KEYi TECH Click Bot Coding Robot Kits for Kids User Manual

KEYi TECH.

Click Bot Coding Robot Kits for Kids
User Manual

Install ClicBot App

You can search “ClicBot App” in App Store/ Android app store or scan the QR code below to download it.

It supports iOS 10.0, Android 5.0 and above.

https://keyirobot.cn/web/index/qrcode

Advice

For the Operation Manual and the FAQs, please refer to the ClicBot Space Travel Guide. Please refer to the User’s Manual for information of ClicBot, including module specifications, assembly, usage, connection settings, battery recharging, security & privacy, after-sale services, and FAQs.

Precautions

1. Contains small parts. Not suitable for children under 3 years old;
2. Contains precision parts. Prevent it from high drop;
3. Not fireproof.
4. Not waterproof.
5. Keep the golden “pogo” pins away from metal;
6. Do not directly or indirectly connect two or more Brain together;
7. Do not remove or replace the built-in battery; please contact our after-sales service team for repairs in case of battery damage;
8. Please use the charger recommended only (output voltage recommended: DC 5V/2A);
9. Do not play with it while charging;
10. Do not rotate ClicBot when the movement function is locked;
11. Do not touch the moving ClicBot;
12. Clicquot should be recycled to prevent environmental pollution;
13. This package contains important information, please keep it properly.

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Introduction

ClicBot is an intelligent robot for kids with built-in educational and entertaining functions.

ClicBot is of unique modular design that is easy to assemble and disassemble and allows the creation of varied imaginative robots as building bricks. ClicBot is more than just a robot or a toy, it is the companion of children. It has a big blinking eye, like a curious kid looking around. ClicBot is able to interact with you. If it recognizes you, it will greet you warmly. When you pet its head, it will play cute; If you block its way, it will take detours curiously. The ClicBot App also provides various functions and applications, such as galloping racing robots, cute animal robots, climbing robots, and bionic walking robots, and satisfying children’s every imagination of robots.

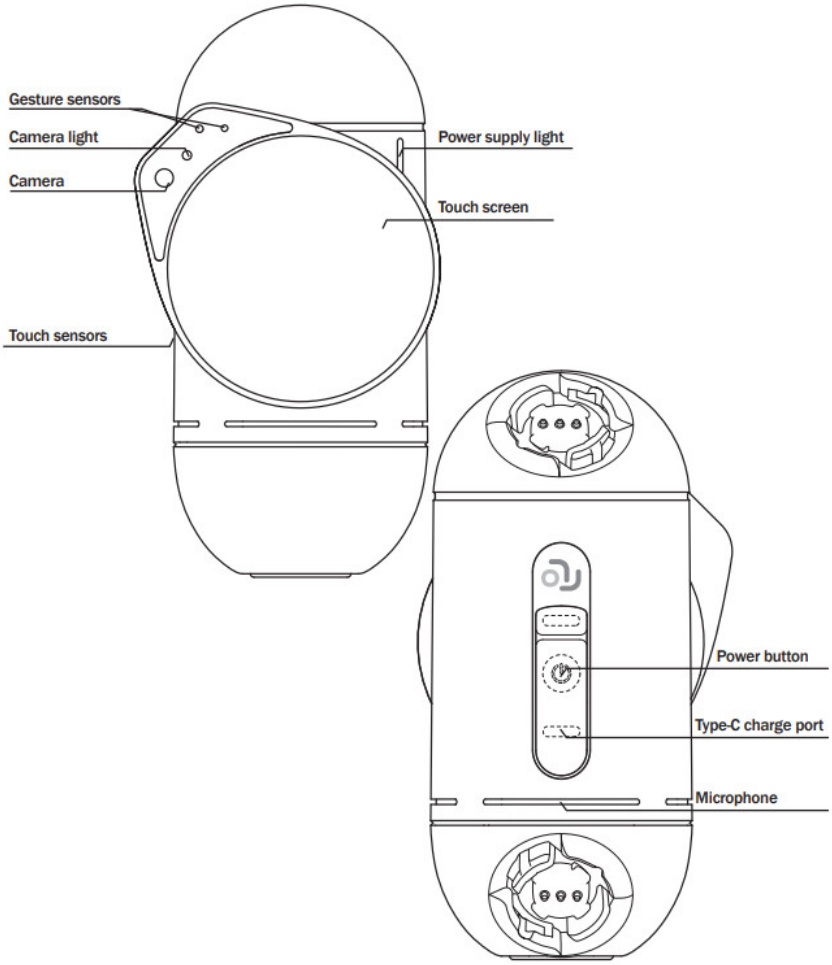
ClicBot is designed to help children shape the future. The ClicBot App has two creative tools: motion script or graphical programming. With a motion script, users can easily control the movement and direction of ClicBot remotely, by directly adjusting the posture of the robot in turn, or pushing the robot to move in all directions like a toy car. For more intermediate and advanced actions, users can use the drag & drop graphical programming feature to create a wider variety of amazing programs and actions. To help children fully exert their ideas and creativity, ClicBot App will continue to update the STEAM videos under its ClicBot CollegeAcademy function, so as to better guide children on how to build, and program, and play with different robotic creations. Additionally, users can also upload their works to the ClicBot App Community for sharing with others.

Specification of Modules

Brain

The Brain is the master control and power supply unit of the ClicBot. It uses an ARM-A7 processor and includes a rechargeable polymer lithium battery with a capacity of 1550mAh. The eye of the ClicBot is a 2.1-inch rotational, circular touch screen. Visual sensors, gesture sensors, and camera lights are located at the upper-left corner. There
are three touch sensors located on the upper, left, and right side of the Brain respectively; two connectors are located on the upper and bottom rear side. The Brain also contains such functional modules as an accelerometer, gyroscope, microphone, loudspeaker, and Wi-Fi module.

