Multi-Function Controller

Core(1PCS)-XA003

User's Manual

Core-A11

Contents [hide]

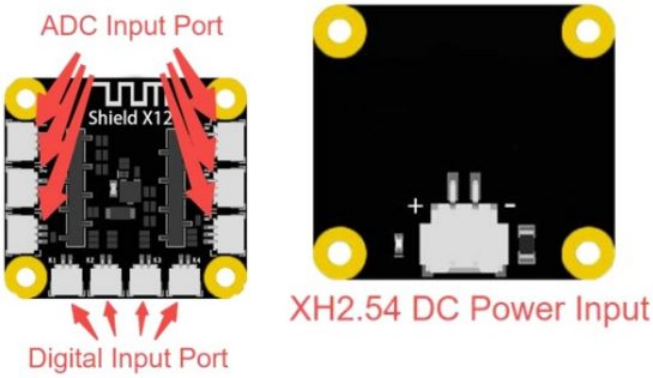
Features

- 2.4Ghz wireless remote control, 10m control distance with an ultra-small size.
- High cost-performance ratio, suitable for car, ship, and tank models, etc.
- Provide up to 10 channels for connecting different devices.
- Transmitter Input Voltage: 4.5V~12.6V 1S-3S , operating current: 65mA.
- Receiver Input Voltage: 7.4V-12.6V 2S-3S , standby current: 60mA, operating current: 200~300mA, maximum current: 3A.

- Support configuration on mobile phones& PCs, with a user-friendly interface.

Receiver & Transmitter Shield

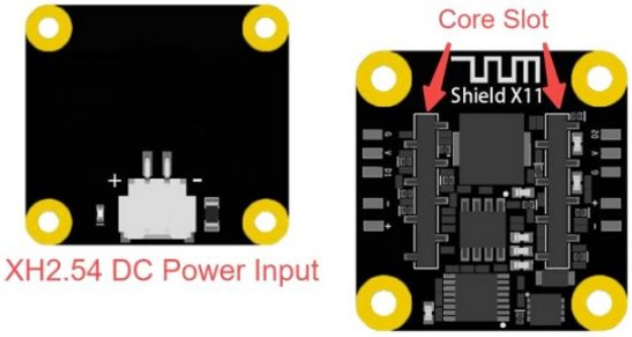
Remote Control Transmitter Shield



On the left and right sides of the transmitter shield, there are 3 ADC input channels respectively. Below it, there are 4 digital input channels. The gray slot on the back is the slot for the multi-function controller core. It can be powered through the XH2.54 power input.

- ADC input port L1~L3 R1~L3: 3pin SH1.0 slot. Connectable with single/dual axis joystick module, three-position rocker switch module, etc.
- Digital input Port K1~K4: 2-pin SH1.0 slot. Connectable with a momentary button module, etc.
- XH2.54 DC power input: 2-pin XH2.54 slot. Connectable with a 4.5V~12.6V power supply.

Remote Control Receiver Shield

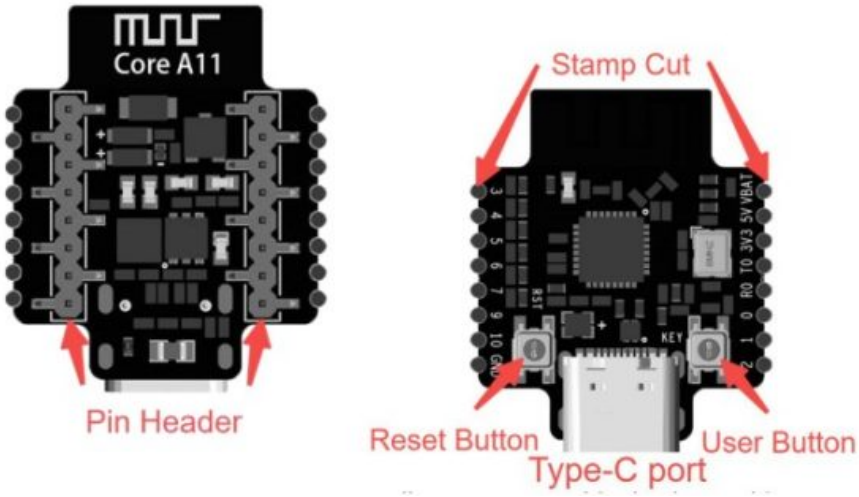


On the left and right sides of the receiver shield, there are, respectively, a DC motor port and a WS2812 port. In the center, there are 4 servo ports. It can be powered through

