

GR-MANGO サンプルNo.20を動かす(Mbed Studio編) 2020.3.6



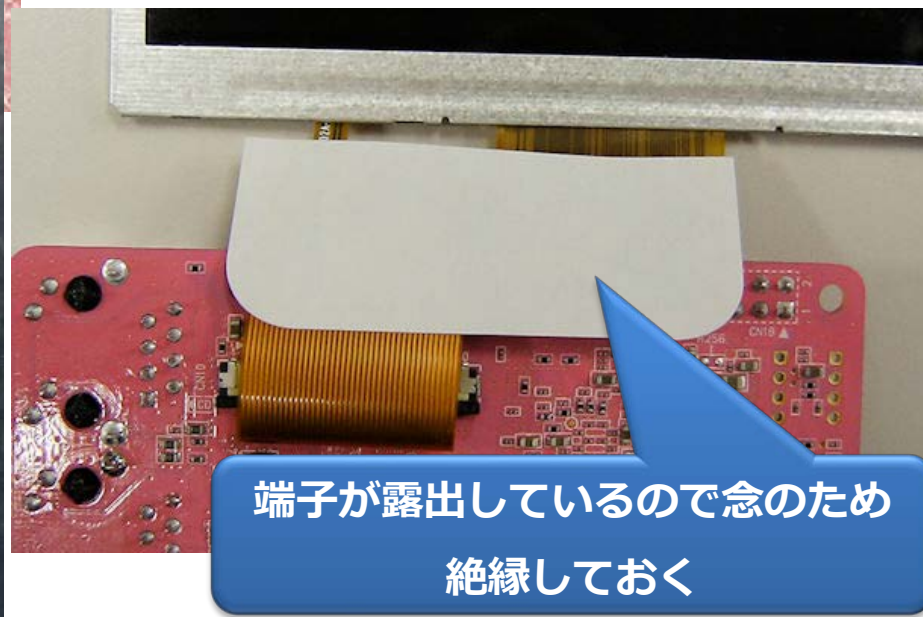
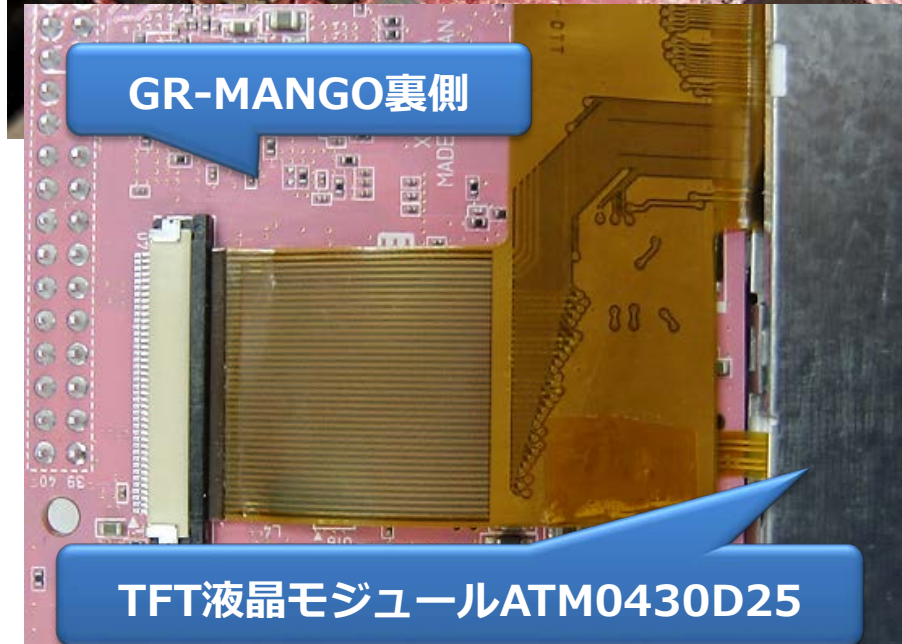
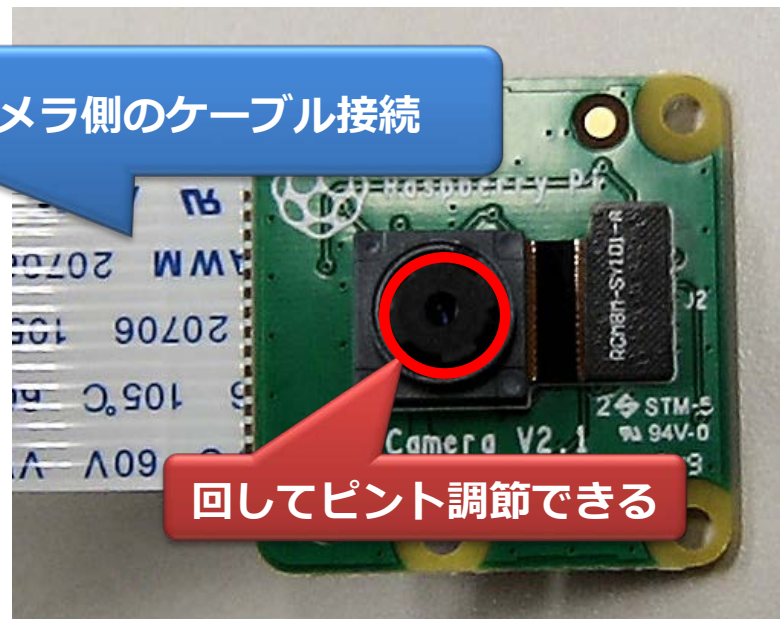
ラズパイカメラ

