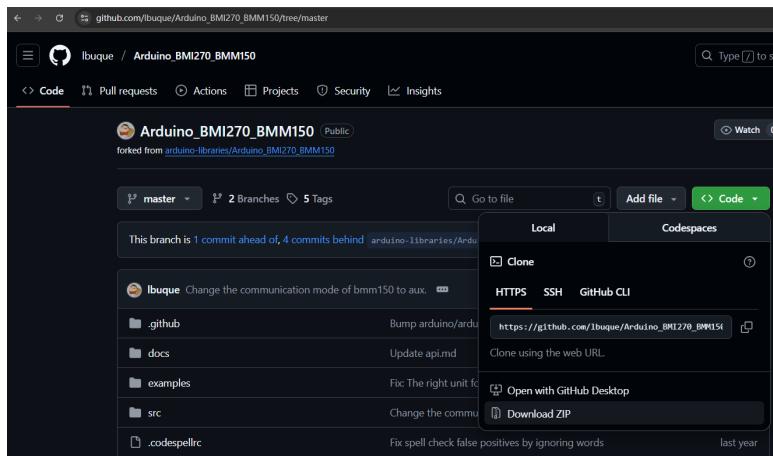


一、库的问题说明

Q: 关于在 Arudino IDE 安装的库，使用 BMM150 无法读取数据，BMI270 可以正常读取数据问题

A: 我方驱动对 Github 上源码库做了重构，请卸载 Arduino IDE 的库，按照此链接下载并安装例程序：https://github.com/lbuque/Arduino_BMI270_BMM150



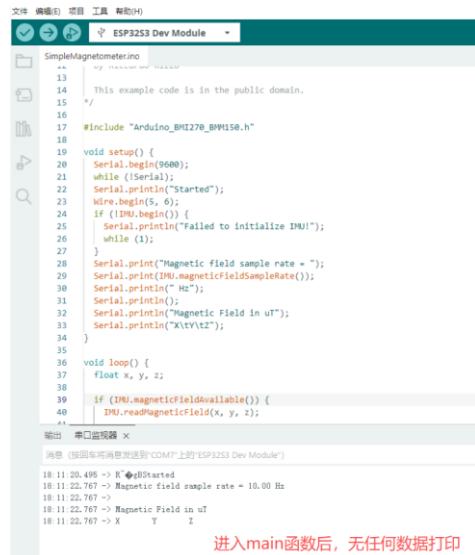
二、Arudino IDE 的库文件界面(已安装的，请卸载)

文件 编辑(E) 项目 工具 帮助(H)



三、安装 Arudino IDE 的库文件会出现以下几种异常情况

1、进入 Main 后，无法任何输出信息，此现象为函数调用失败，一直在 if 死循环



```

文件 书签(1) 项目 工具 帮助(1)
ESP3253 Dev Module
SimpleMagnetometerino
13
14  This example code is in the public domain.
15 */
16
17 #include "Arduino_BMI270_BMM150.h"
18
19 void setup() {
20   Serial.begin(9600);
21   while (!Serial);
22   Serial.println("Started");
23   IMU.begin(5, 6);
24   if (!IMU.begin()) {
25     Serial.println("Failed to initialize IMU!");
26     while (1);
27   }
28   Serial.print("Magnetic field sample rate = ");
29   Serial.print(IMU.magneticFieldSampleRate());
30   Serial.println(" Hz");
31   Serial.println();
32   Serial.println("Magnetic Field in uT");
33   Serial.println("X\U00D7Y\U00D7Z");
34 }
35
36 void loop() {
37   float x, y, z;
38
39   if (IMU.magneticFieldAvailable()) {
40     IMU.readMagneticField(x, y, z);
41   }
}

```

消息 (返回车将消息发送到“COM7”上的“ESP3253 Dev Module”)

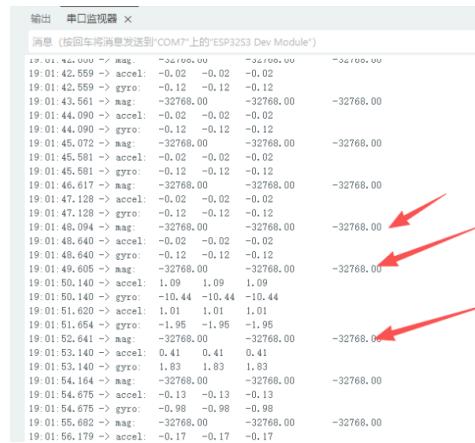
```

18:11:22.468 -> N'@#BStarted
18:11:22.767 -> Magnetic field sample rate = 10.00 Hz
18:11:22.767 ->
18:11:22.767 -> Magnetic Field in uT
18:11:22.767 -> X Y Z