the XH2.54 power input.

- DC Motor Port M1 M2: 2pin SH1.0 slot. Connectable with a DC motor, supporting forward and reverse rotation control& PWM speed regulation.
- WS2812 Port D1 D2: 3pin SH1.0slot. Connectable with WS2812 LED hubs or other light strips that use the WS2812 protocol.
- Servo Port S1~S4: 3-pin header. Connectable with universal 5V servo motors.
- Core Slot: A double-row gray slot. Connectable with a multi-function controller core.
- XH2.54 Power Input: 2-pin XH2.54 slot. Connectable with a 7.4V~12.6V power supply.

Multi-Function Controller Core



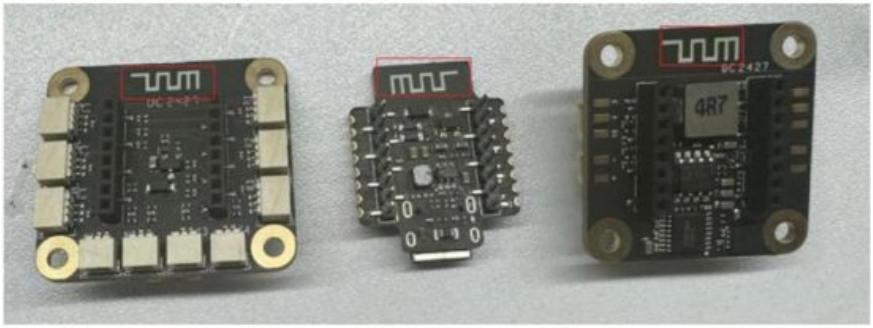
- **Stamp Cut:** Solderable Pinout. It allows users to solder leads to achieve customized circuit connections.
- **Reset Button:** Press to reset the main program.
- **User Button:** Custom Function.
- **Type-C Port:** Type-C Port. Connect to the PC via a data cable for programming and burning the program.
- **Pin Header:** Pin Header. Connectable with Shield.

Hardware connection between the controller core and the remote control transmitter/receiver shield

As shown in the figure, the controller core, the remote control receiver shield, and the remote control transmitter shield have antenna symbols. When making the connection, it is necessary to ensure that the orientations of these three symbols are the same and the

pins correspond to each other one by one.

Orientations of these three symbols are the same.



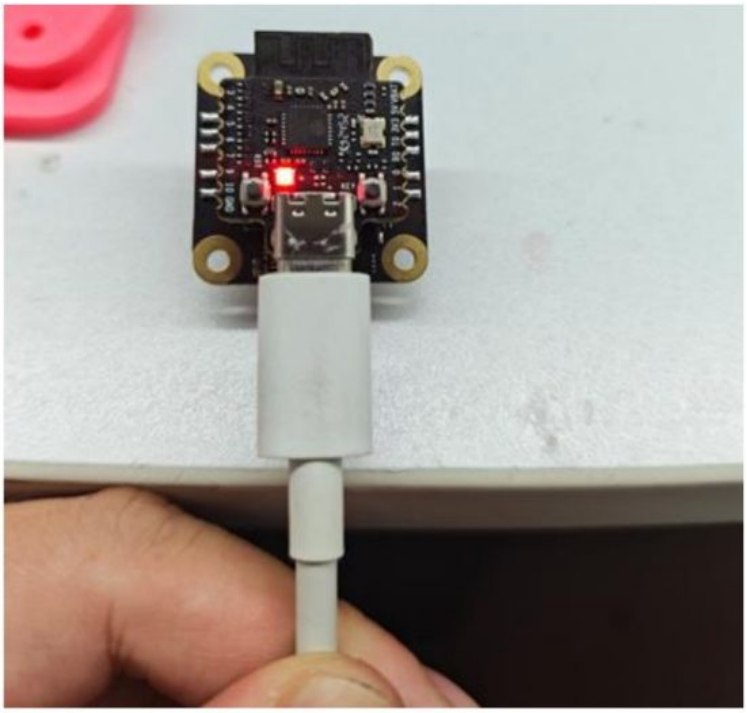
Pins correspond to each other one by one.

