ClicBot®

entertaining and educational toy

User Manual
用户手册
Manuel de l'Utilisateur
Руководство пользователя
ユーザーマニュアル

ClicBot App Installation

Download ClicBot App which is available for iPhone and Android, or scan the QR code below to download and install ClicBot App.

ⓘ ClicBot App only supports iOS 9.0/Android 5.0 and higher.

Advice on the use

Quick Start Guide describes the basic instructions on how to control your ClicBot and three robot characters in the ClicBot world.

Please refer to User Manual for detailed information, including specification of modules, module connection, battery charging, safety and privacy, after-sales service and FAQs.

And refer to Module Function Card for the operation application and safety in use.

Product Model:KY002CK10

Usage Instructions

- ⦸ Contain small parts, not suitable for children under 3-year old;
- ⦸ Contain precision parts, and avoid falling from height;
- ⦸ Do not close to the fire;
- ⦸ Keep your ClicBot dry, and avoid wetting or put it into water;
- ⦸ Do not directly touch the golden po-go pins of module with the mental;
- ⦸ Do not directly or indirectly connect two or more Brain modules together;
- ⦸ Do not remove or replace the build-in battery, please contact our after-sales service for repair in case of damage;
- ⦸ Charger is not a toy, please use the recommended charger (the recommended output voltage: DC 5V/2A);
- ⦸ Do not play while charging;
- ⦸ Do not rotate your ClicBot by force when the rotation is locked;
- ⦸ Do not touch ClicBot when it's moving;
- ⦸ Do not discard your ClicBot carelessly since it may cause pollution to the environment, please dispose or recycle properly;
- ⦸ This packing contains important information, please keep it at hand.

Contents

KEYi TECH.

ClicBot is an intelligent toy designed for children integrating education with fun.

ClicBot adopts modular design which is easy to build setup in minutes, so that children can make creations as simple as playing with building blocks. ClicBot can be a friend of children who looks around curiously with its big eyes. Moreover, it can interact with you. It will say hello to you once it recognizes you, act as a spoiled child when you stroke its head, and dodge left and right when you cover its big eye in front of it ...

With the ClicBot App, you can build ClicBot setups with various functions and applicable to all sorts of scenarios to meet children's expectation, such as speeding car, adorable animal, fantastic climber, bionic walker and so on.

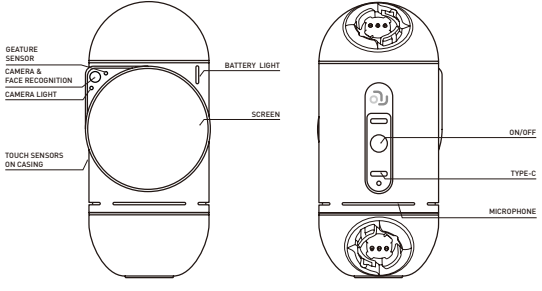
ClicBot can teach children to create the future. ClicBot is capable to edit both motion script and Drag & Drop program. With the help of the motion script, children can do a series of smooth movement by simply adjusting and saving the postures.

And by means of Drag & Drop program, children can complete the application by dragging the Drag & Drop program blocks step by step. To help children to work better on their creative ideas, ClicBot will develop a series of STEAM online courses, so as to teach children to get a better understanding of robotics and learn AI programming. Children can upload their creations to the community in ClickBot App to share with the others and harvest joy and a sense of achievement.

■ Brain module

Brain module is the master control and the power supply unit of ClicBot. It adopts ARM-A7 processor and includes a rechargeable polymer lithium battery with a capacity of 1550mAh. The eye of ClicBot is a 1.96-inch rotatable touch screen. It contains camera & face recognition, gesture sensor and camera light in the upper-left area of the screen. There are three touch sensors which locates on the upper, left and right side of the Brain respectively, and two connectors which locate on the upper and bottom rear side. And Brain module also integrates with a number of function units, including accelerometer and gyro sensor, microphone, loudspeaker, Wi-Fi and etc.