TFT液晶モジュール
ATM0430D25
¥1850 @秋月電子

```
Bayer2Grayscale : Load 0.2ms * Run
MedianBlur      : Load 0.2ms * Run
CannyCalculate  : Load 0.6ms * Run
CannyHysteresis: Load 0.8ms * Run
Total           : 10.2ms
```



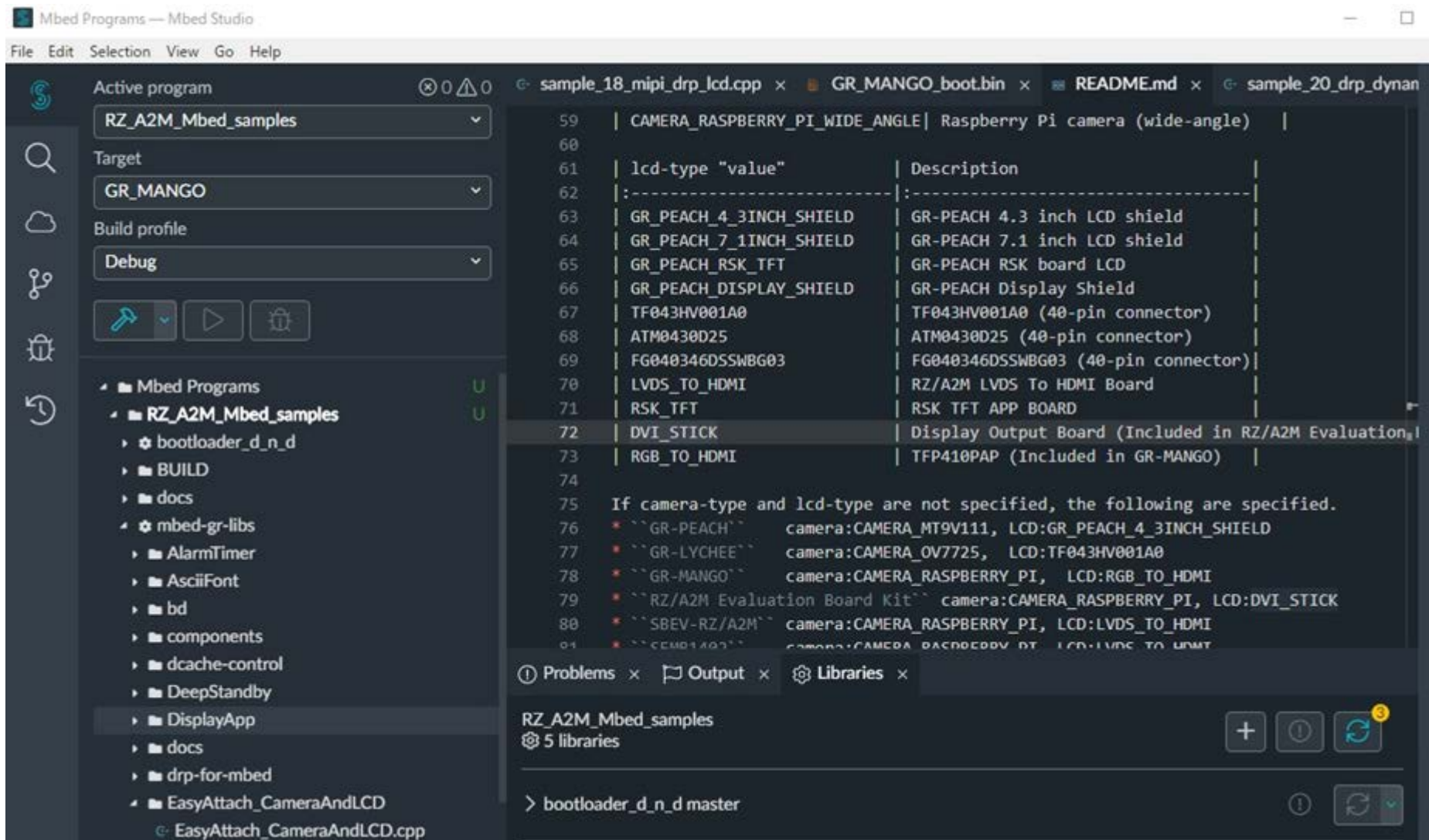
GR-MANGOへラズパイカメラを接続してLCDへ表示



Mbed Studio を起動し、GR-MANGOプロジェクトを開く

参考(サンプルNo.18をビルドする方法と同じ)

http://japan.renesasrulz.com/gr_user_forum_japanese/f/gr-mango/6202/mbed-studio-no-18-hdmi



No.20のサンプルを使う場合の設定

```
requirements.txt
├─ sample_programs
│   ├── sample_00_led_rtc_analogin.cpp
│   ├── sample_01_flash_write.cpp
│   ├── sample_02_ssif_loop_back.cpp
│   ├── sample_03_spdif_loop_back.cpp
│   ├── sample_04_ssif_wav_playback.cpp
│   ├── sample_05_spdif_wav_playback.cpp
│   ├── sample_06_lcd_touch_jcu.cpp
│   ├── sample_07_usb_func_serial.cpp
│   ├── sample_08_usb_func_mouse.cpp
│   ├── sample_09_usb_func_keyboard.cpp
│   ├── sample_10_usb_func_midi.cpp
│   ├── sample_11_usb_func_audio_1.cpp
│   ├── sample_12_usb_func_audio_2.cpp
│   ├── sample_13_ether_http.cpp
│   ├── sample_14_ether_https.cpp
│   ├── sample_15_ceu_lcd_pwm.cpp
│   ├── sample_16_usb_func_msd_1.cpp
│   ├── sample_17_usb_func_msd_2.cpp
│   ├── sample_18_mipi_drp_lcd.cpp
│   ├── sample_19_mipi_drp_displayapp.cpp
│   ├── sample_20_drp_dynamic_loading.cpp
│   └─ sample_select.h
└─ .gitignore
```

sample_programsフォルダに
21種類のプログラムがある

