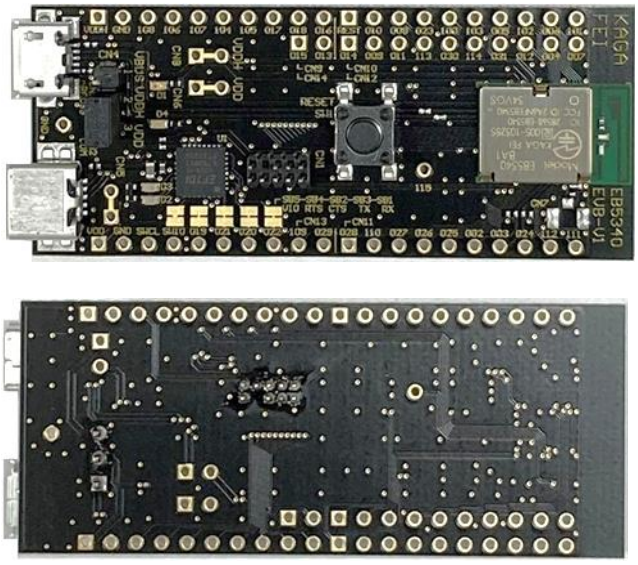
EVALUATION BOARD MANUAL
EB5340BA1-EVB

EVALUATION KIT MANUAL
EB5340BA1-EVK

for EB5340 Series Bluetooth® low energy Module



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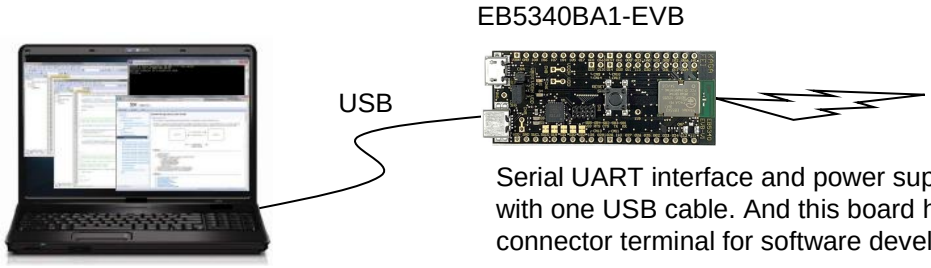
1.Introduction

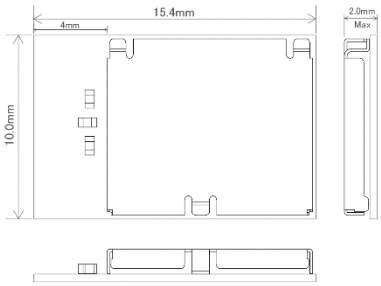
This evaluation board is applicable for KAGA FEI's ***Bluetooth***® **low energy** module, EB5340 Series.



Serial UART interface and power supply are possible with one USB cable. And this board has the SWD connector terminal for software development.

2.Mounted module

EB5340 (10.0mm x 15.4mm x 2.0mm_MAX)



Nordic nRF5340
/ ARM® Cortex™-M33 32 bit processor and 1MB Flash & 512KB RAM
/ ARM® Cortex™-M33 32 bit processor and 256KB Flash & 64KB RAM
63-pin Land Grid Array / 46GPIOs / SWD

- Basic Module -

The user can develop unique application for the module.

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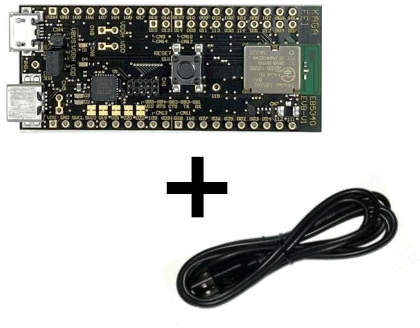
3.Content

1	EB5340BA1-EVB Evaluation Board + USB cable for Evaluation Board	1 pc
2	J-Link Lite (EB5340BA1-EVK Only) + USB cable for Evaluation Board *1	1 set