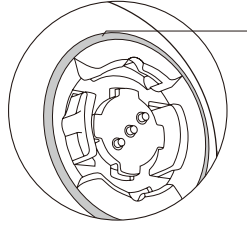
Dimension	55.5*62.9*125.3 mm	Touch sensors on casing	Upper, left and right side
Net weight	260 g		
Touch screen size	1.96"	Microphone	Volume detection
Rotation range	-24°~+24°	Loudspeaker	Mono
Camera	2-megapixel camera Face detection & recognition, motion detection (identification distance <5m)	Wi-Fi	2.4G
		Battery capacity	1550 mAh
		Charging type	USB-C
Gesture sensor	8 gestures (identification distance ≤ 20cm)	Connector	Upper and bottom rear side



■ Joint module

Joint module is the joint of ClicBot which is used for driving motion. It has a high-precision servo system and includes DC geared motor, angular rate sensor and angle position sensor. There are four connectors in total and two in each hemisphere. And every connector has a status indicator which can indicate the connection status and update status.

Dimension	55 mm (diameter)
Net weight	65 g
Rotated voltage	2.64 W
Max. rotor speed	216°/s
Connector	2 in each hemisphere



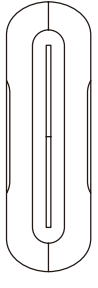
Status of Joint's indicator

Connection Status
·Keep On→Connected right
·Flashing→Wait for connecting module
·Quickly Flashing→Connected wrong

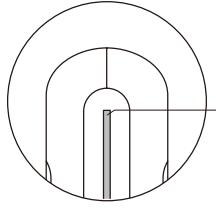
Update Status
·Keep On→Updated
·Gradiently Flashing→Updating

■ Skeleton module

Skeleton module is the bone of ClicBot which is used for building the limbs. There are two connectors at the top and bottom and two strip status indicators which can indicate the connection status of two connectors and update status.



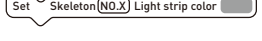
Dimension	37.8*37*120 mm
Net weight	50 g
Connector	Top and bottom



Status of Skeleton's indicator

Connection Status
·Keep On→Connected right
·Flashing→Wait for connecting module
·Quickly Flashing→Connected wrong

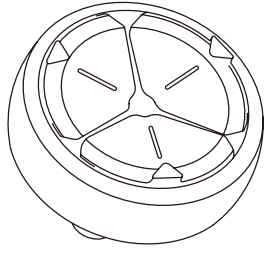
Update Status
·Keep On→Updated
·Gradiently Flashing→Updating



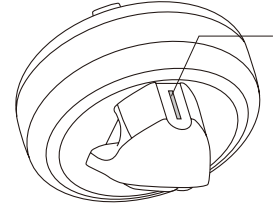
The color of Skeleton's indicator can be changed in Drag & Drop program.

■ Wheel module

Wheel module is a functional module of actuator which is used for vehicle setups. It includes DC geared motor and magnetic speed position sensor, and its maximum rotor speed is 4.5 rounds per second. And there is a status indicator near the connector which can indicate the connection status and update status.



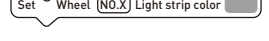
Diameter of wheel	83.8 mm
Net weight	130g
Rotated voltage	2.4 W
Max. rotor speed	4.5 rounds per second
Connector	1



Status of Wheel's indicator

Connection Status
·Keep On→Connected right
·Flashing→Wait for connecting module
·Quickly Flashing→Connected wrong

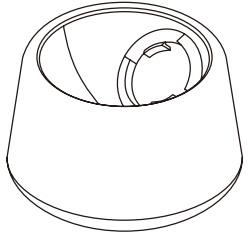
Update Status
·Keep On→Updated
·Gradiently Flashing→Updating



The color of Wheel's indicator can be changed in Drag & Drop program.

■ **Accessory - Mount**

Mount is used for fixing your ClicBot on a table with Mount sticker.

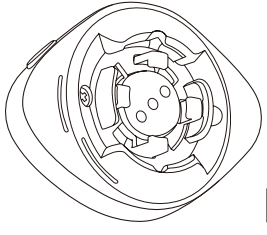


Dimension	75.3*75.3*45.8 mm
Net weight	60 g

ⓘ Please use the Mount sticker provided by KEYi Tech to ensure firm.