[サンプルプログラムの説明は下記URL参照](https://github.com/d-kato/RZ_A2M_Mbed_samples)
https://github.com/d-kato/RZ_A2M_Mbed_samples

No.20のサンプルを使う

sample_select.h を開く

sample_select.h を編集

```
12 * ELECTRONICS CORPORATION NOR ANY OF ITS AFFILIATED COMPANIES SHALL BE LIABLE
13 * FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR
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17 * and to discontinue the availability of this software. By using this software
18 * you agree to the additional terms and conditions found by accessing the
19 * following link:
20 * http://www.renesas.com/disclaimer
21 *
22 * Copyright (C) 2019 Renesas
23 *****
24 #ifndef SAMPLE_SELECT_H
25 #define SAMPLE_SELECT_H
26
27 // You can try each sample program by changing the following macro.
28 #define SAMPLE_PROGRAM_NO 18
29
30 // No. Program file Description
31 //
32 // 0 : sample_00_led_rtc_analogin DigitalOut, InterruptIn, RTC, Timer and
33 // 1 : sample_01_flash_write FlashAPI sample
34 // 2 : sample_02_ssif_loop_back SSIF loop back sample
35 // 3 : sample_03_spdif_loop_back SPDIF loop back sample
36 // 4 : sample_04_ssif_wav_playback SSIF wav playback sample (use USB memor
37 // 5 : sample_05_spdif_wav_playback SPDIF wav playback sample (use USB mem
```

下記の行を編集

#define SAMPLE_PROGRAM_NO 20

```
sample_20_drp_dynamic_loadin
sample_select.h
.gitignore
.mbed
mbed_app.json
```

