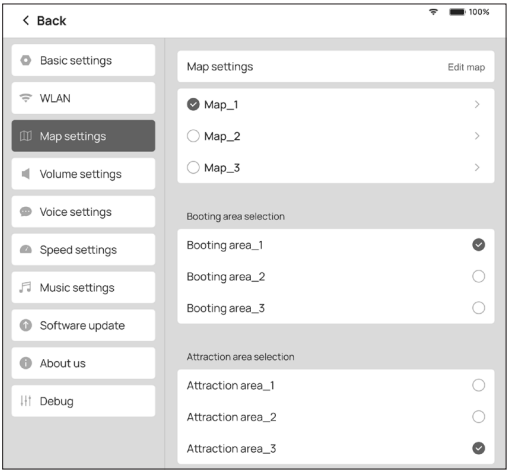




4.Service Features

4.1 Map Settings

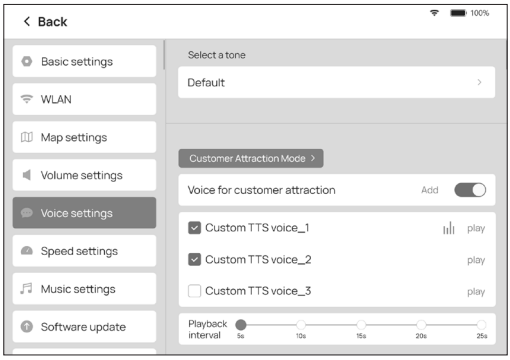
Map Settings enable multiple map selection. When the robot is in one-to-one mode, set a docking location for the selected map.



4.2 Voice Settings

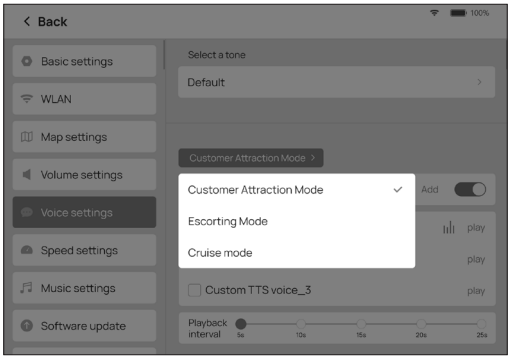
Voice Settings provide voice pack replacement and voice custom settings. The voice pack can be replaced by doing the following:

1. Check for available voice packs, select and download a voice pack.
2. After the download completes, select the desired voice pack to replace the old one.
3. Selecting Default will reset the robot back to its default voice pack.
4. Tap and hold the voice pack to delete it.



Customize the cruise voice by performing the following steps:

1. Select Add Voice, and the voice text editing window appears. Enter the text to be played, and tap OK to generate a custom voice.
2. You can add multiple voices, which will be played in random order.
3. Turn off the cruise voice switch to restore the default voice pack.
4. Tap on a voice to play it, and tap and hold a voice pack to delete it.

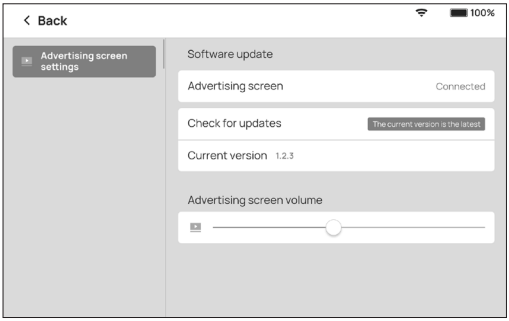


4.3 Speed Settings

Set the delivery speed and cruise speed with the options of 0.5m/s, 0.6m/s, 0.7m/s, 0.8m/s, and 0.9m/s.