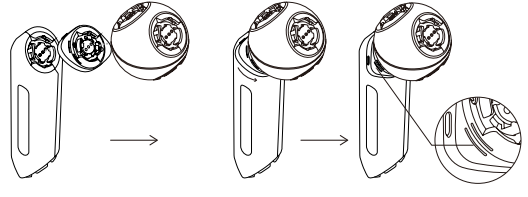
■ **Accessory - Locker**

Locker is used for reinforcing the connections between two modules.



Dimension	47*36*15.4 mm
Net weight	11g

ⓘ It can be used where suffers more stress.



Step1

Connect Locker between modules.

Step2

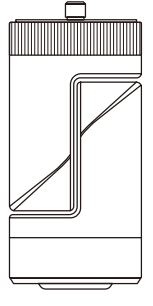
Rotate Locker.

Step3

Rotate till locking baseline alignment

■ **Accessory - Holder**

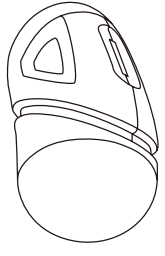
Holder is used for connecting a cellphone or sport camera onto your ClicBot by standard 1/4 screw.



Diameter	39.8*39.8*79.6 mm
Net weight	60 g
Freedom degree of regulation range	Universal joint on the bottom: 0°~180° Horizontal rotation range of the main part: -90°~90°
Buckle	bottom

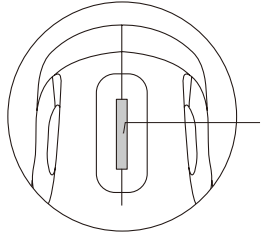
■ Smart Foot module

Smart Foot module is a functional module of sensor which is used as the feet of ClicBot. It includes highly sensitive pressure sensor and can control and measure the terminal pressure by utilizing a micro-processor.



Diameter	41.8*41.8*71.2 mm
Net weight	50g
Pressure range	≤ 9.8 N
Connector	top

Smart foot has a orange indicator. The luminance of indicator will automatically brightens when the pressure is increasing after connecting onto ClicBot. The indicator can also indicate the connection status and update status.

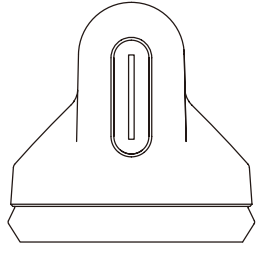


Connection Status
·Keep On→Connected right
·Flashing→Wait for connecting module
·Quickly Flashing→Connected wrong

Update Status
·Keep On→Updated
·Gradiently Flashing→Updating

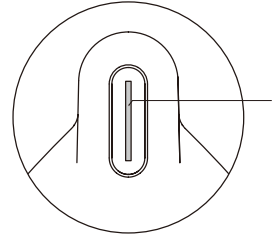
■ Suction Cup module

Suction Cup module is a functional module of actuator. It includes negative pressure pump and solenoid valve. By utilizing a micro-processor, it can control air current and turn on/off the valve to implement the function of climbing. And it also includes air pressure sensor which is able to check the stability proactively.



Diameter	83*83*91 mm
Net weight	200 g
Adsorption capacity	Vertical direction: max.~20kg Horizontal direction: max.~5kg
Connector	bottom

Suction Cup has a green strip indicator. The indicator keeps breathing when Suction Cup is working, and turns on if suction of success. The indicator can also indicate the connection status and update status.

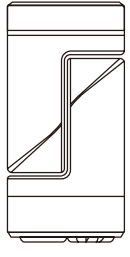


Connection Status
·Keep On→Connected right
·Flashing→Wait for connecting module
·Quickly Flashing→Connected wrong

Update Status
·Keep On→Updated
·Gradiently Flashing→Updating

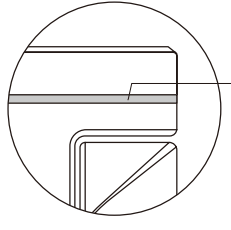
■ Distance Sensor module

Distance Sensor module is a functional module of sensor. It includes high-precision infrared probe and can control and measure the distance from an obstacle by utilizing a micro-processor.