Definition of the System Status Indicator

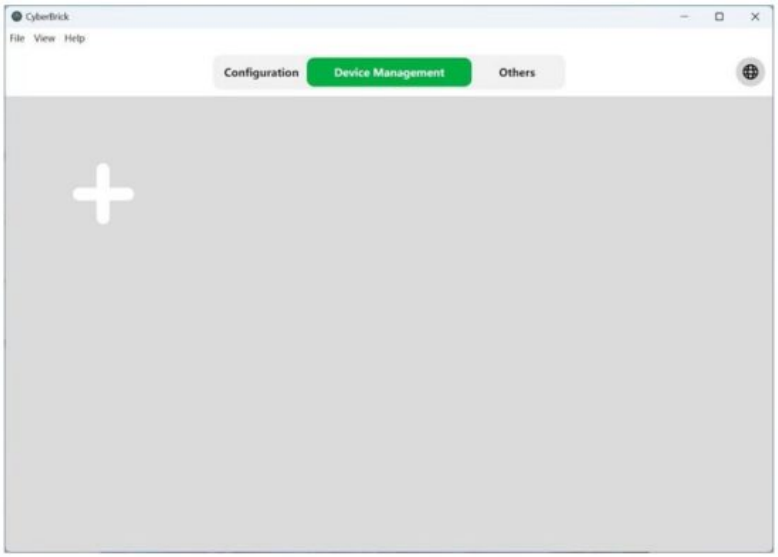
- Powered on but not connected: green light on
- Bluetooth connected: blue light on
- 2.4GHz connected: yellow light on
- Bluetooth& 2.4GHz connected: light flashes alternately between blue and yellow
- Profile upgrading: green light flashes at a frequency of 2Hz and continues until the transmission ends.
- Control object recognition: The green light flashes at a frequency of 1 Hz for 5 seconds.

Connect to the RC Transmitter & Receiver on the PC client.

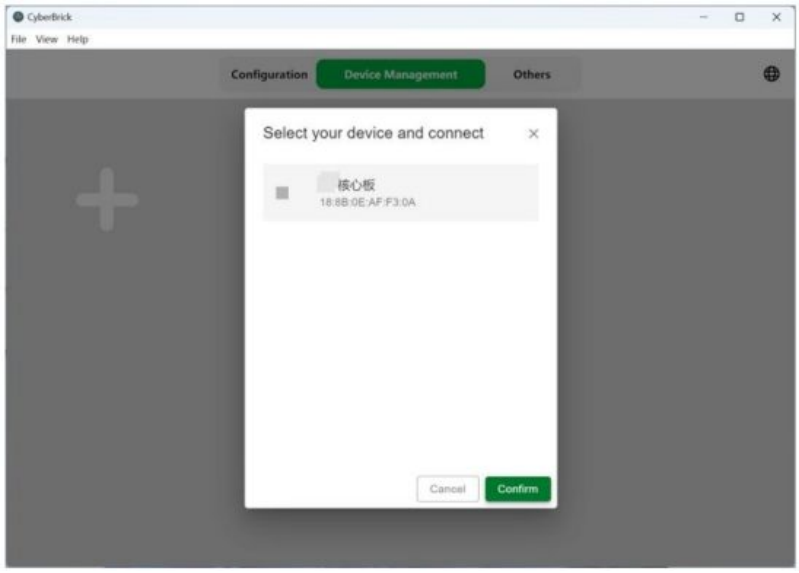
Power the controller core through the Type-C port or the XH2.54 Power Port on the expansion shield.