```

进入main函数后, 无任何数据打印

2、数据值每行打印一致，此现象为 BMI270 FIFO 缓冲区一直在报溢出 $2^{15}=32768$



```

输出 串口监视器 ×
消息 (按回车将消息发送到“COM7”上的“ESP3253 Dev Module”)

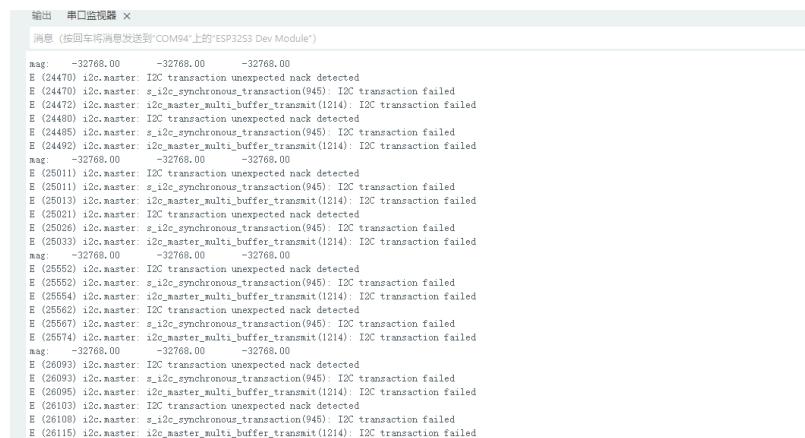
mag: -32768.00 -32768.00 -32768.00
19:01:42.559 -> accel: -0.02 -0.02 -0.02
19:01:42.559 -> gyro: -0.12 -0.12 -0.12
19:01:43.561 -> mag: -32768.00 -32768.00
19:01:44.090 -> accel: -0.02 -0.02 -0.02
19:01:44.090 -> gyro: -0.12 -0.12 -0.12
19:01:45.072 -> mag: -32768.00 -32768.00
19:01:45.581 -> accel: -0.02 -0.02 -0.02
19:01:45.581 -> gyro: -0.12 -0.12 -0.12
19:01:46.617 -> mag: -32768.00 -32768.00
19:01:47.129 -> accel: -0.02 -0.02 -0.02
19:01:47.129 -> gyro: -0.12 -0.12 -0.12
19:01:48.094 -> mag: -32768.00 -32768.00
19:01:48.640 -> accel: -0.02 -0.02 -0.02
19:01:48.640 -> gyro: -0.12 -0.12 -0.12
19:01:49.605 -> mag: -32768.00 -32768.00
19:01:50.140 -> accel: 1.09 1.09 1.09
19:01:50.140 -> gyro: -10.44 -10.44 -10.44
19:01:51.620 -> accel: 1.01 1.01 1.01
19:01:51.654 -> gyro: -1.95 -1.95 -1.95
19:01:52.641 -> mag: -32768.00 -32768.00
19:01:53.140 -> accel: 0.41 0.41 0.41
19:01:53.140 -> gyro: 1.83 1.83 1.83
19:01:54.164 -> mag: -32768.00 -32768.00
19:01:54.675 -> accel: -0.13 -0.13 -0.13
19:01:54.675 -> gyro: -0.98 -0.98 -0.98
19:01:55.682 -> mag: -32768.00 -32768.00
19:01:56.179 -> accel: -0.17 -0.17 -0.17