Diameter	40*40*82.4 mm
Net weight	60 g
Detection distance range	2~100 cm
Freedom degree of regulation range	Universal joint on the bottom: 0°~180° Horizontal rotation range of the main part: -90°~90°
Connector	bottom

Distance sensor has a red indicator. The luminance of indicator will automatically brightens when the distance is shortening after connecting onto ClicBot. The indicator can also indicate the connection status and update status.

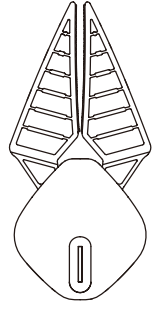


Connection Status
·Keep On→Connected right
·Flashing→Wait for connecting module
·Quickly Flashing→Connected wrong

Update Status
·Keep On→Updated
·Gradiently Flashing→Updating

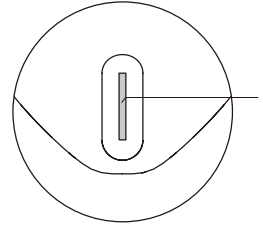
■ Grasper module

Grasper module is a functional module of actuator. With the aid of bionic flexible design, it can control the motor to grasp objects of various shapes by utilizing a micro-processor.



Dimension	165*80*57 mm
Net weight	90 g
Max. weight	250 g
Max. dimension	6 cm
Connector	bottom

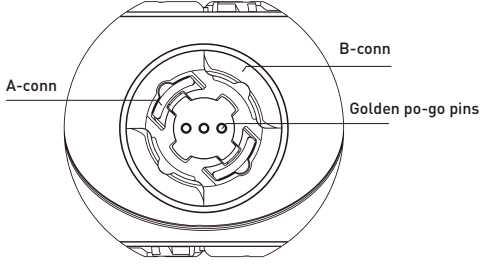
Grasper has a yellow indicator which can also indicate the connection status and update status.

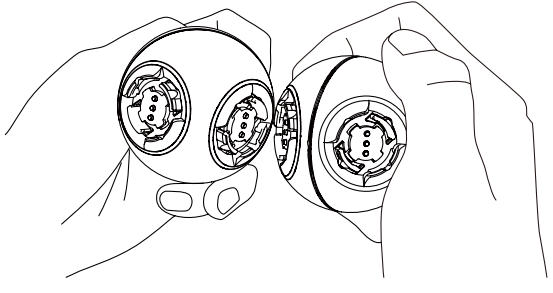


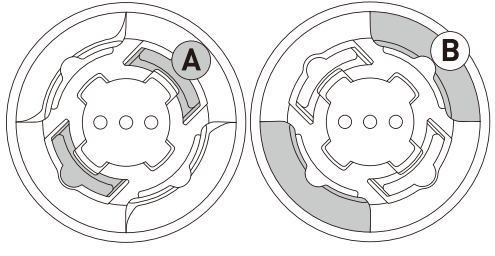
Connection Status
·Keep On→Connected right
·Flashing→Wait for connecting module
·Quickly Flashing→Connected wrong

Update Status
·Keep On→Updated
·Gradiently Flashing→Updating

All the ClicBot modules can be connected with each other by connectors. A connector contains A-conn, B-conn and golden po-go pins. It is to fix A-conn to B-conn by cross connection, and the golden po-go pins are used for transferring instruction and supplying power.

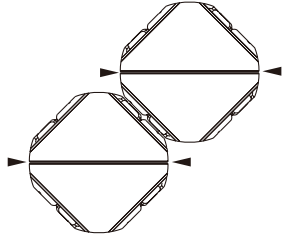




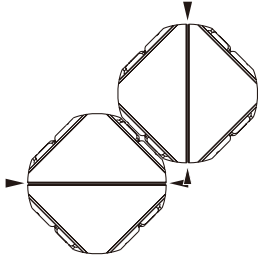


Note: fix A-conn to B-conn by cross connection while connecting two modules with each other

ⓘ Two modules can be connected with each other in parallel/non-parallel direction.

