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AA098

433Mhz RF Wireless transmitter and receiver kit

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Preface

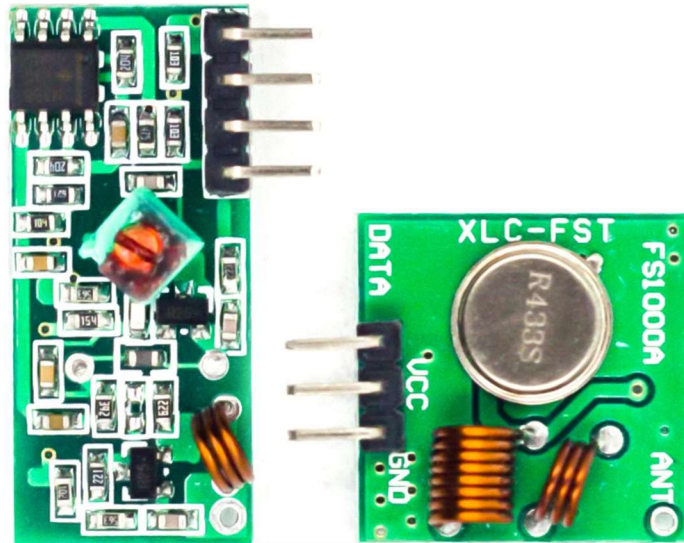
OurCompany

KUONGSHUN Electronic Company is a supplier and manufacturer of electronic components, it is committed to board and starter kit for Arduino, Raspberry PI, Smart Robot Car, 3D printer. It is also a collection of scientific research, design, production, maintenance and sales of high-tech enterprises, in the field of automation with professional standards and mature technology, we rapid rise in the field of foreign trade. Relying on technology and development, continuing to provide users with high-tech products, is our constant pursuit. Fully introduction of foreign advanced technology to enhance the value of our products.

Company gains users' praise for supplying first-class quality product and superb technical services, has now become the first choice of domestic and international procurement company.

Official Website: <https://www.kuongshun-ks.com>

AA098 433Mhz RF Wireless transmitter and receiver kit



Product Description

433MHz wireless transceiver module, using high-frequency RF technology, so it is also called RF433 RF mini module. It is composed of single IC RF front-end produced by All Digital Technology and ATMEL's AVR microcontroller, which can transmit data signals at high speed with a miniature transceiver, and pack, error check and error correction processing of the wireless transmitted data. The module is small in size, easy to install, and suitable for security alarm, wireless automatic meter reading, home and industrial automation, remote control, wireless digital transmission and other wide-ranging fields.

Product Parameters

Transmitter module parameters

Transmitting distance: 20-200 meters (different voltage, different effect)

Working voltage: 3.5-12V

Size: 19*19mm

Working mode: AM

Transmission rate: 4KB/S

Transmission power: 10mW

Transmission frequency: 433M

External antenna: 25cm common multi-core or single-core wire

Pin arrangement from left to right: (DATA; VCC; GND)