```

3、I2C 总线报错存在两种情况

I2C transaction failed: 库文件使用错误，请再耐心检查

I2C timeout failed: 数据和时钟脚未物理连接正确，请再耐心检查



```

输出 串口监视器 ×
消息 (按回车将消息发送到“COM9”上的“ESP3253 Dev Module”)

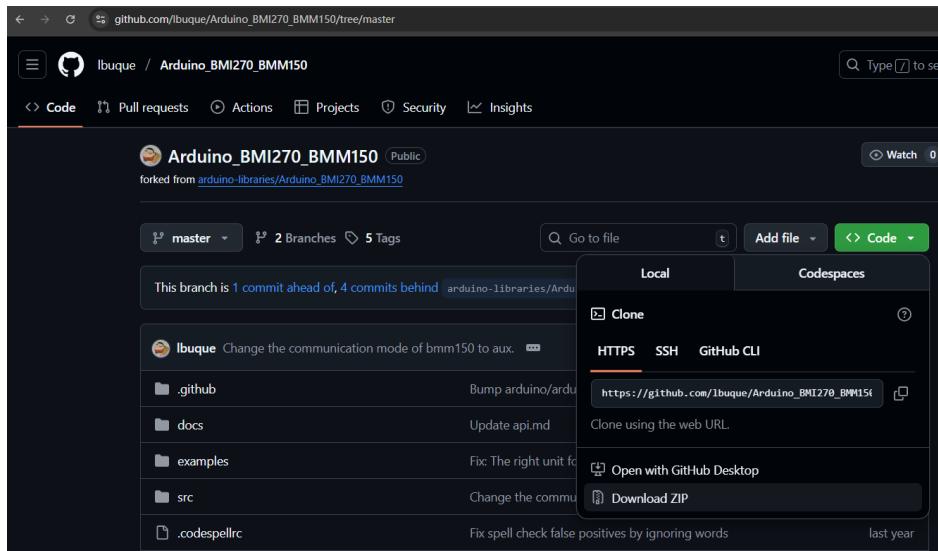
mag: -32768.00 -32768.00 -32768.00
E (24470) i2c.master: I2C transaction unexpected nack detected
E (24470) i2c.master: s_i2c_synchronous_transaction(945): I2C transaction failed
E (24472) i2c.master: i2c_master_multi_buffer_transmit(1214): I2C transaction failed
E (24480) i2c.master: I2C transaction unexpected nack detected
E (24485) i2c.master: s_i2c_synchronous_transaction(945): I2C transaction failed
E (24492) i2c.master: i2c_master_multi_buffer_transmit(1214): I2C transaction failed
mag: -32768.00 -32768.00 -32768.00
E (25011) i2c.master: I2C transaction unexpected nack detected
E (25011) i2c.master: s_i2c_synchronous_transaction(945): I2C transaction failed
E (25013) i2c.master: i2c_master_multi_buffer_transmit(1214): I2C transaction failed
E (25021) i2c.master: I2C transaction unexpected nack detected
E (25026) i2c.master: s_i2c_synchronous_transaction(945): I2C transaction failed
E (25033) i2c.master: i2c_master_multi_buffer_transmit(1214): I2C transaction failed
mag: -32768.00 -32768.00 -32768.00
E (25602) i2c.master: I2C transaction unexpected nack detected
E (25602) i2c.master: s_i2c_synchronous_transaction(945): I2C transaction failed
E (25606) i2c.master: i2c_master_multi_buffer_transmit(1214): I2C transaction failed
E (25662) i2c.master: I2C transaction unexpected nack detected
E (25667) i2c.master: s_i2c_synchronous_transaction(945): I2C transaction failed
E (25674) i2c.master: i2c_master_multi_buffer_transmit(1214): I2C transaction failed
mag: -32768.00 -32768.00 -32768.00
E (26093) i2c.master: I2C transaction unexpected nack detected
E (26093) i2c.master: s_i2c_synchronous_transaction(945): I2C transaction failed
E (26095) i2c.master: i2c_master_multi_buffer_transmit(1214): I2C transaction failed
E (26103) i2c.master: I2C transaction unexpected nack detected
E (26108) i2c.master: s_i2c_synchronous_transaction(945): I2C transaction failed
E (26115) i2c.master: i2c_master_multi_buffer_transmit(1214): I2C transaction failed