Size	66.7*66.5*124.8 mm	Touch sensors	Upper, left, and right side
Weight	275g	Microphone	Support volume detection
Touch screen size	2.1″	Loudspeaker	Single track
Screen rotate angle	-24° – +24°	WiFi	2.4 G/5G
Camera	2-megapixel	Battery	1550mAh
	Support face	Charge port	USB-C
	detection & recognition, m otion detection Recognition distance 5 5m	Connector	Upper and bottom rear side
Gesture recognition sensors	8 gestures can be recogniz ed at a distance of 5 20cm		

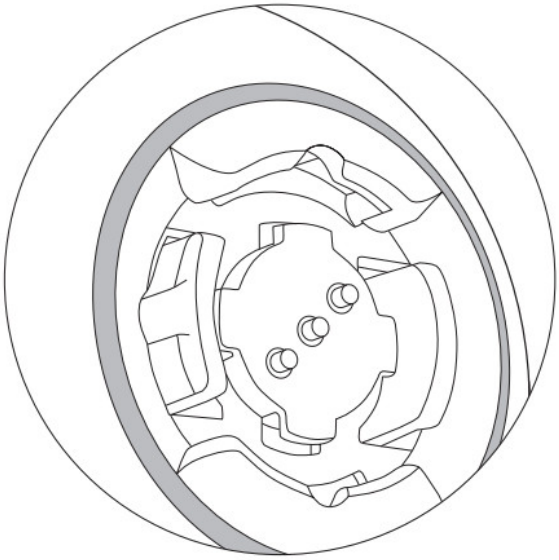


Joint

Joint is used for integrated motion.
It is a high-precision servo system, which contains a DC geared motor and sensors such as angular rate/angle position sensors.
There are four connectors, two in each hemisphere. Each connector has a status indicator showing the connection and update status.

Size	55 mm (diameter)
Weight	65 g
Motor rated power	2.64 W
Maximum rotation speed	216° /s
Connection light	Two each in the upper and lower hemisphere

Joint

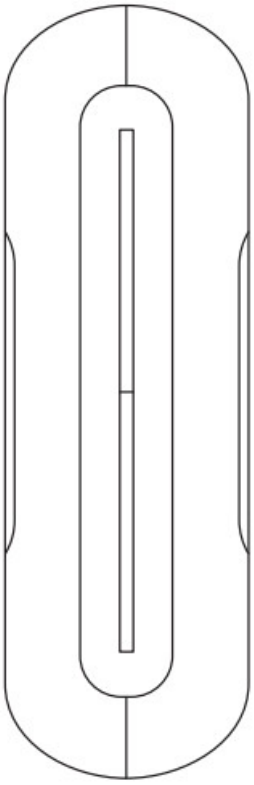


*Status of Joint’s indicator
Connection Status
Light connected correctly
FlashingWaiting for module connection
Flashing quickly wrong connection

Update Status
Light onUpdated
successfully
FlashingModule needs
updating

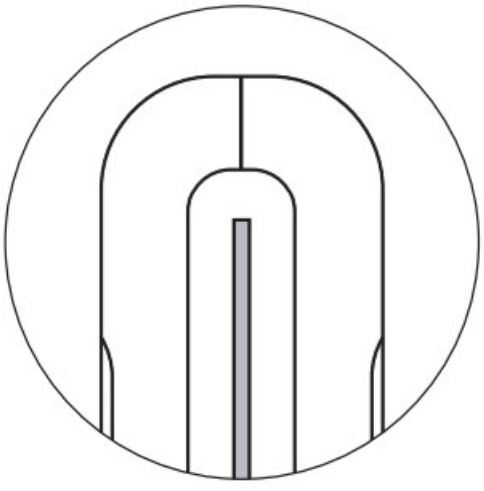
Skeleton

The Skeleton, the “bone” of the ClicBot, is used for connecting the limbs of the robot. There are two connectors, located at the top and bottom of the Skeleton. Two strip status indicators are located on the front, which show the connection and updates status.

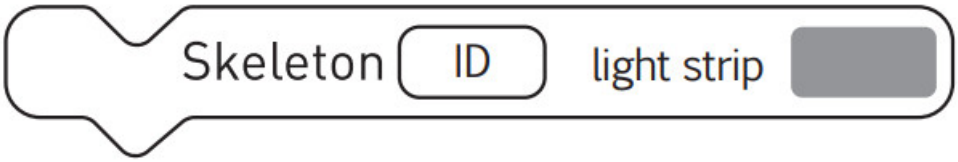


Size	37.8*37*120 mm
Weight	50 g
Connector position	Upper and bottom rear side

***Status of Skeleton’s indicator**



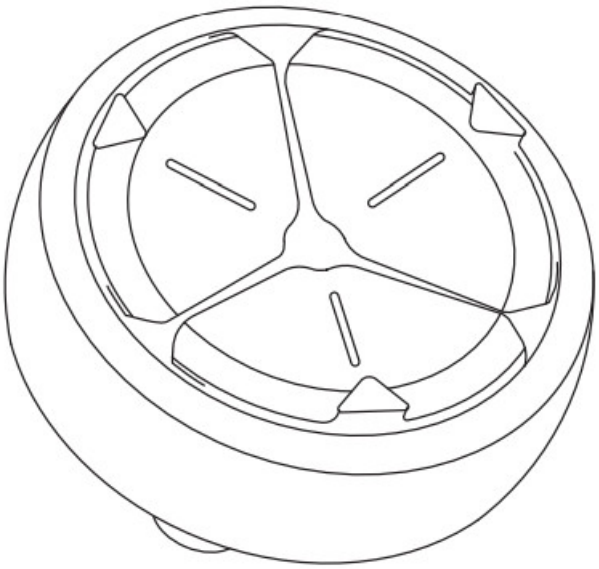
Connection Status
Light onConnected correctly FlashingWaiting for module connection
Flashing quickly wrong connection
Update Status
Light updated successfully
FlashingModule needs updating