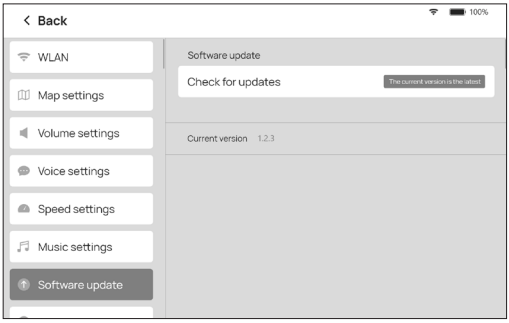
4.4 Advertising Screen Settings

The advertising screen setting function can view the current status of the advertising screen and adjust the volume of the advertising screen.



4.5 Version Update

Check which version is currently installed and whether it is the latest version. If it is not the latest version, you can check for, download, and update to the latest version.

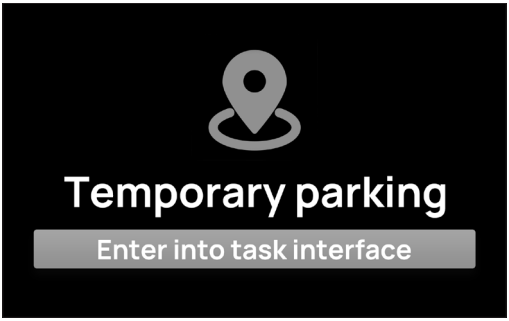


4.6 Docking Instructions

Three docking modes are available for different sizes of restaurants.

1. One-to-one docking mode: Set a fixed docking location for each robot.
2. Free docking mode: Set multiple locations for the robot to dock by priority.
3. Waiting mode: Apart from the abovementioned docking locations, you can also set a temporary docking location for robots to wait before a vacancy appears. When the robot docks at a non-docking location without a task, you may select the return command to make the robot automatically return to the docking location, or push it to the docking location.

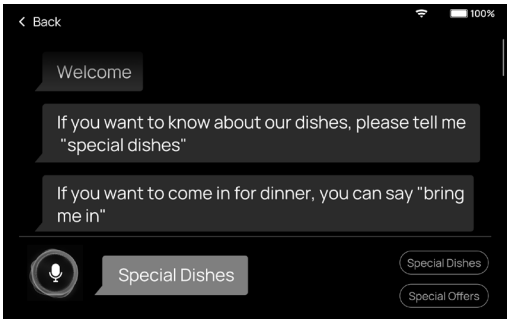
* When the robot is in a temporary docking location, its state is shown as “Temporarily docked”. Once a vacancy appears in the pickup area, it will automatically go there for docking.



4.7 Voice Interaction

When the robot is in attracting customers, cruising (interaction turned on), you can tap on the screen or use wake-up voice to activate voice interaction with the robot.

1. Internet connection is required for voice interaction.
2. Entered voices will be displayed in text on the screen.
3. Responses of the system will be played in voice and displayed in text on the screen.
4. Tapping on the screen to start or end voice interaction will end voice wake-up. If no interaction occurs for a period of time, the system will automatically exit.



4.8 Automatic Self-charging

1. Automatic self-charging is supported (charging pile to be purchased separately).
2. You can also move the robot to the charging file, and tap “Charge Now” on the screen for a charge (as shown in the figure):

5. Maintenance and Care

5.1 Trays, Driving Wheel and Auxiliary Wheel

Keep the trays tidy; inspect and clean them at least once a week. Wipe the robot with a clean cotton cloth. When the bottom of the wheel is entangled or has some debris stuck on it, lift the robot to clean it up.

5.2 Sensor Care

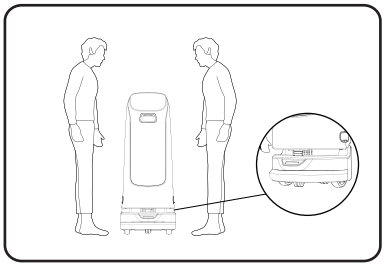
The top positioning sensor and the 3D obstacle avoidance sensor should be inspected and cleaned at least once a week. In case of unexpected contamination, make sure to address it immediately to avoid blocking the sensor and prevent the robot from working improperly. Use soft tissues or other lens cleaning supplies for the cleaning.