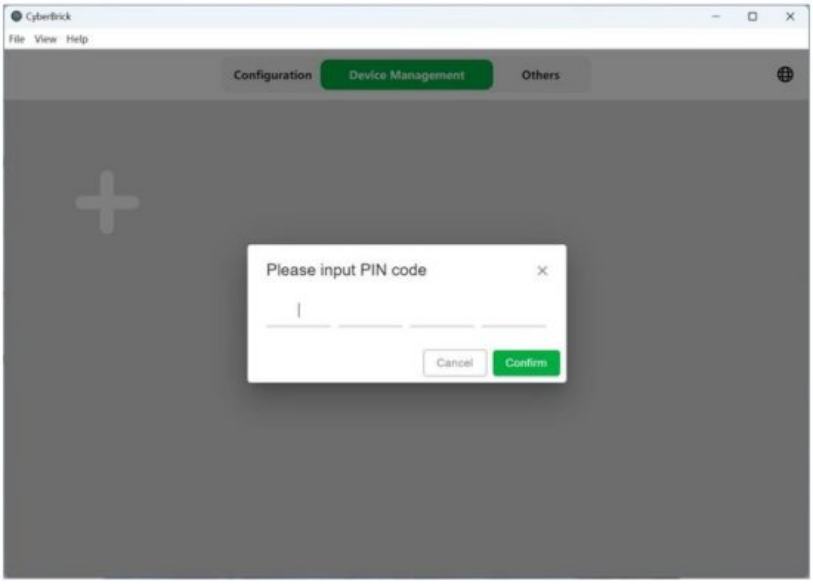
Run CyberBrick client, switch to Device Management