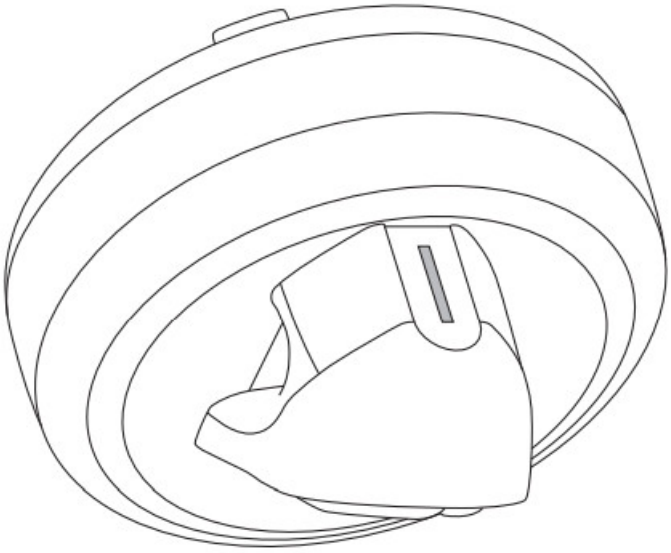
The color of Skeleton’s indicator can be changed via graphical programming.

Wheel

The wheel is a functional actuator module used for vehicle setups. The Wheels include a DC geared motor and a magnetic speed sensor, with a maximum rotation speed of 4.5 rounds per second. It also has a status indicator near the main connector, showing the connection and update status.



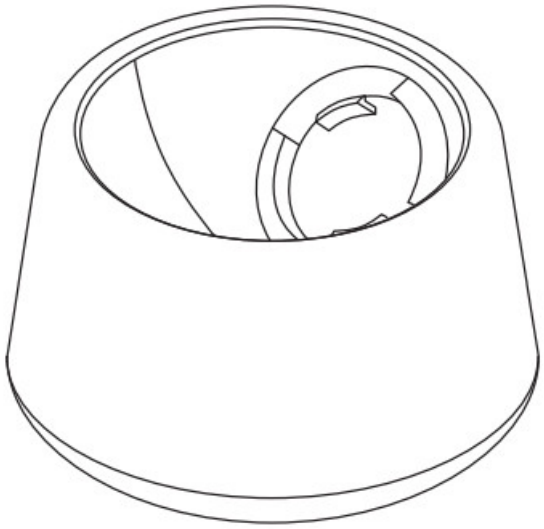
Wheel diameter	83.8 mm
Weight	130g
Motor rated power	2.4W
Maximum rotation	4.5 rounds/second
Connector position	1



*Status of Wheel’s indicator Connection Status Light on→ Connected correctly
FlashingWaiting for module connection Flashing quickly→Wrong connection
Update Status
Light on →Updated successfully
Flashing→ Module needs updating

Mount

The Mount can be used to fix your ClicBot to a table with Mount Stickers.

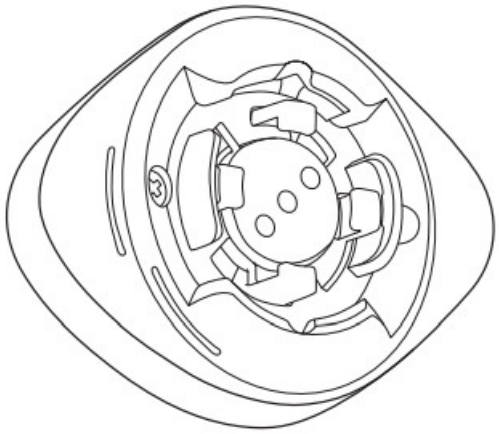


Size	75.3*75.3*45.8 mm
Weight	60g

Please use the Mount stickers provided by KEYi Tech to ensure a firm adhesion.

