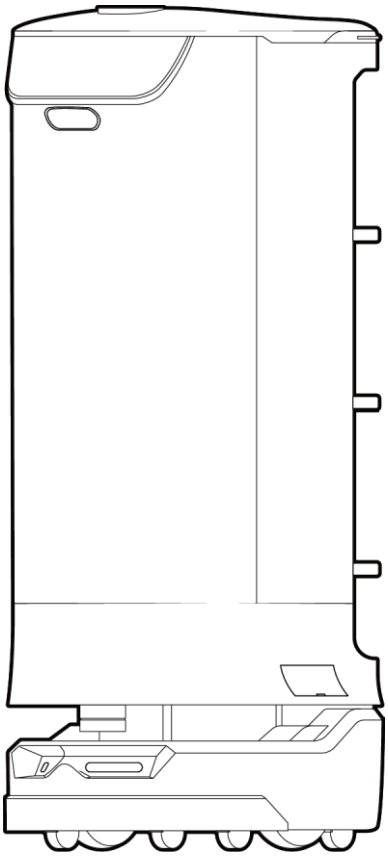


HolaBotUserManual

Version:V1.1

Model:HolaBot 100

ShenzhenPuduTechnologyCo.,Ltd.

Introduction

Purpose

Thismanualdescribesthefunctionsandtechnicalspecificationsof HolaBottohelpusersbetterunderstandandworkwiththerobot.

Audiences

Thismanualisintendedfor:

- Customers
- Salesengineers
- Installationandcommissioningengineers
- Technicalengineers

RevisionHistory

Time	RevisionHistory
Aug.12,2021	Initialrelease

Signs

Thesignslistedbelowmayappearinthismanualwiththefollowingmeanings.

Sign	Description
Danger	Indicateshighpotentialhazards,whichcouldcausedeathorseriouspersonalinjuryifnotavoided.
Warning	Indicatesmoderateorlowpotentialhazards,whichcouldcauseminorpersonalinjuryorrobotdamageifnotavoided.
Caution	Indicatespotentialrisks,whichcouldcauserobotdamage,dataloss,orunpredictableconsequencesifneglected.
🕮Note	Providesadditionalinformationastheemphasisandsupplementtothemaintext.

TableofContents

1. Safetyinstructions

Powerusage:

- Alwaysusetheoriginalrechargeablebatteriesandchargers.Donotchargeyourrobotusing non-originalchargers.Ifthechargerisdamaged,replaceitimmediately.
- Whenthebatterydropsto20%,therobotshouldbechargedtimely.Runningatalowbatteryf oralongtimemayimpairbatterylife.
- Makesurethatthepowervoltagematchesthevoltageindicatedonthecharger,oritmaycaus edamagestothecharger.
- When using the charger, ensure that the fastener of the charging interface is fully engaged to avoid overheating during charging, which may cause burns or damage to the equipment.

Robotusage:

- Donotcovertherobot'stopcamerawhileitisworkingtopreventitfrommovingabnormally .Ifthecameraiscovered,pausethecurrenttaskandmovetherobottothecorrectroutebeforeconti nuingthetask.
- Donotcleanormaintaintherobotwhenitispoweredonandworking.
- Donotputopen-flamestovesoranyflammableandexplosivearticlesontherobot.
- Do not pick up and place food or collect dishes while the robot is moving to avoid any food loss, dishes damage, or personal injury caused by accidental collision.
- Donotmoveortransporttherobotwhileitisworkingtopreventitfrommovingabnormally.
- Therobotmustnotbedisassembledorrepairedbyuntrainedpersonnel.Incaseofmalfuncti on,contactShenzhenPuduTechnologyCo.,Ltd.fortechnicalsupportintime.
- Observethemaximumweightapersonisallowedtoliftasrequiredbylocallawsandregulat ionswhentransportingtherobot.Keeptherobotuprightduringtransportation.Neverattempttot ransportitbyliftingthetrayorthebox.

Environment:

- Donotuseorchargetherobotinahightemperature/pressureenvironment,areaswithfireor explosionhazard,orotherdangerousscenariostoavoidpersonalinjuryorrobotdamage.
- Donotusetherobotinahumidenvironmentoronsurfacescoveredwithfluidorgooeystufft oavoiddamagetotherobot.
- Donotusetherobotinplaceswheretheuseofwirelessdevicesisexplicitlyprohibited,other wiseitmaycauseinterferencetootherelectronicdevicesorleadtootherdangers.
- Donotdisposeoftherobotoritsaccessoriesashouseholdwaste.Alwaysdisposeoftherobo tanditsaccessoriesaccordingtolocallawsandregulations,andrecyclewhereverpossible.