```

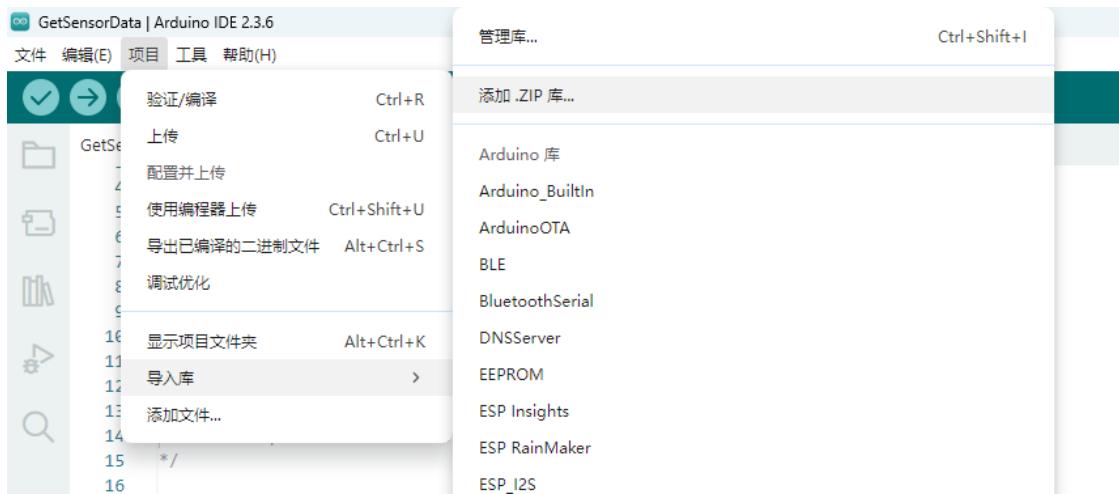
四、库文件下载

1、Github 界面->Code(绿色按钮)->Download ZIP->我的电脑->下载文件夹中

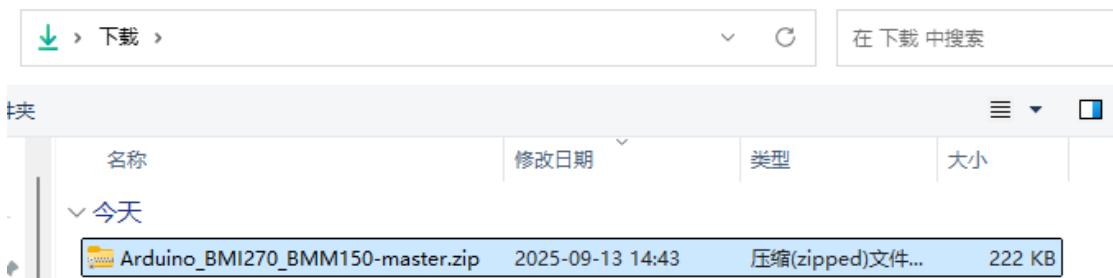
PS: 如需另存其他路径, 建议避免中文路径



2、Arudino IDE 添加我方提供库文件方法, 如下所示



库压缩包(.zip 格式):



库文件包含资源:

📁 .github	2025-09-13 15:22	文件夹
📁 docs	2025-09-13 15:22	文件夹
📁 examples	2025-09-13 15:22	文件夹
📁 src	2025-09-13 15:22	文件夹
📄 .codespellrc	2025-06-22 17:39	CODESPELLRC ... 1 KB
📄 .gitignore	2025-06-22 17:39	Git Ignore 源文件 1 KB
📄 CHANGELOG	2025-06-22 17:39	文件 1 KB
📄 keywords.txt	2025-06-22 17:39	文本文档 1 KB
📄 library.properties	2025-06-22 17:39	Properties 源文件 1 KB
📄 LICENSE	2025-06-22 17:39	文件 26 KB
📄 README.md	2025-06-22 17:39	Markdown 源文件 4 KB

