

Wiced IDE and SDK Followed Procedure

Step 1:

Downloaded the WICED IDE 3.5.2, SDK 3.5.2 and Platform for STDiscovery407_BCM43362 from following link,

<https://community.broadcom.com/community/wiced-wifi/wiced-wifi-forums/blog/2015/01/02/sn8000-wifi-module-with-stm-discovery-board>

Step 2

Installed IDE and ported the SDK.

After ported the STDiscovery407_BCM43362 SDK. The IDE looks like, as shown in the figure 1.1

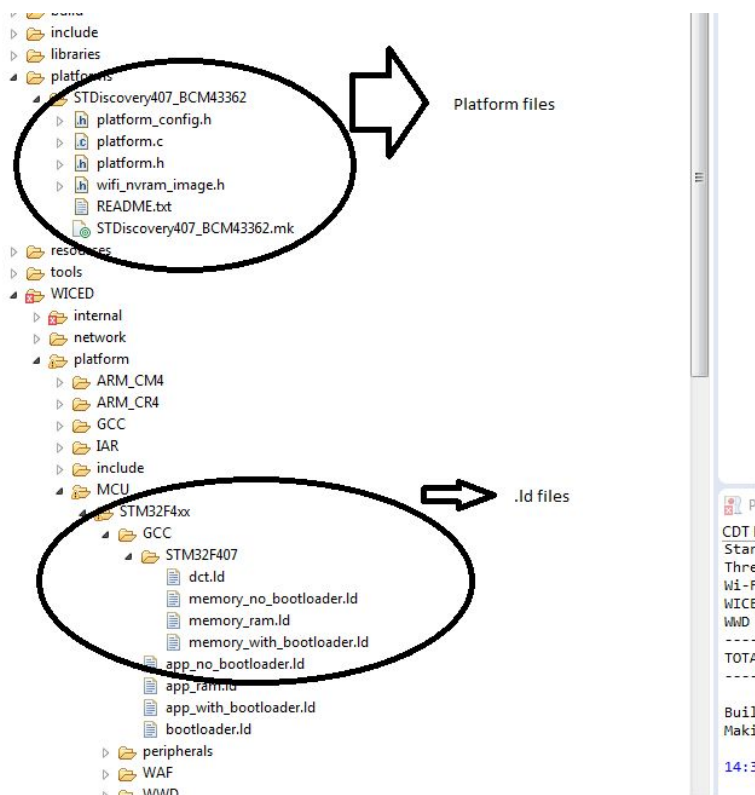
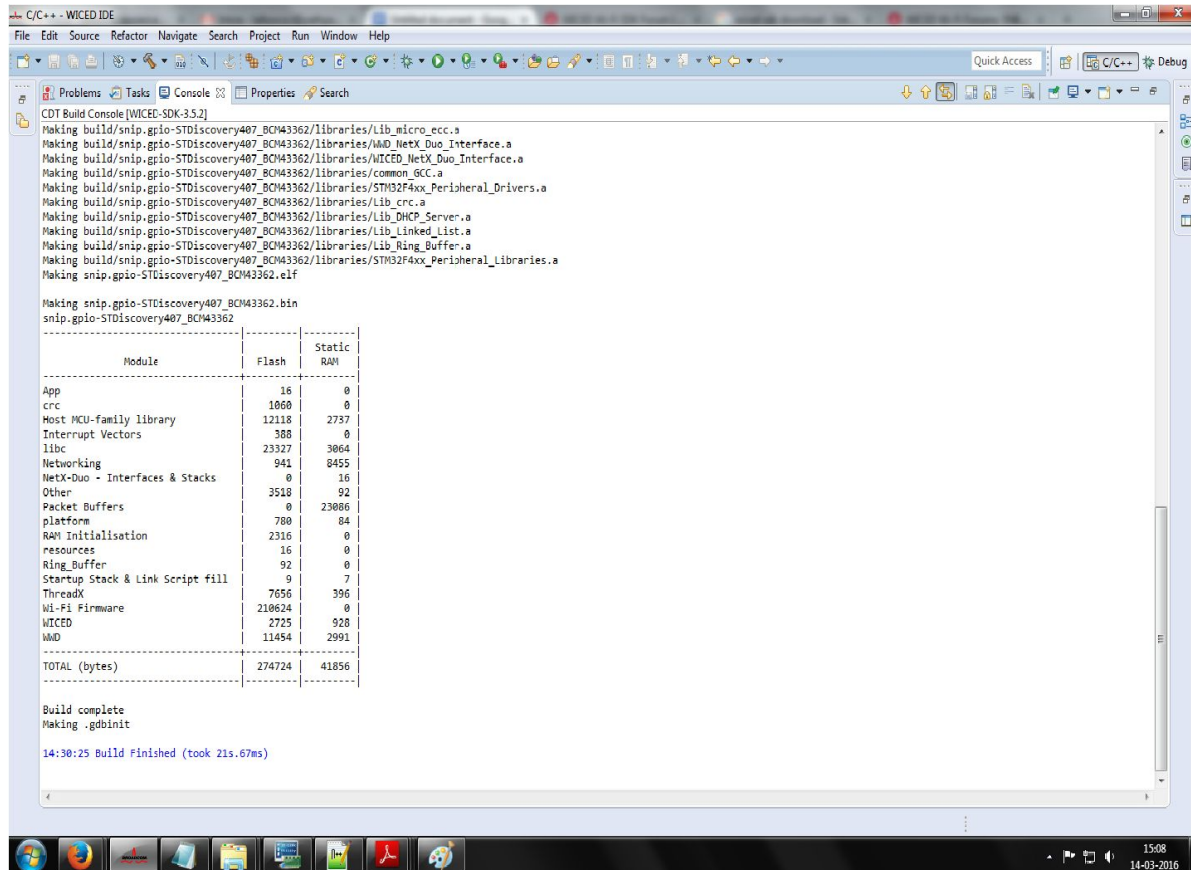