2. Productcomponents

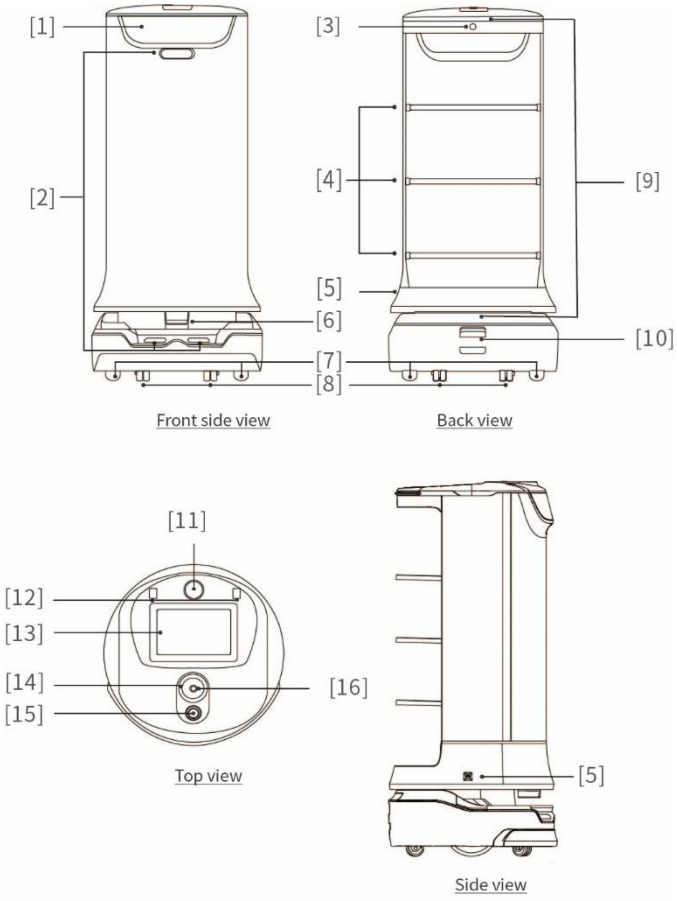
2.1 Packinglist

Robot x 1,HolaBotUserManual x 1,QualityCertificate x 1,WarrantyCard x 1,Charger x 1,PowerKey x 1,Markers x 1.

2.2 Overview

As a delivery robot that features calling and notifications, HolaBot supports SLAM positioning and navigation solutions integrating both visual and laser positioning. Featuring high carrying capacity, voice control, and remote operability, HolaBot integrates functions including calling, notification, and autonomous movement and can be used in various scenarios efficiently, conveniently, and flexibly. HolaBot comes with various modes, including Delivery Mode and Dish-return Mode, to cater to the needs of different scenarios.

2.3 Appearance&components



No.	Description
1	Dot matrix screen
2	Depth vision sensors
3	Power switch

4	Trays
5	Charging jack
6	Lidar
7	Drive wheels
8	Auxiliary wheels
9	Light strips
10	Battery box
11	Lightning button
12	Infrared gesture sensor
13	LCD screen
14	6-mic circular array kit
15	Emergency stop switch
16	Vision sensor

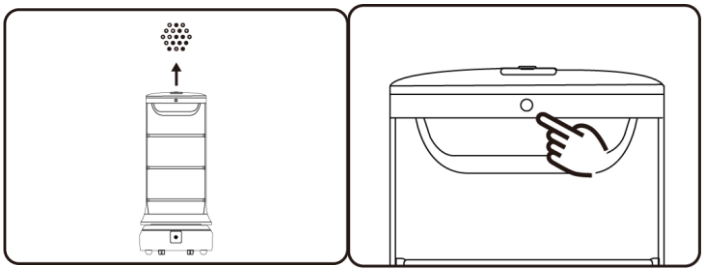
2.4 Specifications

Feature	Description
Operatingvoltage	DC23–29.4V
Powerinput	AC100–264V,50/60Hz
Poweroutput	29V/8A
Batterycapacity	25.6Ah
Chargingtime	4.5h
Batterylife	10–24h
Cruisespeed	0.5–1.2m/s(adjustable)
Navigation	Laser and visual integrated SLAM positioning
Min.travelwidth	70cm
Max.surmountableheight	7mm
Max.climbingangle	5 °
Traydimensions	390 mm x 360 mm, 120 L ultra-large volume
No.oftrays	Four

Heightbetweentrays	Fromtoptobottom: 216 mm/184 mm/184 mm/184 mm
Trayload	Flat and smooth ground:15kg/layer; 5 mm surmountable heigh: 10 kg/layer
Machinematerial	ABS/aviationgradealuminumalloy
Robotweight	60kg
Robotdimensions	542 mm x 534 mm x 1226 mm
Screensize	10.1-inchLCDscreen
Operationsystem	Android
Microphone	6-miccirculararraykit
Speakerpower	2×10Wstereospeakers
Servicelife	5years
Workingenvironment	Temperature:0℃to40℃; RH:≤85%
Storageenvironment	Temperature:-40℃to65℃; RH:≤85%
Workingaltitude	<2000m
Surface requirement	Indoorenvironment,flatandsmoothground
IPrating	Robot: IP20 Tray compartment: IPX5
Frequencybandrange	
Max.transmitpower	

