32-bit, 768 kHz Sampling Stereo Audio D/A Converter

BD34301EKV Evaluation Board (Software)

(BD34301EKV-EVK-005)

About this Manual

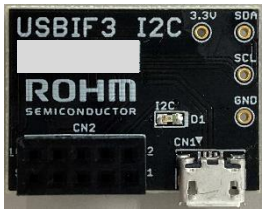
This manual explains USBIF3 for HDAC Control Software for operating BD34301EKV evaluation board.
(BD34301EKV-EVK-005)
This software supports Microsoft® Windows®7、Windows®10、Windows®11.
Please refer to BD34301EKV datasheet more detail information is required.

■Accessories

・CD-ROM

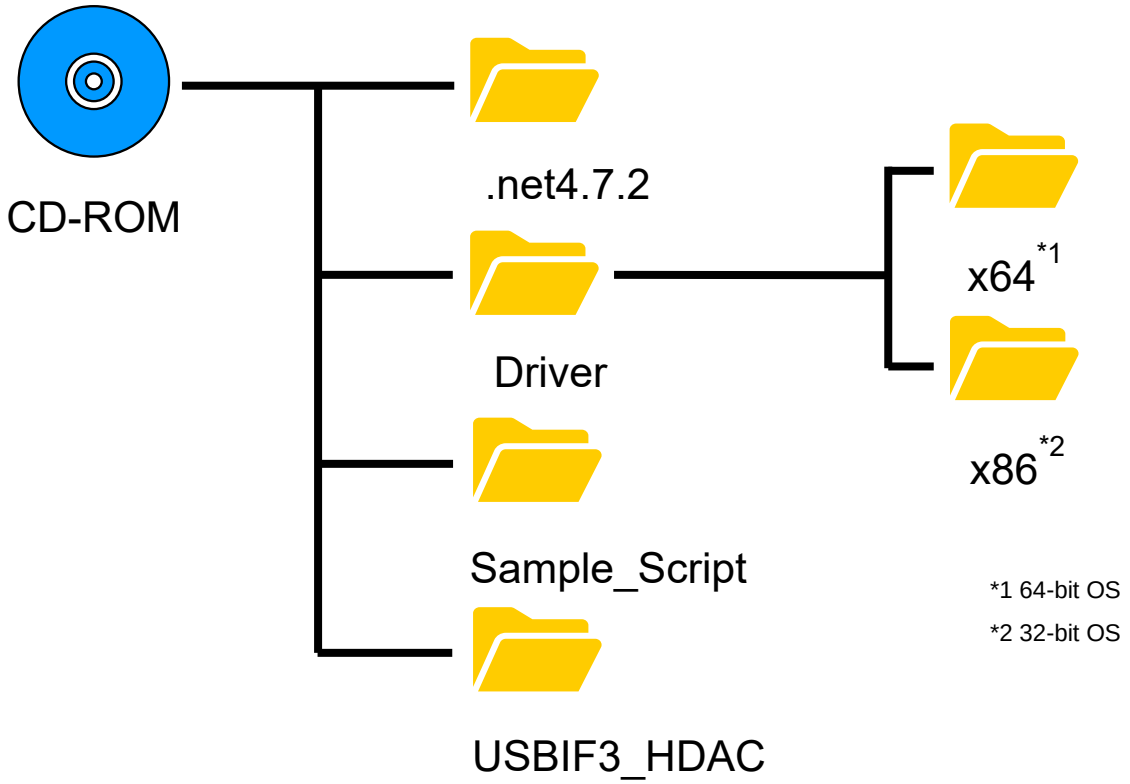
・USBIF3 for HDAC Control Software
・Sample Script file for BD34301EKV evaluation board
・Schematic diagram of USBIF3 board

・USBIF3(USB to 2-Wire Conversion board) (attached to the evaluation board)

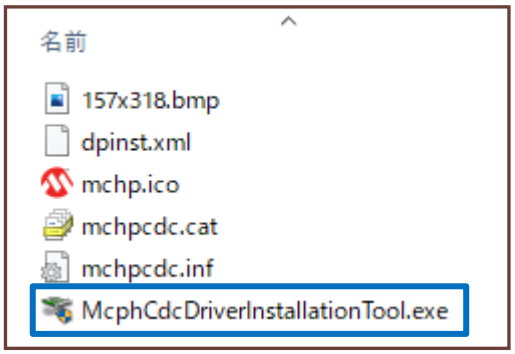


Note: USB cable(USB-A to Micro-B) is required due to connect PC.

■Folder Structure of accessory CD-ROM



x64 or x86 folder



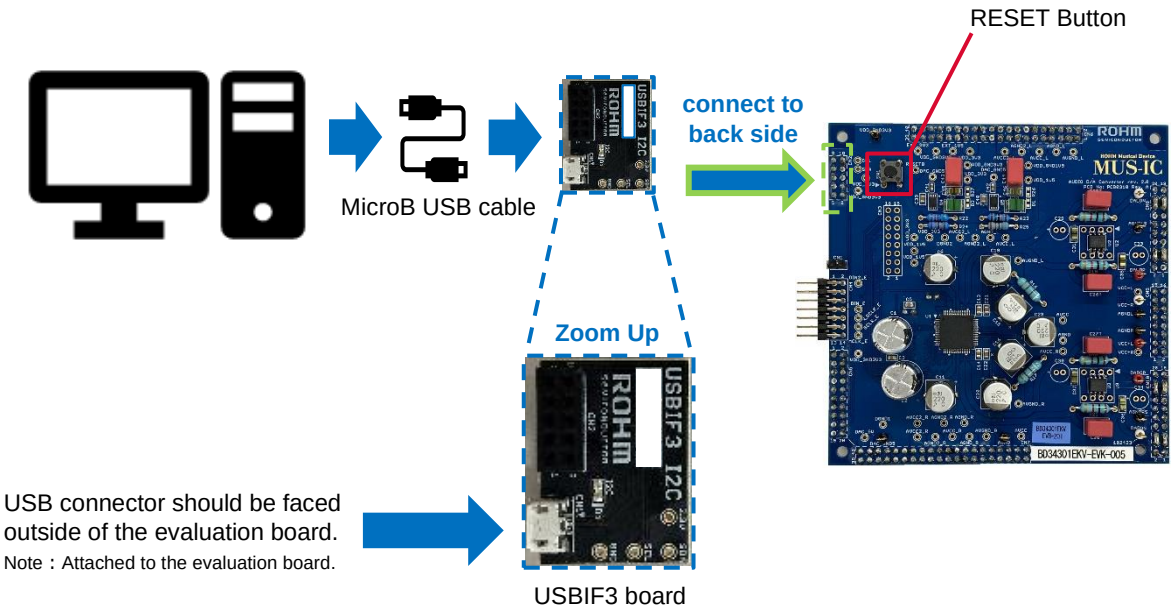
■Install USB Driver

1. Copy all data in CD-ROM to any folder in PC for running software.
2. Click the "McphCdcDriverInstallationTool.exe" which is suitable for your OS.

