

BTM-NL15C DK Uart Service 與 nRF Toolbox APP 操作說明

July 2025

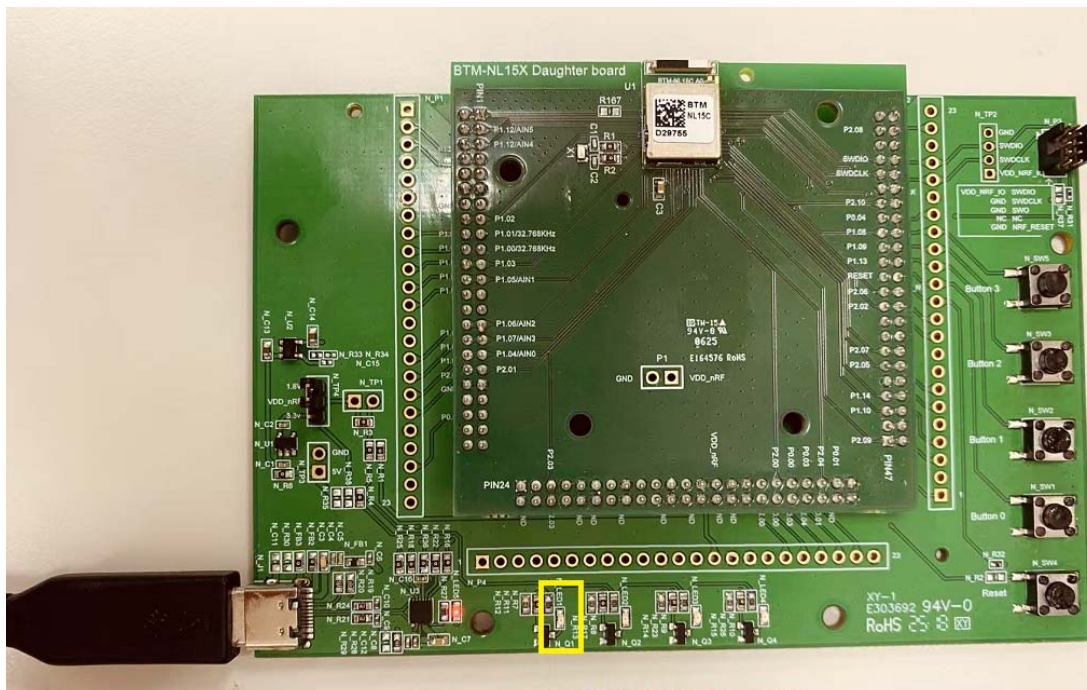
1. 手機端安裝應用程式：

請於手機上安裝 **Nordic nRF Toolbox** 應用程式。



2. 連接裝置電源：

使用 **USB Type-C** 為 DK 供電。供電後，**LED (N_LED1)** 將開始閃爍，表示已進入藍牙廣播模式。