Mbed_app.jsonファイルの編集も必要(次ページで説明)

jsonとは、JavaScript Object Notationの略で、XMLなどと同様のテキストベースのデータフォーマットです

mbed_app.jsonを編集



クリックで開く



カメラ、LCD接続タイプの説明は
EasyAttach_CameraAndLCDフォルダ
のREADME参照

```
1  
2 "config": {  
3   "camera": {  
4     "help": "0:disable 1:enable",  
5     "value": "1"  
6   },  
7   "camera-type": {  
8     "help": "Please see EasyAttach_CameraAndLCD/README.md",  
9     "value": "CAMERA_RASPBERRY_PI"  
10  },  
11  "lcd": {  
12    "help": "0:disable 1:enable",  
13    "value": "1"  
14  },  
15  "lcd-type": {  
16    "help": "Please see EasyAttach_CameraAndLCD/README.md",  
17    "value": "ATM0430D25"  
18  }  
19 },  
20 target_overrides": {  
-----|:-----|  
SC signal (only GR-PEACH) |  
MT9V111 |  
PI | Raspberry Pi camera |  
PI_WIDE_ANGLE | Raspberry Pi camera (wide-angle) |  
| Description |  
-----|:-----|  
SHIELD | GR-PEACH 4 |  
SH_SHIELD | GR-PEACH 7 |  
GR_PEACH_DISPLAY_SHIELD | GR-PEACH P |  
TF043HV001A0 | TF043HV001A0 (40-pin con |  
ATM0430D25 | ATM0430D25 (40-pin conn |  
FG040346DSSWBG03 | FG040346DSSWBG03 (40-pin connector) |  
LVDS_TO_HDMI | RZ/A2M LVDS To HDMI Board |  
RGB_TO_HDMI | TFP410PAP (Included in GR-MANGO) |
```

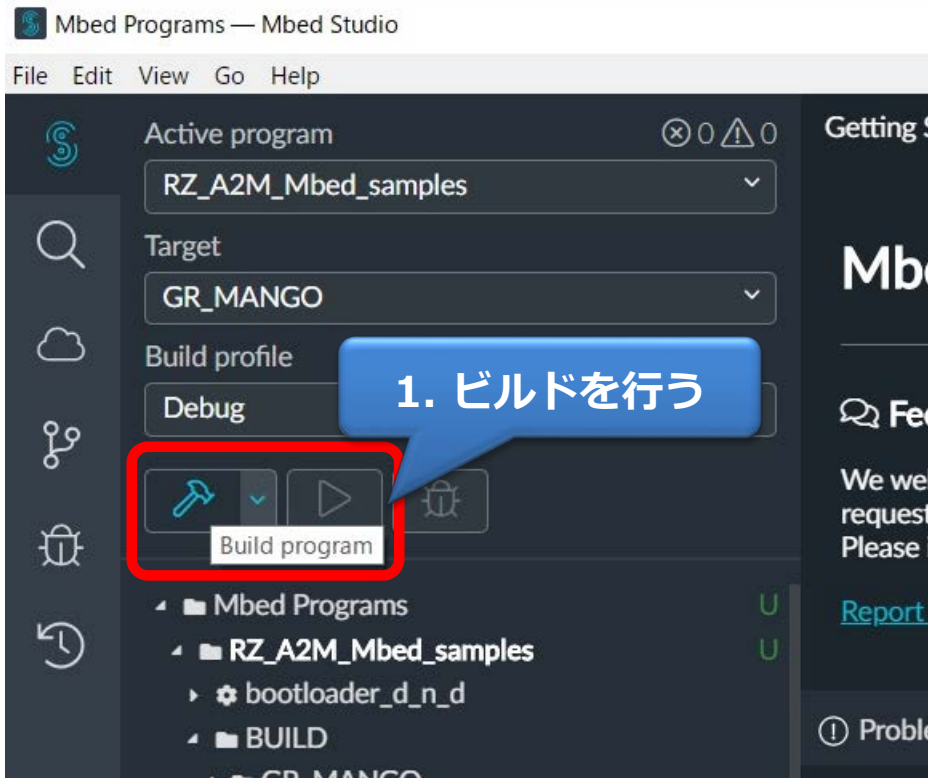
編集する

"CAMERA_RASPBERRY_PI"

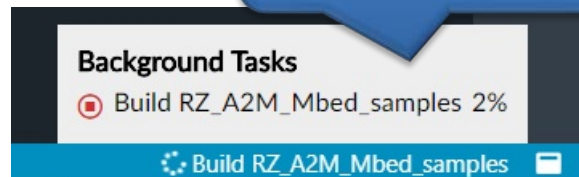
"ATM0430D25"

