

NILE

Bluetooth Low Energy 5.4

BLINKY FREERTOS

1 Overview

The blinky_FreeRTOS App note shows the difference in Blinky application with FreeRTOS and without FreeRTOS. FreeRTOS shows the features like task, task delay and timer. FreeRTOS will run the multiple tasks parallelly with the task delay using task timer. Task timer will blink the LED1& LED2 at scheduled time. The Blinky without FreeRTOS shows all the LEDs are changing their states one after the other with 500ms delay.

2 Hardware Requirements

- NILE DVK
- Micro USB Cable
- PC/Laptop with latest SEGGER Embedded Studio and nRF5 SDK

3 Software Requirements

- SEGGER Embedded Studio IDE. Click on the below link to download the IDE, [SEGGER Embedded Studio](#) and extract the downloaded file
- NRF5 SDK latest version. Click on the below link to download the latest SDK, [nRF5 SDK](#) and extract the downloaded file

4 Procedure

- Connect the NILE DVK to the PC or Laptop with the micro USB cable (J2)
- Power ON the DVK by toggling the power switch (SW8) and observe that LED5 is ON on DVK
- Open nRF5 SDK->Examples->Peripheral->blinky_FreeRTOS->pca10056->blank->SES-> open Embedded Project file (.EM PROJECT FILE)
- Compile and run the application. Observe that LED1 is ON on DVK. This indicates that the application is advertising
- Now observe the response on DVK ie LED1 & LED2 are blinking parallelly with a scheduled time.

Now let's observe the procedure of Blinky Application without FreeRTOS:

- Connect the NILE DVK to the PC or Laptop with the micro USB cable (J2)
- Power ON the DVK by toggling the power switch (SW8) and observe that LED5 is ON on DVK
- Open nRF5 SDK->Examples->Peripheral->blinky_FreeRTOS->pca10056->blank->SES-> open Embedded Project file (.EM PROJECT FILE)
- Compile and run the application. Observe that LED1 is ON on DVK. This indicates that the application is advertising
- Now observe the response on DVK i.e LED1 & LED2 are blinking parallelly with a scheduled time.