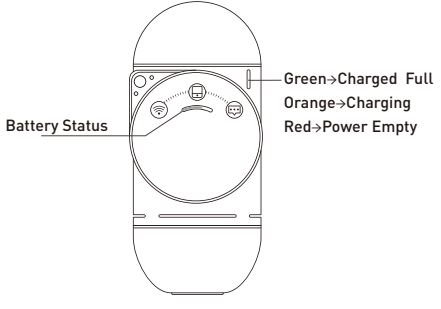


Connection in parallel direction

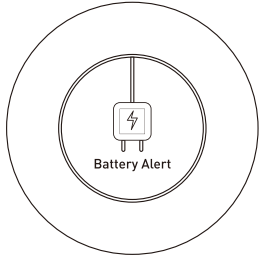


Connection in non-parallel direction

The battery status is indicated by different colors of the power light on Brain module, and viewed in the system menu.

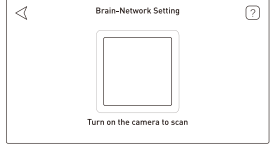


When the battery is low, there will be an alert on the screen. Please charge the battery in time to ensure the normal operation and maintain the battery life.

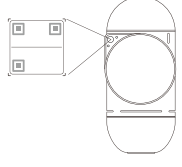


■ Internet Connection

Brain module can connect to the internet through Wi-Fi to download the update from the cloud server to implement new functions.
How to connect the internet:
1. Open ClicBot App, choose "Settings" then "Brain-Network Settings", enter the Wi-Fi name and password to generate a QR code;
2. Click Home button"—" on Brain module back to the system menu, choose "((·))"and wait until it is ready to scan ;
3. Scan the QR code generated in ClicBot App with Brain module to connect to the internet.



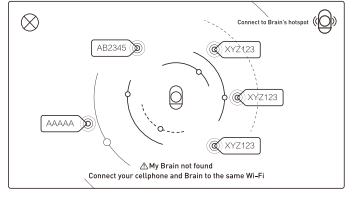
QR code generated in ClicBot App



Scan the QR code with Brain module

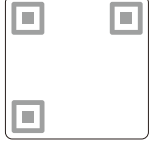
■ Device Connection

Brain module can be connected to ClicBot App via router or hotspot.
It is suitable for remotely controlling the robot by connecting to ClicBot App via router in the Wi-Fi scenarios.
How to connect to ClicBot App via router:
1. Connect Brain module and installed ClicBot App to the same Wi-Fi;
2. Open ClicBot App, click " ⊙ " to search the Brain module connected to the same Wi-Fi, choose the serial number of the Brain module to set up the connection.

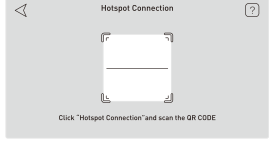


Brain module in ClicBot App

Brain module can be connected via hotspot when Wi-Fi is not available or the signal is weak.
How to connect to ClicBot App via hotspot:
1. Click Home button "—" on Brain module back to the system menu, choose " " and then "Hotspot Connection" to generate the QR code;
2. Open ClicBot App, click " " and then choose hotspot connection at the top-right of Brain module page to enter into the connection page;
3. Scan the QR code with your mobile device to set up the connection.



The QR code generated by Brain module



Scan the QR code to set up the connection

■ Safety Information

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

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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, i ncluding interference that may cause undesired operation.
This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
1. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

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 followingmeasures:
-- 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.

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.
--French:
Le présentappareilestconforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitationestautorisée aux deux conditions suivantes:
(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareildoit accepter tout brouillageradioélectriquesubi, mêmesi le brouillageest susceptible d'encompromettre le fonctionnement.

About Your Privacy

We are fully aware of the importance of personal information safety and will make every effort to protect the personal information safety of all the users. We will take all reasonable and practicable means to avoid collecting irrelevant personal information. And we will first get your authorization to use your personal information in case of need and store your personal information on the local hard drive in accordance with the professional standard. Unless it is necessary, we will only process your personal information on the local hard drive to avoid unauthorized access, disclosure to the public, usage, modification, damage or loss.