Figure 1.1 : Ported wiced sdk for stm32f4xx_discovery

Step 3 :

Created an Make Target as “snip.gpio-STDDiscovery407_BCM43362” for to build.
Build logs as shown in the figure 2.2



```
CDT Build Console [WICED-SDK-3.5.2]
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/lib_micro_ecc.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/MD_NetX_Duo_Interface.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/WICED_NetX_Duo_Interface.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/common_GCC.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/STM32F4xx_Peripheral_Drivers.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/Lib_crc.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/Lib_DHCP_Server.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/Lib_Linked_List.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/Lib_Ring_Buffer.a
Making build/snip.gpio-STDDiscovery407_BCM43362/libraries/STM32F4xx_Peripheral_Libraries.a
Making snip.gpio-STDDiscovery407_BCM43362.elf

Making snip.gpio-STDDiscovery407_BCM43362.bin
snip.gpio-STDDiscovery407_BCM43362
-----
Module                Flash    Static
-----
App                    16      0
crc                   1060    0
Host MCU-family library 12118   2737
Interrupt Vectors     388     0
libc                  23327   3064
Networking            941     8455
NetX-Duo - Interfaces & Stacks 0       16
Other                 3518    92
Packet Buffers        0       23006
Platform              700     84
RAM Initialisation    2316    0
resources             16      0
Ring_Buffer           92      0
Startup Stack & Link Script fill 9       7
ThreadX               7656    396
Wi-Fi Firmware        210624  0
WICED                 2725    928
WnD                   11454   2991
-----
TOTAL (bytes)         274724  41856
-----

Build complete
Making .gdbinit

14:30:25 Build Finished (took 21s.67ms)
```

Figure 1.2: Build logs

Which is created three images such as bootloader.bin, DCT.bin and app.bin.
Build logs attached here, please look at the attachment as “bootloader”.

Flashed the images on STM32F4xx discovery board by using STM utility as shown in the figure 1.3.