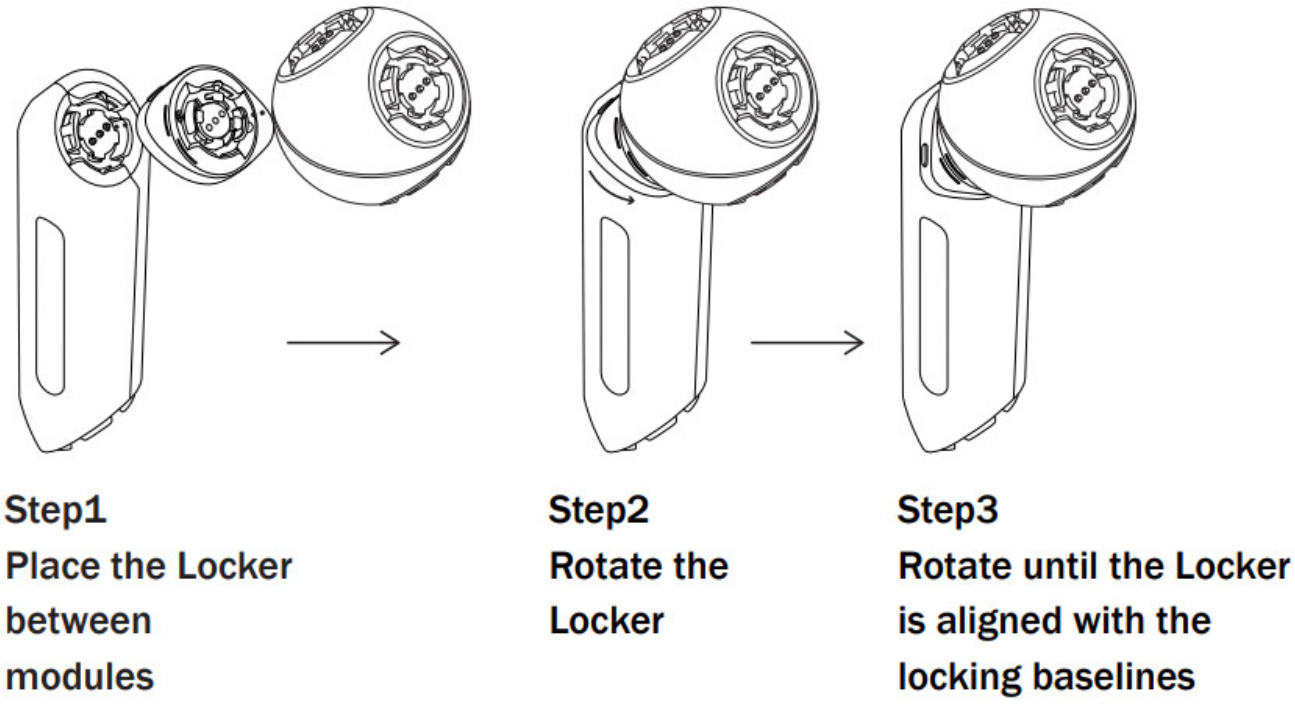
Locker

The Locker is used to reinforce connections between two modules.



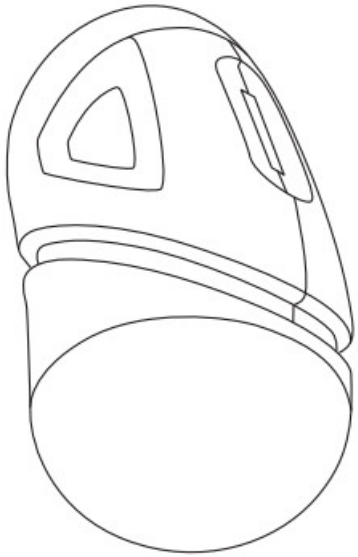
Size	47*36*15.4 mm
Weight	60g

It can be used for connecting modules when additional Lockers are required.



Smart Foot

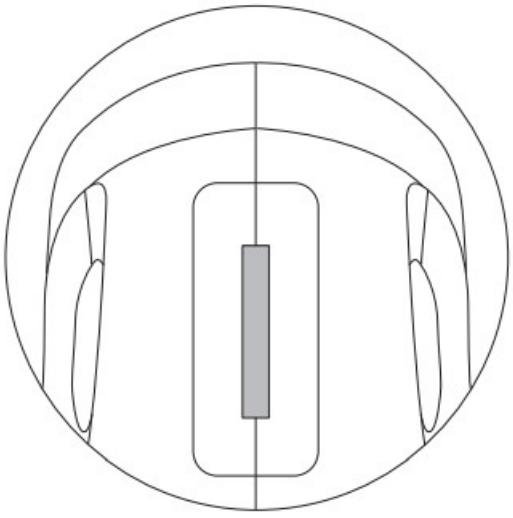
The Smart Foot is a functional sensor module that serves as the ‘feet’ of the ClicBot. The Smart Foot includes a highly sensitive pressure sensor and a microprocessor to control and measure terminal pressure.



Size	41.8*41.8*71.2 mm
Weight	50g
Pressure detection range	2N
Connector position	Upper side

Do not apply too much pressure, otherwise, the pressure detection function of Smart Foot may be damaged.

Above the Smart Foot, there is an orange indicator. After connecting to ClicBot, the luminance of the indicator will change along with the pressure. The indicator can also indicate the connection status and update status.

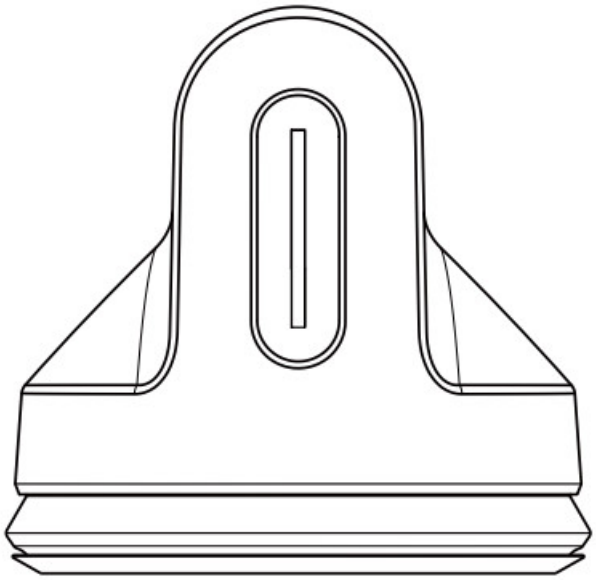


Connection Status
Light on→Connected correctly
FlashingWaiting for module connection
Flashing quickly→Wrong connection