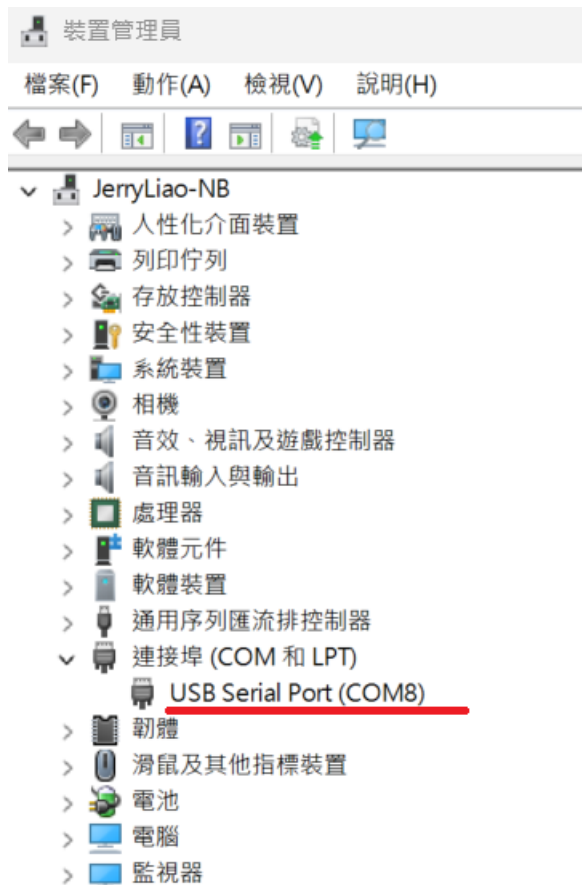


N_LED1(廣播狀態): 閃爍

N LED1(已連線狀態)：恆亮

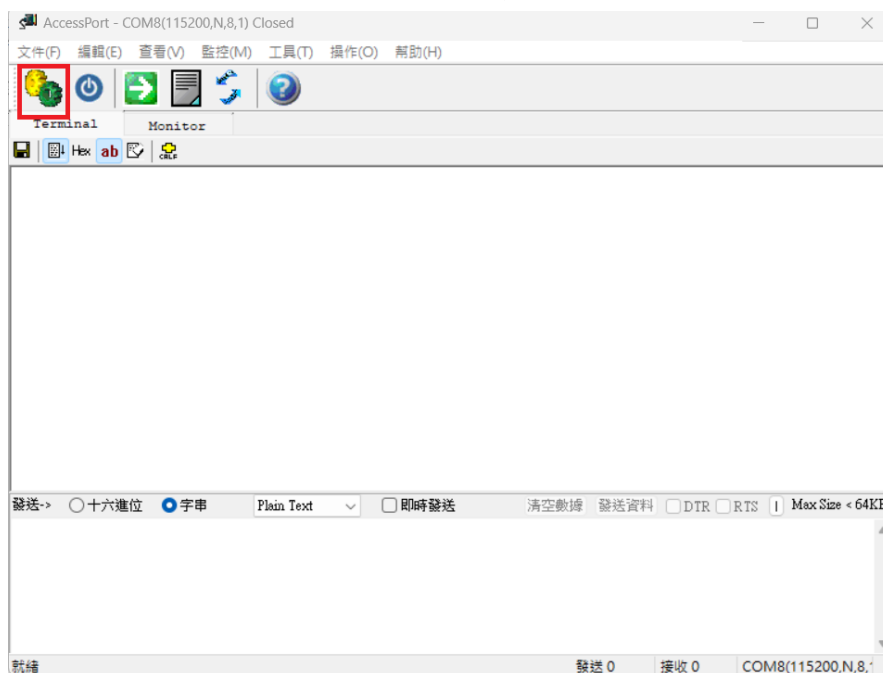
3. 確認裝置 COM Port :

在電腦中開啟**裝置管理員**，確認裝置所使用的 **COM Port** 編號。



4. 啟動 UART 通訊工具 :