1. EB5340BA1-EVB

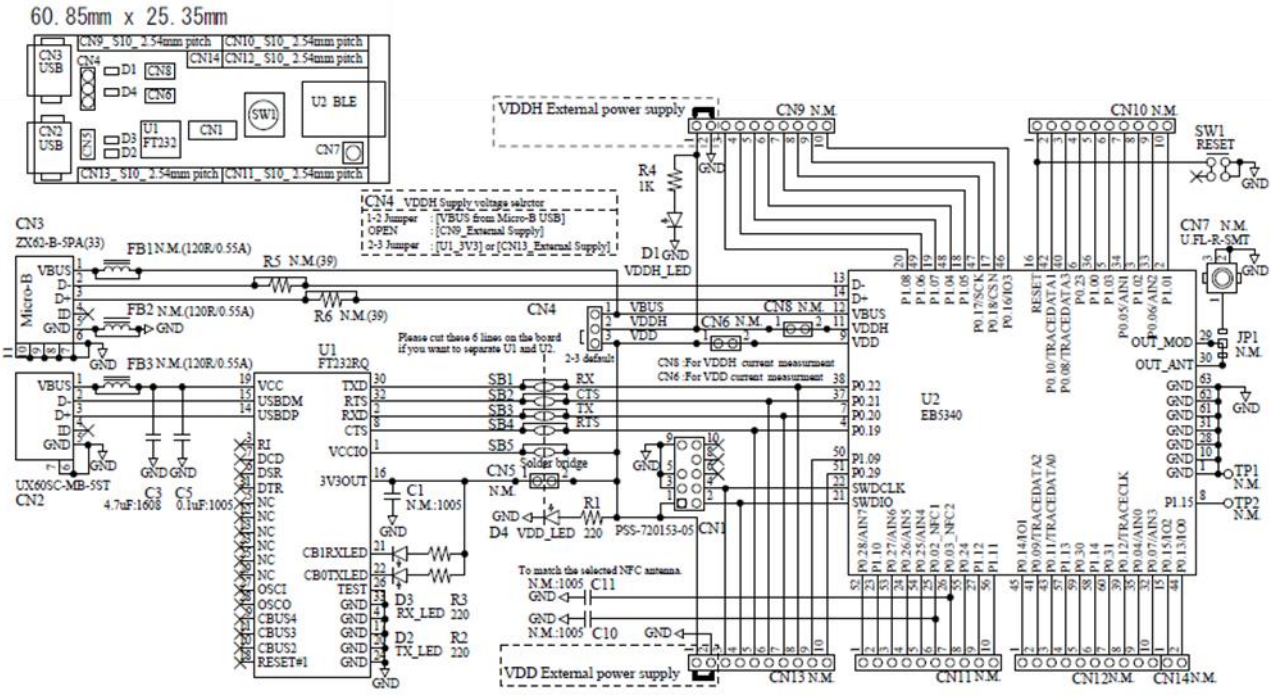


2. EB5340BA1-EVK

*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



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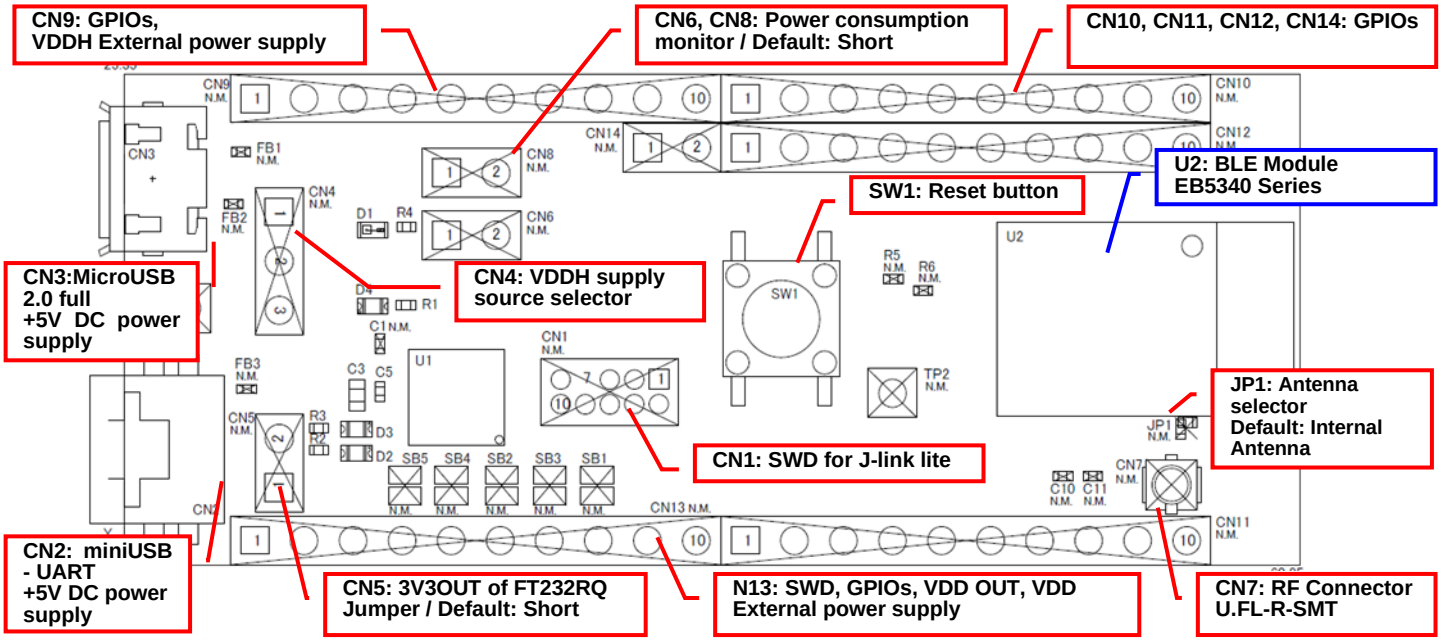
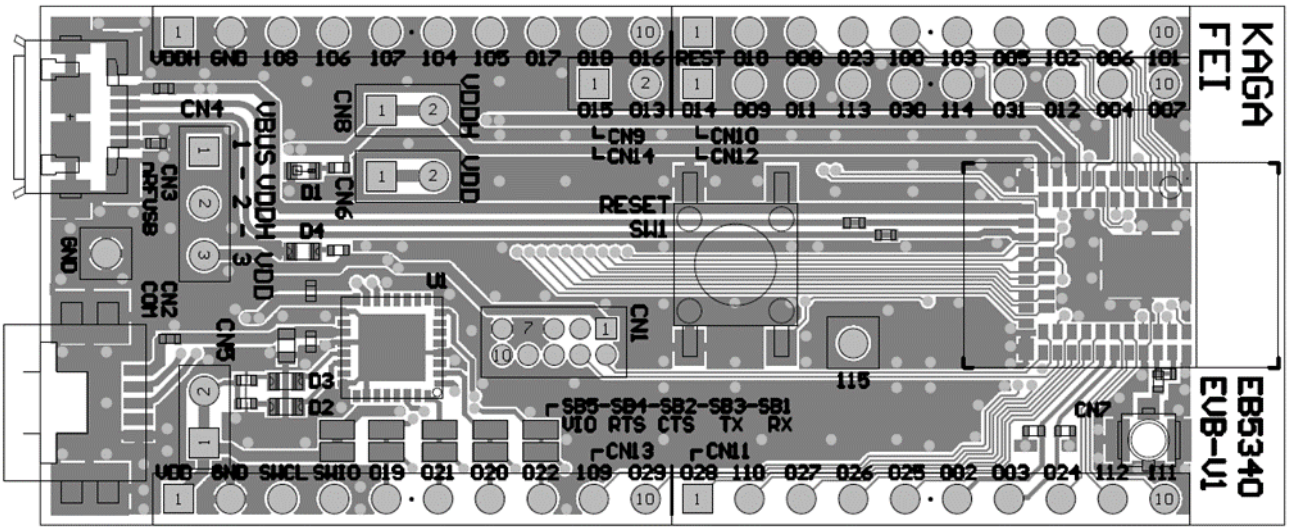
5.Evaluation board layout



1) All pin headers are 2.54mm pitch. And **CN9 - CN14** are on the **2.54mm grid**.
2) Many parts are not mounted. Please refer to (N.M.) in the circuit schematic.
3) **D1 (LED):** VDDH Indicator, **D4(LED):** VDDL(VCC_NRF) Indicator
4) **D2 (LED):** UART TX Indicator
5) **D3 (LED):** UART RX Indicator
6) **SW1 (Push button):** Module Reset (active low)

