WELCOME

Thank you very much for choosing our products!

The data package we provide is a zip compression package. Please unzip the data package before learning. Start from this PDF course.

Technical support

If you have any questions about the product, don't worry. You can view the "Common problem.PDF" file or contact us.

Our email is straysnail-wiki@outlook.com

We will reply you within one working day and give you a reasonable solution.

Safety matters

- This product is recommended for children over 6 years old.
- This product needs battery power supply. It is not waterproof. Don't play in water.
- Turn off the power switch when not in use.

About Stray Snail

- Stray Snail is the brand trademark of Shenzhen Snail Man Intelligent Technology Co., Ltd.
- Mainly for STEAM education products, self developed, including hardware and software design.
- The main products are smart cars, 3D printers and DIY writing plotters, mechanical arms, and some e-learning kits.
- The main control board includes Arduino, raspberry pie, Micro-bit and ESP series.
- Provide customization services: hardware customization, such as the design of sensor modules or the entire product.
- Software customization: Bluetooth and WiFi control APP of Android and iOS, and secondary development customization of scratch3.0 graphical programming.

If you want to know more about Stray Snail, you can visit our official website:

https://www.straysnail.com

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CC protocol is 《 Attribution-ShareAlike 3.0 Unported 》 .That is, it cannot be used for commercial purposes without our permission.

Ⅰ. Introduction of BENGBENG

The invention of building blocks is so creative that a stable and innovative structure can be installed without using a screw. Isn't it the perfect match for STEAM education? Therefore, we designed some sensor modules, and skillfully used PMMA boards with holes, which are compatible with building blocks, to create a building block car -- BENGBENG.

However, the idea of building blocks is flexible and should not be limited to one structure. So we have designed and assembled 12 structures by using the existing components. And corresponding to these structures, teaching documents of 12 courses have been prepared.

In terms of programming language, SnailBlock, a graphical programming software compatible with scratch 3.0, is used to write programs like building blocks, making programming easier for younger children to learn.

Of course, functions are also very rich, including tracking, following, mobile phone control, infrared remote control, music box, etc, which are very interesting.

Hands on practice and creative programming are so attractive. Let's happily learn about the programming robots.

Ⅱ. Product features

- Use building blocks to build the structure without using a screwdriver.
- 12 structural construction tutorials.
- Graphical programming tutorial, just like building blocks, is simple and easy to understand.
- Functions are rich, including tracking, obstacle avoiding, turning and following, music box, etc.
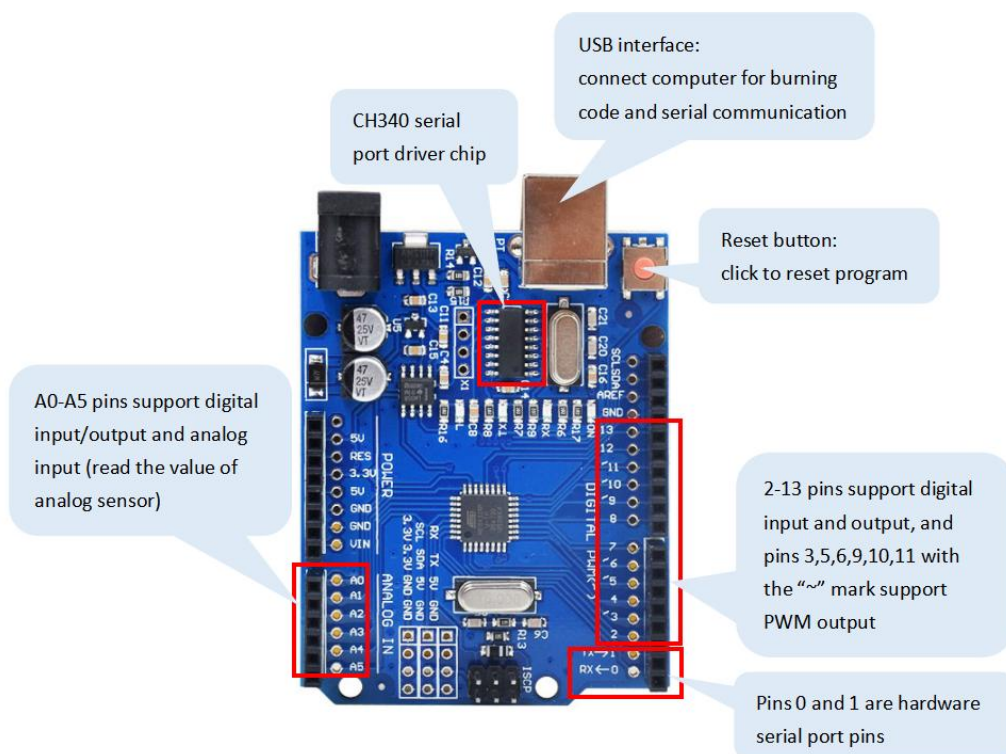- It can be controlled by iOS and Android APP.