開啟 **UART** 通訊軟體，進入設定畫面。



5. 設定通訊參數：

UART 工具中設定以下參數：

COM Port： 根據步驟 3 查到的 COM Port 編號

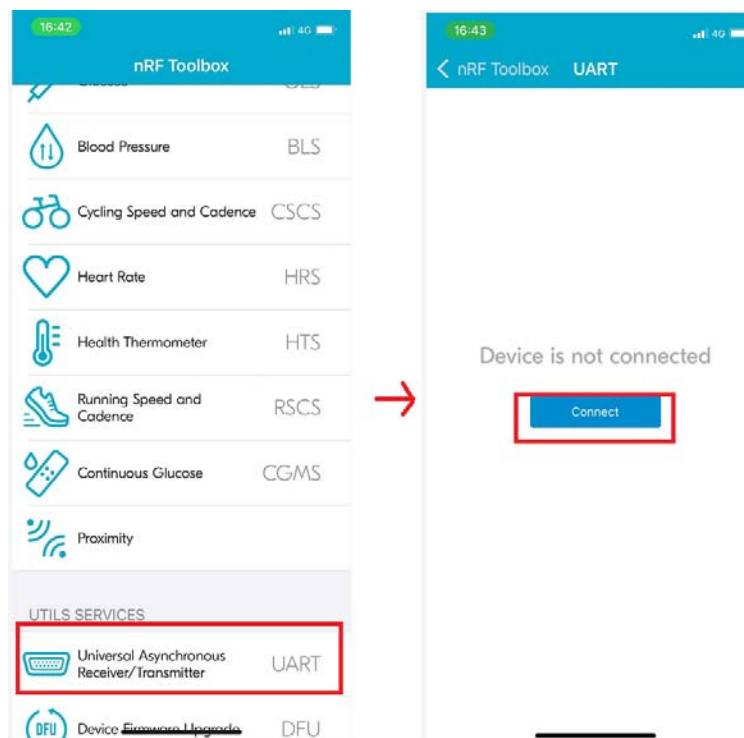
Baud Rate： 設定為指定的波特率（例如 115200）

Flow Control： 根據系統需求選擇（如 None , 8, 1）



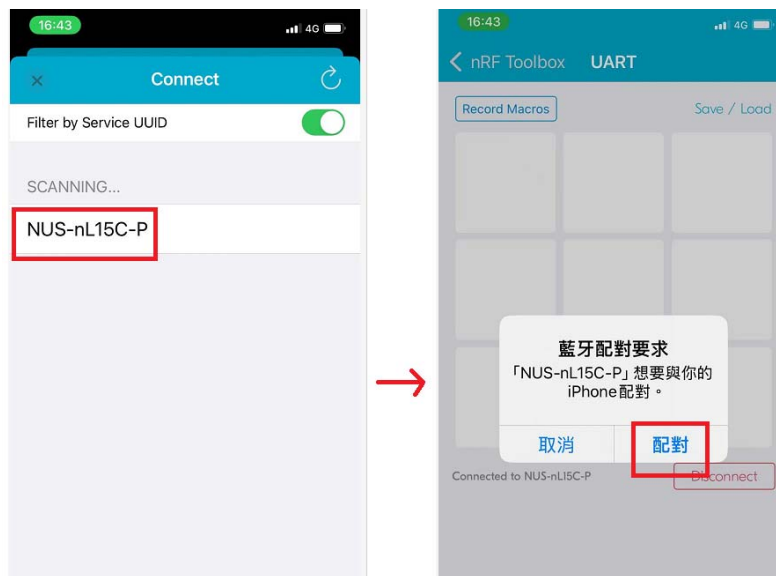
6. 連接手機與裝置：

- 開啟手機藍牙
- 打開 nRF Toolbox，選擇 UART 模組，點擊 Connect



7. 搜尋與配對裝置：

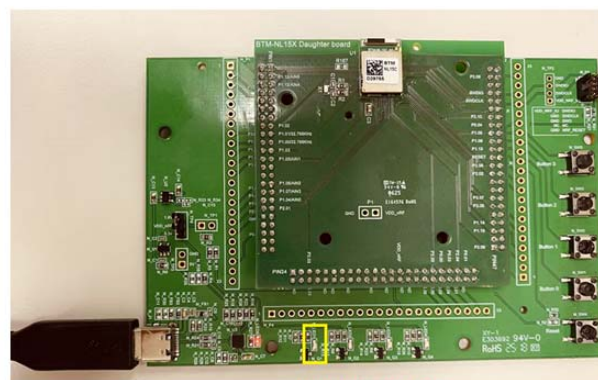
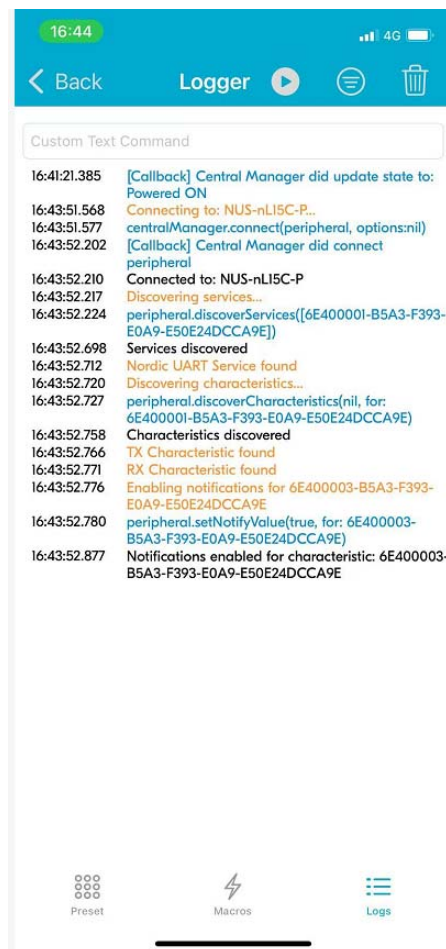
App 會自動搜尋藍牙裝置，選擇 **NUS-nL15C-P** 並點擊進行配對。



8. 確認連線狀態：

配對成功後

- 手機 App 會顯示連線訊息
- LED (N_LED1) 將由閃爍變為恆亮



N_LED1 (廣播狀態)：閃爍
N_LED1 (已連線狀態)：恆亮

9. 雙向資料傳輸測試：

此時手機 App 與電腦端 UART 工具已建立連線，雙方可進行資料互傳。

The image shows a bidirectional data transfer test between a mobile application and a PC UART tool. The PC tool, 'AccessPort - COM8(115200,N,8,1) Opened', displays a log of communication events. The mobile app, 'Logger', shows the received data. Red arrows and labels (1.) through (4.) highlight specific steps in the process:

- (1.) The '發送' (Send) button is highlighted in the PC tool's interface.
- (2.) The 'eventid1243' is highlighted in the PC tool's log.
- (3.) The 'gjfgy1356' command is entered in the mobile app's input field.
- (4.) The 'gjfgy1356' command is sent from the mobile app to the PC tool.

The PC tool log shows the following sequence of events:

```