カメラ、LCD接続できる
機器が記述されている

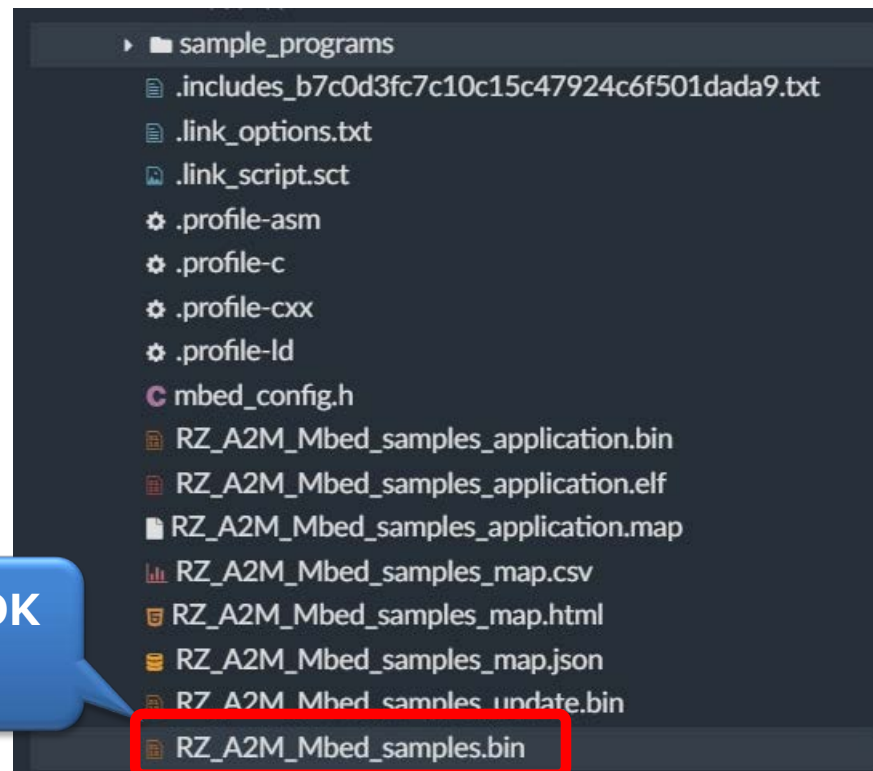
GR-MANGOプロジェクトのビルド (他サンプルのビルド後なら1~2分ぐらい)



2. ウィンドウの右下に
進行状況が表示される



3. sample_programフォルダに下記できればOK
RZ_A2M_Mbed_sample.bin



GR-MANGOへプログラムを書き込み (DAP Linkを使用)

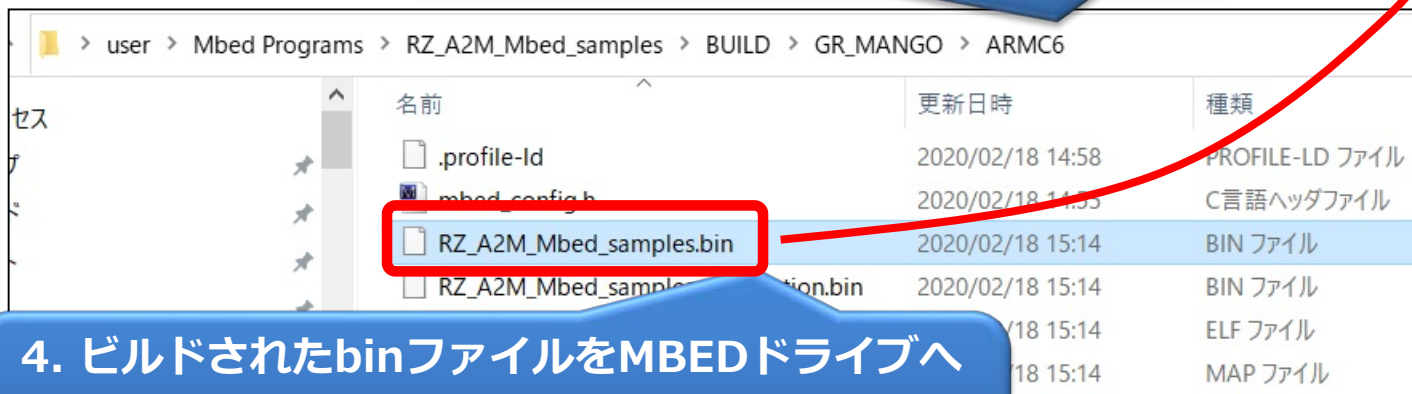


1. USB マイクロ
でPCと接続



2. MBEDとしてドライブ
が表示される

3. デフォルトのbin生成フォルダへ移動



4. ビルドされたbinファイルをMBEDドライブへ
ドラッグ&ドロップして自動で書き込み
(RZ_A2M_Mbed_sample.bin)