Ⅲ. Products parameters

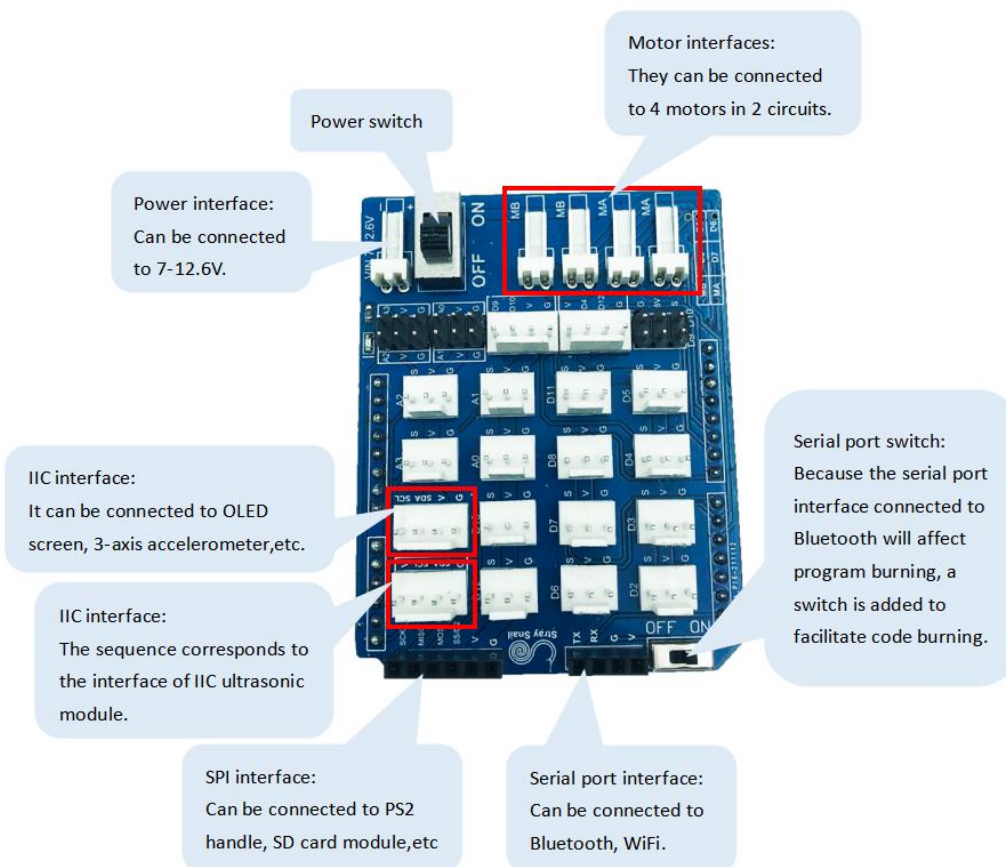Input voltage of USB interface of Arduino UNO main board : 5V
Input voltage of external power interface : 7~12.6V
Working voltage of all sensor modules : 5V
The illustration of Arduino UNO main board is as follows :

USB interface:
connect computer for burning
code and serial communication

CH340 serial
port driver chip

Reset button:
click to reset program

A0-A5 pins support digital
input/output and analog
input (read the value of
analog sensor)

2-13 pins support digital
input and output, and
pins 3,5,6,9,10,11 with
the "~" mark support
PWM output

Pins 0 and 1 are hardware
serial port pins

The illustration of expansion board is as follows:

Motor interfaces:
They can be connected
to 4 motors in 2 circuits.

Power switch

Power interface:
Can be connected
to 7-12.6V.

Serial port switch:
Because the serial port
interface connected to
Bluetooth will affect
program burning, a
switch is added to
facilitate code burning.

IIC interface:
It can be connected to OLED
screen, 3-axis accelerometer,etc.

IIC interface:
The sequence corresponds to
the interface of IIC ultrasonic
module.

SPI interface:
Can be connected to PS2
handle, SD card module,etc

Serial port interface:
Can be connected to
Bluetooth, WiFi.

Ⅳ. Software and its environment configuration

1. Install Arduino IDE and serial port driver

Please open the learning manual of SnailBlock graphical programming software provided by us.

Material of BENGBENG	Search Material of
Name	**Date modified**
Lesson 1: breathing lamp	3/14/2023 1:58 PM
Lesson 2: table lamp	3/9/2023 1:23 PM
Lesson 3: audio control	3/9/2023 1:23 PM
Lesson 4: infrared signal receiver	3/9/2023 1:23 PM
Lesson 5: electronic photo album	3/9/2023 1:23 PM
Lesson 6: MP3 music player	3/9/2023 1:23 PM
Lesson 7: infrared remote control vehicle	3/9/2023 1:23 PM
Lesson 8: automatic tracking vehicle	3/9/2023 1:23 PM
Lesson 9: automatic obstacle avoidance vehicle	3/9/2023 1:23 PM
Lesson 10: auto-following function	3/9/2023 1:23 PM
Lesson 11: race form of BENGBENG	3/9/2023 1:23 PM
Lesson 12: cross-country form of BENGBENG	3/9/2023 1:23 PM
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Ⅴ. Learn to control BENGBENG

The BENGBENG learning kit has 12 structures in total. Each structure is a major course, from simple to complex. Follow our tutorial to learn, and I believe you can master the knowledge of each function.

Material of BENGBENG	⌄	↻		🔍 Search Material of

Name ⌃	Date modified
📁 Lesson 1: breathing lamp	3/14/2023 1:58 PM
📁 Lesson 2: table lamp	3/9/2023 1:23 PM
📁 Lesson 3: audio control	3/9/2023 1:23 PM
📁 Lesson 4: infrared signal receiver	3/9/2023 1:23 PM
📁 Lesson 5: electronic photo album	3/9/2023 1:23 PM
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📄 Start of the tutorial.docx	3/20/2023 7:25 PM