Update Status
Light on→Updated successfully
Flashing→Module needs updating

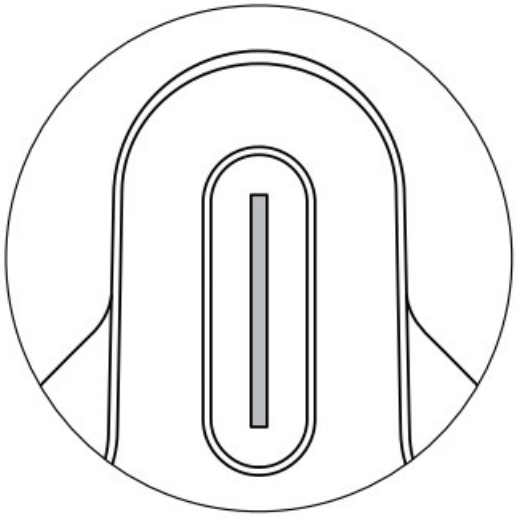
Suction Cup

The Suction Cup is a functional actuator module. The Suction Cup includes a negative pressure pump and a solenoid valve. By utilizing a microprocessor, it can control the air current and on/off the vacuum, allowing the ClicBot to perform climbing functions. It also uses the air pressure sensor to proactively check the stability of the ClicBot's movement.



Size	83*83*91 mm
Weight	200 g
Suction weight	Maximum weight in vertical direction 20 kg Maximum weight in the horizontal direction 5 kg
Connector position	Bottom

The suction Cup has a green indicator. The indicator presents a breathing effect when Suction Cup is functioning and stays on if the suction is successful. The indicator can also indicate the connection and update status.

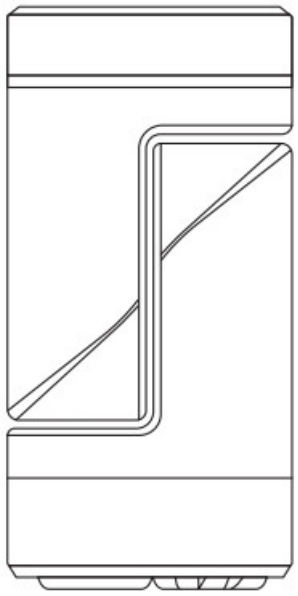


Connection Status

Light on→Connected correctly
FlashingWaiting for module connection
Flashing quickly→Wrong connection
Update Status
Light on→Updated successfully
Flashing→Module needs updating

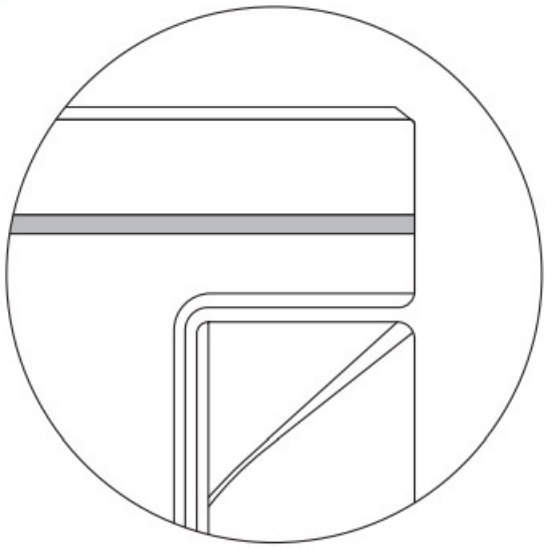
Distance Sensor

The Distance Sensor is a functional sensor module, which uses a high-precision infrared probe and a built-in microprocessor to control and measure the distance from an obstacle.



Size	40*40*82.4 mm
Weight	60 g
Detection distance range	2-100 cm
Degree of freedom control	Control range of universal joint at the Bottom: 0° – 180° Body left-right rotatio n control range: -90°- 90°
Connector position	Bottom

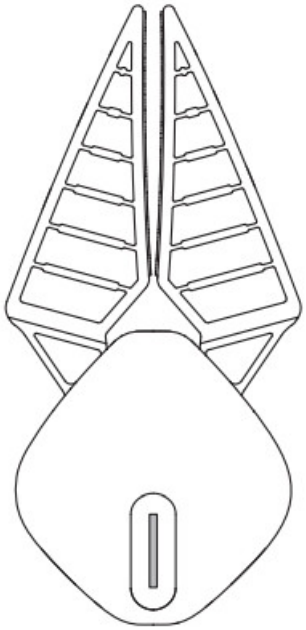
It has a red indicator. After connecting the Distance Sensor, the luminance of the indicator will become brighter when the distance is shortening. The indicator can also indicate the connection status and update status.



Connection Status
Light on→Connected correctly
Flashing→Waiting for module connection
Flashing quickly→Wrong connection
Update Status
Light on→Updated successfully
Flashing→Module needs updating

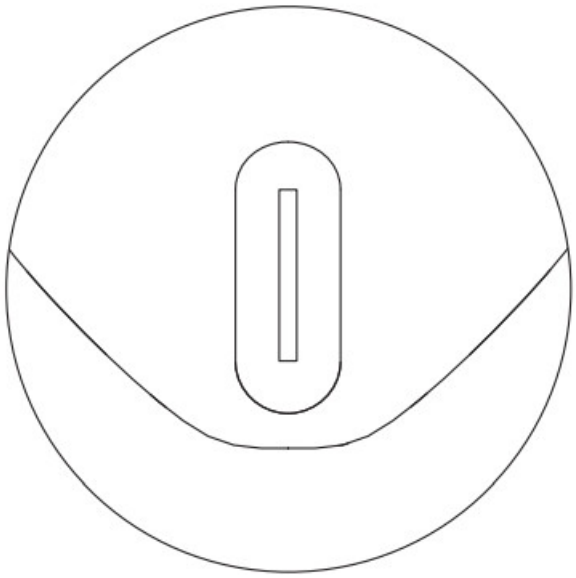
Grasper

Grasper is a functional actuator module. It adopts a flexible bionic design and can be controlled by a built-in microprocessor for grasping objects of various shapes and sizes.



