



Mpression Odyssey

Alternate BLE Firmware Update Utility Script

Overview:

This document provides the steps to update the Odyssey BLE firmware using an alternate utility script – in the event the standard posted utility script does not work for the user. Some users have been unable to update their BLE firmware using the original script with certain host PC configurations including Windows 10. This script requires a [Cygwin](#) installation.

Broadcom WICED Smart SDK Required

It is assumed the host PC has the Broadcom WICED Smart SDK installed per the [Odyssey User Guide](#), sections 2.2.7B and 5.2/5.22. Users should get version SDK2.2.2 (newer should work).

Files Required

The following files are required. They should be available in a zip file along with this document on the [Mpression Odyssey Software Download page](#) (“Utilities” section).

File Name	Description
windows_cygwin_installation.pdf	Steps for installing required Cygwin environment
odyssey_fmfw_update_cyg_unix.sh	Top level script – sets filenames, etc
<BLE_firmware_ver_install_script>.cgs *	Firmware programming script for BLE (Broadcom)
<BLE_firmware_filename>.hex **	BLE firmware image
bt_mac_address.txt	Bluetooth MAC Address text file

* Version 2.0 filename: A_20737A1_BLE_v2_0_17Feb2016.cgs

** Version 2.0 filename: BLE_odyssey_v2_0_17Feb2016.hex

Users should only update these files – per installation instructions in the following section:

- odyssey_fmfw_update_cyg_unix.sh – the top level script (path & file names, etc)
- bt_mac_address.txt – for setting new MAC ID – optional (no requirement to do this)

Installation / Setup Steps:

1. Make sure you have Cygwin installed on your PC.
 - If not already installed, follow the included document: windows_cygwin_installation.pdf. Remember the path where you installed it.
 - If you have Altera Quartus tools installed, you should find Cygwin here:
C:\altera\<quartus_version>\quartus\bin64\cygwin
-or- for Quartus Prime Pro:
C:\altera_pro\<quartus_version>\quartus\bin64\cygwin
2. Place the following files in your Cygwin user directory:
<Cygwin_path>\home\<your_user_name>\
Examples for directory: C:\altera\15.1\quartus\bin64\cygwin\home\girving
C:\cygwin\home\girving (where *girving* is user name)
 - odyssey_fmw_update_cyg_unix.sh
 - <BLE_firmware_ver_install_script>.cgs (for ver 2.0: A_20737A1_BLE_v2_0_17Feb2016.cgs)
 - <BLE_firmware_filename>.hex (for ver 2.0: BLE_odyssey_v2_0_17Feb2016.hex)
 - bt_mac_address.txt
3. Open the script file *odyssey_fmw_update_cyg_unix.sh* in a text editor to do the following:
 - Modify the Broadcom WICED Smart tools path to point to your SDK installation.
This is the first “Mandatory Parameter” to set, named “SDK_PATH_FROM_USER”.
An example is given in the script. Must have single quotes around the path.
Example:
`SDK_PATH_FROM_USER='C:\Users\mickael\Documents\WICED\WICED-Smart-SDK-2.2.2\'`
 - Check/set the Mandatory Parameter “ODYSSEY_FIRMWARE_HEX_FILE_NAME”
(default should be okay for version 2.0 firmware)
Example:
`ODYSSEY_FIRMWARE_HEX_FILE_NAME=BLE_odyssey_v2_0_17Feb2016.hex`
 - OPTIONAL – If changing the MAC Address (ID) of your Odyssey BLE
Default setting does NOT change MAC ID: `SET_NEW_MAC_ADDRESS=n`
(Only reason to change this is for using multiple Odyssey kits to avoid contention)
To change MAC ID:
 - Modify “Optional Parameter” named SET_NEW_MAC_ADDRESS to:
`SET_NEW_MAC_ADDRESS=y`
... and just below that...
 - Check/set programming script “CGS” filename (default should be okay for ver 2.0):
Example:
`ODYSSEY_FIRMWARE_CGS_FILE_NAME=A_20737A1_BLE_v2_0_17Feb2016.cgs`
 - Make sure you have the MAC ID set in the text file: *bt_mac_address.txt*
First line of the file should just have the 12-character MAC ID (hex characters)
Example: 0123456789ab

- Save the file(s)

Script Execution:

1. Start the Cygwin shell

Double-click on Cygwin.bat in the cygwin folder. This opens the shell into your user directory with the scripts and files. Can type "ls" at the prompt to list / check the file names.

2. Run the top level script

At the prompt launch the script as follows:

```
./odyssey_fmw_update_cyg_unix.sh
```

NOTE: If the script fails to run, give it executable privileges with this command:

```
chmod +x odyssey_fmw_update_cyg_unix.sh
```

History:

Version	Date	Note	From
1.0	06/29/2016	Initial Version	GBI/MTI

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