■Connect to PC

Connect between software installed PC and evaluation board using USBIF3 board.

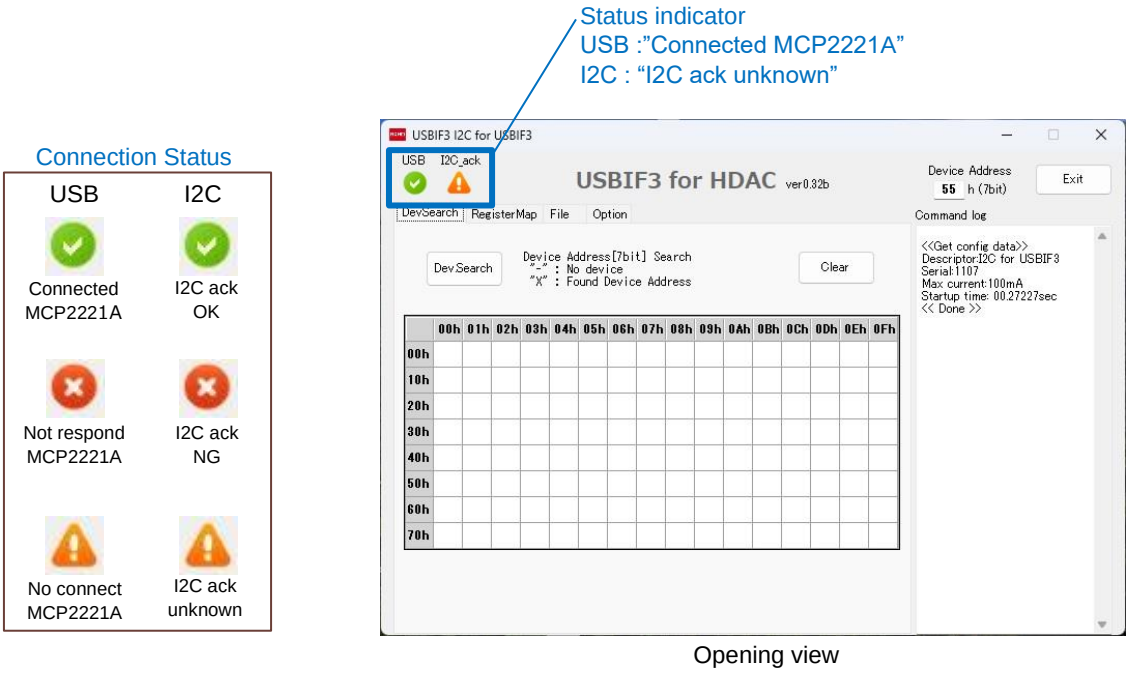
Setup the evaluation board referring to "BD34301EKV-EVK-005 User's Guide".



■"USBIF3 for HDAC" Software Operation

1. Start the "USBIF3 for HDAC" software.

Click "USBIF3_v032bforHDAC.exe" in "USBIF3_HDAC" folder in PC that copied all files in CD-ROM.

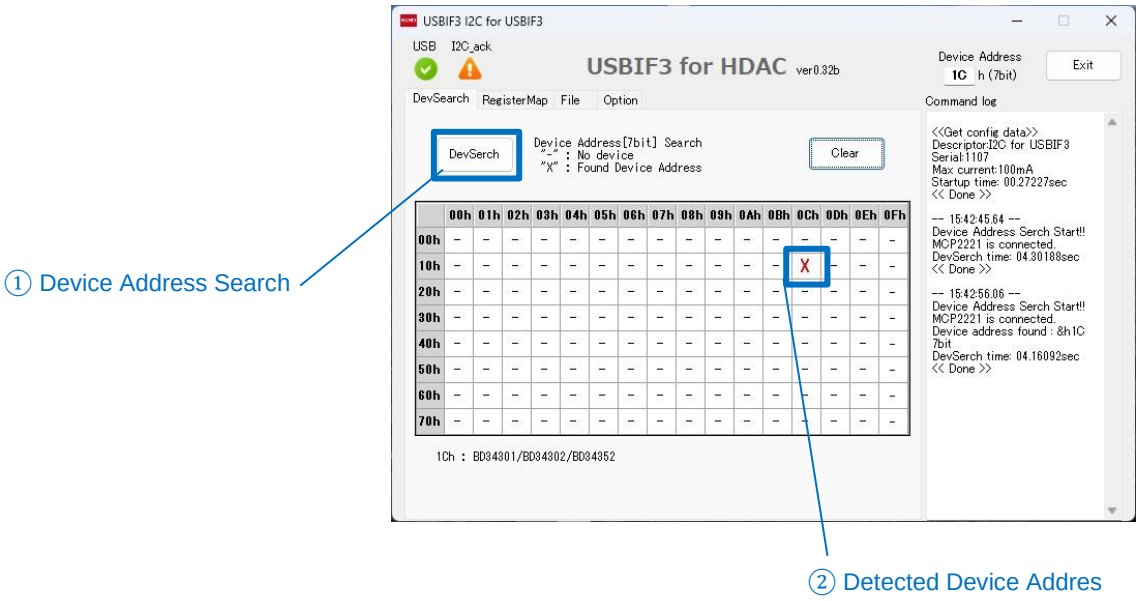


Opening view

2. Detect USBIF3 board and BD34301EKV evaluation board by PC.

① Click "DevSearch" button.

② Address "1Ch" has "X" mark after detecting device, detection completed.



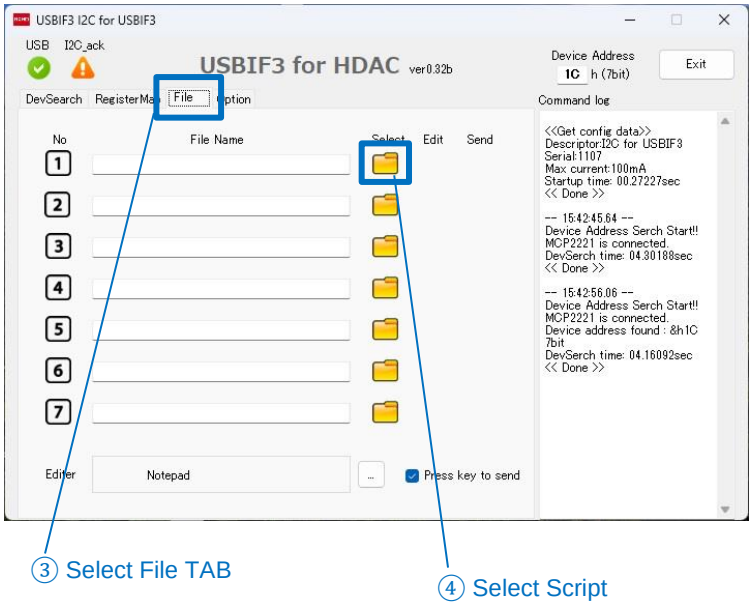
3. Set Sample Script for sending to the evaluation board.