6.Silkscreen Printing



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7.Pin Descriptions

Pin No.	CN9	CN10	CN11
1	VDDH	RESET	P0.28/AIN7
2	GND	P0.10	P1.10
3	P1.08	P0.08	P0.27/AIN6
4	P1.06	P0.23	P0.26/AIN5
5	P1.07	P1.00	P0.25/AIN4
6	P1.04	P1.03	P0.02_NFC1
7	P1.05	P0.05_AIN1	P0.03_NFC2
8	P0.17/SCK	P1.02	P0.24
9	P0.18/CSN	P0.06_AIN2	P1.12
10	P0.16	P1.01	P1.11

Pin No.	CN12	CN13	CN14	TP2
1	P0.14/IO1	VDD	P0.15/IO2	P1.15
2	P0.09	GND	P0.13/IO0	-
3	P0.11	SWDCLK	-	-
4	P1.13	SWDIO	-	-
5	P0.30	P0.19	-	-
6	P1.14	P0.21	-	-
7	P0.31	P0.20	-	-
8	P0.12	P0.22	-	-
9	P0.04/AIN0	P1.09	-	-
10	P0.07/AIN3	P0.29	-	-

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.

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9.For software development

・Nordic-DK and Use case

Nordic
Master control panel
etc.

nRF5x-Dongle

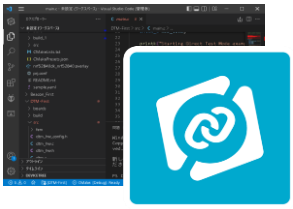
microUSB
miniUSB

SWD

EB5340BA1-EVB

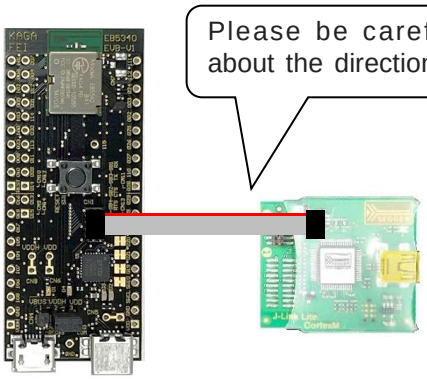
・SEGGER Embedded
Studio (Nordic Edition)

・Visual Studio Code



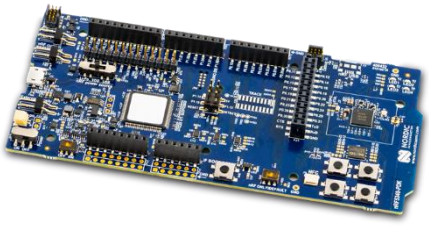
SWD : Serial Wire Debug
It can be use J-Link Lite CortexM-9 JTAG/SWD Emulator that attached with EB5340BA1-EVK.

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



Please be careful about the directions.

・Nordic-nRF5340-PDK
https://www.nordicsemi.com/Products/Development-hardware/nrf5340-pdk



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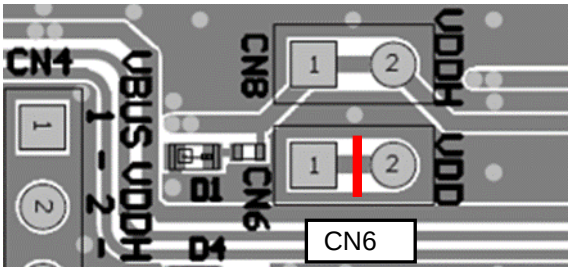
10.MEMO

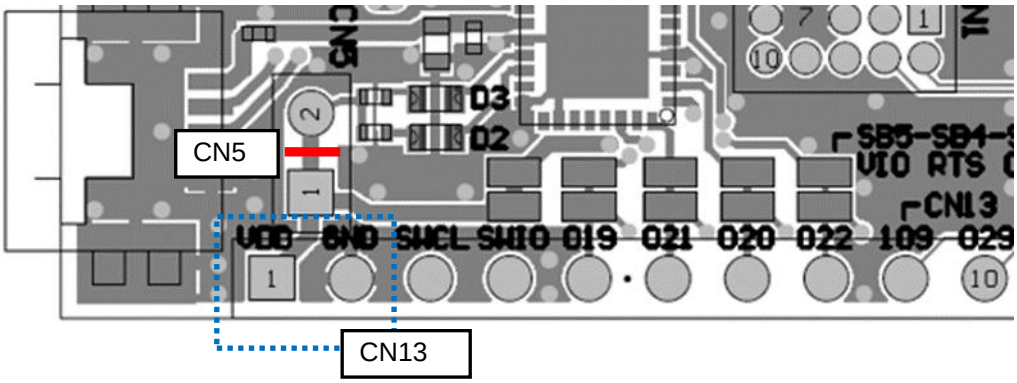
1) **Current measurement**

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
P0.19	RTS
P0.20	TX
P0.21	CTS
P0.22	RX