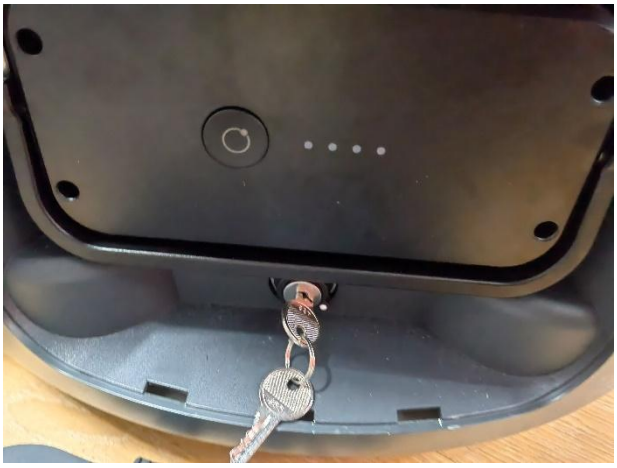
3. Howtouse

- Power-on:Move the robot to the startup location, and press and hold the power switch for 1 second. The light strips and dot matrix screen will flash, indicating that the robot is powered on.



⚠Caution

Besuretoturnthekeyswitchto"ON"andpushbackthebatterybackcoverbeforepoweringontherobot.



- Power-off

Press and hold the power switch for 3 seconds, the **Power Off** option will appear on the screen. Tap the **Power Off**, and the light strips, dot matrix screen, and LCD screen will go off, indicating that the robot is powered off.

- Pause:

Taponthescreentopausetheworkingrobot.Tapagaintoresumeoperation.Youcanalsopressthelightningbuttontopausetherobot.

- Emergencystop:

Incaseofanemergency,presstheemergencystopswitchtostopaworkingrobot.Rotatetheemergencystopswitchclockwise,taponthescreenorpressthelightningbuttontoresumeoperation.

Refer to *HolaBotOperationGuide* formoreinformationonhowtousetherobot.

4. Maintenanceandcare

Components	RobotStatus	InspectionInterval	MaintenanceMethod
Drivingwheels,anddauxiliarywheels	Power-off	Weekly	Wipethesurfacewithacleancloth.
Trays	Power-off	Weekly	Wipe the surface with a clean cloth. If there are oil stains on the silicone pad of the tray, please scrub it clean with water and dry it in time.
Visionsensor,depthvisionsensors,anddLidar	Power-off	Weekly	Useacleanclothorlenscleanserforthecleaning. Incaseofunexpectedcontamination,addressitimmediatelytoavoidblockingthesensorandpreventtherobotfromworkingimproperly.
Robotbody	Power-off	Monthly	Wipethesurfacewithacleancloth.

Refer to *HolaBotOperationGuide* formoreinformationonhowtomaintainandcarefortherobot.

5. After-salesservice

ShenzhenPuduTechnologyCo.,Ltd.providesfreewarrantyservicewithintheeffectivewarrantyperiod(thewarrantyperiodmayvaryfordifferentcomponents).Thefeesincurredbytheafter-salesservicewillbecoveredbyPudu.Beyondthewarrantyperiodorinanycircumstancesnotcoveredbythefreewarranty,acertainfeewillbechargedaccordingtothenormalprice.Pleasecalltheafter-saleshotlinefordetailedafter-salesservicepolicyandrepairservices.Thepolicycanalsobefoundin*HolaBotOperationGuide*.

Puduafter-salesemail:techservice@pudutech.com.

6. Complianceinformation

6.1 FederalCommunicationsCommission compliancestatement

ThefollowinginformationappliestoPudurobotic.

Thisequipmenthasbeentestedandfoundtocomplywiththelimitsfora ClassBdigitaldevice,pursuanttopart15oftheFCCRules.Theselimitsaredesignedtoprovidereasonableprotectionagainstharmfulinterferenceinaresidentialinstallation.Thisequipmentgenerates,usesandcanradiateradiofrequencyenergyand,ifnotinstalledandusedinaccordancewiththeinstructions,maycauseharmfulinterferencetoradiocommunications.However,thereisnoguaranteethatinterferencewillnotoccurinaparticularinstallation.Ifthisequipmentdoescauseharmfulinterferencetoradioortelevisionreception,whichcanbedeterminedbyturningtheequipmentoffandon,theuserisencouragedtotrytocorrecttheinterferencebyoneormoreofthefollowingmeasures:

- Reorientorrelocatethereceivingantenna.
- Increasetheseparationbetweentheequipmentandreceiver.
- Connecttheequipmentintoanoutletonacircuitdifferentfromthattowhichthereceiverisconnected.
- Consultthedealeroranexperiencedradio/TVtechnicianforhelp.