③ Select File Tab.

④ Click "Select" button and choose a Sample Script to send from Sample Script folder.

Sample Script List

BD34301EKV-EVK-005_MODE0_(PCM44p1k_x8_Sharp).txt
BD34301EKV-EVK-005_MODE1_(PCM96k_x16_Sharp).txt
BD34301EKV-EVK-005_MODE2_(PCM192k_x16_Sharp).txt
BD34301EKV-EVK-005_MODE3_(PCM768k_x8).txt
BD34301EKV-EVK-005_MODE5_(PCM44p1k_x32_Sharp).txt
BD34301EKV-EVK-005_MODE6_(PCM96k_x32_Sharp).txt
BD34301EKV-EVK-005_MODE7_(PCM192k_x32_Sharp) .txt
BD34301EKV-EVK-005_MODE8_(PCM44p1k_x32_Slow).txt
BD34301EKV-EVK-005_MODE9_(PCM96k_x32_Slow).txt
BD34301EKV-EVK-005_MODEA_(PCM192k_x32_Slow).txt
BD34301EKV-EVK-005_MODEB_(PCM384k_x32).txt
BD34301EKV-EVK-005_MODEC_(PCM768k_x16) .txt
BD34301EKV-EVK-005_MODED_(DSD2.8M).txt
BD34301EKV-EVK-005_MODEE_(DSD5.6M).txt
BD34301EKV-EVK-005_MODEF_(DSD11.2M).txt



4. Send Sample Script to the evaluation board.

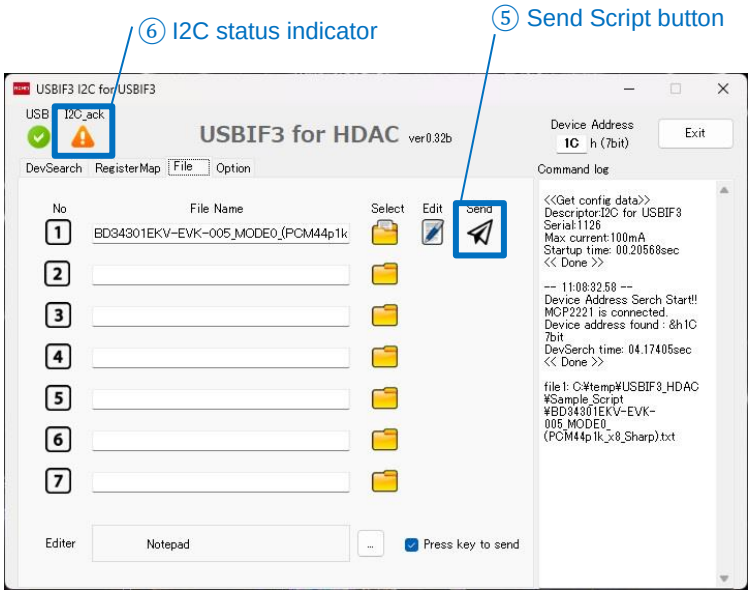
⑤ Click "Send" button.*1

⑥ I2C status changes from "unknown" to "OK"

when the Sample Script sent successfully to the evaluation board.

Connection Status

USB	I2C
Connected MCP2221A	I2C ack OK
No respond MCP2221A	I2C ack NG
No connect MCP2221A	I2C ack unknown



*1 "Editor" and "Send" button appear when the sample script selected.

■ Sample Scripts

15 Sample Script files (MODE0 to MODEF) stored in CD-ROM.

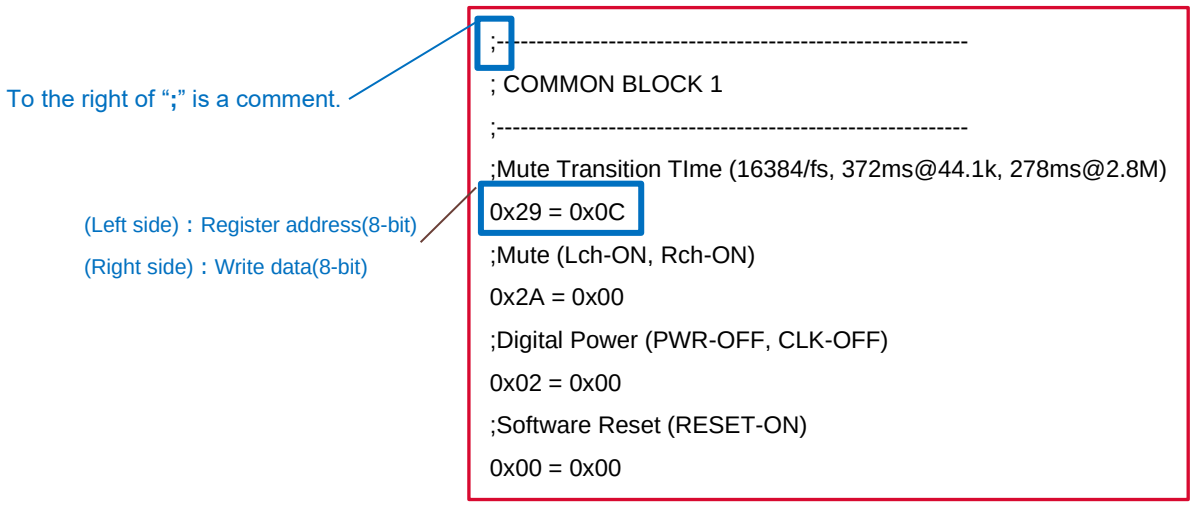
Refer to BD34301EKV-EVK-001 User's Guide for each mode condition.

