T5 LS & T8 LS Wireless Calling Solution

International GTM 2022 Dec 23

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Background and Function

System Typology and Components





Background and Function

Background

Service of the robot is required when the robot is not nearby.

Function

Press the button on the Call Button and the robot for the corresponding service will go to the exact place to serve.

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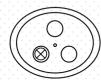
03 Typical Scenarios

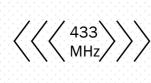


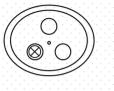
System Typology

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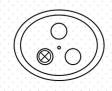
Call Button







- 50m(theoretical) 25m(Single Wall
- in between)



x 100 Totally in the system





Receiver

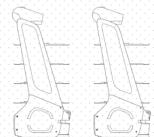
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50m(theoretical) 25m(Single Wall in between) 50m(theoretical) 25m(Single Wall in between)

 $\langle 2.4G \rangle \rangle$



Service Robot x 19 Total number in the system(only support T series laser version for the time being)

*Total number of the receivers, the bridges and the robots can not be more than 20.

Components Call Button

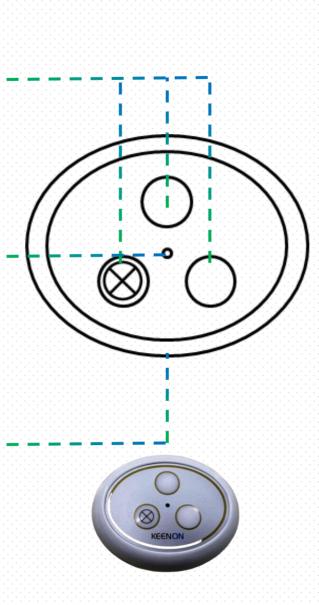
Three Buttons

Bottom left button is fixed for 'Cancel'. Different stickers can be used on the other two buttons according to the actual use.

One White Light Indicator The indicator will be on when the button is pressed and will be off when the button is released.

Double-side Tape on the back To easily fix the Call Button on the table or the wall.

*Screws can also be used to fix the Call Button.



Call Button Data		
Product Size	72 x 57 x 22mm	
Net Weight	TBD	
Button Quantity	3	
Lifespan of Button	Million Times	
Surface Material of Button	PVC	
Shell Material	ABS	
Operating Temperature, Humidity	0 - 40°C, RH: <=98%	
Battery Required	12V 23A x 1	
Working Current	50mA	
Battery Life	> 3000 times press	

Components Receiver

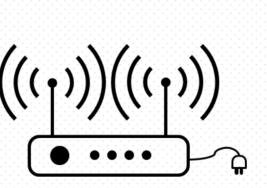
Antenna

Two antennas on the front panel of the receiver. The left one(when facing the receiver) is used to connect the Call Button and the right, the robot.

Power Supply

Stable power supply is required during the operation of the receiver.

Suggested Deployment Location It is suggested that put the receiver in the center of the service area and fix it on the ceiling so the receiver will provide the maximum possible coverage.





Receiver Data		
Product Size	220 (W) *135 (H) *48 (D) mm	
Net Weight	TBD	
Shell Material	ABS	
Operating Temperature, Humidity	0 - 40°C, RH: <=98%	
Power Supply	DC 12V 1A/12W (AC TO DC, 100~240V)	
Maximum Pairing with Call Button	100	
Antenna Quantity	2	

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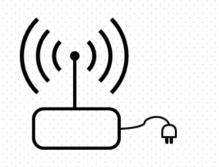
Components Bridge

Antenna

One antenna on the front panel of the bridge to connect to the robot.

Power Supply

Stable power supply is required during the operation of the bridge.





Bridge Data		
Product Size	220 (W) *135 (H) *48 (D) mm	
Net Weight	TBD	
Shell Material	ABS	
Operating Temperature, Humidity	0 - 40°C, RH: <=98%	
Power Supply	DC 12V 1A/12W(AC TO DC, 100~240V)	
Antenna Quantity	1	