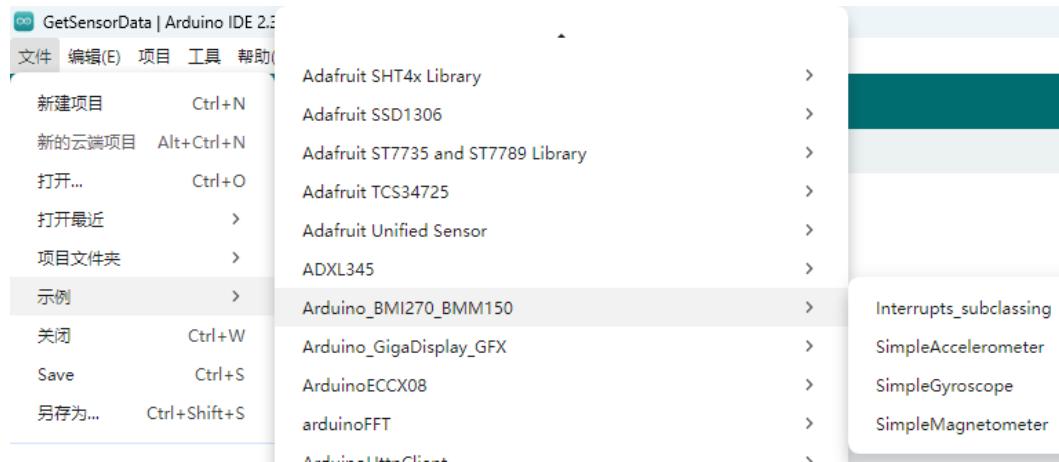
3、打开例程方式

1、请在下载的文件夹中打开对应例程



2、不建议在 Arudino IDE 中打开，如下所示：

由于我方的库基于 Arudino 此库进行二次改成，有可能造成冲突



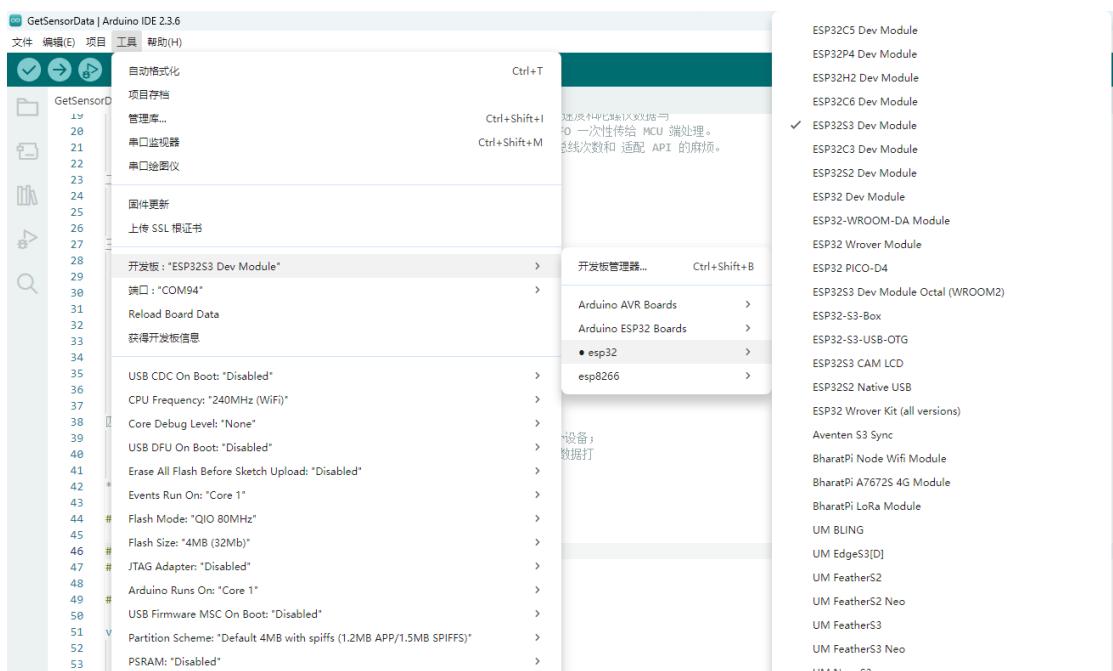
五、例程使用步骤，如下所示：

1、请先选择自己连接的对应开发板

方法一：



方法二：



2、更改对应的 I2C 的数据和时钟管脚号

```

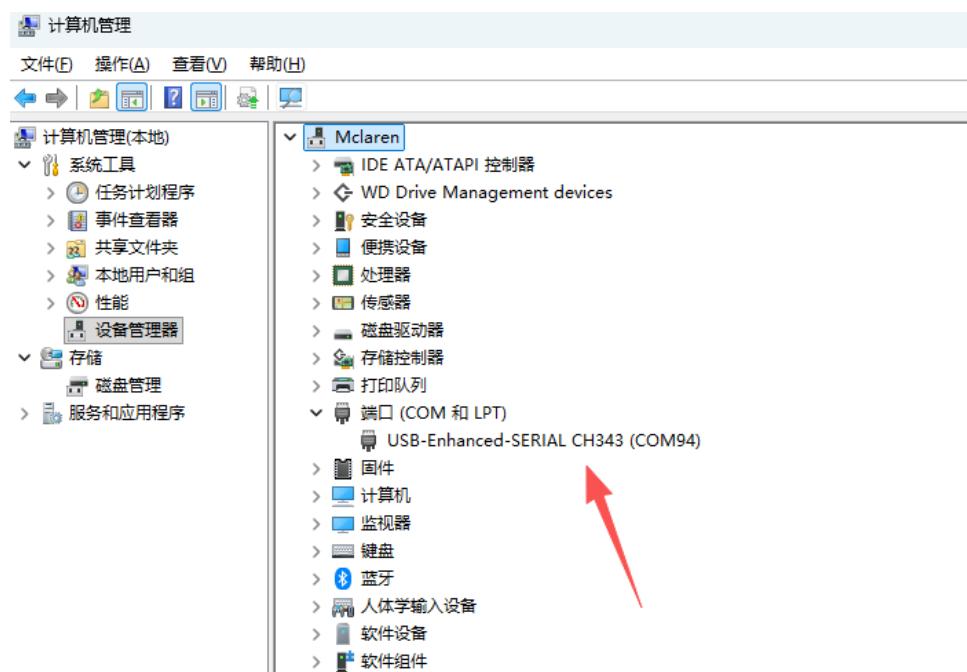
43
44 #include "Arduino_BMI270_BMM150.h"
45
46 #define I2C_SDA 40 // My own Dev_Board GPIO
47 #define I2C_SCL 45 // My own Dev_Board GPIO
48
49 #define I2C_Freq 100000 // use 100KHz or 400KHz
50
51 void setup() {
52     Serial.begin(115200);
53     while (!Serial);
54     Serial.println("Started");
55
56 // Wire.begin(39, 45, 400000); // SDA SCL Freq
57 Wire.begin(I2C_SDA, I2C_SCL, I2C_Freq); // 初始化 I2C 总线
58
59 if (!IMU.begin()) {
60     Serial.println("Failed to initialize IMU!");
61 }
```

