

使用 Lightblue APP 与 TLS 蓝牙模块通信

用户如果使用 iOS 的设备(需要 iOS7.0 以上,即 iPhone4s 以后的手机系列),可以在 APP Store 下载 Lightblue 对模块进行测试,简单稳定,方便快捷。



一、手机发送数据给蓝牙模块操作步骤如下：

手机发送数据到模块步骤：

The following steps illustrate the process of sending data from a mobile phone to a Bluetooth module using the LightBlue Explorer app:

- Step 1:** Open the LightBlue Explorer app. In the 'Peripherals Nearby' section, select the device 'BLE SPP' (1).
- Step 2:** Tap on the selected device to view its details. Under the 'ADVERTISMENT DATA' section, select the 'Write: APP->Module' option (2).
- Step 3:** In the 'Write: APP->Module' screen, tap on the 'Write new value' button (3).
- Step 4:** A numeric keypad will appear. Enter the hexadecimal data '0102030405' and tap the 'Done' button (4) to send the data.

打开手机lightblue 下拉页面开始自动搜索，搜索到设备：BLE SPP

点击BLE SPP，连接模块
选择APP->Module

点击： Write new value

输入数据，按Done 发送，
蓝牙模块收到数据后串口输出

二、蓝牙模块发送数据给手机操作步骤如下：

模块发送数据到手机步骤：

The process is shown in four sequential screenshots of the LightBlue Explorer app:

- Step 1:** The 'Peripherals Nearby' list shows 'BLE SPP' with 1 service. A red circle '1' highlights the device.
- Step 2:** The 'Peripheral' screen for 'BLE SPP' shows it is 'Connected'. A red circle '2' highlights the 'Notify: Module->APP' option under the 'Write: APP->Module' section.
- Step 3:** The 'BLE SPP' screen shows the 'NOTIFIED VALUES' section. A red circle '3' highlights the 'Listen for notifications' button.
- Step 4:** The 'BLE SPP' screen shows the 'NOTIFIED VALUES' section with the data '0x3132333435' received. A red circle '4' highlights the data.

Below the screenshots are four text boxes explaining the steps:

- 打开lightblue 下拉页面开始自动搜索，搜索到设备：BLE SPP
- 点击BLE SPP，连接模块选择Module->APP
- 点击：Listen for notification
- 手机可以接收到模块发送的数据

三、手机发送 IO 控制指令给蓝牙模块操步骤如下：

手机发送控制指令步骤：

The figure consists of four sequential screenshots of the LightBlue Explorer app interface, illustrating the steps to send an IO control command to a BLE module. Red circles and arrows indicate the sequence of actions.

- Screenshot 1:** The 'Peripherals Nearby' list shows 'BLE SPP' with 1 service. A red circle with the number '1' is next to it.
- Screenshot 2:** The 'Peripheral' screen for 'BLE SPP' shows it is 'Connected'. A red circle with the number '2' is next to the 'IO' service listed under 'Device Information'.
- Screenshot 3:** The 'BLE SPP' screen shows the 'IO' service selected. A red circle with the number '3' is next to the 'Write new value' button.
- Screenshot 4:** The 'Edit Value' screen shows the 'UTF-8 String' input field with the text 'AT+IO1=H'. A red circle with the number '4' is next to the 'Done' button.

Below each screenshot is a corresponding instruction in a blue box:

- 打开lightblue 下拉页面开始自动搜索，搜索到设备：BLE SPP
- 点击BLE SPP，连接模块选择IO
- 点击：Write new value
- 发送IO控制指令，可控制模块IO