

The diagram illustrates the components of the RoboBee. At the center is the **Controller**, a small black rectangular unit with a single antenna. Surrounding it are several other components: **Expression Screen** (two small gray square screens), **Touch Sensor** (two small orange rectangular sensors), **Infrared Sensor** (one small orange rectangular sensor), **Integrated Grayscale Sensor** (a long, thin orange rectangular sensor), and **Closed-loop Motor** (three blue cylindrical motors).

Diagram of the integrated sensor module showing the following components:

- Integrated Grayscale Sensor Port 5
- I/O Port 10/34
- Display
- Programming Selection
- QUADSPY
- Clockstop Motor Port A/B/C/D
- USB Download Port
- Servo Motor Port
- LED Indicators:
 - Power Off
 - Power On
 - Running Program
 - Running Data Logging/stop
 - Low Power

Legend for Status Light:

- Status Light Off
- Status Light White
- Status Light Red/Beating

The Controller requires 6 AA/ALC batteries.

At all times, the batteries must be inserted correctly to insert the batteries into the controller. Press the plastic on the side to remove the battery cover. After inserting 6 AA/ALC batteries, put the battery cover on.

Battery Use Precautions:

- A fully charged AA/ALC uses one other type of battery can not use.
- Non-rechargeable batteries cannot be recharged.
- The battery should be placed with the correct polarity.
- Do not connect terminals with a shorted wire.
- The used battery should be taken out of the battery cover.
- Remove the batteries when not in use for a long time.

Note: It is recommended not to use rechargeable batteries!

Note: If your battery power is low, allowing your "Signal" feature, the status light may fail to be red, and flashing.

Energy-saving Practices

- Please remove the battery when not in use.
- Please do not use the controller for a long time to be placed in a responsive storage location, which needs to be charged.
- Please do not connect other devices to it.

Warning:

- The product contains flammable and explosive materials.
- Do not use the product for other than its intended use.
- Do not use the product for other than its intended use.

Warning: Do not touch the battery terminals.

Power On: To turn on the controller, press and hold the power button for 3 seconds. The controller status LED will become solid green and you will hear the audio signal "144". It is the "welcome" sound.

Running the program: To run the program when the controller is on, press the power button on the controller. When the program starts, the status LED will turn light on blue. Controller will blink.

Shut Down: Press the controller, when the status on running program, press and hold the power button. The controller will turn over the "OFF" state and the led will be off.

White Light Power

Controller Technical Specification

- **Controller:** STM32F103C8T6, STMicroelectronics
- **Processor:** 32-bit, 72MHz ARM Cortex-M3
- **Storage:** 256KB of non-volatile memory, 64KB of internal RAM, 128KB of external memory, 16MB of external memory
- **Power:** 3.3V, 5V, 12V, 24V, 48V, 96V, 192V, 384V, 768V, 1536V, 3072V, 6144V, 12288V, 24576V, 49152V, 98304V, 196608V, 393216V, 786432V, 1572864V, 3145728V, 6291456V, 12582912V, 25165824V, 50331648V, 100663296V, 201326592V, 402653184V, 805306368V, 1610612736V, 3221225472V, 6442450944V, 12884901888V, 25769803776V, 51539607552V, 103079215104V, 206158430208V, 412316860416V, 824633720832V, 1649267441664V, 3298534883328V, 6597069766656V, 13194139533312V, 26388279066624V, 52776558133248V, 105553116266496V, 211106232532992V, 422212465065984V, 844424930131968V, 1688849860263936V, 3377699720527872V, 6755399441055744V, 13510798882111488V, 27021597764222976V, 54043195528445952V, 108086391056891904V, 216172782113783808V, 432345564227567616V, 864691128455135232V, 1729382256910270464V, 3458764513820540928V, 6917529027641081856V, 13835058055282163712V, 27670116110564327424V, 55340232221128654848V, 110680464442257309696V, 221360928884514619392V, 442721857769029238784V, 885443715538058477568V, 1770887431076116955136V, 3541774862152233910272V, 7083549724304467820544V, 14167099448608935641088V, 28334198897217871282176V, 56668397794435742564352V, 113336795588871485128704V, 226673591177742970257408V, 453347182355485940514816V, 906694364710971881029632V, 1813388729421943762059264V, 3626777458843887524118528V, 7253554917687775048237056V, 14507109835375550096474112V, 29014219670751100192948224V, 58028439341502200385896448V, 116056878683004400771792896V, 232113757366008801543585792V, 464227514732017603087171584V, 928455029464035206174343168V, 1856910058928070412348686336V, 3713820117856140824697372672V, 7427640235712281649394745344V, 14855280471424563298789490688V, 29710560942849126597578981376V, 59421121885698253195157962752V, 118842243771396506390315925504V, 237684487542793012780631851008V, 475368975085586025561263702016V, 950737950171172051122527404032V, 1901475900342344102245054808064V, 3802951800684688204490109616128V, 7605903601369376408980219232256V, 15211807202738752817960438464512V, 30423614405477505635920876929024V, 60847228810955011271841753858048V, 121694457621910022543683507716096V, 243388915243820045087367015432192V, 486777830487640090174734030864384V, 973555660975280180349468061728768V, 1947111321950560360698936123457536V, 3894222643901120721397872246915072V, 7788445287802241442795744493830144V, 15576890575604482885591488987660288V, 31153781151208965771182977975320576V, 62307562302417931542365955950641152V, 124615124604835863084731911901282304V, 249230249209671726169463823802564608V, 498460498419343452338927647605129216V, 996920996838686904677855295210258432V, 1993841993677373809355710590420516864V, 3987683987354747618711421180841033728V, 7975367974709495237422842361682067456V, 15950735949418990474845684723364134912V, 31901471898837980949691369446728269824V, 63802943797675961899382738893456539648V, 127605887595351923798765477786913079296V, 255211775190703847597530955573826158592V, 510423550381407695195061911147652317184V, 1020847100762815390390123822295304634368V, 2041694201525630780780247644590609268736V, 4083388403051261561560495289181218537472V, 8166776806102523123120990578362437074944V, 16333553612205046246241981156724874149888V, 32667107224410092492483962313449748299776V, 65334214448820184984967924626899496599552V, 130668428897640369969935849253798993199104V, 261336857795280739939871698507597986398208V, 522673715590561479879743397015195972796416V, 1045347431181122959759486794030391945592832V, 2090694862362245919518973588060783891185664V, 4181389724724491839037947176121567782371328V, 8362779449448983678075894352243135564742656V, 16725558898897967356151788704486271129485312V, 33451117797795934712303577408972542258970624V, 66902235595591869424607154817945084517941248V, 133804471191183738849214309635890169035882496V, 2676089423823674776984286192717803380