3、先请核对串口端口号正确，再点击 **->** 按钮开始烧录，等待烧录成功

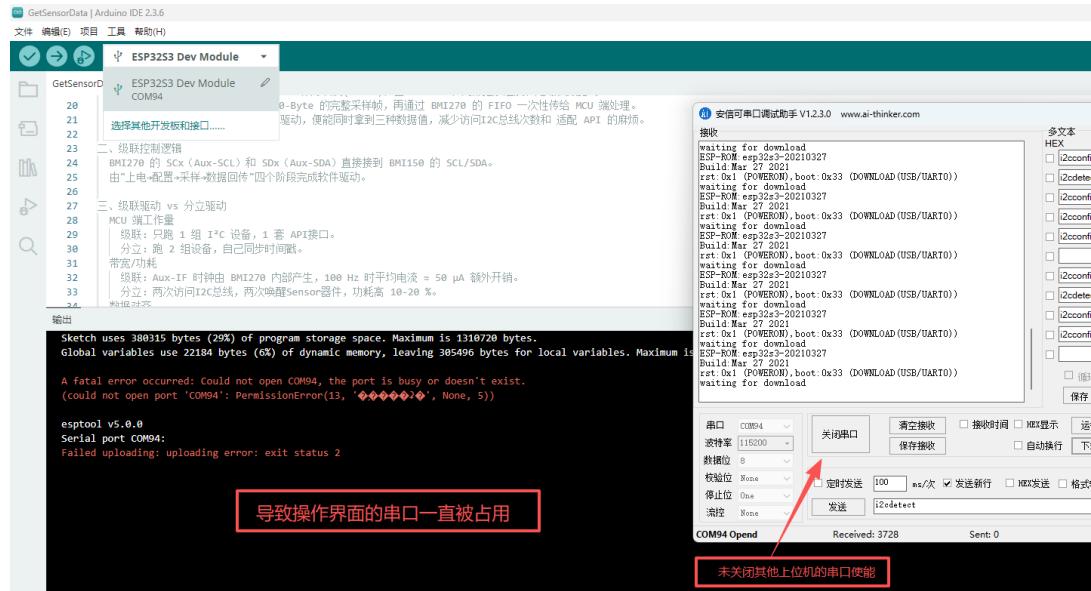


六、开发板无法烧录问题，存在以下几种现象：

1、我的电脑->右击->管理->设备管理器->端口(检查是否正确)