ThisdevicecomplieswithPart15oftheFCCrules.Operationissubjecttothefollowingtwo conditions:

- Thisdevicemaynotcauseharmfulinterference.

Thisdevicemustacceptanyinterferencereceived,includinginterferencethatmaycauseundesiredoperation.

6.2 IndustryCanadacompliancestatement

ThisdevicecomplieswithIndustryCanadalicence-exemptRSSstandard(s).Operationissubjecttothefollowingtwoconditions:

- Thisdevicemaynotcauseinterference.
- Thisdevicemustacceptanyinterference,includinginterferencethatmaycauseundesired operationofthedevice.

6.3 Disposalandrecyclinginformation

TheWasteElectricalandElectronicEquipment(WEEE)Directiveaimstominimizetheimpactofelectricalandelectronicgoodsontheenvironment,byincreasingre-useandrecyclingandbyreducingtheamountofWEEEgoingtolandfill.Thesymbolonthisproductoritspackagingsignifiesthatthisproductmustbedisposedseparatelyfromordinaryhouseholdwastesatitsendoflife.Beawarethatthisisyourresponsibilitytodisposeofelectronicequipmentatrecyclingcentersinordertoconservenaturalresources.Eachcountryshouldhaveitscollectioncentersforelectricalandelectronicequipmentrecycling.Forinformationaboutyourrecyclingdropoffarea,pleasecontactyourrelatedelectricalandelectronicequipmentwastemanagementau

thority,yourlocalcityoffice,oryourhouseholdwastedisposalservice.

Beforeplacingelectricalandelectronicequipment(EEE)inthewastecollectionstreamorinwastecollecti onfacilities,theenduserofequipmentcontainingbatteriesand/oraccumulatorsmustremovethosebatteri esandaccumulatorsforseparatecollection.

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 : Pudu HolaBot
Model number: HL100
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.

CE

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)

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			

RF POWER

Function	Operation Frequency	Max RF outputpower:	Limit
BLE	2402MHz–2480MHz	6.69dBm	20 dBm.
BT(BR+EDR)	2402MHz–2480MHz	9.83 dBm	20 dBm.
WIFI 802.11b/g/n(HT20,HT40) 2.4G	802.11b/g/n(20MHz): 2412~2472MHz; 802.11n(40MHz):2422~2462MHz	16.96 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	13.07dBm	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	12.66 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	12.73 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	12.93 dBm	13.98dBm
WCDMA Band 1	Tx(Uplink): 1920MHz~1980MHz; Rx(Downlink): 2110MHz~2170MHz	23.64dBm	Class3 24 (dBm) +1,7/-3,7 (dB)
WCDMA Band 8	Tx(Uplink): 880MHz~915MHz; Rx(Downlink): 925MHz~960MHz	21.71dBm	Class3 24 (dBm) +1,7/-3,7 (dB)
FDD-LTE Band 1	Tx(Uplink): 1920MHz~1980MHz; Rx(Downlink): 2110MHz~2170MHz	23.77dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 3	Tx(Uplink): 1710MHz~1785MHz; Rx(Downlink): 1805MHz~1880MHz	23.51dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 7	Tx(Uplink): 2500MHz~2570MHz; Rx(Downlink): 2620MHz~2690MHz	23.7dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 8	Tx(Uplink): 880MHz~915MHz; Rx(Downlink): 925MHz~960MHz	23.22 dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 20	Tx(Uplink): 832MHz~862MHz; Rx(Downlink): 791MHz~821MHz	22.97dBm	Class3 23 (dBm)+2.7/-2.7(dB)
FDD-LTE Band 28	Tx(Uplink): 703MHz~748MHz; Rx(Downlink): 758MHz~803MHz	23.05 dBm	Class3 23 (dBm)+2.7/-3.2(dB)
TDD-LTE Band 34	Uplink & Downlink: 2010 MHz to 2025 MHz	23.73 dBm	Class3 23 (dBm)+2.7/-3.2(dB)
TDD-LTE Band 38	Tx(Uplink): 2570MHz~2620MHz; Rx(Downlink): 2570MHz~2620MHz	23.97 dBm	Class3 23 (dBm)+2.7/-2.7(dB)
TDD-LTE Band 40	Tx(Uplink): 2300MHz~2400MHz; Rx(Downlink):	23.45dBm	Class3 23 (dBm)+2.7/-2.7(dB)

	2300MHz~2400MHz		
2.4G	2402.4MHz–2482MHz	7.78dBm	20 dBm.

WeChatOfficialAccount,OfficialWebsite,OperationGuide