MODE	File name
MODE0	BD34301EKV-EVK-005_MODE0_(PCM44p1k_x8_Sharp).txt
MODE1	BD34301EKV-EVK-005_MODE1_(PCM96k_x16_Sharp).txt
MODE2	BD34301EKV-EVK-005_MODE2_(PCM192k_x16_Sharp).txt
MODE3	BD34301EKV-EVK-005_MODE3_(PCM768k_x8).txt
MODE5	BD34301EKV-EVK-005_MODE5_(PCM44p1k_x32_Sharp).txt
MODE6	BD34301EKV-EVK-005_MODE6_(PCM96k_x32_Sharp).txt
MODE7	BD34301EKV-EVK-005_MODE7_(PCM192k_x32_Sharp).txt
MODE8	BD34301EKV-EVK-005_MODE8_(PCM44p1k_x32_Slow).txt
MODE9	BD34301EKV-EVK-005_MODE9_(PCM96k_x32_Slow).txt
MODEA	BD34301EKV-EVK-005_MODEA_(PCM192k_x32_Slow).txt
MODEB	BD34301EKV-EVK-005_MODEB_(PCM384k_x32).txt
MODEC	BD34301EKV-EVK-005_MODEC_(PCM768k_x16).txt
MODED	BD34301EKV-EVK-005_MODED (DSD2.8M)
MODEE	BD34301EKV-EVK-005_MODEE (DSD5.6M)
MODEF	BD34301EKV¥EVK-005_MODEF (DSD11.2M/22.4M)

■ Description rule of Script file

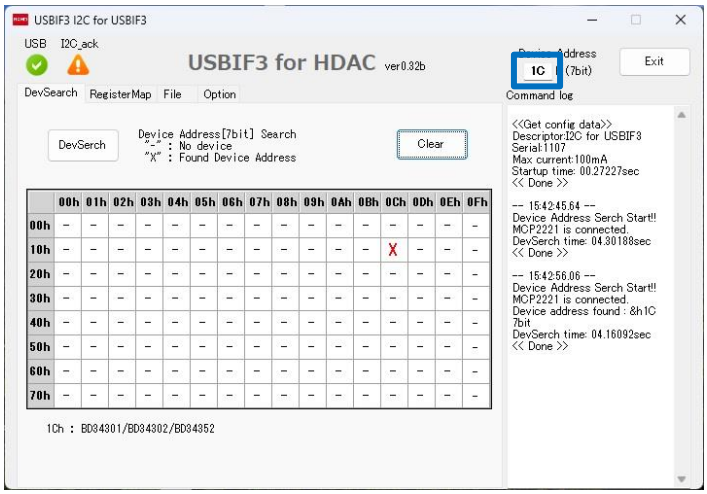
Sample Script is described by the following rules.

Please refer to Appendix 2 more detail information is required.

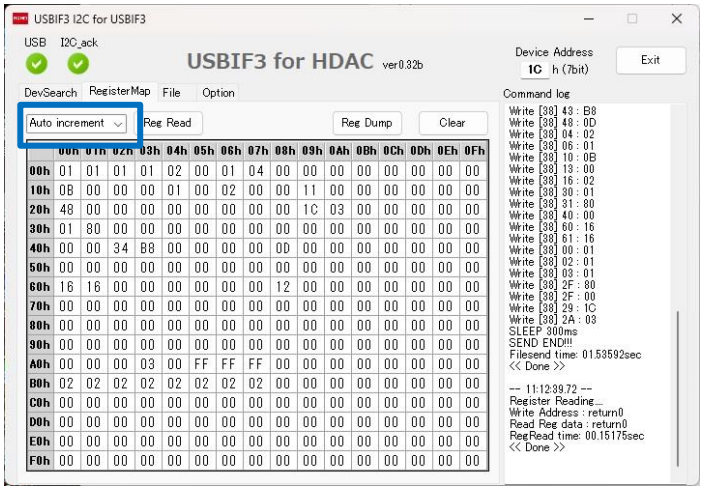


■ Retained data when exiting Software

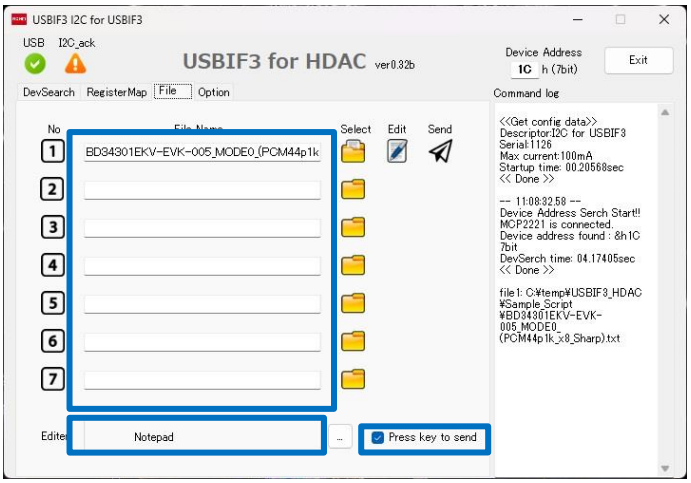
The data in blue frame will be retained the same data at the next start up.



