

BM83 2025/4/23版

・ファームウェアの焼き方

※注意！USBケーブルから5Vを供給するようにしてありますから、BTモジュールが載った基板単体でUSBケーブルを接続してください！

動作にはファームを書き込む必要があります。以下のページより、ツールをダウンロードしてください

<https://www.microchip.com/en-us/product/BM83>

Embedded Software->IS2083 Turnkey Software and Tools よりダウンロードしてください。

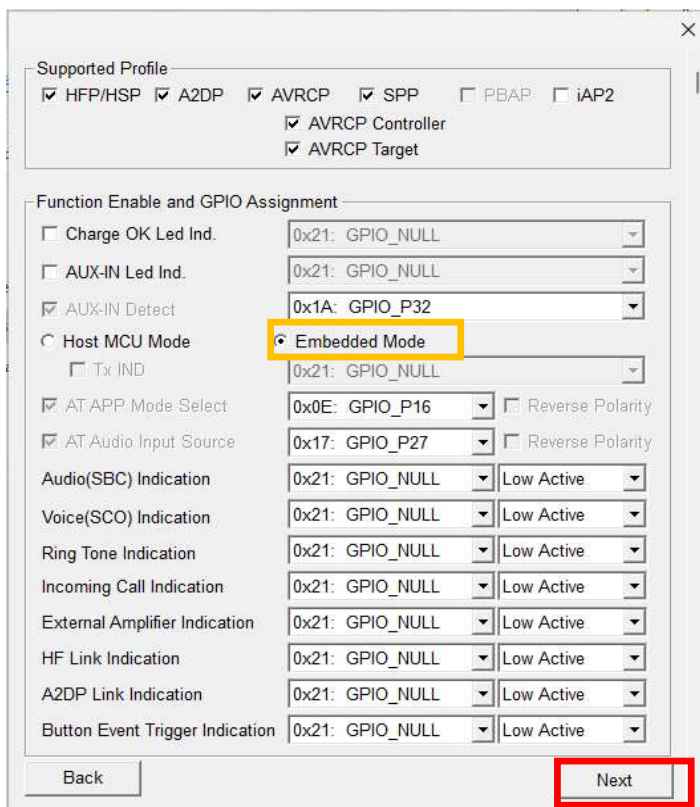
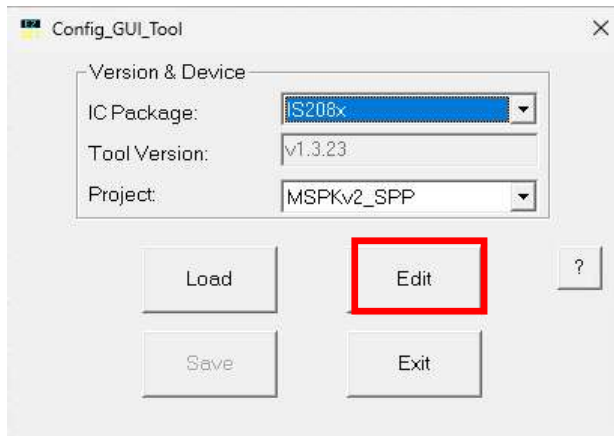
<https://ww1.microchip.com/downloads/en/DeviceDoc/IS2083Turnkey1.2.4.zip>

ダウンロードしたアーカイブを解凍し、日本語パス名を含まない場所にコピーしてください。

¥IS2083 Turnkey_1.2.4¥Tools¥Config Tool¥is208x_config_gui_tool v1.3.23.exe

を起動します。このツールを使って、設定を行っていきます。

橙は設定項目、赤は項目変更後の次画面への遷移指示です。



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PMU Setup | CODEC Setup | iAP2 Setup | BLE Setup | MSPK Setup | User Define | DSP Feature Setup
Sys. Setup1 | **Sys. Setup2** | Sys. Setup3 | LED Setup1 | LED Setup2 | LED Setup3 | Tone Setup | Button Setup

Power Switch Setting

--- Power Switch Type

☒ Power ON Directly ☐ MFB Power ON/OFF ☐ Power ON by UART Cmd

Help

PMU Setup | CODEC Setup | iAP2 Setup | BLE Setup | MSPK Setup | User Define | DSP Feature Setup
Sys. Setup1 | Sys. Setup2 | Sys. Setup3 | LED Setup1 | LED Setup2 | LED Setup3 | Tone Setup | Button Setup

Name Frag Segment

--- Device Name

MCHP BM83
(Current: 9 Char, Total: 64 Char)