5.3 Robot Care

Keep the robot clean and wipe it with a clean cotton cloth. Do not lift, climb on, hit, push, or attempt to break off the robot, and pile any sundries on it. In case of malfunction, do not remove the screws or open the cover for repair without Pudu’ s permission or guidance.

5.4 Transporting the Robot

The robot should be transported following the GB/T 4857.23-2012 Requirements for Road Transportation with Steel Spring Damping Trucks and using a forklift or other transportation tools. The robot is a valuable device, so make sure to transport it as instructed in the following figure. You can lift the robot from the force-bearing area above the base (as shown in the figure). Lift the robot on both the left and right and keep it balanced. Keep the robot upright during transportation. Never attempt to transport it by lifting the tray or the box.



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6. Troubleshooting

6.1 Power-on Self-test Fails

After verifying there is sufficient power, restart the robot below the positioning mark. If the self-test still fails, please contact our after-sales service team for help.

6.2 Robot Stops During Operation

1. Tap on the screen to show the pause page indicating the operation is paused. Tap again to resume operation.
2. After hearing the voice prompt “Excuse me”, tap on the screen to pause the robot. Then, align the robot to the path, and tap again to continue.

6.3 “Loss of Signal” Warning

The message “I’m lost. Please push me directly below the positioning mark.” appears on the screen. At this time, the robot will issue a voice prompt for help. Please push the robot directly below the positioning mark.

6.4 Robot Cannot be Powered On

1. Check if the emergency stop switch is pressed or damaged. If it is damaged, contact our customer service team for help.
2. Check if the robot is out of power. If so, charge the robot by connecting it to an adapter.
3. For other reasons, please contact our customer service team for help.

7.After-sales Service

7.1 Free Warranty

When the robots are under warranty (different warranty periods for different components, calculated from the receipt of the robot), Pudu offers a free warranty if:

- Defects are caused by non-human factors;
- There are no unauthorized disassembly, modification or addition not included in the user manual, or other faults caused by non-human factors;
- The robot S/N sticker and other labels are not removed or altered;
- Effective purchase certificate, receipt, and order number are provided;
- Damaged components are sent back to Pudu as required.

7.2 Paid Services

Pudu offers paid after-sales services when the robot is out-of-warranty or the policy of free warranty is not applicable:

- Online and remote technical support is provided, and customers should cooperate with engineers for diagnosis and troubleshooting;
- Technicians will offer on-site service when necessary;
- The “After-sales Service Form” should be filled when the policy of free warranty is not applicable;
- Customers should pay for both maintenance and spare parts.

7.3 Contact

For any questions, please call 400-0826-660.
Working hours: 9:00 - 12:00, 14:00 - 18:00, Monday to Saturday (GMT+8).

FCC Compliance Statement

1. 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.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user’ s authority to operate the equipment.

FCC information

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.

To maintain compliance with FCC’s RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

Industry Canada compliance statement

CAN ICES-3(B)/NMB-3(B)

English:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

French:

L’émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d’Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes :

1. L’appareil ne doit pas produire de brouillage;
2. L’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

Manufacturer's Name: SHENZHEN PUDU TECHNOLOGY CO., LTD.
Address: Room 501, Building A, Block 1, Phase 1, Shenzhen International Inno Valley, Dashi 1st Road, Nanshan District, Shenzhen, China 518057
Product name : KettyBot
Model number: PNT
Operating Temperature: 0° C to 40° C
This device in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. All essential radio test suites have been carried out.

1. The product shall only be connected to a USB interface of version USB 2.0
2. Adapter shall be installed near the equipment and shall be easily accessible.
3. The plug considered as disconnect device of adapter
4. The device complies with RF specifications when the device used at 20cm form your body
5. Operations in the 5.15-5.35GHz band are restricted to indoor usage only.

Restrictions in the 5 GHz band:

According to Article 10 (10) of Directive 2014/53/EU, the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in Belgium (BE), Bulgaria (BG), the Czech Republic (CZ),Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain(ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania(LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria(AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK),Finland (FI), Sweden (SE), Turkey (TR), Norway(NO), Switzerland (CH), Iceland (IS), and Liechtenstein (LI).