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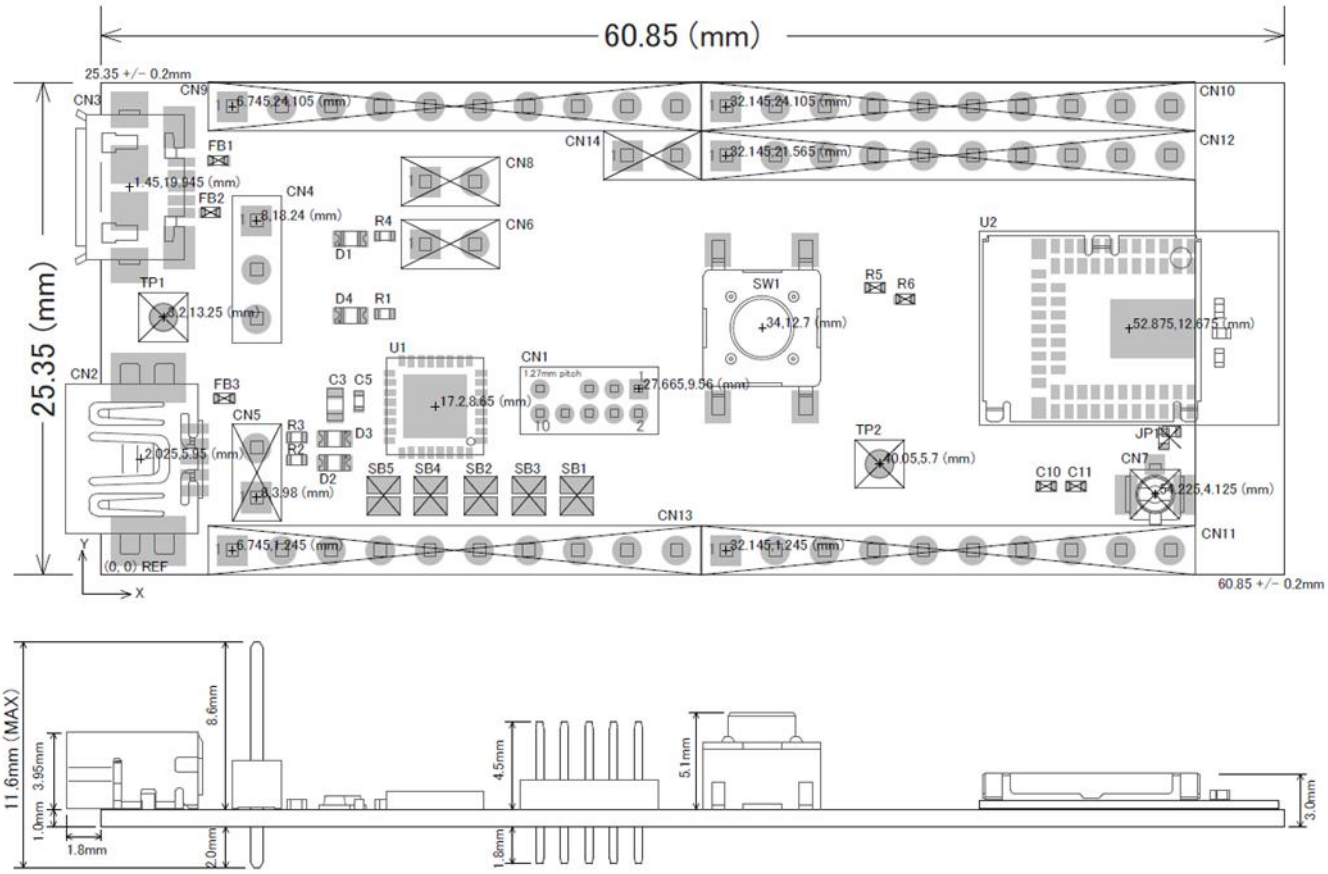
4) **Size and Coordinate information**



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