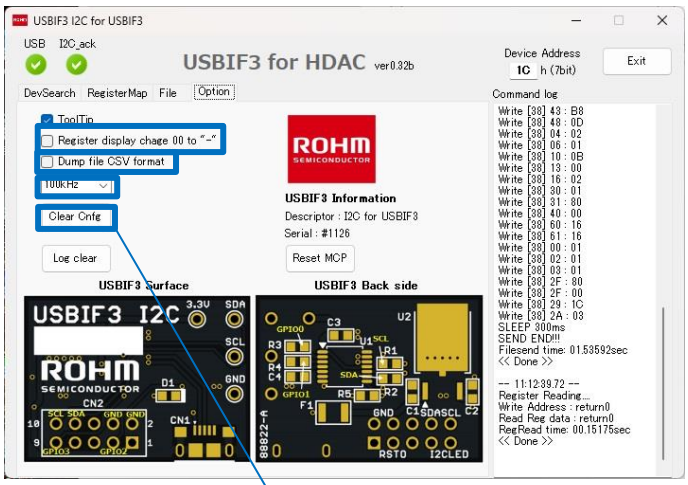
DevSearch view



RegisterMap view



File view



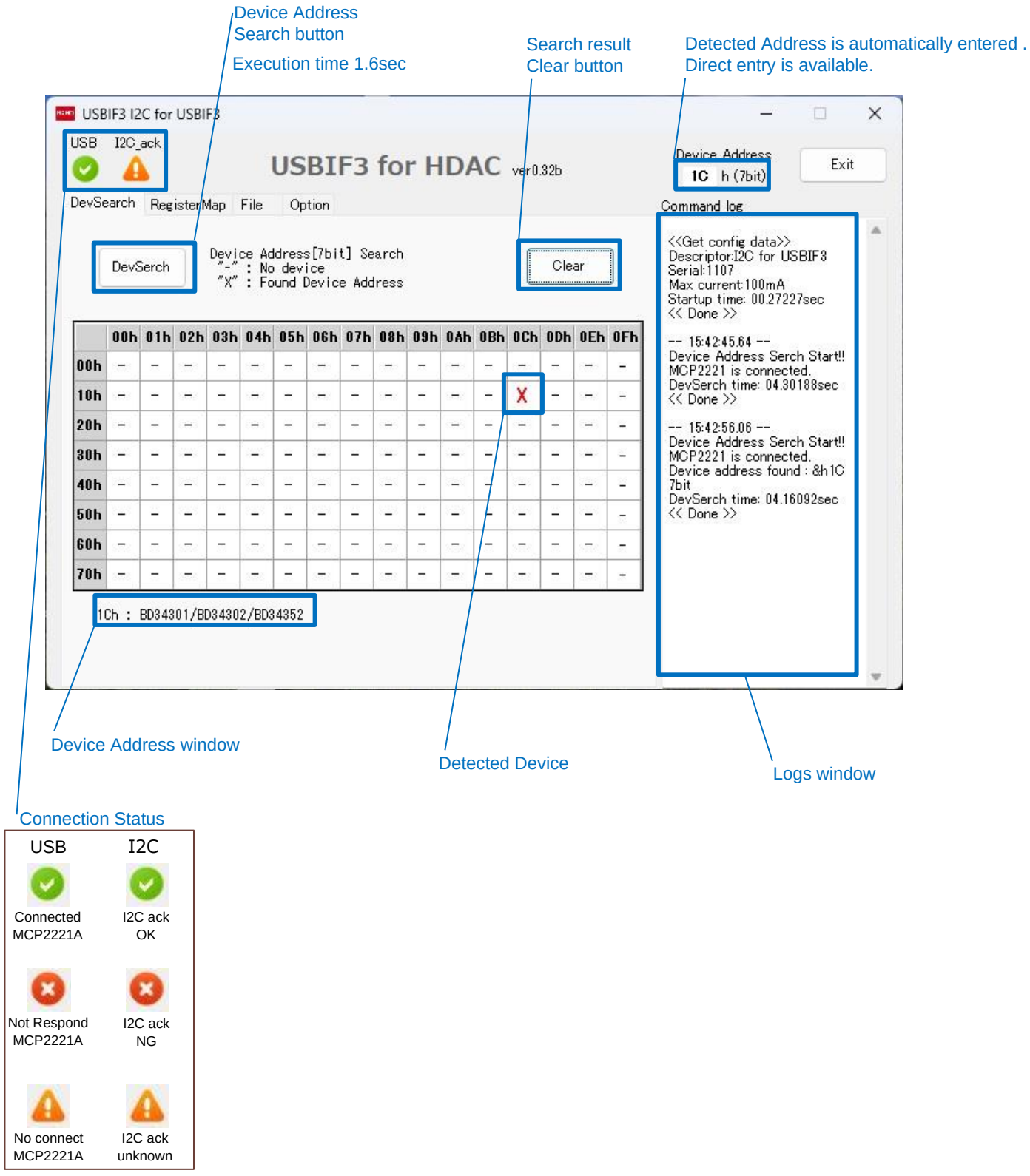
Option view

Initialize hold data

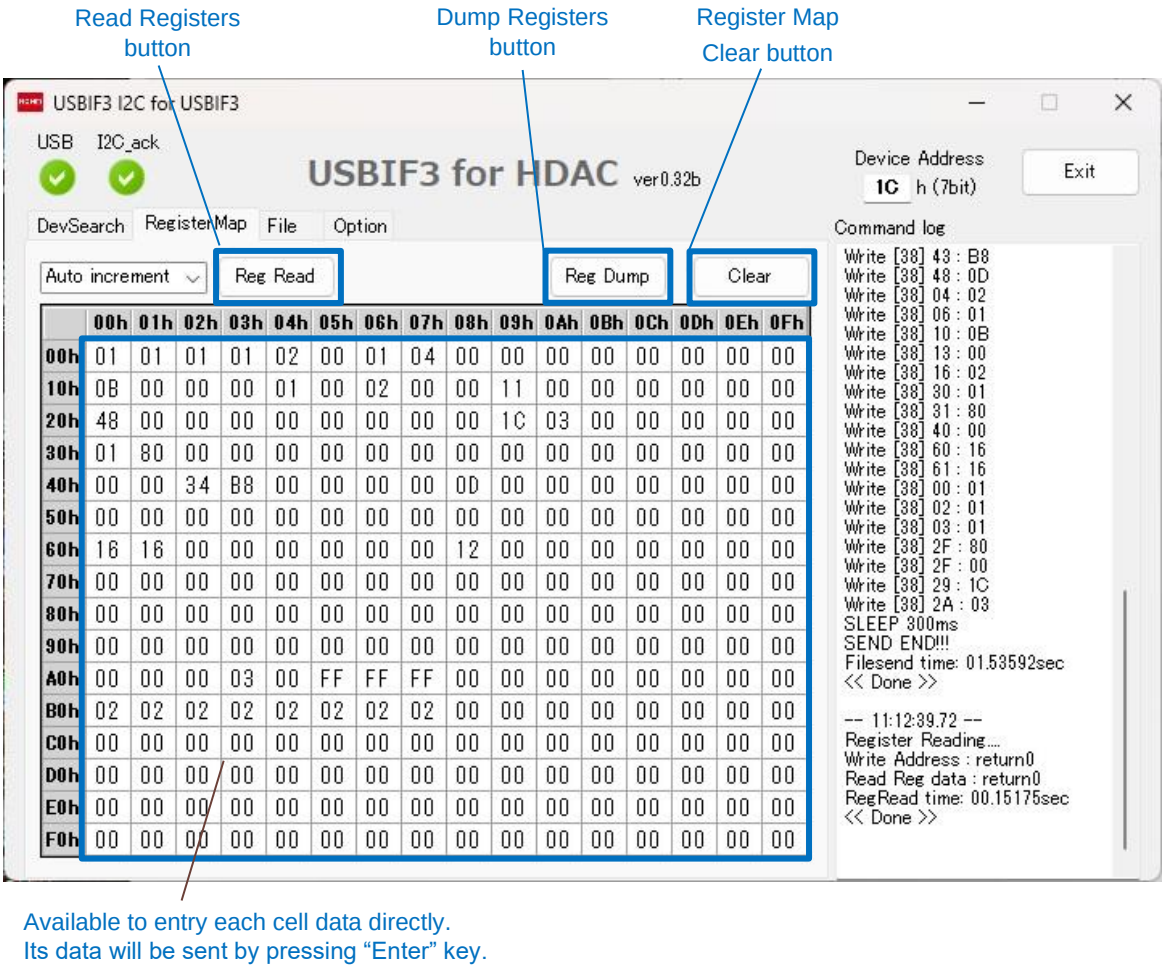
Appendix

【Appendix 1：Explanation of each TAB】

1. DevSearch



2. RegisterMap



3. File

Max 7 setting scripts can be hold.