Weight	90g
Size	165*80*57mm
Maximum grasping weight	250g
Maximum grasping size	6cm
Connector position	Bottom

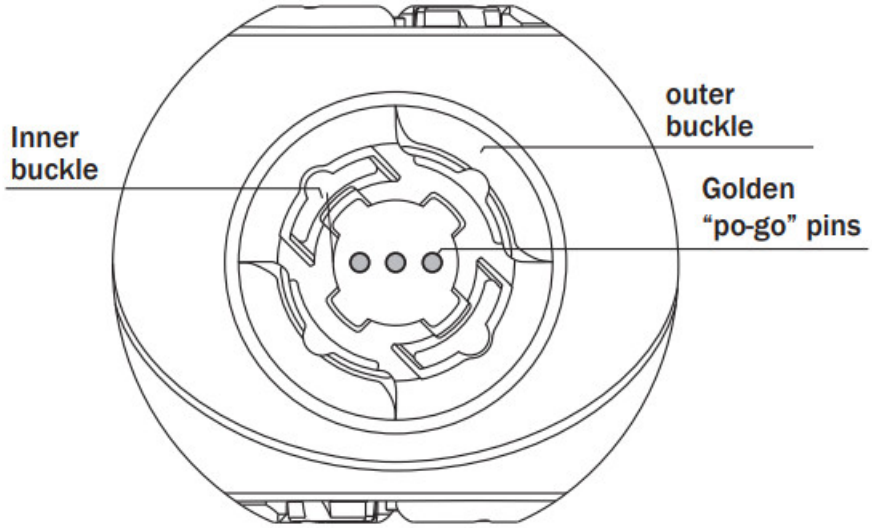
Grasper has a yellow indicator which can also indicate the connection status and update status.

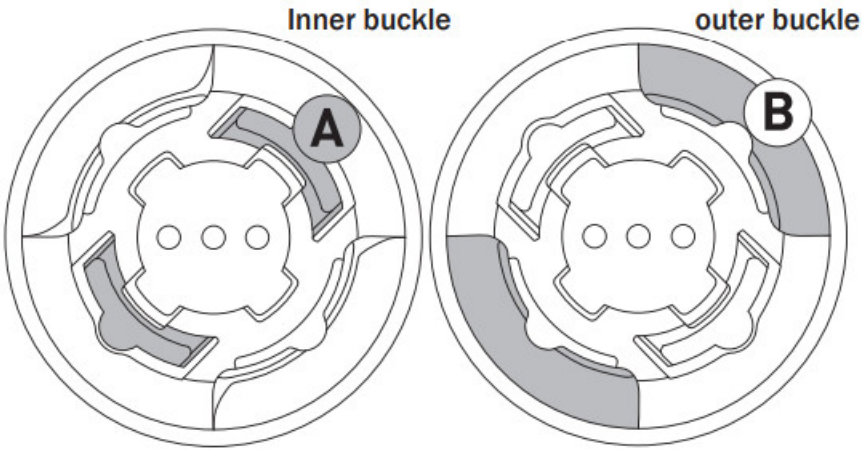


Connection Status
Light on→Connected correctly
Flashing→Waiting for module connection
Flashing quickly→Wrong connection Update Status
Light on→Updated successfully
Flashing→Module needs updating

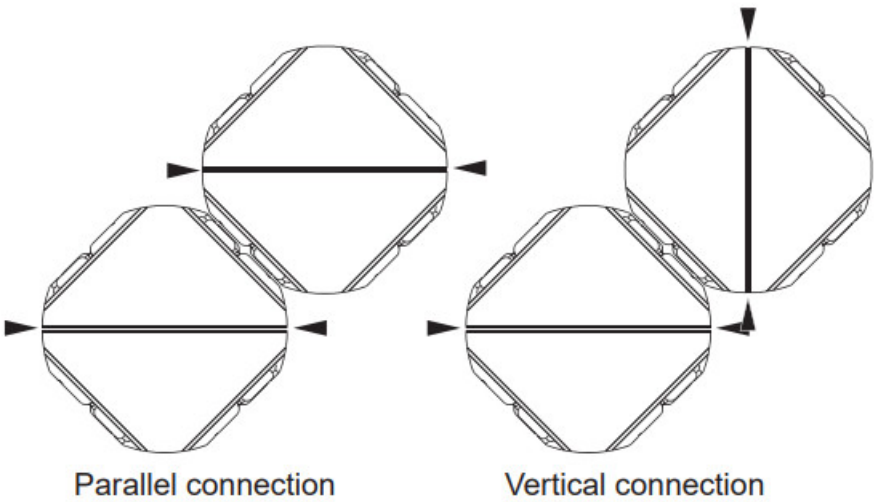
Assembly

All ClicBot modules are connected by connectors. Each connector has an inner buckle, an outer buckle, and golden “pogo” pins. You can connect two modules by interlacing the inner buckle and outer buckle, while the golden “pogo” pins are used for transferring instruction and supplying power.



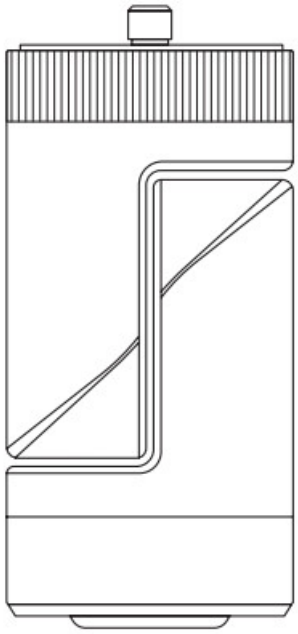


*When connecting two modules, please align the inner buckle of one module with the outer buckle of the other module
*Any two modules can be connected in parallelly or otherwise.



