GY-521 读取数据测试

一、工具：

1. Arduino mega2560（不是 pro 的）

引脚功能图：Vector-Tensor/Arduino_Meaga2560_引脚表.png at main · jiang-xin-859300/Vector-Tensor (github.com)

2. GY-521

二、连线

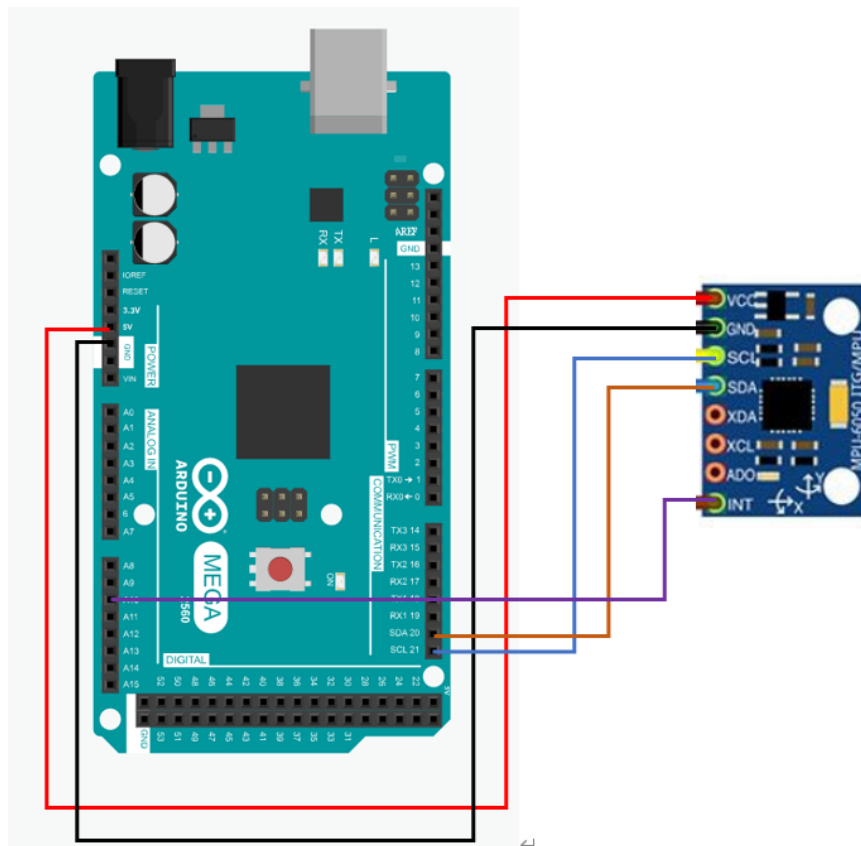GY-521 用到 5 个接口：VCC, GND, SCL, SDA, INT

1. VCC 接 Arduino 5V 输出

2. GND 接 Arduino GND

3. SCL 接 Arduino SCL 口，即 Communication 处 20 号

4. SDA 接 Arduino SDA 口，即 Communication 处 21 号

5. INT 接 Arduino A10 口

三、测试代码

Arduino 程序：

```arduino
1.  // MPU-6050 Short Example Sketch
2.  // By Arduino User JohnChi
3.  // August 17, 2014
4.  // Public Domain
5.  #include<Wire.h>
6.  const int MPU_addr=0x68;  // I2C address of the MPU-6050
7.  int16_t AcX,AcY,AcZ,Tmp,GyX,GyY,GyZ;
8.  void setup(){
9.    Wire.begin();
10.   Wire.beginTransmission(MPU_addr);
11.   Wire.write(0x6B);  // PWR_MGMT_1 register
12.   Wire.write(0);     // set to zero (wakes up the MPU-6050)
13.   Wire.endTransmission(true);
14.   Serial.begin(9600);
15. }
16. void loop(){
17.   Wire.beginTransmission(MPU_addr);
18.   Wire.write(0x3B);  // starting with register 0x3B (ACCEL_XOUT_H)
19.   Wire.endTransmission(false);
20.   Wire.requestFrom(MPU_addr,14,true);  // request a total of 14 registers
21.   AcX=Wire.read()<<8|Wire.read();  // 0x3B (ACCEL_XOUT_H) & 0x3C (ACCEL_XOUT_L)

22.   AcY=Wire.read()<<8|Wire.read();  // 0x3D (ACCEL_YOUT_H) & 0x3E (ACCEL_YOUT_L)

23.   AcZ=Wire.read()<<8|Wire.read();  // 0x3F (ACCEL_ZOUT_H) & 0x40 (ACCEL_ZOUT_L)

24.   Tmp=Wire.read()<<8|Wire.read();  // 0x41 (TEMP_OUT_H) & 0x42 (TEMP_OUT_L)
25.   GyX=Wire.read()<<8|Wire.read();  // 0x43 (GYRO_XOUT_H) & 0x44 (GYRO_XOUT_L)
26.   GyY=Wire.read()<<8|Wire.read();  // 0x45 (GYRO_YOUT_H) & 0x46 (GYRO_YOUT_L)
27.   GyZ=Wire.read()<<8|Wire.read();  // 0x47 (GYRO_ZOUT_H) & 0x48 (GYRO_ZOUT_L)
28.   Serial.print("AcX = ");Serial.print(AcX);
29.   Serial.print(" | AcY = ");Serial.print(AcY);
30.   Serial.print(" | AcZ = ");Serial.print(AcZ);
31.   Serial.print(" | Tmp = ");Serial.print(Tmp/340.00+36.53);  //equation for temp
    erature in degrees C from datasheet
32.   Serial.print(" | GyX = ");Serial.print(GyX);
33.   Serial.print(" | GyY = ");Serial.print(GyY);
34.   Serial.print(" | GyZ = ");Serial.println(GyZ);
35.   delay(333);
36. }
```

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