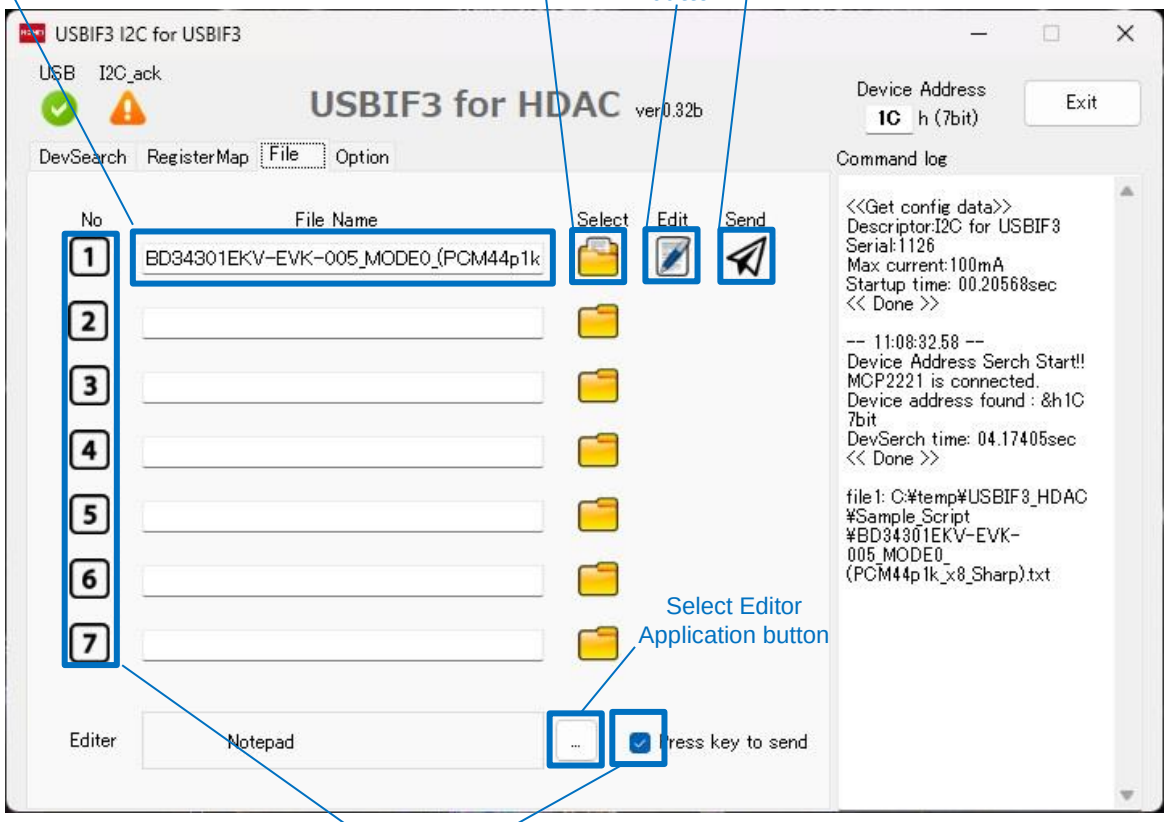
Tooltip enable/disable

Available to erase by DEL key.

Note:Full-path information appears to tooltip when the Mouse is overlayed file name region.