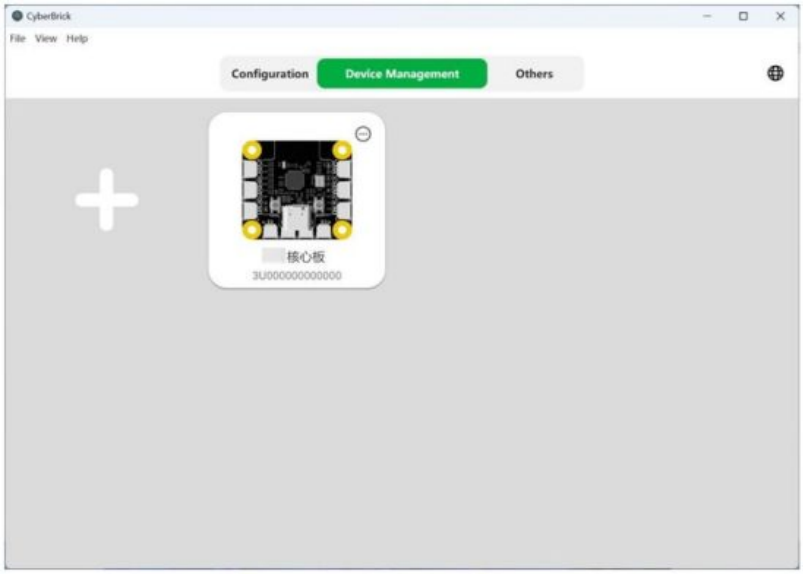
Click [+] to find your device



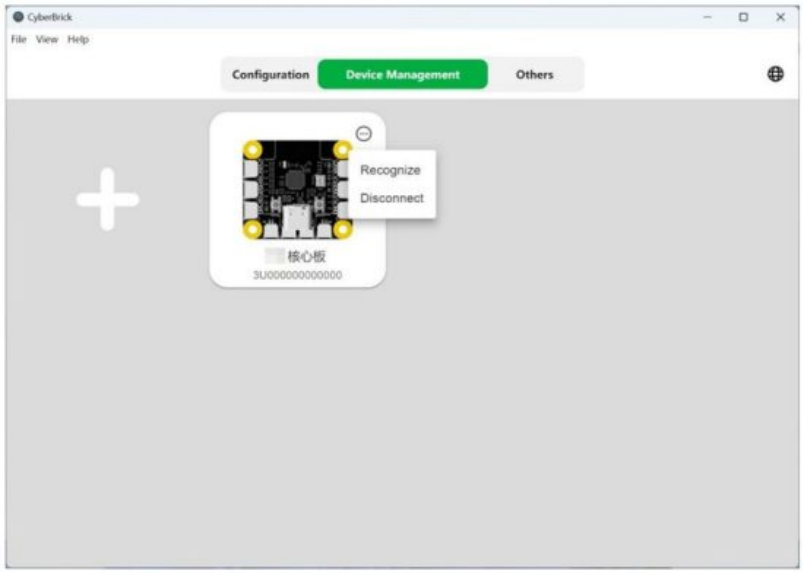
Connect the device by entering the PIN code. If the PIN hasn’t been set during the first connection, confirm directly.



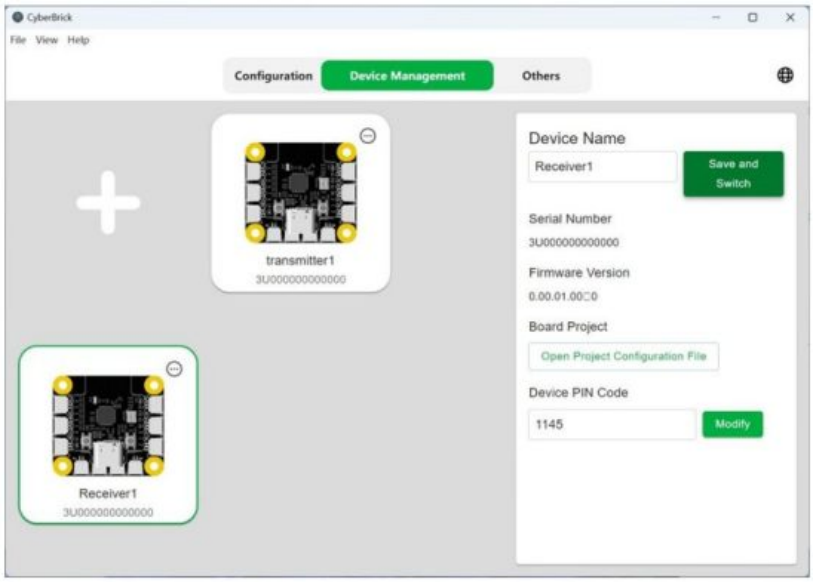
After a successful connection, the indicator of the controller core lights blue, and the client displays this device.



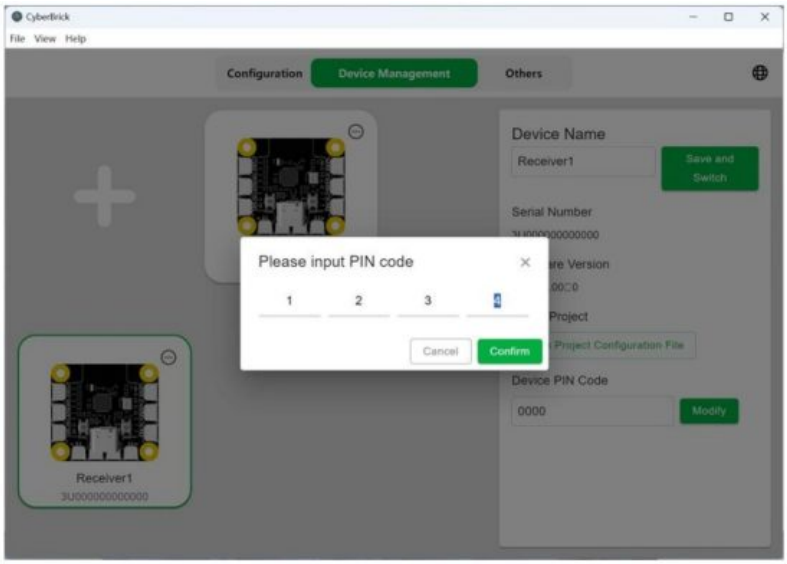
Click on the expansion symbol in the upper right corner of the device. If you have connected multiple devices, click on Recognize, and the status indicator of the selected device will flash green; if you need to disconnect from the selected device, click on Disconnect.