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Background and Function

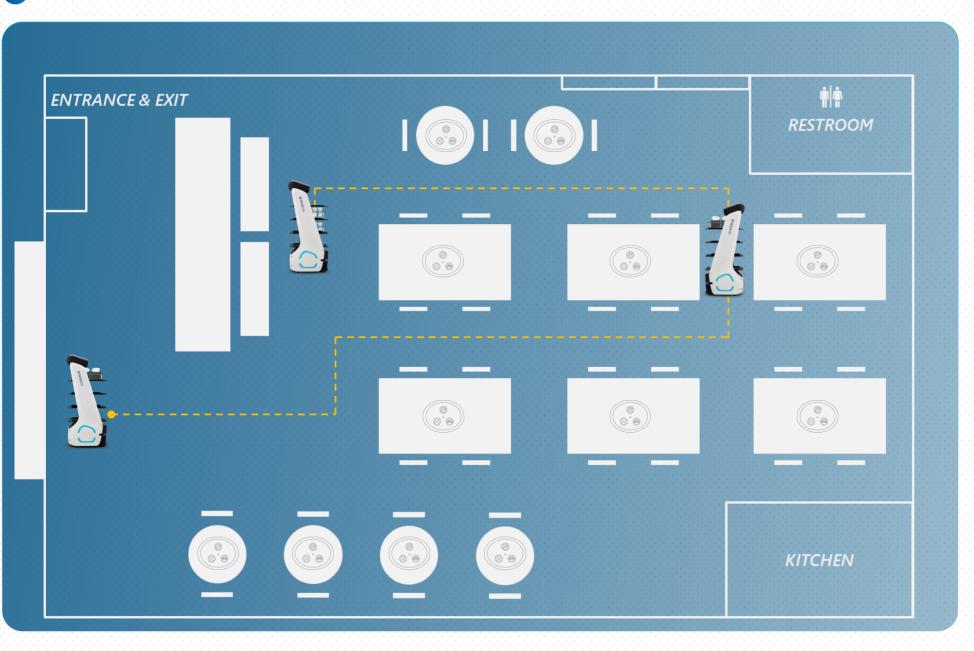
System Typology and Components





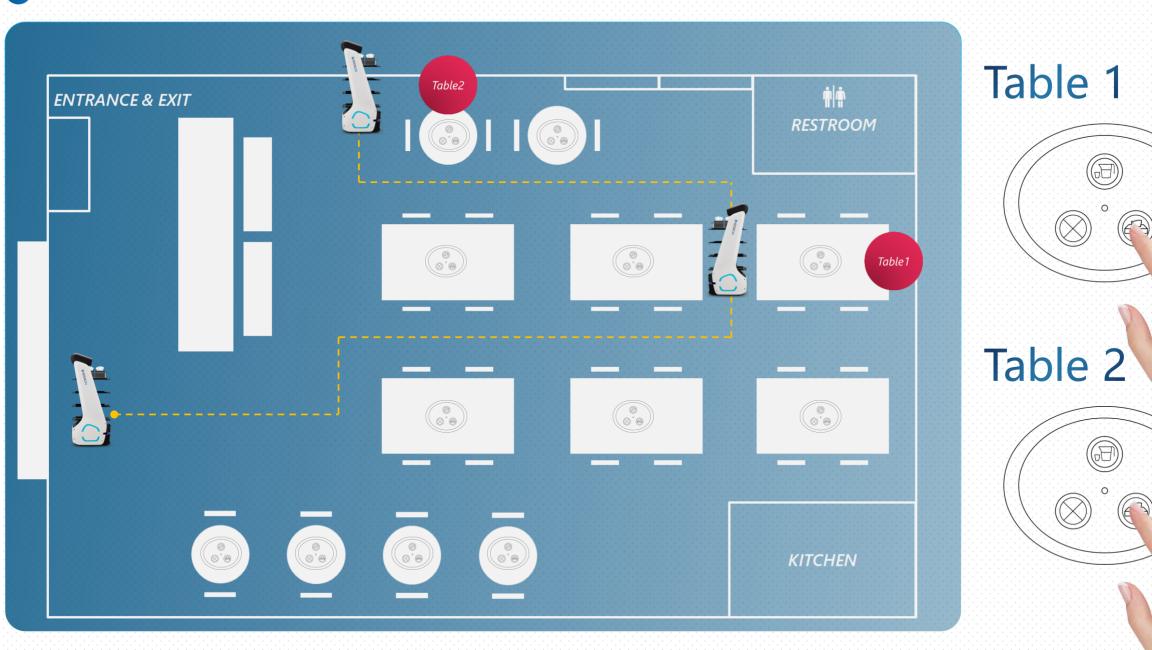
Typical Scenario Call Different Delivery Service

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Typical Scenario Call Task Queuing



