

Recovering the Firmware

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1 Prerequisites

- You need to have an account on www.cypress.com inorder to download wiced sdk.
- A windows running machine.
- Knowledge about C programming.
- Read Programming Wiced with Wiced SDK document in this repo.

2 Hardware Requirement

- Wiced Sense Tag
- A local system (Laptop or PC with bluetooth 4.0 or above)
- Micro Usb Cable

3 Software Requirement

- Wiced Sense SDK

4 Recovery Procedure

1. Remove the CR2032 battery (Button Cell Battery) by opening the cover on the back of the wiced sense.



Figure 1: Turn to open the back cover



Figure 2: Removing the battery

2. Open the Wiced sense device. The top housing do not have any screws, it is attached by locking mechanism. Open it with a screw driver by pushing it from the space where we place the battery.



Figure 3: Removing the housing

3. Remove the housing in which the pcb is enclosed so as to make the boot and reset buttons visible. Remove the screws that are shown in the image.



Figure 4: Removing the top cover

4. Follow the instructions given in Programming the Wiced Sense document for installing the Silicon Labs USB Drivers and the Wiced SDK.
5. Connect the USB cable to Wiced Sense Kit.

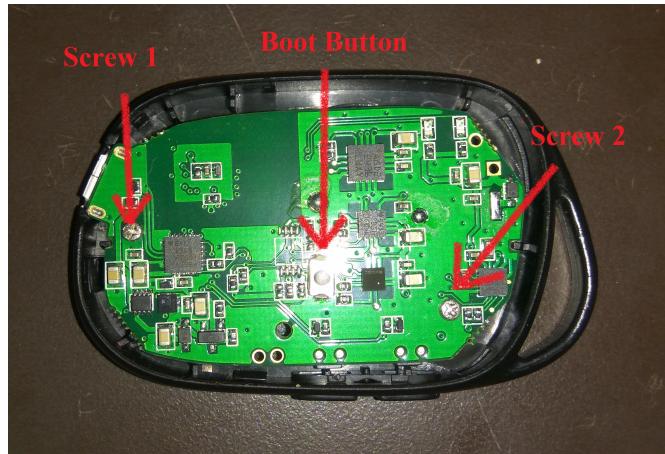


Figure 5: Front PCB view

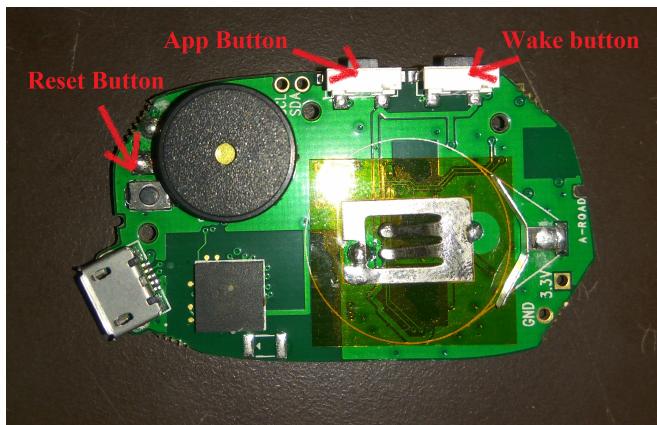


Figure 6: Back PCB view

6. Go to Control Panel > Hardware And Sound > Device Manager > Ports.
7. Note down the Enhanced COM port on which the wiced is connected.
8. Open the Wiced SDK.
9. Refer Programming Wiced with Wiced SDK document to make the target.

