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keyestudio SIM900 GSM/GPRS Module Shield



Introduction

SIM900 GSM/GPRS shield is based on Quad-Band SIM900 GSM/GPRS module. It provides Arduino with GSM/GPRS function. This shield allows you to make voice calls, send SMS or make connections to the Internet network.

On the shield, there is a serial port toggle switch for you to select either software serial port or hardware serial port to be connected to GPRS Shield. If you choose software serial port, you need to use the Software UART; otherwise, you need to use the Hardware UART. The shield includes a high capacitor dedicated to RTC (Real Time Clock).

If you toggle the switch to DBG-Port, you can connect the port to Arduino or connect the port to PC by Arduino to proceed the debugging.

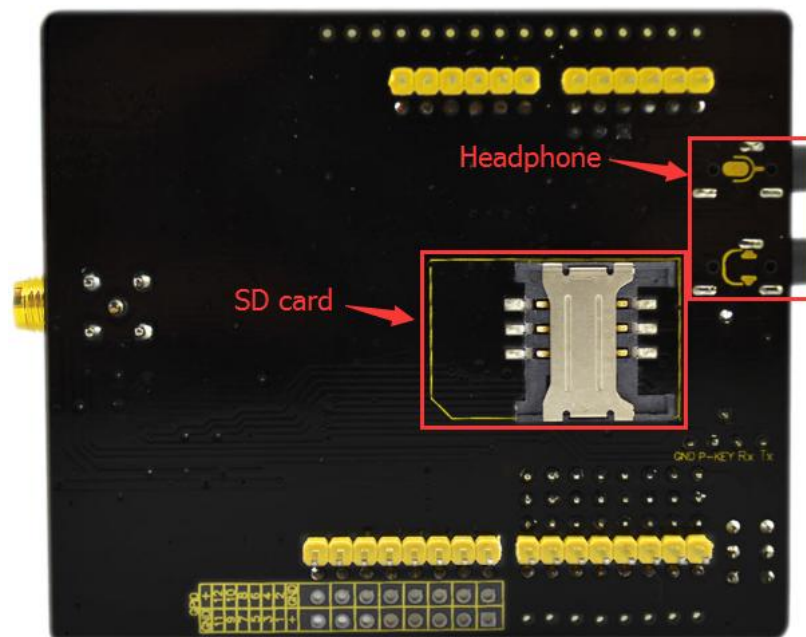
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Specification

1. Auto-adaption to 3.3V and 5V main board, supports 3.3V platforms such as leaf maple and Chipkit;
2. After connecting the SIM900 shield to Arduino, 9V/2A DC power supply is needed. Otherwise, there may be malfunction;
3. Quad-Band GSM/GPRS 850/900/1800/1900MHz (Support 2G card of UNICOM, China Mobile, does not support Telecom card). We use SIM900 GSM Module – This means the module supports communication in 900MHz band. If you are from other country, you have to check the mobile network band in your area.

Using Method

1. Insert the SIM Card into the SIM Card holder.



2. Make sure the antenna pad is buckled properly. If you don't want to fix it on the board, a patch cord is also supplied with the GPRS Shield to interface the antenna to the board. At the same time, plug your headphone into the shield.

