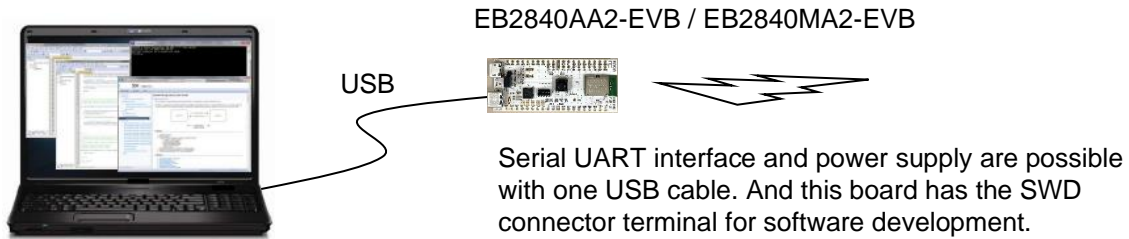

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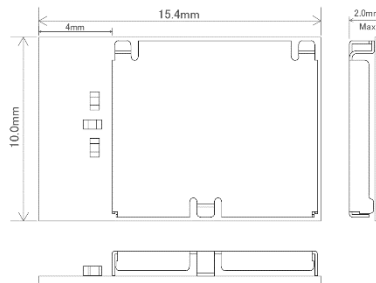
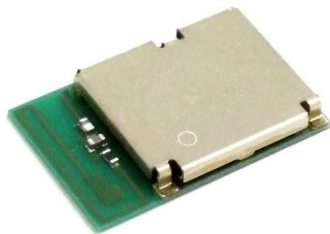
1. Introduction

This evaluation board is applicable for KAGA FEI's **Bluetooth® low energy** module, EB2840 Series.



2. Mounted module

EB2840 (10.0mm x 15.4mm x 2.0mm_MAX)



Nordic nRF52840 / ARM® Cortex™-M4F 32 bit processor and 1MB Flash & 256kB RAM
63-pin Land Grid Array / 46GPIOs / SWD

- Basic Module -

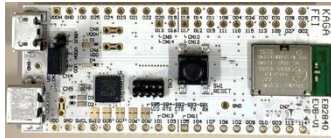
KAGA FEI writes S140 SoftDevice to this product (EB2840AA2).

The user can develop unique application for the module.

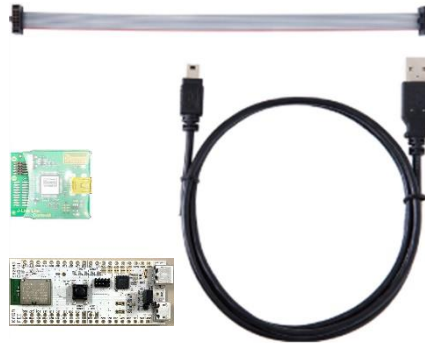
3. Content

1	EB2840AA2-EVB / EB2840MA2-EVB Evaluation Board + USB cable for Evaluation Board	1 pc
2	J-Link Lite (EB2840AA2-EVK Only) + USB cable for Evaluation Board *1	1 set

