Instructions for RN4678 Firmware Update

RN4678 firmware can be loaded into a RN4678 module, mounted on RN4678 PICtail using the Flash Update tool ***isbtflash_21.exe***. Follow the detailed steps below to perform firmware upgrade. This instruction applies to both RN4678 EVB board and RN4678 module mounted on customer.

Read and follow the instructions very carefully to ensure a successful firmware upgrade.

1. RN4678 firmware update requires following components:
    a. One personal computer running on Windows 2000 or later
    b. RN4678 PICtail board and USB cable that connects the board to PC
    c. Microchip Bluetooth flash tool **isbtflash.exe**
    d. Official release set of images for RN4678 firmware from authorized sources. Make sure that the released image set is uncompressed and put into a single directory.
2. Adjust the switch board to Write Flash Mode. All three switches should be turned to **ON** position, as show in figure 1. For modules, ensure P2_0, P2_4, and EAN are pulled high.

Figure 1: Switch Board in Write Flash Mode

3. Connect RN4678 PICtail to the personal computer with USB cable. Press the Reset button if necessary and make sure that the blue LED should flash quickly to indicate that it is in Write Flash mode.
4. From the PC, launch Microchip Bluetooth flash tool **isbtflash.exe** and adjust the port settings from the tool's user interface as follows
    a. The COM port number should be assigned to the RN4678 PICTail connected to the PC USB port.
    b. The baud rate of COM port should be set to 115200:32
    c. Set proper bank number. The number of banks is equal to the number of files with extension of .Hxx. For instance, if the image set has file with extension .H00 to .H05, then the bank number should be set to 6.
    d. The proper setting from the user interface could be seen in figure 2.

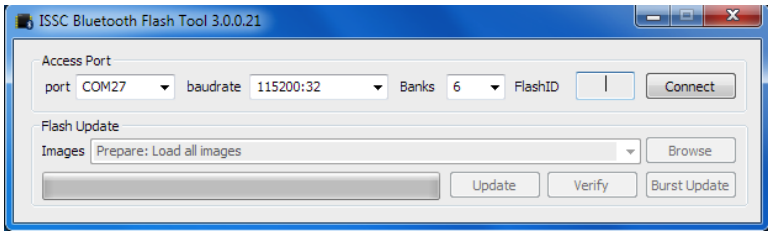

Figure 2: Access Port Settings of Bluetooth Flash Tool

5. Click “Connect” button to establish connection between Bluetooth flash tool and RN4678 board.
6. Click “Browse” button to pop out file window to choose the image set to be upgraded. User should browse the file window to the directory where RN4678 release images are stored and choose all the image files with extension .Hxx (where xx is from 00 to *number of banks minus one*) using SHIFT key, as shown in figure 3.

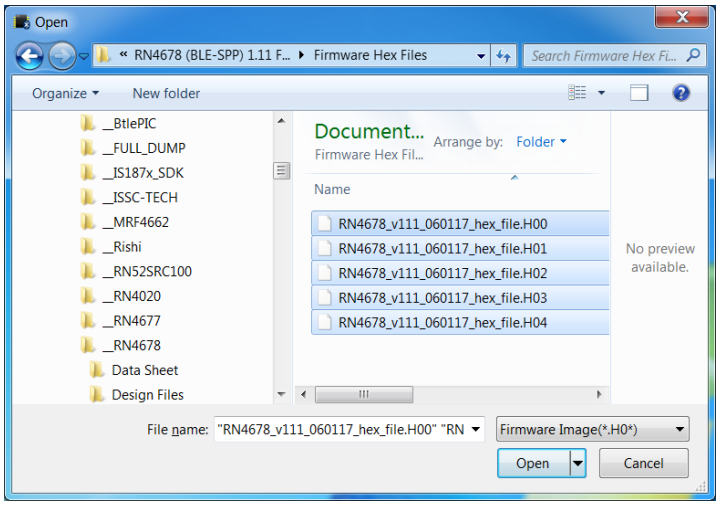

Figure 3: Selecting RN4678 images

7. Click **Update** button to start the updating process. It may take a few minutes to update the firmware. As shown in Figure 4, a complete progress indicates firmware update is finished. After finish firmware update, optionally, user could click **Verify** button to compare the image in RN4678 flash and image files. Then, the button **Disconnect** should be clicked to finish firmware upgrade process.

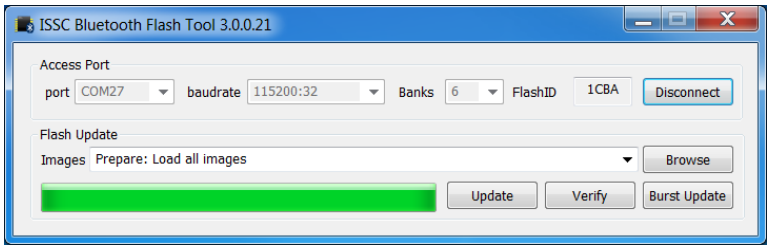

Figure 4: Firmware Update Completed

8. Once firmware upgrade is finished, adjust the switch board to App Mode (all three switches at OFF position) and press RESET button to run the newly upgraded firmware. The blue LED should blink periodically with relatively long interval.
9. The RN4678 module will be discoverable by Bluetooth host as “Dual_SPP”