Click on the device, and you can change the name of the device in the upper right corner to make it easier to identify it when there are multiple devices.

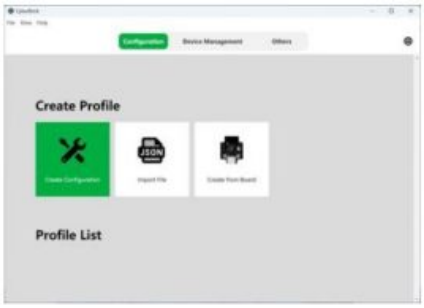


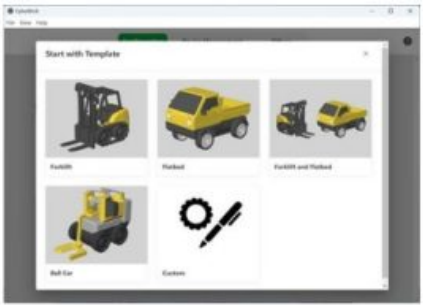
If you need to change the PIN code of the device, you can click Modify in the lower right corner and enter the new PIN code.



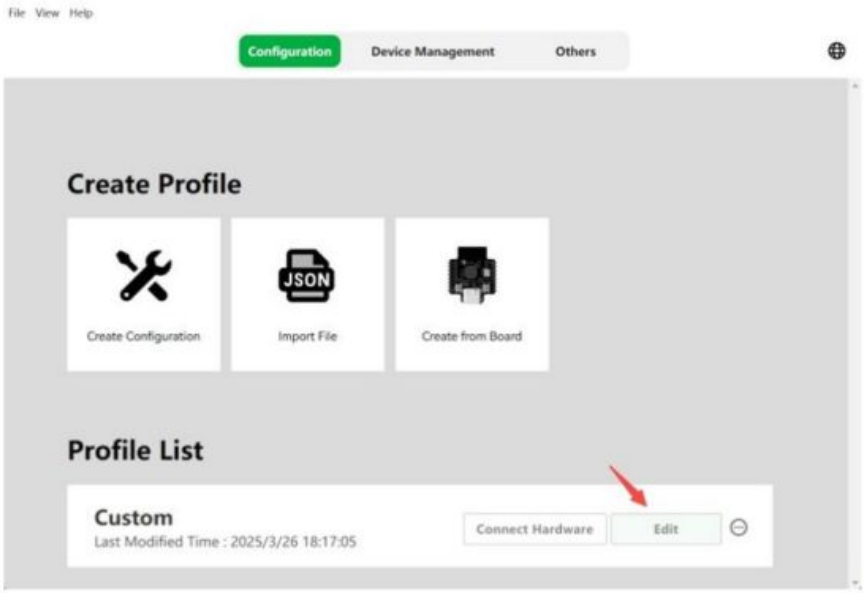
Configure the core controller profile

Click on the Configuration, click on Create Configuration, and start with a template, or an empty configuration[Custom].