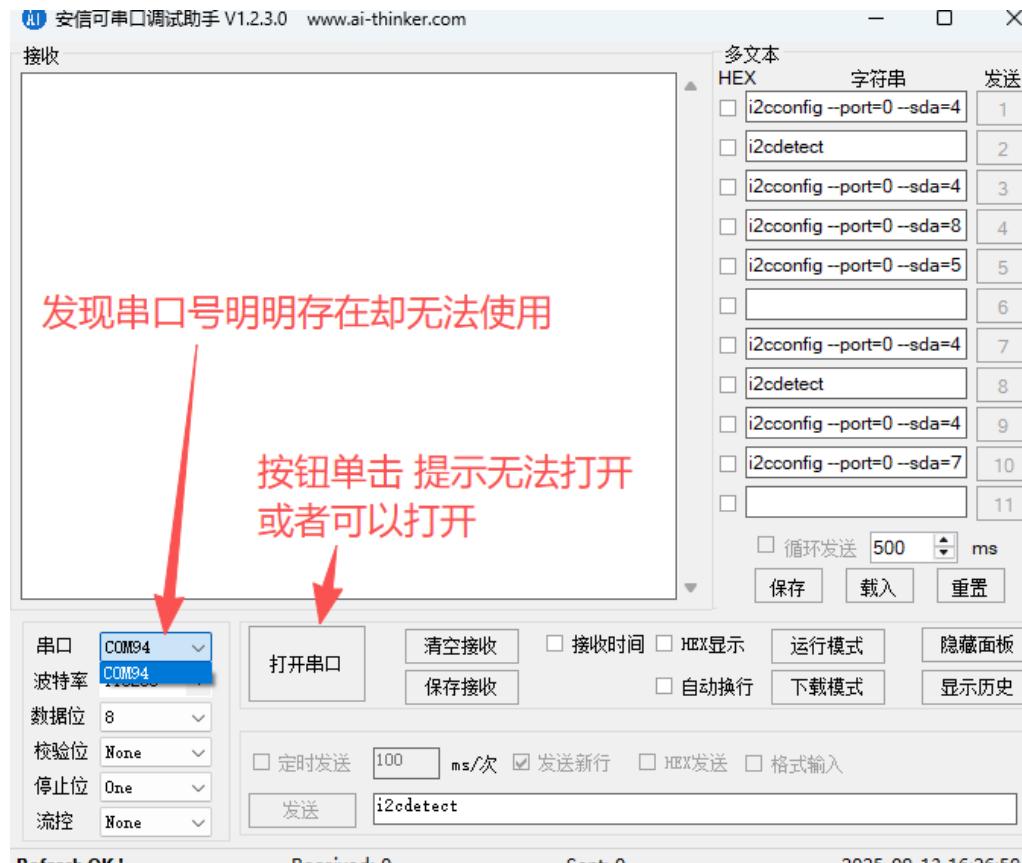
2、串口被其他上位机占用的情况



3、串口号存在，却无法使用的情况

原因：电脑操作系统的线程出现了异常，导致串口芯片也异常

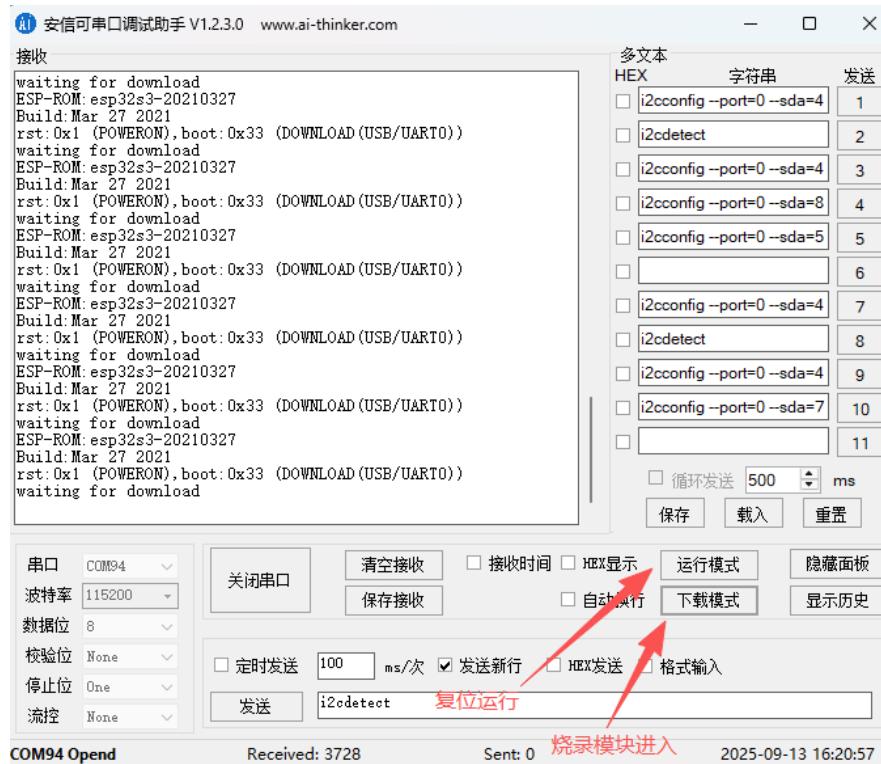
解决：建议重新插拔串口烧录器工具，使串口芯片重新热启动下



4、打印测试能否进入 Bootlader 烧录模式

情况一：无自动烧录控制电路的，请长按 BOOT 按键(别释放)，再单击 RST(EN)按键复位 MCU，等待串口监视工具打印 Waiting for download，松开 BOOT 按键，开始下载固件