16:41:21.385 [Callback] Central Manager did update state to: Powered ON
16:43:51.568 Connecting to NUS-nLISC-P...
16:43:51.577 centralManager.connect(peripheral, options:nil)
16:43:52.202 [Callback] Central Manager did connect peripheral
16:43:52.210 Connected to NUS-nLISC-P
16:43:52.217 Discovering services...
16:43:52.224 peripheral.discoverServices([6E400003-B5A3-F393-EDA9-E50E24DCCAE])
16:43:52.698 Services discovered
16:43:52.712 Nordic UART Service found
16:43:52.720 Discovering characteristics...
16:43:52.727 peripheral.discoverCharacteristics(nil, for: 6E400003-B5A3-F393-EDA9-E50E24DCCAE)
16:43:52.758 Characteristics discovered
16:43:52.766 TX Characteristic found
16:43:52.771 RX Characteristic found
16:43:52.776 Enabling notifications for 6E400003-B5A3-F393-EDA9-E50E24DCCAE
16:43:52.780 peripheral.setNotifyValue(true, for: 6E400003-B5A3-F393-EDA9-E50E24DCCAE)
16:43:52.877 Notifications enabled for characteristic: 6E400003-B5A3-F393-EDA9-E50E24DCCAE
16:48:59.754 Notification received from 6E400003-B5A3-F393-EDA9-E50E24DCCAE, with value: 0-6576672747373323433
16:48:59.778 'eventid1243' received
16:49:53.343 Writing to characteristic: 6E400003-B5A3-F393-EDA9-E50E24DCCAE, with value: 0-6576672747373323433, for: 6E400003-B5A3-F393-EDA9-E50E24DCCAE, type: .withoutResponse
16:49:53.354 'gjfgy1356' sent
```