RT1062 88W8801 WiFi Provision Demo with LVGL GUIv7.3

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1. Hardware Setup

- 88w8801 Board (AW-NM191NF) with SDIO Interface x1 Link:

  www.azurewave.com
- MIMXRT1060-EVK x1
- 4.3 Inch LCD Panel x1 Link:

https://www.nxp.com/design/development-boards/i-mx-evaluation-and-development-boards/mimxrt1060-evk-i-mx-rt1060-evaluation-kit:MIMXRT1060-EVK

- USB cable x1

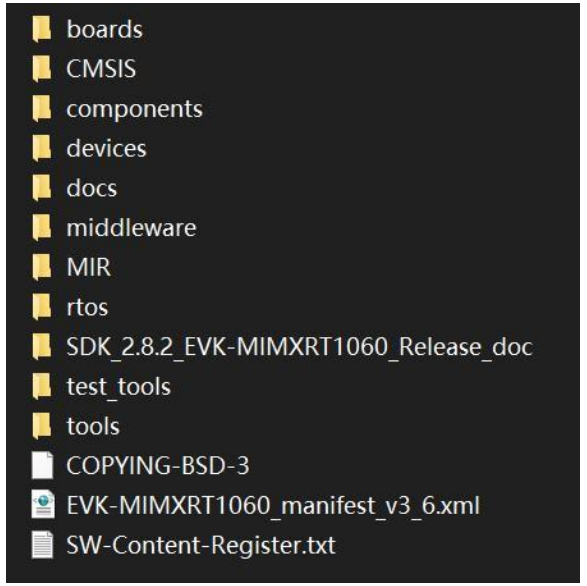
2. Download SDK 2.8.2

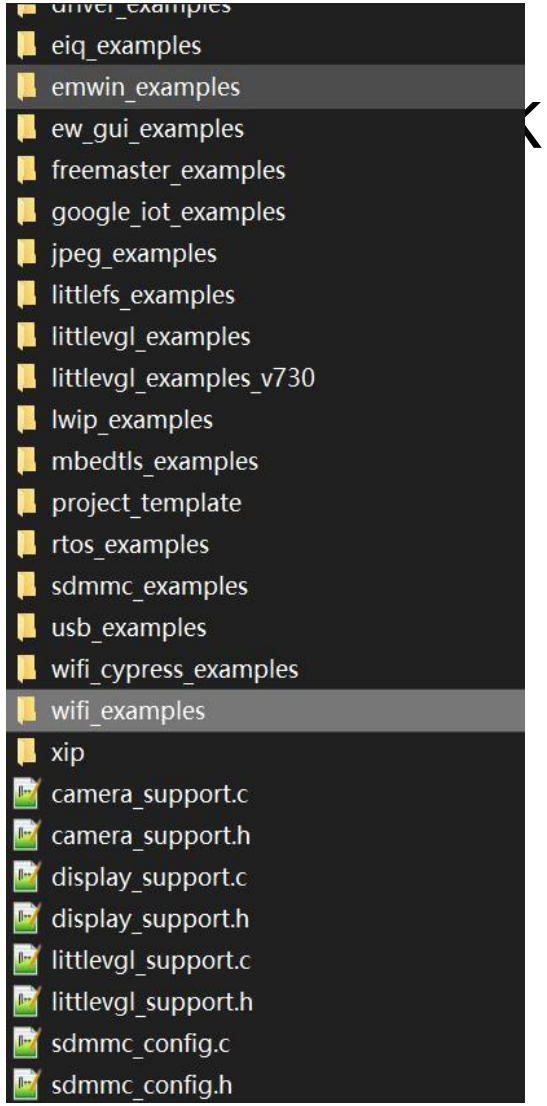
- 1. Make sure WiFI component is selected when build SDK in builder website