情况二：有自动烧录控制电路的，通过串口芯片的流控控制 MCU，测试运行模式和下载模式是否正常，（强烈推荐安信可串口调试助手，个人觉得非常好用）



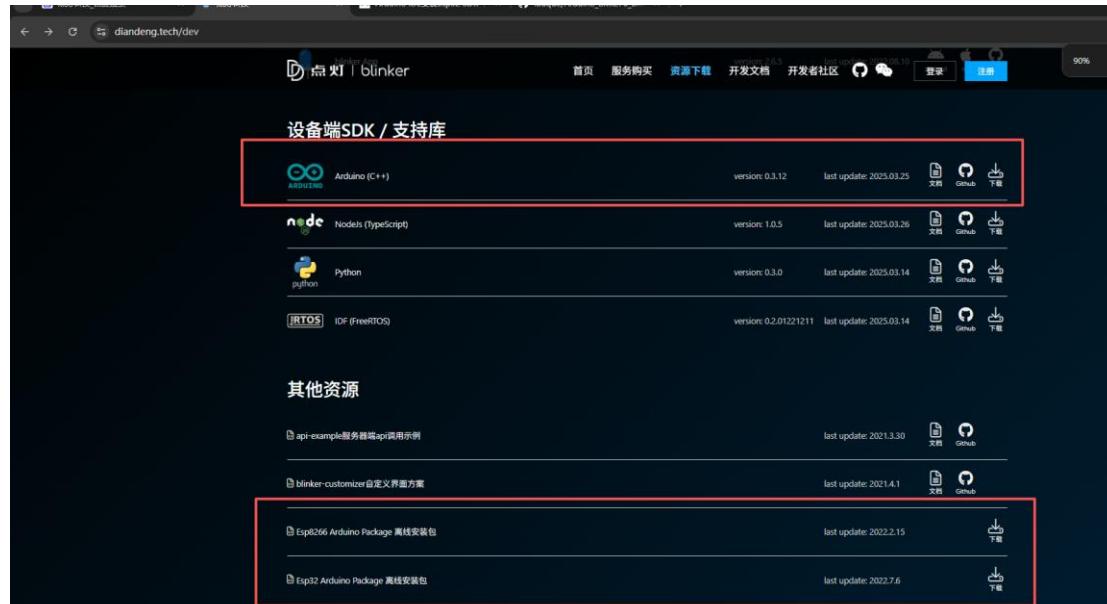
七、开发工具资源包获取问题

点灯科技 Arduino IDE 工具，ESP8266/32 系列开发板离线资源包下载链接：

<https://diandeng.tech/dev>

Arduino IDE 添加开发板库资源依赖教程，参考如下：

<https://arduino.me/a/esp32>



The screenshot shows the '设备端SDK / 支持库' section with four items:

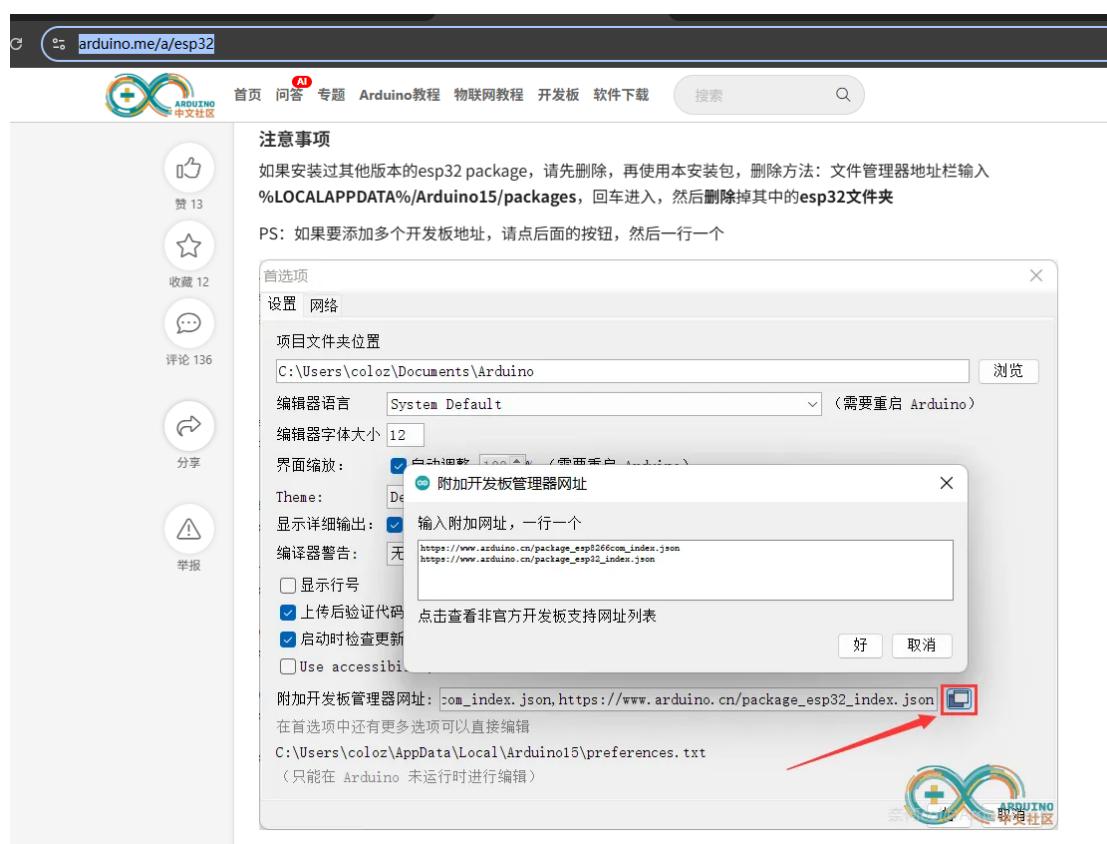
- Arduino (C++) version 0.3.12, last update 2023.03.25
- Node.js (TypeScript) version 1.0.5, last update 2023.03.26
- Python version 0.3.0, last update 2023.03.14
- RTOS (FreeRTOS) version 0.2.01221211, last update 2023.03.14

The '其他资源' section contains two links:

- api-example 服务器端API调用示例, last update 2021.3.30
- blinker-customizer 自定义界面方案, last update 2021.4.1

Below these are two highlighted links:

- Esp8266 Arduino Package 离线安装包, last update 2022.2.15
- Esp32 Arduino Package 离线安装包, last update 2022.7.6



The screenshot shows the '注意事项' section with instructions for deleting old packages before installing new ones.

The '首选项' dialog is open, showing the '附加开发板管理器网址' (Additional Board Manager URLs) field with the URL `https://www.arduino.cn/package_esp8266com_index.json`. A red arrow points to this field.

PS：十分感谢点灯科技的教程开源