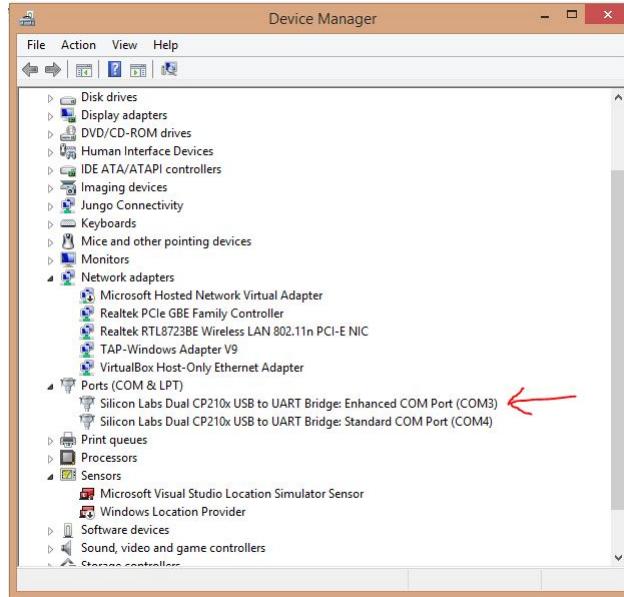


Figure 7: Device Manager Snippet

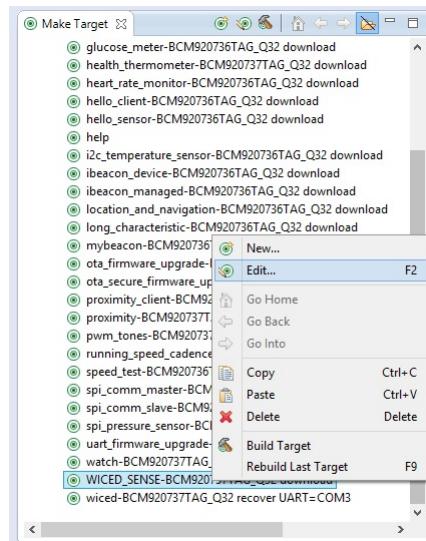


Figure 8: Making new target

10. Edit the name of the target whose name was WICED-SENSE-BCM920737TAG-Q32 download to WICED-SENSE-BCM920737TAG-Q32 recover UART=COM3 in the Modify target dialog box.
11. Note that the COM port in your system may be different. Replace COM3 with that COM port.

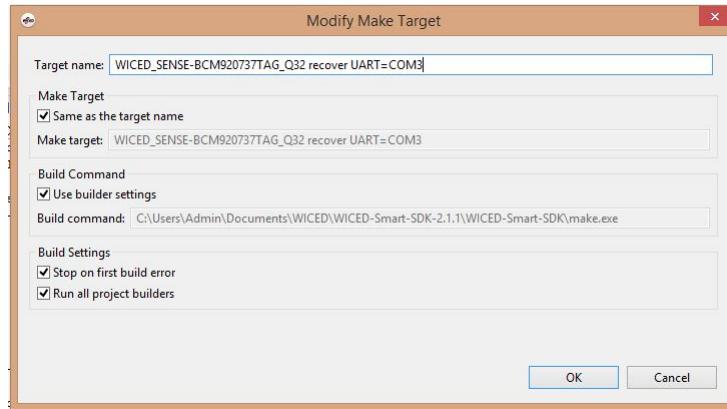


Figure 9: Modifying target

12. Now all set. Double click on the target and the compiling process should begin.
13. You can observe the output on the console.

```

-----[redacted]-----
Patches start at          0x00204568 (RAM address)
Patches end at           0x002052D0 (RAM address)
Application starts at    0x00204F70 (RAM address)
Application ends at      0x00207966 (RAM address)

Patch size (including reused RAM)   3432 bytes
Patch size                      2568 bytes
Application size                  10742 bytes
-----
Total RAM footprint            13310 bytes (13.0kiB)
-----

Converting CGS to HEX...
Conversion complete

Creating OTA images...
Conversion complete
OTA image footprint in NV is 12855 bytes

Recovering platform ...
Recovery complete

Application running

07:40:59 Build Finished (took 19s.113ms)
-----[redacted]-----

```

Figure 10: Console log output

14. You will see Recovering platform and Recovery Complete on the console. At the end you will get Application Running. It means that recovering firmware was successful.

5 References

- <https://community.cypress.com/community/wiced-smart/wiced-smart-forums/blog/2014/08/27/wiced-sense-ios-source-code>
- Refer the video in Research/Videos section.