1. EB2840AA2-EVB / EB2840MA2-EVB



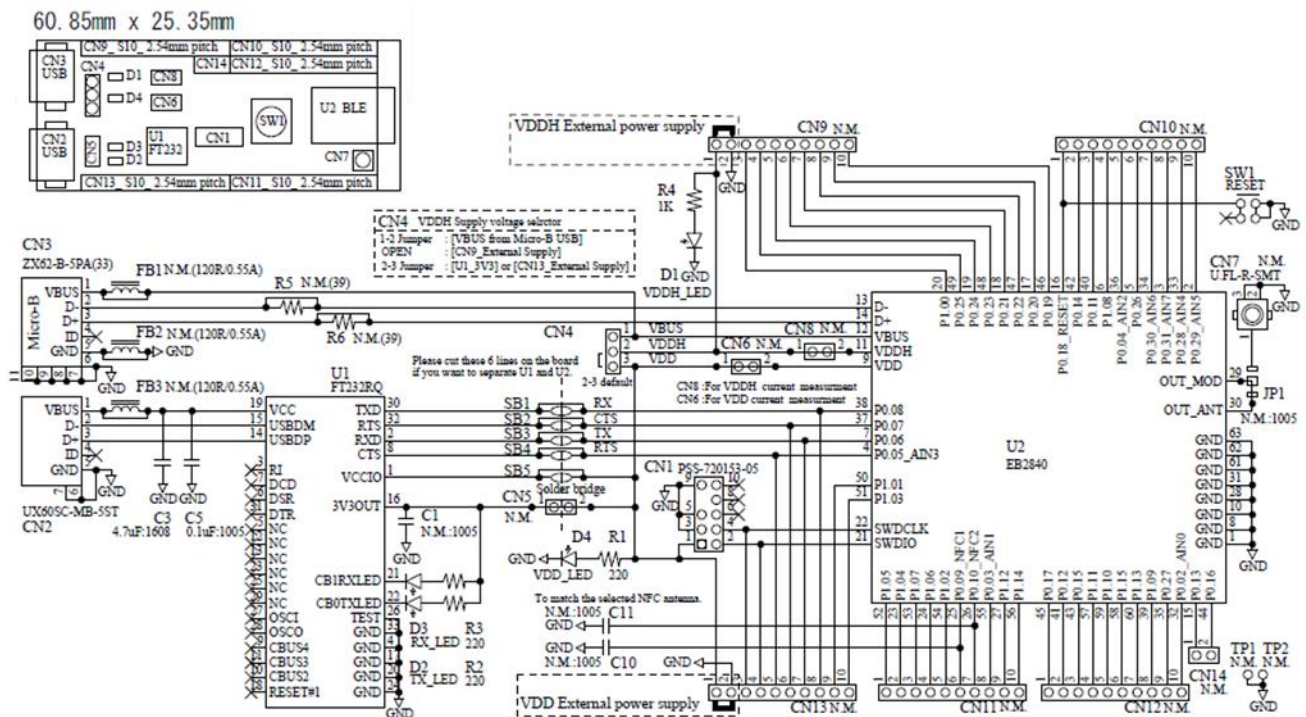
2. EB2840AA2-EVK



*1 Notes on using J-Link Lite

J-Link Lite is only delivered and supported as part of an evaluation kit, which includes an evaluation board. It may only be used with the evaluation board it came with, and not to be used for commercial product development.

4. Evaluation board circuit schematic



7. Pin Descriptions

Pin No.	CN9	CN10	CN11
1	VDDH	P0.18_RESET	P1.05
2	GND	P0.14	P1.04
3	P1.00	P0.11	P1.07
4	P0.25	P1.08	P1.06
5	P0.24	P0.04_AIN2	P1.02
6	P0.23	P0.26	P0.09_NFC1
7	P0.21	P0.30_AIN6	P0.10_NFC2
8	P0.22	P0.31_AIN7	P0.03_AIN1
9	P0.20	P0.28_AIN4	P1.12
10	P0.19	P0.29_AIN5	P1.14

Pin No.	CN12	CN13	CN14
1	P0.17	VDD	P0.13
2	P0.12	GND	P0.16
3	P0.15	SWDCLK	-
4	P1.11	SWDIO	-
5	P1.10	P0.05_AIN3 / RTS	-
6	P1.15	P0.07 / CTS	-
7	P1.13	P0.06 / TX	-
8	P1.09	P0.08 / RX	-
9	P0.27	P1.01	-
10	P0.02_AIN0	P1.03	-

8. How to use

It is very easy just to tie this board to the PC with a USB cable. It is not necessary to change the setting of the board. The power supply of the module supplies by default 3.3V from 3V3OUT of FT232RQ.