Holder

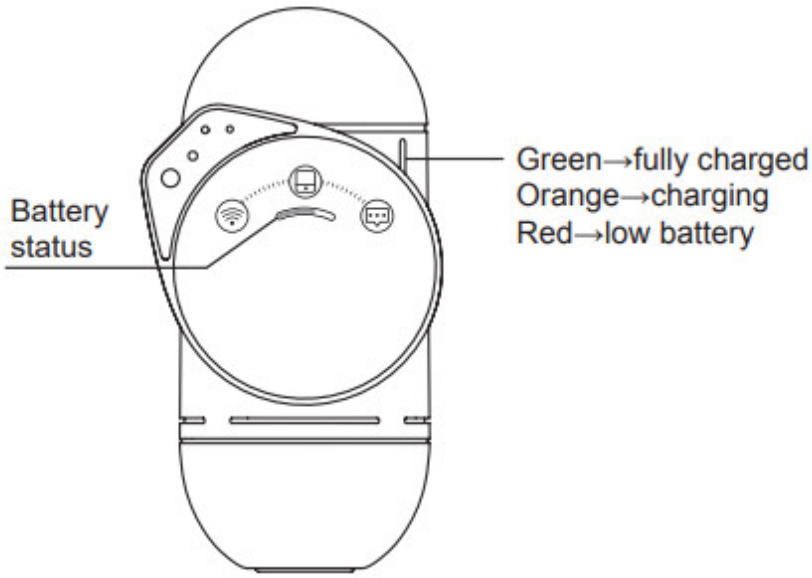
The top of the Holder is a standard 1/4 screw, which can be used for connecting a cellphone or sports camera to ClicBot.



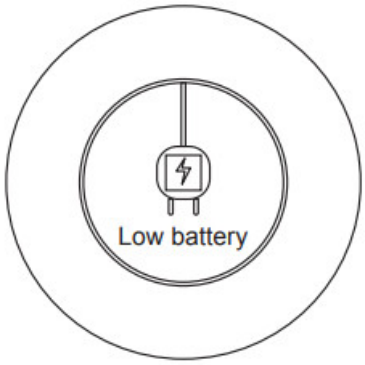
Size	39.8*39.8*79.6 mm
Weight	sog
Degree of freedom contro	Control range of universal Joint at the Bottom:0° -180° Body left-right rotation control range: -90° -90°
Connector position	Bottom

Battery Capacity and Charging

Different colors on the Brain indicate the battery status of the ClicBot.
You can also check the power on the system menu.



When the power is low, an alert will be displayed on the screen.
Please charge the battery to ensure its normal operation and better maintain the battery performance.



Security and Privacy

Security Information

GB19865-2005 GB6675.1-2014 GB6675.2-2014 GB6675.3-2014 GB6675.4-2014

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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.

The device has been evaluated to meet general RF exposure requirements.
This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. FCC ID: 2AWR5-KY002B

IC

RSS-Gen Issue 4 December 2014″&”CNR-Gen 4e Décembre 2014: –English:
This device complies with Industry Canada licence-exempt RSS standard(s).
Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.
IC : **226344-KY002B**

Manufacturer's Name: Beijing Ke Yi Technology Co., Ltd.
Address: 8th Floor, Diamond Building, Huayuan Road, Haidian District, Beijing, China
Product Name: ClicBot Modular Entertaining and Educational Toy Trade Mark: ClicBot
Model number: KY002CK10
Operating Temperature: -10° C to 40° C
This device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. All essential radio test suites have been carried out.
Detailed DOC file please visit our website: **www.keyirobot.com.**
The device complies with RF specifications when the device is used at 20cm from your body.
Care for the environment! Must not be discarded with household waste.
Ke Yi Technology Co., Ltd.

RF Specification

This product can be used across EU member states.

Function	**Operation Frequency**	**Max RF output power**	**Limit**
2.4G WIFI 802.11b/g/n (HT2O,HT4O)	802.11b/g/n(20MHz): 2412-2472MHz; 802.11n(40MHz):2422-2462MHz	13.02 dBm	30 dBm.
5G WIFI 802.11a/n/ac (20/40/80)	802.11a/n(HT20)/ac(VHT20): 5745-5825MHz: 802.11n(HT40)/ac(VHT40): 5755-5795MHz: 802.11ac(VHT80):5775MHz	10.57 dBm	30 dBm.

User Privacy
We value personal information security and will make every effort to protect your personal information. We will take all reasonable and practicable means to avoid collecting irrelevant information. If it is necessary for us to

collect your information, we will obtain your authorization first, and store such information on a local hard drive in accordance with relevant standards.
Unless absolutely necessary, we will give priority to processing your personal information on the local hard drive, so as to avoid any unauthorized access, disclosure, improper usage, modification, damage, or loss of your information. For specific privacy policies, please refer to the ClicBot App or visit **www.keyirobot.com.**

We will provide a 12-month free maintenance service for any material and technological defects to your ClicBot or its accessories, and a 6-month free maintenance service for materials or motors from the date of purchase, provided that such defects fall within the scope of the product warranty as confirmed by test technicians of KEYi TECH.

Please contact **support@keyirobot.com** or visit your local retailer for after-sales services.

Please keep your receipt secure for after-sales services.

FAQs

How to turn on/off ClicBot?
To turn on ClicBot, you can press and hold the power button on the rear side of Brain for 3 seconds. To turn off it, you can press the power button on the rear side of Brain and then choose the turn-off icon on the screen; or press and hold the power button for 6 seconds to trigger a force shutdown.