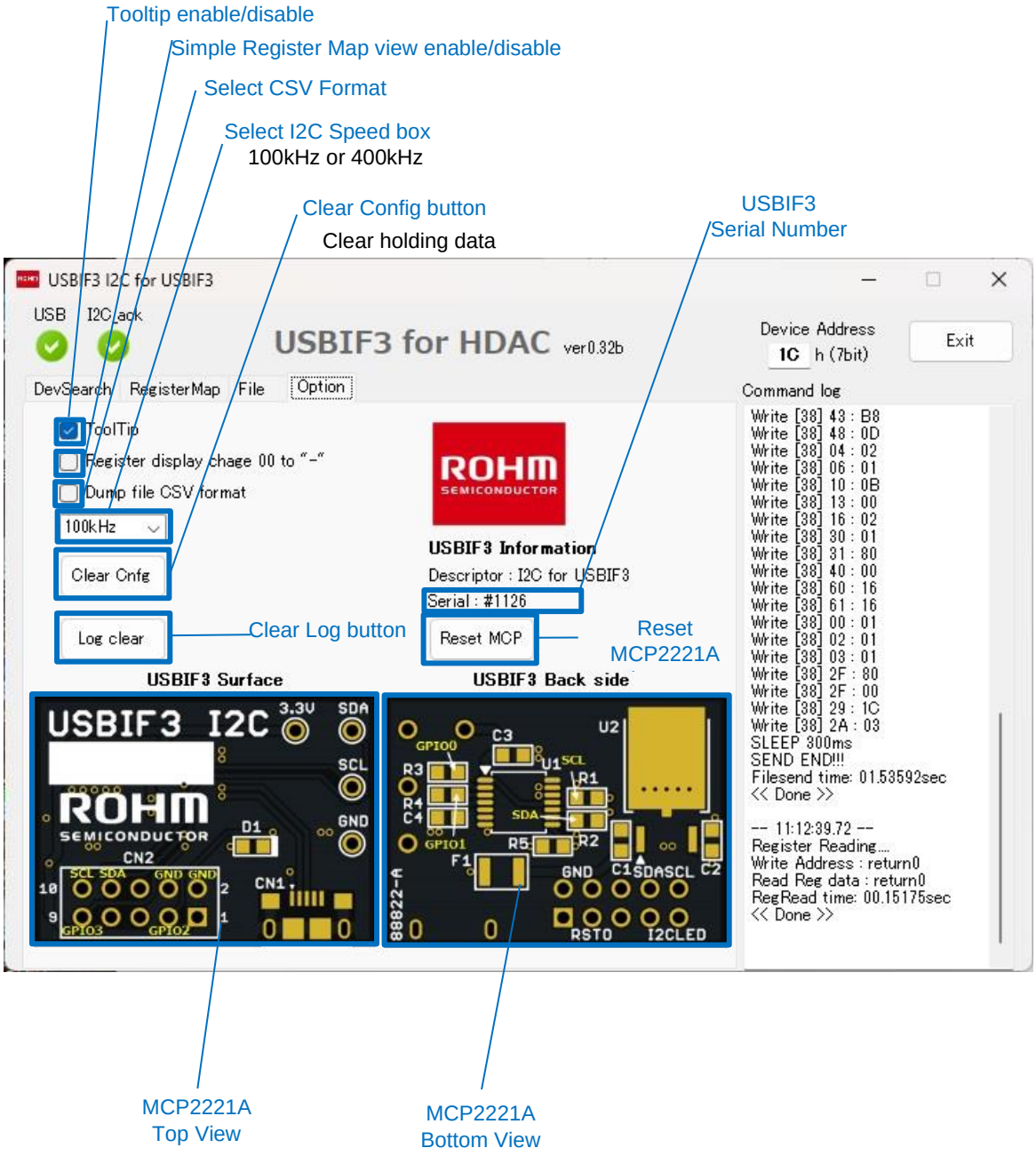
Send button

Note : Edit button and Send button appear when selecting Script file to send.



Keyboard Execution enable/disable check box.
If enable, No.1 to No.7 Script send when 1 to 7 key pressed.

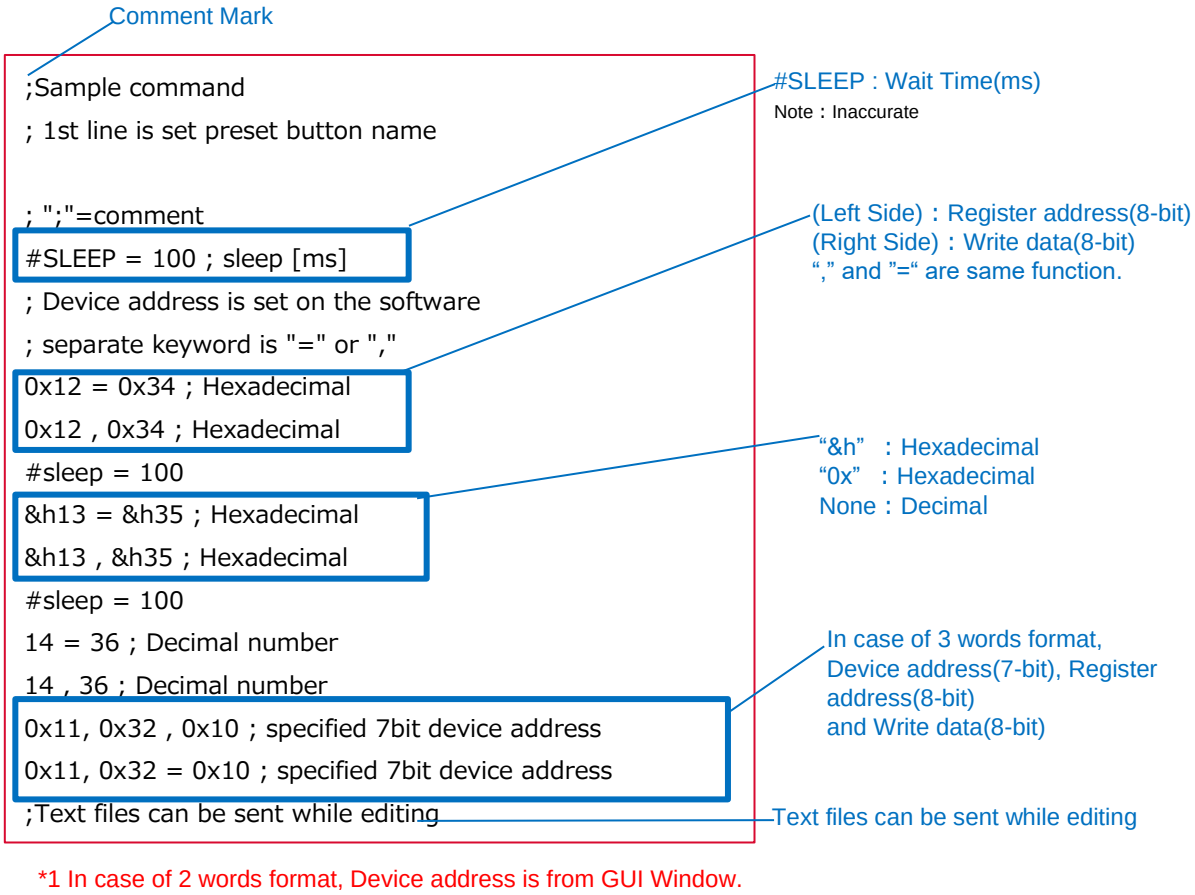
4. Option



MCP2221A is a product of Microchip Technology.

【Appendix 2 : Format of Script File】

1. Script Fle examples



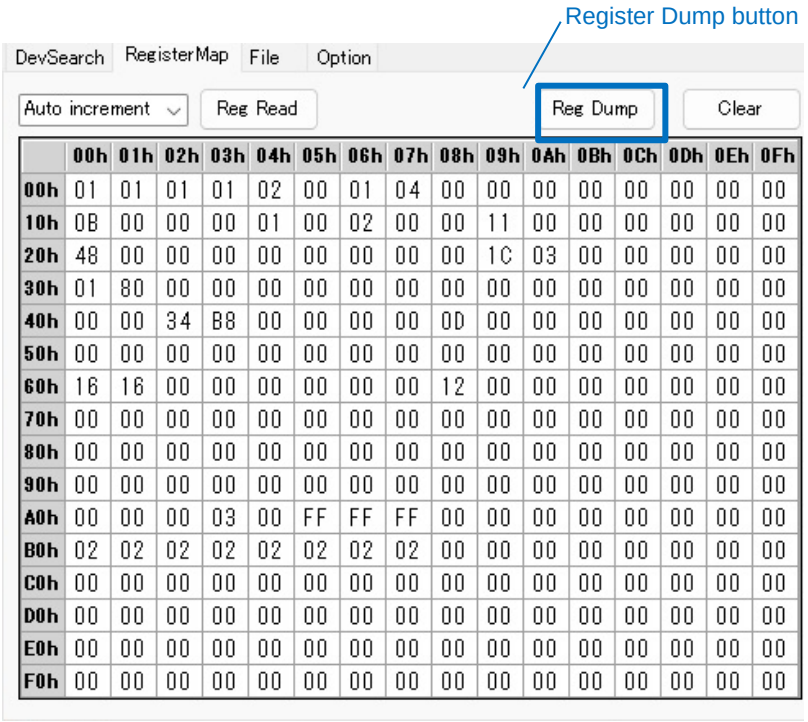
*1 In case of 2 words format, Device address is from GUI Window.