9. For software development

Nordic-DK and Use case



Nordic nRF Connect etc.



NORDIC DK

microUSB
miniUSB

EB2840AA2-EVB

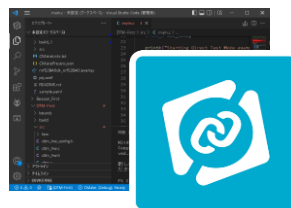
SWD



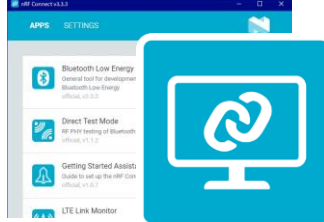
- SEGGER Embedded Studio



- Visual Studio Code



- nRF Connect for Desktop



etc.

- Nordic-nRF52840 DK

<https://www.nordicsemi.com/Products/Development-hardware/nRF52840-DK>



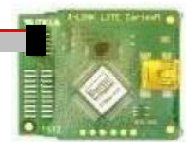
SWD : Serial Wire Debug
It can be use J-Link Lite CortexM-9
JTAG/SWD Emulator that attached with
EB2840AA2-EVK.



CN1 supports the connection of the 10 pin 1.27mm flat cable.



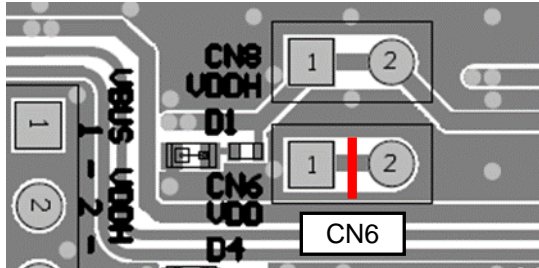
Please be careful about the directions.



10.MEMO

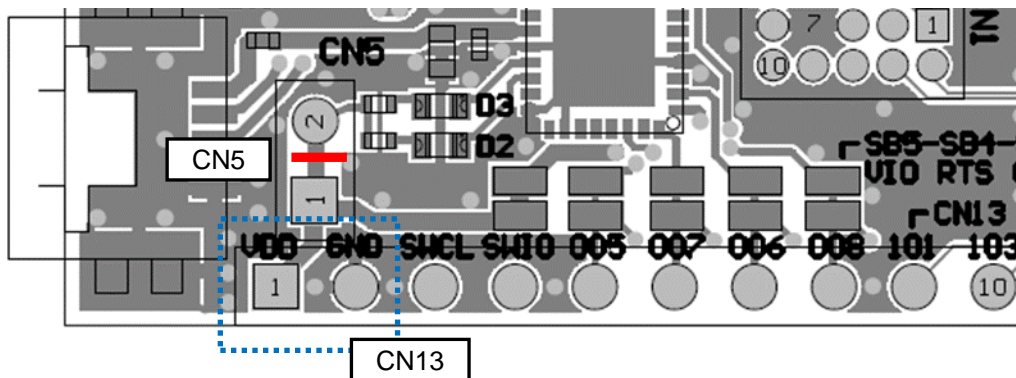
1) Current measurement

To measure VDD current, please cut the shorting 1pin and 2 pin of CN6. And connect an ampere-meter between the pins of connector CN6 to monitor the current directly.



2) About VDD power supply

When you use external power supply, please supply power from 1pin and 2pin of CN13. On this case, you cut short circuit 1pin and 2pin of CN5 and should separate 3V3OUT of FT232RQ.



3) USB to serial UART interface

It needs to install driver of FT232RQ to use USB for UART interface. The drivers are available on FTDI website.

<http://www.ftdichip.com/Drivers/D2XX.htm>

In addition, by the application development, please assign GPIO as follows.

GPIO	UART
P0.05	RTS
P0.06	TX
P0.07	CTS
P0.08	RX

4) Size and Coordinate information