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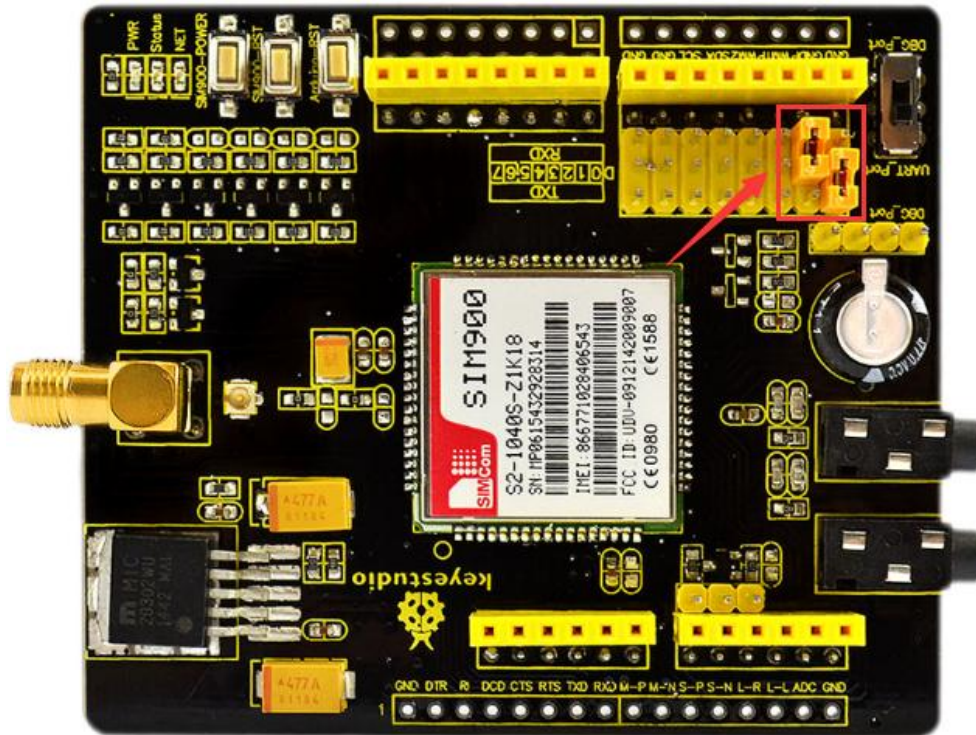
3. Then, connect UNO R3 with computer using USB cable, and upload code to it.



4. UNO R3 communicates with GPRS module by serial port, so after uploading (you must plug the shield into UNO R3 after uploading code, or serial port can't work.), connect RXD(D0) on UNO R3 to TXD on the shield, TXD (D1) on UNO R3 to RXD on the shield.

Note that: If you need more serial ports, except for the default serial port D0 and D1, you can add some by programming. We provide code to make RXD(D6) and TXD(D7) serial ports below.

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5. Because in the program, we have set the number you want to dial, after uploading and connecting, press dialing key and you can make a voice call by the headphone with a mobile phone.

Sample Code

A. For default serial ports RXD(D0) and TXD (D1)

```
void setup()
{
  pinMode(13, OUTPUT);
  pinMode(9, OUTPUT); //D9 is SIM900 turn on pin
  digitalWrite(9,HIGH);
```

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```
    delay(1000);

    digitalWrite(9,LOW);

    delay(15000);

    Serial.begin(9600);
}

void loop()
{
    Serial.print("ATD15812345678;\r");//15812345678 your dialing phone number
    delay(100000);
    // Serial.println("ATH");
    delay(200000);
}
```

B. Add serial ports RXD(D6) and TXD(D7)

```
#include <SoftwareSerial.h>

SoftwareSerial SIM900(6, 7); // define serial port PIN

void SIM900_Start()
{
    digitalWrite(9, HIGH);

    delay(2000);

    digitalWrite(9, LOW);

    delay(5000);
}

void Call_Phone()
```

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```
{  
  
  SIM900.println("ATD15812345678;");// the numbers behind ATD is your phone  
  number to dial.  
  
  delay(100);  
  
  SIM900.println("ATD15812345678;");  
  
  delay(30000);          // wait for 30 seconds...  
  
  SIM900.println("ATH"); // hang up  
  
}  
  
void setup()  
{  
  
  pinMode(9, OUTPUT);  
  
  SIM900.begin(19200); //set baud rate  
  
  SIM900_Start();  
  
  delay(20000); // wait for SIM900 to work  
  
}  
  
void loop()  
{  
  
  Call_Phone();  
  
  do  
  
  {  
  
  }  
  
  while(1);  
  
}
```

Shipping List:

1. keystudio SIM900 GSM_GPRS Module Shield *1
2. Extension Cable 22CM *1