Bootloader.bin at 0x0800000

DCT.bin at 0x08004000

App.bin at 0x0800C000

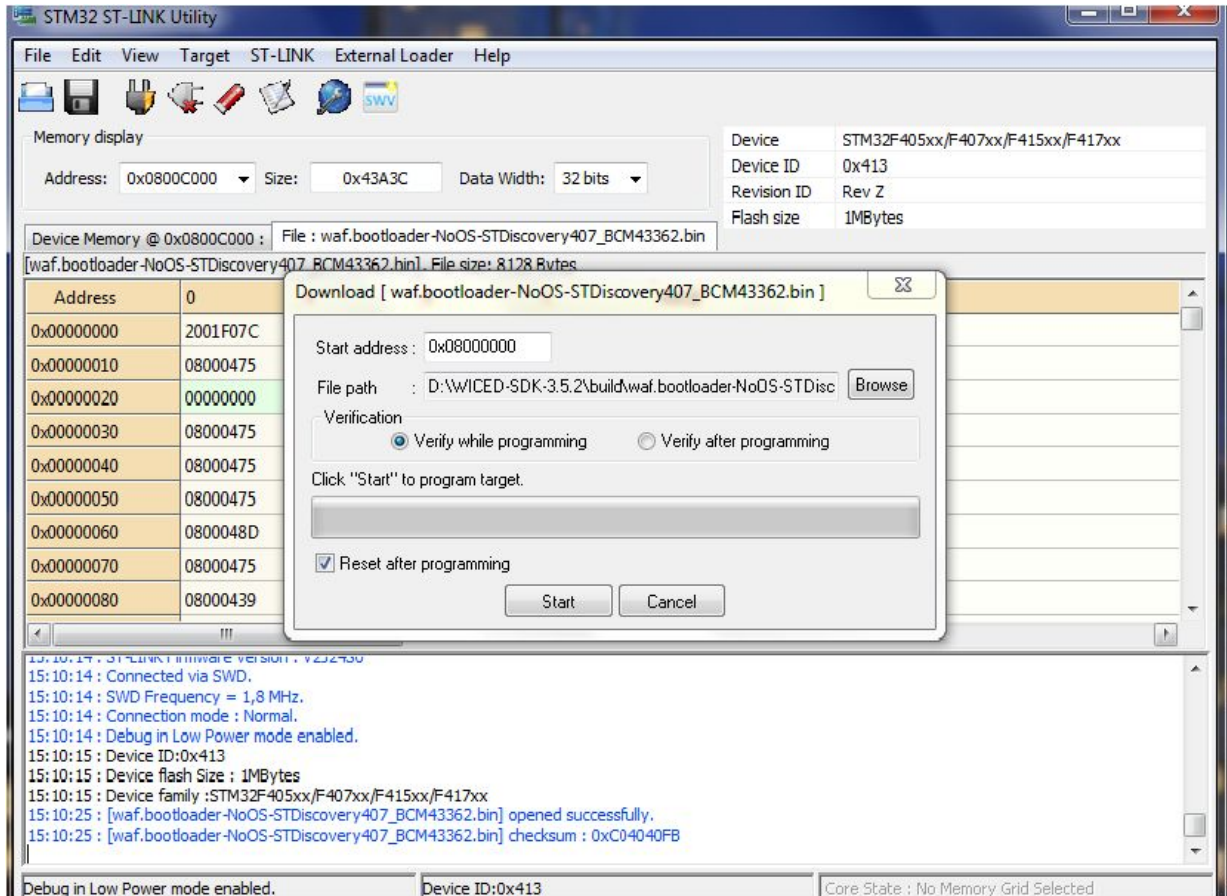


Figure 1.3 : Flashed the images via STM utility at fixed memory location

Step 4:

After flashed all the images, Bootloader is running..

Bootloader initialize four on board led as output and on two of them is high(2 and 3). Which is located at **"WICED-SDK-3.5.2\platforms\STDDiscovery407_BCM43362\platform.c"** `platform_init_external_devices()`

```

223
224 void platform_init_external_devices( void )
225 {
226     /* Initialise LEDs and turn off by default */
227     platform_gpio_init( &platform_gpio_pins[WICED_LED1], OUTPUT_PUSH_PULL );
228     platform_gpio_init( &platform_gpio_pins[WICED_LED2], OUTPUT_PUSH_PULL );
229     platform_gpio_init( &platform_gpio_pins[WICED_LED3], OUTPUT_PUSH_PULL );
230     platform_gpio_init( &platform_gpio_pins[WICED_LED4], OUTPUT_PUSH_PULL );
231     platform_gpio_output_low( &platform_gpio_pins[WICED_LED1] );
232     platform_gpio_output_high( &platform_gpio_pins[WICED_LED2] );
233     platform_gpio_output_high( &platform_gpio_pins[WICED_LED3] );
234     platform_gpio_output_low( &platform_gpio_pins[WICED_LED4] );
235
236     /* Initialise buttons as input by default */
237     platform_gpio_init( &platform_gpio_pins[WICED_BUTTON1], INPUT_PULL_UP );
238     // platform_gpio_init( &platform_gpio_pins[WICED_BUTTON2], INPUT_PULL_UP );
239

```

→ 2nd and 3rd led's are ON
1st and 4th led's are OFF

Bootloader is not jump into application

After initialized all peripherals, it's jump into app code, which is located at "WICED-SDK-3.5.2\WICED\platform\MCU\STM32F4xx\WAF\waf_platfom.c"

void platform_start_app(uint32_t entry_point);

```
/* Now rely on the app crt0 to load VTOR / Stack pair
   SCB->VTOR = vector_table_address; - Change the vec
   __set_MSP( *stack_ptr ); */
   __jump_to( entry_point );
}
```

In our application code we make the LED1 to high. But is not getting high

```
57 void application_start( )
58 {
59     /* Initilise the WICED device */
60     wiced_init();
61     wiced_gpio_output_high( WICED_LED1 );
62 }
```