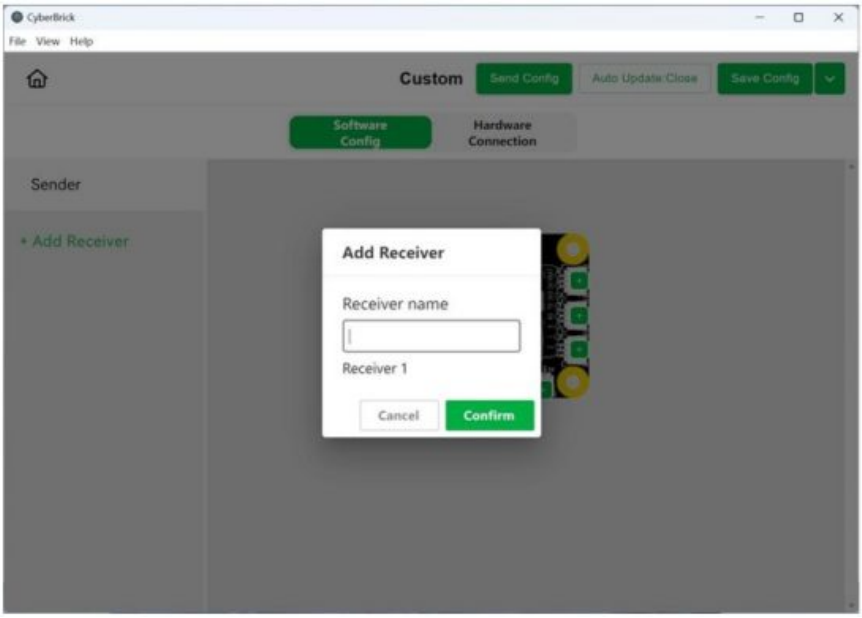




Here we take the custom empty configuration as an example, click on Custom, and then click on Edit in the configuration list below.

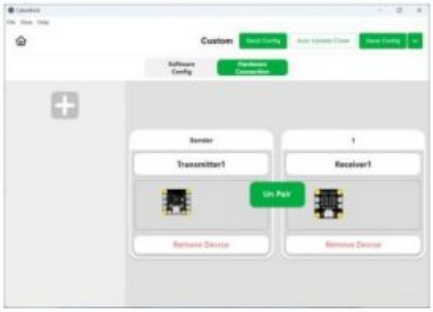
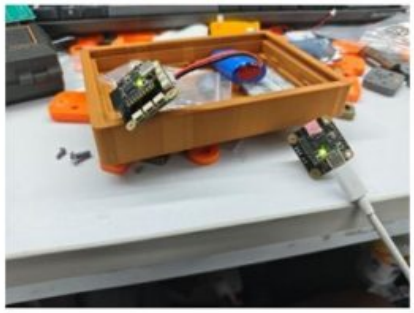


After entering the configuration interface, first, click Add Receiver on the left side, and input the name of the receiver.



Click on the hardware connection above and drag the receiver device and controller device to the corresponding position.


Click to start pairing. After pairing successfully, the status indicators of these devices should flash blue and yellow alternately.

After modifying the configuration, remember to save the configuration locally with Save Config in the upper right corner, and update the configuration to the device with Send Config.

List of applicable FCC rules

FCC Part 15.247

Label and compliance information

FCC ID label on the final system must be labeled with “Contains FCC ID: 2A6J8-COREA11” or “Contains transmitter module FCC ID: 2A6J8-COREA11”.

Information on test modes and additional testing requirements

Contact Shenzhen Tuozhu Technology Co., Ltd. will provide a stand-alone modular transmitter test mode. Additional testing and certification may be necessary when multiple modules are used in a host.

Additional testing, Part 15 Subpart B disclaimer

To ensure compliance with all non-transmitter functions, the host manufacturer is responsible for ensuring compliance with the module(s) installed and fully operational. For example, if a host was previously authorized as an unintentional radiator under the

Supplier's Declaration of Conformity procedure without a transmitter-certified module and a module is added, the host manufacturer is responsible for ensuring that, after the module is installed and operational, the host continues to be compliant with the Part 15B unintentional radiator requirements. Since this may depend on the details of how the module is integrated with the host, Shenzhen Tuozhu Technology Co., Ltd. shall provide guidance to the host manufacturer for compliance with the Part 15B requirements.