For specific provision of Privacy Policy, please refer to ClicBot App or visit www.keyirobot.com.

We commit that, in case any defect of your ClicBot modular robot product and its accessories is found during use in accordance with User Manual due to faulty workmanship and confirmed by test technician, your ClicBot will be covered for electronic component for 1 year from the date of purchase, and material and motor for 6 months from the date of purchase.

Please contact support@keyirobot.com or your local retailer to enjoy after-sales service.

ⓘ Please keep the recipe at hand so as to ensure you enjoying after-sales service.

■ How to turn on/off ClicBot?

Long press the power button on the rear side of Brain module for 3 seconds to turn on ClicBot.

Press the power button on the rear side of Brain module and then choose the shutdown option to turn off ClicBot, or long press the power button for 4 seconds to force a shutdown.

■ Diagnostics - Auto Shutdown

To maintain the battery life, ClicBot will be shut down automatically in the following situation:
1. No operation for longer than 20 min;
2. Battery power is lower than 10%.

■ How long does ClicBot take a full charge and how long can it be used consciously?

It takes a full charge in 2.5 hours at 5V/2A, and can be used continuously up to 4 hours according to the difference size of the robot.

■ Is it a must to connect ClicBot to the internet while playing?

No, but it needs to connect to the internet to check for update.

■ Is it a must to control ClicBot Robot with ClicBot App?

No, it can be controlled manually with the screen of Brain module.

■ The maximum distance of remote control with ClicBot App

It depends on how to connect the robot to ClickBot App:
·Via router, it is up to 10m which may be difference due to the performance of router.
·Via hotspot, it is up to 5m.

■ Is ClicBot scalable?

ClicBot modules can be upgraded online. Connect Brain module to Wi-Fi, click Home button "—" and choose "Update" to check/download the update.

Connect other modules to Brain module to auto start the update, follow the update instruction on the screen to upgrade modules.

■ The identification distance of gestures like shielding, waving and etc.

The gesture sensor locates in the upper-left triangle area of the screen of Brain module. Please keep your hand at a distance of 5-20cm.

■ The detection distance range of Brain module

The gesture sensor locates in the upper-left triangle area of the screen of Brain module, and can detect the obstacle at a distance between 5-20cm in the front of the robot.

■ The face identification distance of Brain module

The camera for face detection & recognition locates in the upper-left triangle area of the screen of Brain module, and can identify the face at a distance of 1m.

■ The motion detection distance of Brain module

The camera for motion detection locates in the upper-left triangle are of the screen of Brain module, and can detect the movement at a distance between 1-5m.

■ The role of the camera of Brain module

Brain module is equipped with a 1.2-megapixel camera which is capable for controlling the robot from the first-person point of view, face detection & recognition and motion detection.

■ The rotation range of the screen of Brain module

The rotation range of the screen is up to 24 degree in the horizontal direction which can be set in ClicBot App. Please do not rotate the screen by hand.

■ How to assemble a ClicBot Robot?

ClicBot is installed with a smart assembling guidance system. After choosing which robot is to be assembled, there will be a step-by-step instruction shown on the screen of Brain Module. The indicator light will flash to indicate where to be connected. The system will automatically check whether all the modules have been assembled correctly and show alert message on the screen in case of error whiling the indicator light will fast flashing. And the system will automatically adjust the angle of connection as long as the two modules are correctly assembled.

■ Diagnostics – why does the indicator light of a module flash?

The indicator light is used for indicating the status of a module, mainly including:
·Solid light - normal operation
·Breathing – in preparation
·Flashing – wait for being connected to a module
·Fast flashing – connection error

■ Programming language applicable to ClicBot

Support Graphic programming and Python programming.

■ Editable modules applicable to ClicBot

Support over 20 editable modules, including the screen of Brain module, loudspeaker, the motor of Joint module, the motor of Wheel module, the color of the strip lights of Skeleton module.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