According to Radio Equipment Regulations (SI 2017/1206), the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in the United Kingdom (UK)

The WLAN function for this device is restricted to indoor use only when operating in the 5180 to 5240 MHz frequency range.

ES	LU	RO	CZ	FR
HU	SI	DK	HR	BE
BG	DE	EE	IE	EL
IT	CY	LV	LT	SK
MT	NL	AT	PL	PT
FI	SE	LI	TR	NO
CH	IS			

UK

RF POWER

Function	Operation Frequency	Max RF outputpower:	Limit
BLE	2402MHz–2480MHz	5.96dBm	20 dBm.
BT(BR+EDR)	2402MHz–2480MHz	8.49 dBm	20 dBm.
WIFI 802.11b/g/n(HT20,HT40) 2.4G	802.11b/g/n(20MHz): 2412~2472MHz; 802.11n(40MHz):2422~2462MHz	17.48 dBm	20 dBm.
5.2G WIFI 802.11a/n(HT20,HT40)	802.11a/ac/n20:5180~5240MHz; 802.11ac40/n40:5190~5230MHz; 802.11ac80：5210~5210MHz	13.41dBm	23 dBm.
5.3G WIFI 802.11a /n(HT20,HT40)	802.11a/ac/n20: 5260~5320MHz; 802.11ac40/n40: 5270~5310MHz; 802.11ac80:5290~5290MHz	13.41 dBm	23 dBm.
5.6G WIFI 802.11a/n(HT20,HT40)	802.11a/ac/n20: 5500~5700MHz; 802.11ac40/n40: 5510~5670MHz; 802.11ac80:5530~5610MHz	13.55 dBm	23 dBm.
5.8G WIFI 802.11a/n(HT20,HT40)	802.11a/ac/n20: 5745-5825 MHz 802.11ac40/n40: 5755-5795 MHz 802.11ac80:5775~5775MHz	13.85 dBm	13.98dBm
WCDMA Band 1	Tx(Uplink): 1920MHz~1980MHz; Rx(Downlink): 2110MHz~2170MHz	23.56dBm	Class3 24 (dBm) +1,7/-3,7 (dB)
WCDMA Band 8	Tx(Uplink): 880MHz~915MHz; Rx(Downlink): 925MHz~960MHz	23.43dBm	Class3 24 (dBm) +1,7/-3,7 (dB)
FDD-LTE Band 1	Tx(Uplink): 1920MHz~1980MHz; Rx(Downlink): 2110MHz~2170MHz	23.49dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 3	Tx(Uplink): 1710MHz~1785MHz; Rx(Downlink): 1805MHz~1880MHz	23.96dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 7	Tx(Uplink): 2500MHz~2570MHz; Rx(Downlink): 2620MHz~2690MHz	24.33dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 8	Tx(Uplink): 880MHz~915MHz; Rx(Downlink): 925MHz~960MHz	23.45 dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 20	Tx(Uplink): 832MHz~862MHz; Rx(Downlink): 791MHz~821MHz	23.36dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 28	Tx(Uplink): 703MHz~748MHz; Rx(Downlink): 758MHz~803MHz	23.81 dBm	Class3 23 (dBm)+2.7/-3.2(dB)
TDD-LTE Band 34	Uplink & Downlink: 2010 MHz to 2025 MHz	23.32 dBm	Class3 23 (dBm)+2.7/-3.2(dB)
TDD-LTE Band 38	Tx(Uplink): 2570MHz~2620MHz; Rx(Downlink): 2570MHz~2620MHz	24.76 dBm	Class3 23 (dBm)+2.7/-2.7(dB)
TDD-LTE Band 40	Tx(Uplink): 2300MHz~2400MHz; Rx(Downlink):	23.25dBm	Class3 23 (dBm)+2.7/-2.7(dB)

	2300MHz~2400MHz		
This product can be used across EU member states.			

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