Why does my ClicBot shut down automatically?
To maintain the battery and motor performance, ClicBot will shut down automatically in the following situation:

1. No operation for over 20 minutes;
2. Battery capacity below 10%.

How long does it take for ClicBot to be fully charged, and how long can a completely charged ClicBot run?
It takes 3 hours to fully charge it with a 5V/2A charger. It can run continuously for up to 4 hours. (as the case may be).

Does the ClicBot have to be connected to the network while operating?
No, but it does when checking available updates.

Does the ClicBot Robot have to be used with the ClicBot App?
Not necessary. It can be controlled manually with the Bac/Bic function on the Brain.

What is the maximum distance of remote control with ClicBot App?
It's up to the connection mode: When connecting via a router, it is up to 10m which may be different due to the performance of the router.
When connecting via hotspot, it is up to 5m.

Can ClicBot's functions be updated?
All ClicBot modules can be upgraded online.
For checking/downloading new functions, please connect the Brain to Wi-Fi, swipe upwards to enter the system menu, and select [Upgrade].
Upon connecting other modules to Brain, a prompt for upgrading will pop up on the screen when it finds an available update. You can follow the instructions on the screen to upgrade modules.

How far can Brain recognize blocking or gestures like waving?

The gesture sensor is located in the upper-left triangle area of the screen of Brain Module. Blocking or gestures can be recognized at a distance of 5-20 cm.

How far can Brain detect obstacle?
The gesture sensor is located in the upper-left triangle area of the screen of the Brain Module. Obstacles can be detected at a distance of 5-20 cm.

How far can Brain recognize the human face?
The camera & Face Recognition module is located in the upper-left triangle area of the screen on the Brain. Human faces can be recognized at a distance of around 1 meter.

How far can Brain recognize motion?
The camera for motion detection is located in the upper-left triangle of the screen on the Brain. Motion can be detected at a distance range between 1 and 5 m.

What is the purpose of the camera on the Brain?
The Brain is equipped with a 2-megapixel camera that enables the robot's functions such as first-person perspective control, face detection & recognition, motion detection, etc.

What is the rotation range of the screen on the Brain?
The screen can be rotated up to 24° either to the left or right. You can set up the rotation via drag & drop graphical programming in ClicBot App. Please do not rotate the screen manually.

How to assemble a ClicBot Robot?
The ClicBot is designed with smart assembling guidance. After choosing the robot is to be assembled, there will be a step-by-step instruction shown on the screen of the Brain, and the indicator light will flash as an indication. The system will automatically check whether the modules have been assembled correctly. An alert message will be prompted on the screen when the assembly is wrong, while the indicator light of the wrongly-connected module will flash quickly. The system will automatically adjust the angle of connection as long as the two modules are correctly assembled.

Why do the indicator lights of a module flash?
The indicator lights indicate the status of a module. Statuses include:
Constant on – Operation normally
Breathing – In preparation
Flashing – Module assembly required
Flashing quickly – Wrong assembly

What programming languages does the ClicBot support?
Currently, ClicBot supports graphical programming and Python programming.

Which modules of ClicBot are programmable?
The ClicBot has over 20 programmable modules, including the screen of the Brain, microphone, Joint, Wheel, and the color of the lights of Skeleton.

Warranty description

Dear Customers,

Thank you for choosing Clicbot. As former children too interested in computers, all of us here at ClicBot remember dreaming of building a custom robot we could truly call our own, but being constrained by the technology of our time.We made ClicBot fulfill this dream, and hope you enjoy it as much as we have. If you want to learn more configurations for ClicBot, or share one you made, check out the ClicBot Facebook community. We've seen some truly extraordinary nary custom builds made by our users.

ClicBot is covered by a one-year hardware warranty so if anything starts acting funny, please tell us!

This product is near and dear to our hearts, and we care about your feedback. if you've got any thought, opinions, or questions, send us an email at **eedback@global.keyirobot.com** and we'll reply to you within ONE business day.

Welcome to the world of ClicBot.

479Jessie St, San Francisco, CA 94103 USA
http://keyirobot.com/

Description of Warranty Terms

1. This warranty policy is valid for one year.
2. Within the warranty period, KEYi Tech will provide free repairs and replacements for all defective modules that cease functioning during normal usage.
3. Within the warranty period, KEYi Tech will charge for all repairs and replacements under the following circumstances:
   1. Fail to provide a valid warranty card or proof of purchase.
   2. Improper usage not in compliance with a user manual, or self-conducted modifications that lead to broken product.
   3. Transportation, movement, or falling that leads to broken product.
   4.0ther force majeures that lead to broken products. Example of force majeure: Earthquake.
4. This warranty term does constitute an implicit promise. KEYi Tech is not responsible for unique, coincidental, and indirect damages, no matter contractual, civil negligence, or other stipulations.
5. If a customer's country of residence has relevant laws regarding warranty terms, then those laws will prevail.

After-sales service email
feedback@global.keyirobot.com

Warranty Card
[KEYi Tech's Copyl

Model/SKU_____
SK number (Located on the back of the box)
_____
Purchase date_____Year_____Month_____date_____
Customer name_____
Phone number_____
Customer address_____

Copy

1.Warranty program_____
After sales agent_____
Customer signature_____
2.Warranty program_____
After sales agent_____
Customer signature_____

Documents / Resources

ClicBot	KEYi TECH Click Bot Coding Robot Kits for Kids [pdf] User Manual KY002B, 2AWR5-KY002B, 2AWR5KY002B, Click Bot Coding Robot Kits for Kids

References

- KEYi Tech Loona Petbot | ClicBot | AI Robot
- KEYi Tech Loona Petbot | ClicBot | AI Robot
- KEYi Tech Loona Petbot | ClicBot | AI Robot