Using Notepad++ and Color Syntax Highlighting

BL654 Module

Application Note   *v1.0*

1   INTRODUCTION

If you intend to use Notepad++ to edit and develop *smart*BASIC source code, the goal of this document is to explain how to configure Notepad++ so that *smart*BASIC code is displayed with color syntax highlighting.

2   REQUIREMENTS

Windows PC (XP or newer) with Notepad++ version 6.4.5 or newer installed. You can install it by downloading it from http://notepad-plus-plus.org.

3   OVERVIEW

When editing and developing source code for programs, most modern text editors can display the code with color syntax highlighting.

The color scheme is based on the underlying syntax of the language for which the code was written. *smart*BASIC has a BASIC flavor and in addition, for each implementation, there are platform specific extension functions.

Notepad++ can be configured directly from the software by using the built-in syntax editor which defines the color syntax highlighting for a specifically named programming language. All BL652 firmware upgrade zip files from Laird contain a file called *smartBASIC(Notepad++).xml* which can be used to configure Notepad++ to display *smart*BASIC source code.

A typical look and feel of *smart*BASIC source fragment in Notepad++ (when configured correctly) is shown in Figure 1. For example, UartCloseEx() is an extension function displayed in a different color from the token function which is part of the core language.

```
57  '//****************************************************************
58  '// Handler definitions
59  '//****************************************************************
60
61  '//================================================================
62  '// Uart Inactivity timer handler
63  '//================================================================
64  function handlerUartTimer() as integer
65     dim rc
66     '//Close the uart, and set up TX/RX/RTS lines as gpio and for a hi-lo transition
67     '//on the RX line to be detected
68     if UartCloseEx(1) == 0 then
69        rc=GpioSetFunc(21,2,1)   '//TX  - set high on default
70        rc=GpioSetFunc(23,2,0)   '//RTS - set low by default
71        rc=GpioSetFunc(22,1,2)   '//RX  - Pull high input & irq on hi2lo transition
72        rc=GpioAssignEvent(UART_GPIO_ASSIGN_CHANNEL,22,1)
73        if rc != 0 then
74           print "\nGpioAssignEvent() Failed"
75        endif
76     endif
77  endfunc 1
78
```

Figure 1: Standard smartBASIC source code with color syntax highlighting

4   *SMART*BASIC NOTEPAD++ SYNTAX SETUP

To configure Notepad++ for color syntax highlighting for the first time, perform the following actions:

1. If necessary, install Notepad++ (version 6.4.5 or newer).
2. From the BL654 firmware upgrade zip file, copy the file *smartBASIC(Notepad++).xml* to the desktop (it is deleted in the final step).
3. Start Notepad++.
4. If Notepad++ is already configured for *smart*BASIC color syntax highlighting, then *smart*BASIC must be removed. To do this, follow these steps:
    a. Select **Language > Define your language.**
    b. In the User Language dropdown menu, select *smart*BASIC.
    c. Click **Remove**.
    d. Close the User Defined Language dialog box.
5. Close Notepad++.
6. Start Notepad++.
7. Close all current (non-empty) Notepad++ documents.
8. From the top menu, select **Language > Define your language** to open the User Defined Language vW.X.Y.Z window.
9. Click **Import**.
10. From the new popup screen, find and select the *smartBASIC(Notepad ++).xml* file in the folder saved in step 2.
11. Click **Open**.
12. Close the remaining popup screen and then close Notepad++.
13. Reopen Notepad++.
14. From the top menu, select **Language > smartBASIC.**
    You can now delete the *smartBASIC (Notepad++).xml* file from your desktop

Loading a .sb or a .sblib file from the sample apps should now result in the source code being displayed with color syntax highlighting.

5 SMARTBASIC NOTEPAD++ SYNTAX EDITING

To edit with *smart*BASIC Notepad++, follow these steps:

1. Start Notepad++.
2. From the taps on the top select **Language > Define your language**.
3. From the new window, select **User Language > smartBASIC**.

You are now able to edit your syntax as needed.

5.1 Further Information

Further information relating to firmware and the use of UWTerminal is available from the Laird website at
https://www.lairdtech.com/products/bl654-ble-thread-nfc-modules.

6 REVISION HISTORY

Version	Date	Notes	Contributor(s)	Approver
1.0	09 July 2018	Initial Release	Youssif Saeed	Jonathan Kaye