1. Closed-Amp Motor

Closed-amp Motor for robots is the source of power used to perform various actions.

Product types



Output and connection 5V+ Pin

Installation

Closed-amp Motor can be connected to any part of controller A-C.



2. Expression Screen

Expression screen gives the robot a human-like expression. There are also two for customer emotions.

Product types



Expression screen 5V+ Pin

Installation

Expression screen can be connected to any part of controller F-H.

Keep the cable with connection 5V+!
Keep the cable with connection 5V-!



3. Touch Sensor
Touch sensor can detect when a button is touched or when the button is released.

Product picture

Installation
Touch sensor can be connected to any pair of terminals +5V.

4. Integrated Gyroscopic Sensor
Integrated gyroscopic sensor can detect the rotation of the gyroscope around the axis of the device.

Product picture

Installation
Integrated gyroscopic sensor can only be connected to pair of terminals +5V.

5. Infrared Sensor
Infrared sensor detects infrared light reflected from the object. It can detect infrared light signals from remote infrared transmitters.

Product picture

Installation
Infrared sensor can be connected to any pair of terminals +5V.

RoHS CE FCC
Made in China

1. WhaleBot APP

WhaleBot APP is mainly aimed at children and teenagers. It provides construction instructions, remote control, programming and other functions for A4000 robot users. It is convenient to software on the user's creativity, function and rapid thinking ability. To play better with the A4000-15, download the APP now.

Download "WhaleBot APP":
For iOS, please search for "WhaleBot" in APP Store.
For Android, please search for "WhaleBot" in Google Play.



Bluetooth 4.2 and designed **intentionally** for MC10100 controllers, and supports device pairing to control **inert** and **also** supports Bluetooth communication pairing so as to use the **modular programming software for windows** programming.

1. **Connect Bluetooth**
Enter the remote control or **modular programming interface**. The system will then automatically search for nearby Bluetooth devices and display them in a list, select the Bluetooth device to be connected.

The AI Module 150 Bluetooth name will appear as **inert# + number**.

2. **Disconnect Bluetooth**
To disconnect the Bluetooth connection, click the **Bluetooth** icon on the remote control or the **modular programming interface**.

2. WhalesBot Scratch

WhalesBot Scratch software supports mainstream programming, including Scratch programming and standard C programming. The WhalesBot module contains 4 ports functions, supports subview functionality and other visual programming. Including module, sensor (detection), control, function, data, advanced and ports. The function module, based on new cross-platform technology, available for operating systems like Windows, Mac, it also supports multi-processor programming.

Download Links:
<http://www.whalesbot.com>

[illegible]

Sensors

- Temperature sensor (DS18B20)
- Accelerometer (ADXL345)
- Ultrasonic sensor (HC-SR04)

Actuators

- Servo motor (SG90)
- Relay module

Control

- USB cable

Arduino Uno

Whitfield aims to develop mechanical links to break through the limitations of our physical strength, and to develop potential devices to break through our perception.

At Bosch, Black Rock is related by Whitfield in 2018, to apply the intelligence of the brain to the mechanical world. The idea is to use the intelligence of the brain to serve markets to re-development, and also merge artificial intelligence technology on site, even use emotional experience successfully. It provides two different programming languages: modular programming, Scratch, Python, C++ language and Rosetta.

Whitfield of his language to unlock the secrets of the brain, to assist the liberation of the brain. This is how artificial intelligence comes into being.

A new generation of youth partners

切线
折线

FCC Statement

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.
- 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.

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

RF Exposure Information

The device was evaluated to meet general RF exposure requirements. This equipment should be installed and used with a minimum distance of 0 mm between the radiator and your body.