Help

Misc Option

--- Enable Inquiry Scan In Standby

Enable

--- Enable Power On Enter Pairing

Enable

--- Suspend Stream When SCO Established

Disable

--- BT Class of Device

0x28:HiFi Audio Device

--- Report Battery Status to Smart Phone

Enable

--- Link Application

Single-Link

--- Always Answer Incoming Call

Disable

好きなBTの接続名に変更

スライダーを使って
スクロールして次の
設定項目を表示して
ください

PMU Setup | CODEC Setup | iAP2 Setup | BLE Setup | MSPK Setup | User Define | DSP Feature Setup
Sys. Setup1 | Sys. Setup2 | **Sys. Setup3** | LED Setup1 | LED Setup2 | LED Setup3 | Tone Setup | Button Setup

--- Always Answer Incoming Call

Disable

--- Auto Answer Incoming Call When Link Back

Disable

--- Shut Down Power in Off State

Enable

--- Enter Pairing When Power On Link Back Fail

Disable

--- Only Accept Paired Device

Disable

--- Disconnect All In Pairing

Disable

--- Keep BLE In Power Off

Enable

--- Wide Band Speech Enable(mSBC)

Enable

--- AVRCP Version

AVRCP v1.3

--- Auto Unsniff in Data Transmission

Disable

--- Enable AVRCP Browsing Feature

Enable

--- Allow Users to Enable Device Under Test

Disable

--- Auto Role Switch to BT Master

Enable

--- Enable Role Switch in Link Policy

Disable

--- Force as BT Slave role

Disable

--- Phone Provide NR and EC Function

Enable

--- Disable Link Back When Remote No Link Key

Disable

Main Feature Previous Next Finish

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PMU Setup | CODEC Setup | iAP2 Setup | BLE Setup | MSPK Setup | User Define | DSP Feature Setup
Sys. Setup1 | Sys. Setup2 | Sys. Setup3 | LED Setup1 | LED Setup2 | LED Setup3 | Tone Setup | Button Setup

Connection Setting

--- Power On Link Back Setting: Enable

--- Search Paired Device Pattern Setting: All Devices

--- Power On Link Back Profile(s) Setting: Last Device

Help

スライダーを使ってスクロールして次の設定項目を表示してください

PMU Setup | **CODEC Setup** | iAP2 Setup | BLE Setup | MSPK Setup | User Define | DSP Feature Setup
Sys. Setup1 | Sys. Setup2 | Sys. Setup3 | LED Setup1 | LED Setup2 | LED Setup3 | Tone Setup | Button Setup

RF Tx Power Setting

--- Inquiry TX Power Level: 1

--- BT Connected TX Power Level: 1

Help

接続性が悪いと思ったら、ノイズの様子見ながら、レベルを上げてください

Sys. Setup1 | Sys. Setup2 | Sys. Setup3 | LED Setup1 | LED Setup2 | LED Setup3 | Tone Setup | Button Setup
PMU Setup | **CODEC Setup** | iAP2 Setup | BLE Setup | MSPK Setup | User Define | DSP Feature Setup

CODEC Function

--- Speaker Output: Capless Speaker Output

--- Enable LR Sound Channel Swap: L/R Normal

--- Enable LR Sound Mix: Disable

--- DSP CODEC Always On Enable: Disable

--- Close CODEC Time: 8
(1 - 254 unit : 0.64s)

--- CODEC Type: External

--- Audio SRC: Disable

--- Voice SRC: Enable

--- Tone Stereo: Enable

--- Voice Stereo: Disable

--- Output Volume Scaling Method: 0x01: I2S scale

Help

Line-In Setting

--- Line In / SBC Priority: Line In > SBC

Help

Main Feature | Previous | Next | Finish

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Sys. Setup1 | Sys. Setup2 | Sys. Setup3 | LED Setup1 | LED Setup2 | LED Setup3 | Tone Setup | Button Setup
PMU Setup | CODEC Setup | IAP2 Setup | **BLE Setup** | MSPK Setup | User Define | DSP Feature Setup

Specific Transparent Service Setting

Help

--- Transparent Service UUID 0x 49535343FE7D4AE58FA99FAFD205E455 (16 Bytes)

--- Transparent TX UUID 0x 495353431E4D4BD9BA6123C647249616 (16 Bytes)

--- Transparent RX UUID 0x 49535343884143F4A8D4ECBE34729BB3 (16 Bytes)

--- Authentication Request Disable

BLE Application Setting

--- BLE Application in Embedded Mode Disable Help

RF Tx Power Setting

--- Connected TX Power Level. 0 Help

--- Advertising TX Power Level. 0

GFPS Setting

Main Feature Previous Next **Finish**

IS208x_DSP_GUI_Tool

BLE Settings Dynamic Tuning Commands Help

DUT Status: Unknown DSP Status: Unknown BLE Status: Not connected

Main Function | Voice Function | Audio Function **I2S/PCM**

IS208x DSP GUI Tool Version 6.1



Save Reset

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IS208x_DSP_GUI_Tool

BLE Settings Dynamic Tuning Commands Help

DUT Status: DSP Status: BLE Status:

Main Function | Voice Function | Audio Function | I2S/PCM

MASTER MODE

SLAVE MODE

☐ 24Bit To 16Bit Truncate

☒ MCLK Note: Enable MCLK if required by

MCLK:

I2S Mode:

Data Bitwidth:

Loopback ADC:

Mic ADC Selection:

DAC Selection:

RFS Setting:

help

Save Reset

オーバーサンプリングDACの場合
MCLKを有効にする必要があります。
他のバージョンでは、この設定を省略してかまいません
設定するfsは、256fsまたは128fsです。
各BT DACモジュールに従ってください。

Config_GUI_Tool

Version & Device

IC Package:

Tool Version:

Project:

Load Edit

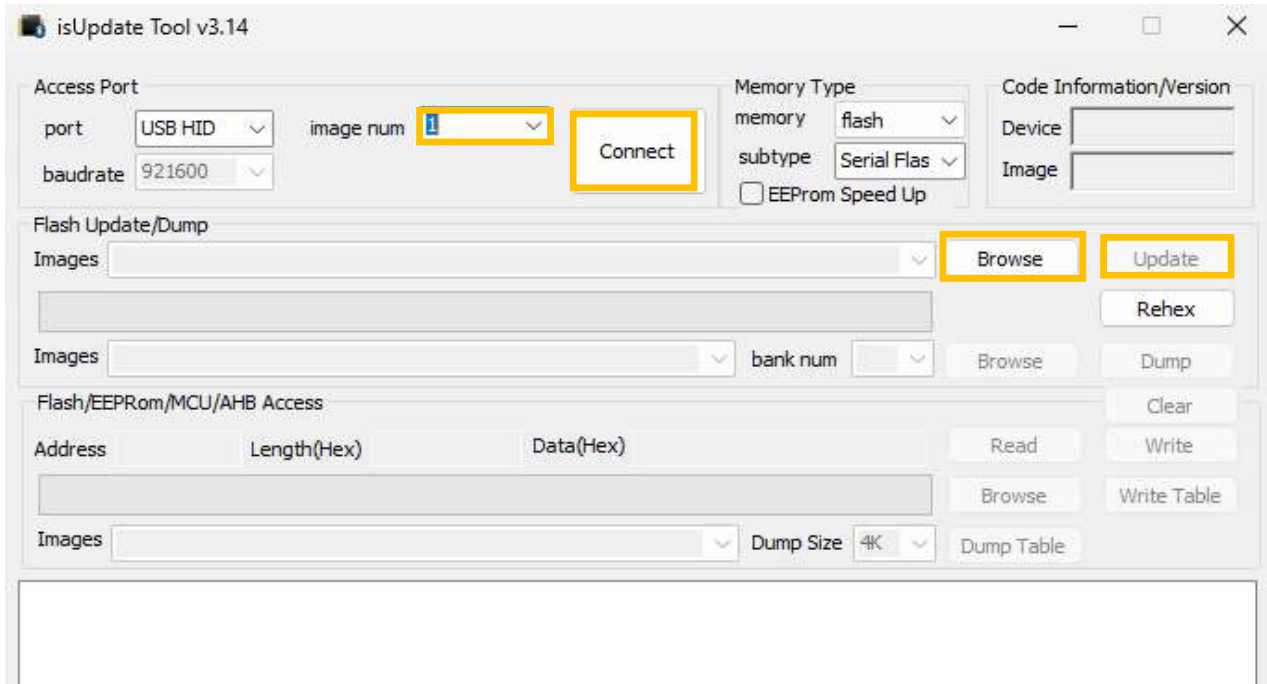
Save Exit

好きな場所にコンフィグを保存します。
名前は「config.hex」などとしてください

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¥IS2083 Turnkey_1.2.4¥Tools¥isupdate¥isupdate.exe を起動します。

このツールを使って、ファームの書き込み、先ほど作成したコンフィグの書き込みをします



MicroUSBにて、PCとBTモジュールをつなげてください。

その後、image numを1にし、「connect」ボタンを押下します。

「¥IS2083 Turnkey_1.2.4¥Software¥IS2083 Image¥MSPK2v1.3.4¥SPP¥Embedded Mode」にある、以下のファームを順番に書き込みします。

- MSPKv2_1.03.0406_SPP.hex
- MSPK2.0_DSP_FW_V1.04.0411.HEX
- IS208x_UI_1.3.23_Demo_Package_Embedded_Mode_SPP.hex

「Browse」ボタン押下し、ファームを選択。「Update」ボタンで書き込みです。（1つずつ、この手順を繰り返します。）

このとき「Would you like to disable current procedure?」と表示されたら「Yes」を選択してください。接続が切断されますので再度「connect」ボタンを押下し、やりなおしてください。

おなじ手順で、さきほど保存しておいたconfig.hexを書き込みます

すべて書き込んだら完了です

下記動画も参考になります

<https://www.youtube.com/watch?v=SPlbVVXS5hs>

以上