FCC Warning

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.

NOTE 1: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions to satisfy RF exposure compliance.

Note 1: This module is certified to comply with the RF exposure requirement under mobile or fixed conditions; this module is to be installed only in mobile or fixed applications.

A mobile device is defined as a transmitting device designed to be used in locations other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. Transmitting devices designed to be used by consumers or workers that can be easily relocated, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20-centimeter separation requirement.

A fixed device is defined as a device that is physically secured at one location and is not able to be easily moved to another location.

Note 2: Any modifications made to the module will void the Grant of Certification. This module is limited to OEM installation only and must not be sold to end-users; end-user has no manual instructions to remove or install the device, only software or operating procedure shall be placed in the end-user operating manual of final products.

Note 3: The module may be operated only with the antenna with which it is authorized. Any antenna that is of the same type and of equal or less directional gain as an antenna that is authorized with the intentional radiator may be marketed with, and used with, that intentional radiator.

Note 4: For all products marketed in the US, OEM has to limit the operation channels in CH1 to CH11 for the 2.4G band by supplying a firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.

IC WARNING

This device contains licence-exempt transmitter(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.

IC Radiation Exposure Statement:

This device and its antenna(s) must not be co-located with any other transmitters except by IC multi-transmitter product procedures. Referring to the multi-transmitter policy, multiple-transmitter(s) and modules (s) can be operated simultaneously without reassessment permissive change.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body.

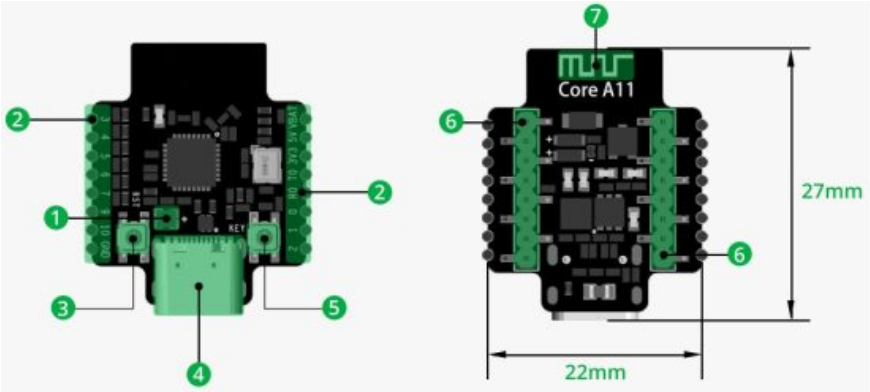
This module is limited to OEM installation only and must not be sold to end-users; end-user has no manual instructions to remove or install the device, only software or operating procedures shall be placed in the end-user operating manual of final products.

Additional testing and certification may be necessary when multiple modules are used.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

The end product must be labeled in a visible area with the following: "Contains IC: 28436-COREA11 ".

Multi-Function Controller Core



Product Specifications

Item Number	Component	Function
1	W52812LED	RGB system status indicator
2	Stamp Cut	Solderable pinout
3	Reset Button	Press to reset the main program
4	Type-C Port	Burning firmware & programming
5	User Button	Custom function
6	Pin Header	Connectable with various shields
7	Orientation Mark	Ensure proper installation alignment

Product ID	XA003
Model	Core A11
Type-C Input Voltage	DC 5V
VBAT Input Voltage	3.7V-12.6V
Antenna Type	PCB Antenna
Remote Control Distance	Up to 100m (in open space)
Weight	6g
Size	27*22mm

Documents / Resources

	Tuozhu Core-A11 Multi Function Controller [pdf] User Manual Core-A11, Core-A11 Multi Function Controller, Multi Function Controller, Controller

References

- User Manual

Tuozhu Tuozhu controller, Core-A11, Core-A11 Multi Function Controller, Multi-Function Controller,

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