Receiver module parameters

Operating voltage: DC5V

Static current: 4MA

Receiving frequency: 433.92MHZ

Receiving sensitivity: -105DB

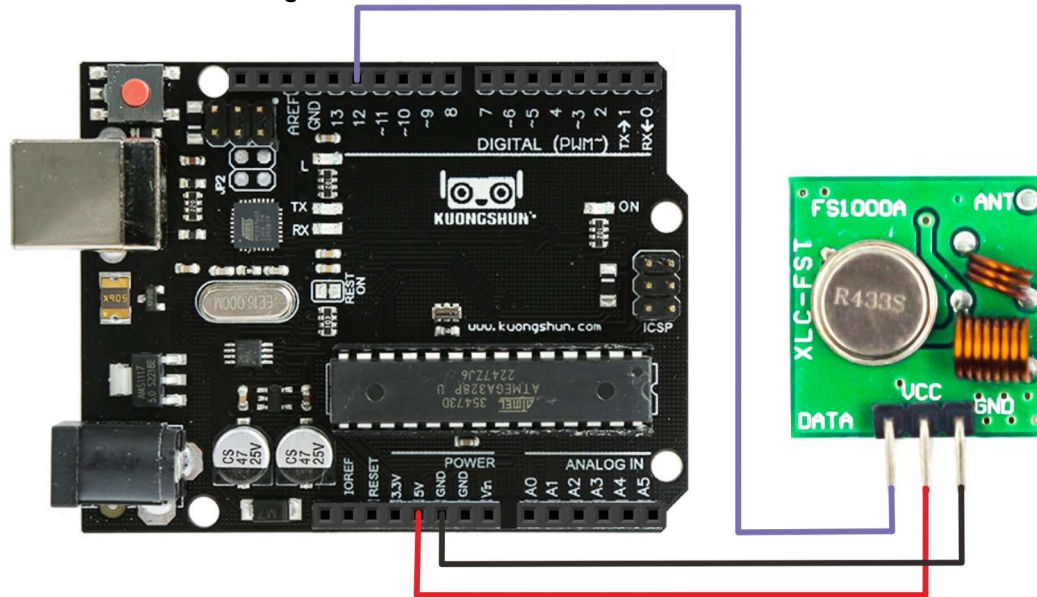
Size: 30*14*7mm

External antenna: 32CM single-core wire, spiral winding

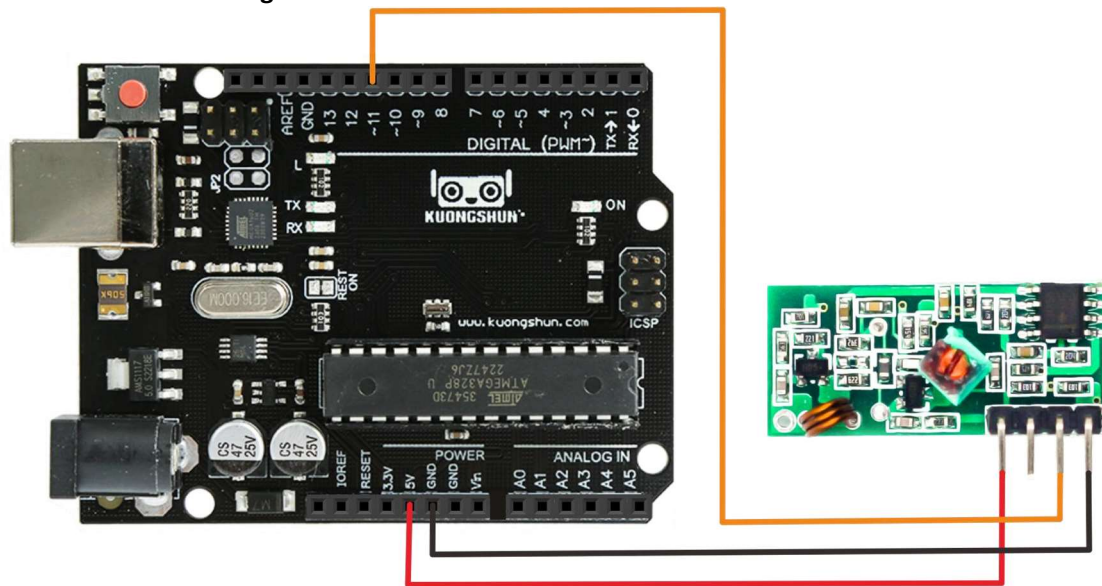
Pin arrangement from left to right: (VCC; DATA; DATA; GND)

Connection Diagram

Transmitter module wiring method



Receiver module wiring method



Sample Code

The test code for the transmitter module is as follows.

```
/*
```

```
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```

```
*/
```

```
#include <VirtualWire.h>
```

```
void setup() {
```

```
    vw_setup(2000); //Setting the transmission rate of the module (bps) vw_set_tx_pin(12);
```

```
    //Setting the Transmit Pin
```

```
}
```

```

void loop() {
  const char *msg = "Hello,kuongshun!";
  vw_send((uint8_t *)msg, strlen(msg));
  vw_wait_tx(); //Waiting for sending to complete
  delay(200); //Delayed for a while
}

```

The test code for the receive module is as follows.

```

/*
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*/
#include <VirtualWire.h>

void setup() {
  vw_setup(2000); // Setting the transmission rate of the module (bps)
  vw_set_rx_pin(11); // Setting the receive pins vw_rx_start(); //
  Activate reception Serial.begin(9600);
}

void loop() {
  uint8_t      message[16];      uint8_t
  messageLength = sizeof(message);

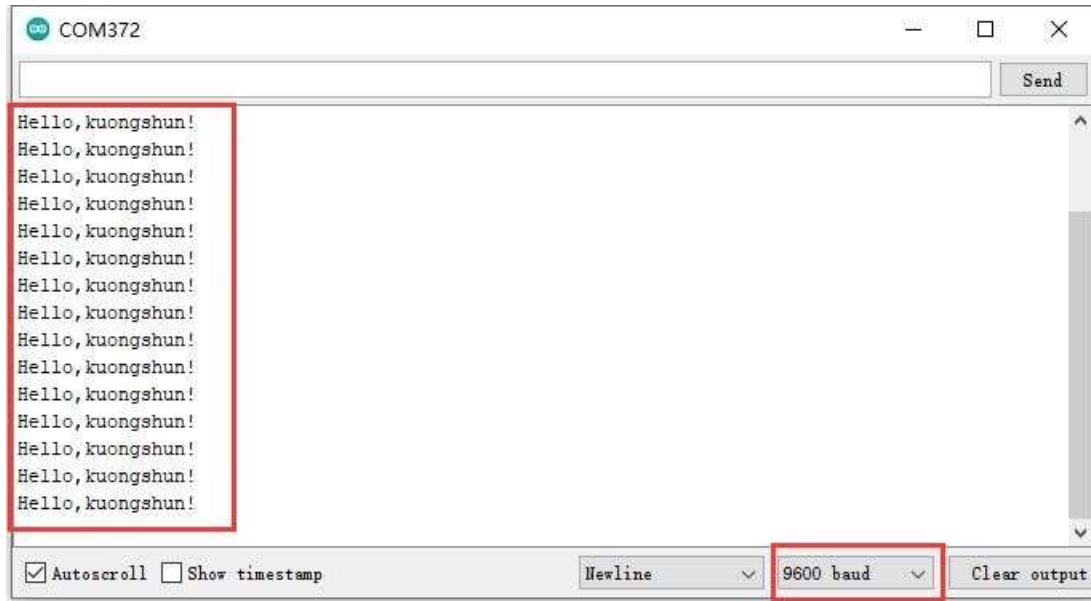
  if (vw_get_message(message, &messageLength)) {
    // Receive message
    // Processing here
    for (int i = 0; i < messageLength; i++) {
      Serial.print((char)message[i]);
    }
    Serial.println();
  }
}

```

Test Result

Connect the wires according to the wiring method of the transmitter module, upload the test code of the transmitter module from the control board, and then the module will start to send the message, sending the character of "Hello,kuongshun!".

Connect the wires according to the wiring method of the receiver module, the control board uploads the test code of the receiver module, after powering on, the module will be able to receive the information sent by the other module, open the serial monitor, set the baud rate to 9600, the monitor will be able to display the received information, as shown in the figure below.



Resources

Related code and library files are linked below:

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