Typical Scenario Dish Collection

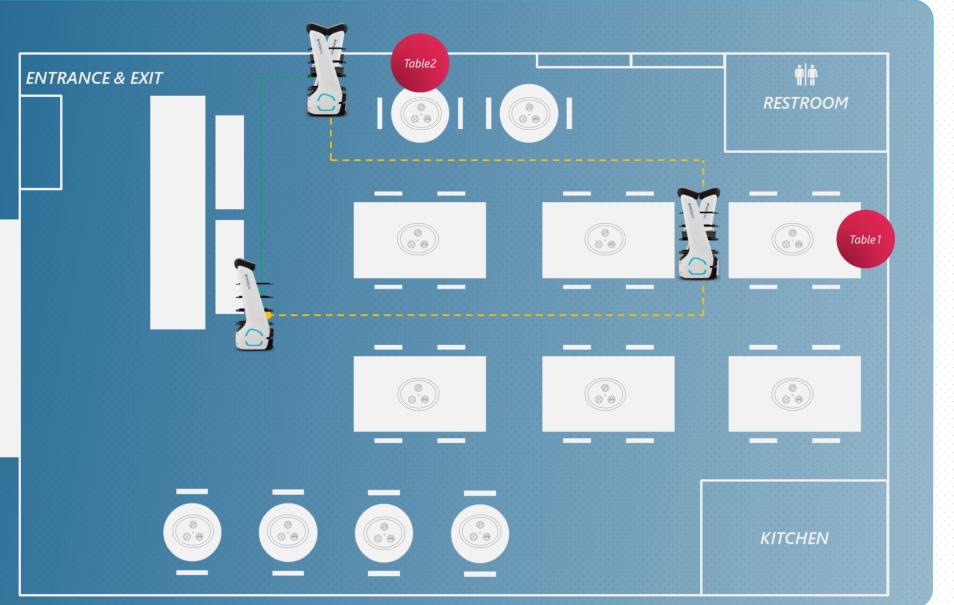
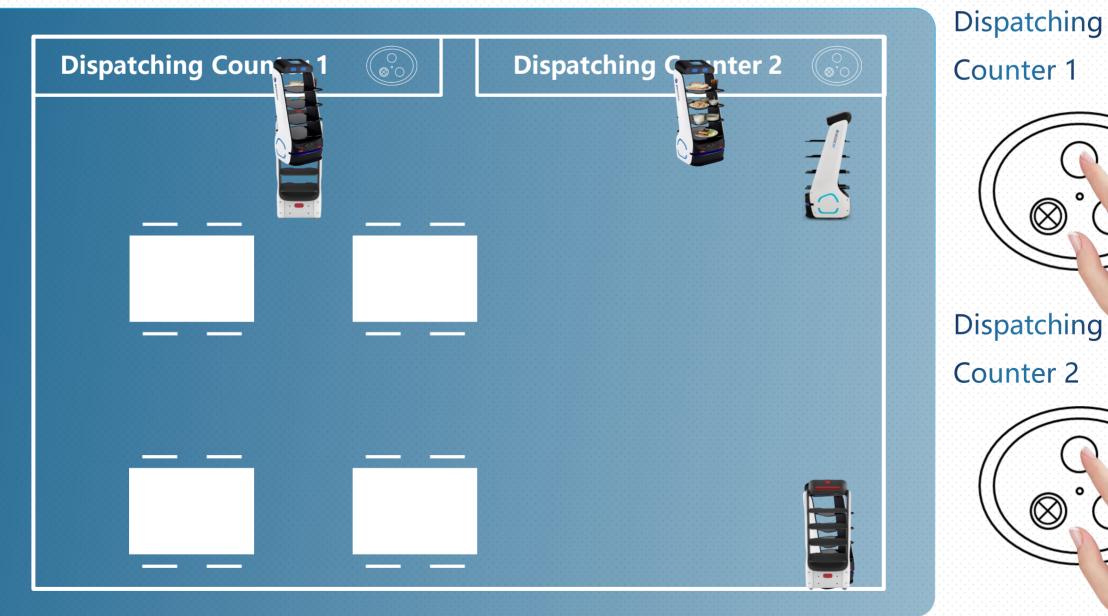


Table 1



Typical Scenario Multiple Dispatching Counter



Dispatching Counter 1

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Brief Introduction of Deployment

Preparation

Upgrade the scheduling module firmware, Service System APP, Delivery APP, Robot Installation Assistant APP, and ROS to the specific versions.

Call Button & Point Pairing

Pair the Call Button and the points of the robot, so when you press the button on the Call Button, the robot will go to the right point in its point list.

Configuration on the robot is required.

Call Button & Receiver Pairing

Simply power on the Call Button and the receiver is enough to pair the two.



Bridge & Receiver Pairing

Simply power on the bridge and the receiver is enough to pair the two.



Call Button & Robot Pairing

Pair the button on the Call Button and the specific robot. So you can get the right service from the dedicated robot.

And since there are two buttons on one Call Button, you can have two kinds of robot in one scenario.

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FAQ

Frequently Asked Questions

- Q: How many bridges does one single system support?
 A: 5
- 2. Q: How many Call Button does one bridge support?A: 100, the same limit as the receiver, as it is for one single system.
- 3. Q: How long can we use the Call Button for?
- A: Supposing that the button will be pressed 20 times per day, the Call Button can be used for 150 days(3000-times press) before the battery runs down.
- 4. Q: If we have a place where there are more Call Buttons and bridges required to build a whole calling system, is it possible?A: Please share the detailed requirement and we will try to provide solution.
- 5. Q: Does the wireless calling solution support label version robot?A: No for the time being.

WKEENON Thanks