【Appendix 3 : Register Dump】

Click "Reg Dump" button, showing register table is exported to the file.

Evaluation board can be set same condition by using exported file.

CSV format can be selected in Option Tab menu.



	00h	01h	02h	03h	04h	05h	06h	07h	08h	09h	0Ah	0Bh	0Ch	0Dh	0Eh	0Fh
00h	01	01	01	01	02	00	01	04	00	00	00	00	00	00	00	00
10h	0B	00	00	00	01	00	02	00	00	11	00	00	00	00	00	00
20h	48	00	00	00	00	00	00	00	00	1C	03	00	00	00	00	00
30h	01	80	00	00	00	00	00	00	00	00	00	00	00	00	00	00
40h	00	00	34	B8	00	00	00	00	0D	00	00	00	00	00	00	00
50h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
60h	16	16	00	00	00	00	00	00	12	00	00	00	00	00	00	00
70h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
80h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
90h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
A0h	00	00	00	03	00	FF	FF	FF	00	00	00	00	00	00	00	00
B0h	02	02	02	02	02	02	02	02	00	00	00	00	00	00	00	00
C0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
D0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
E0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
F0h	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

Dump file & setting file

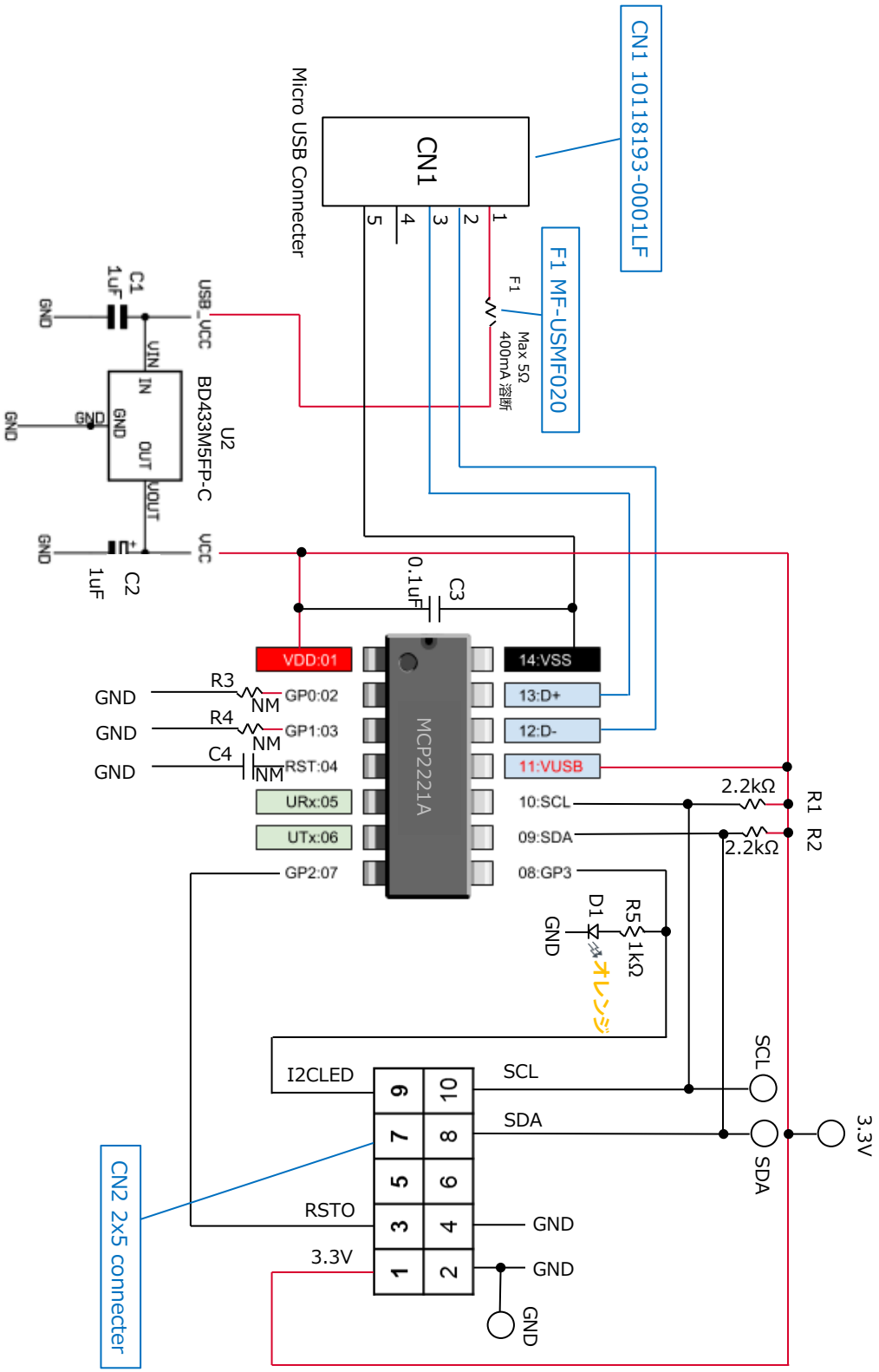
```
;    00 01 02 03 04 05 06 07  08 09 0A 0B 0C 0D 0E 0F
; 00: 01 01 01 01 02 00 01 04  00 00 00 00 00 00 00 00
; 10: 0B 00 00 00 01 00 02 00  00 11 00 00 00 00 00 00
; 20: 48 00 00 00 00 00 00 00  00 1C 03 00 00 00 00 00
; 30: 01 80 00 00 00 00 00 00  00 00 00 00 00 00 00 00
; 40: 00 00 34 B8 00 00 00 00  0D 00 00 00 00 00 00 00
; 50: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00
; 60: 16 16 00 00 00 00 00 00  12 00 00 00 00 00 00 00
; 70: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00
; 80: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00
; 90: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00
; A0: 00 00 00 03 00 FF FF FF  00 00 00 00 00 00 00 00
; B0: 02 02 02 02 02 02 02 02  00 00 00 00 00 00 00 00
; C0: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00
; D0: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00
; E0: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00
; F0: 00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00
```

Dump file

```
&h00 = &h01
&h01 = &h01
&h02 = &h01
&h03 = &h01
&h04 = &h02
&h05 = &h00
&h06 = &h01
&h07 = &h04
&h08 = &h00
```

Setting file

【Appendix 4 : Circuit Diagram of USBIF3 board】



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