  mcuxpresso.nxp.com

- 2. Include MDK IDE for projects

- 3. Install SDK 2.8.2 into your PC

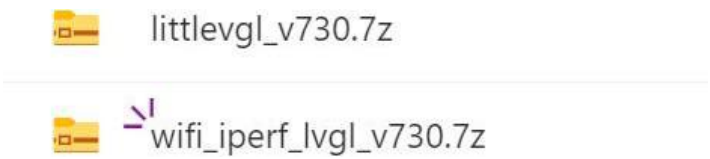




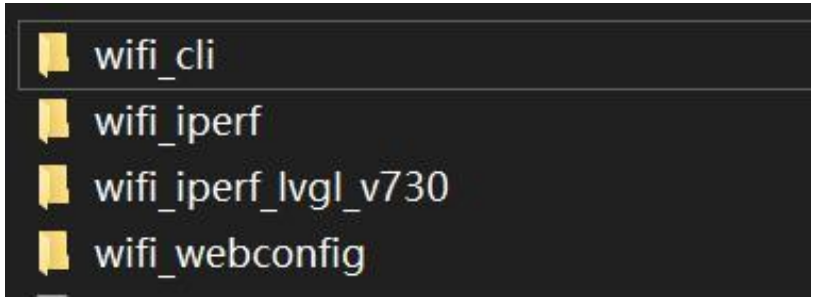
3. Get LVGL 7.3 and demo code

1. Get littlevgl_v730.zip code package and wifi_iperf_lvgl_v730.zip package

   Note: LVGL related code is from https://github.com/lvgl and is MIT licensed



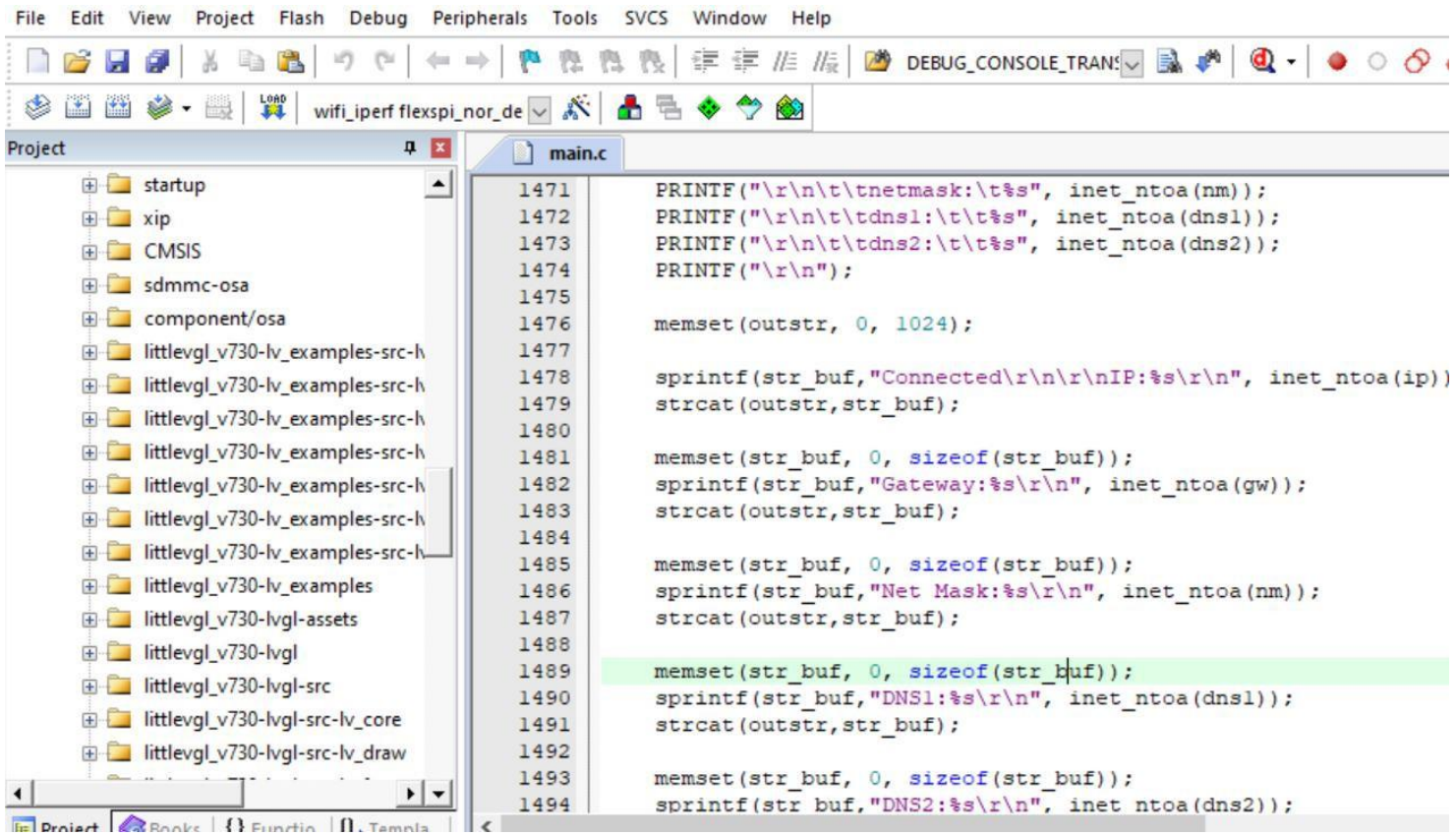
2. Unzip littlevgl_v730.zip into directory:
\middleware\littlevgl_v730



3. Unzip wifi_iperf_lvgl_v730.zip into directory:
\boards\evkmimxrt1060\wifi_examples

4. Build Project

1. Open MDK project



5. Flash to board

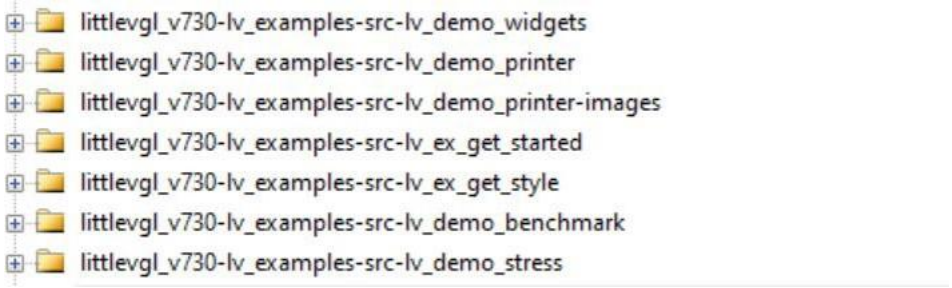
1. Flash to EVK board
2. Input password and SSID with soft-keyboard, it will pop with you click text field
3. Click Connection button to connect board to a external wifi AP

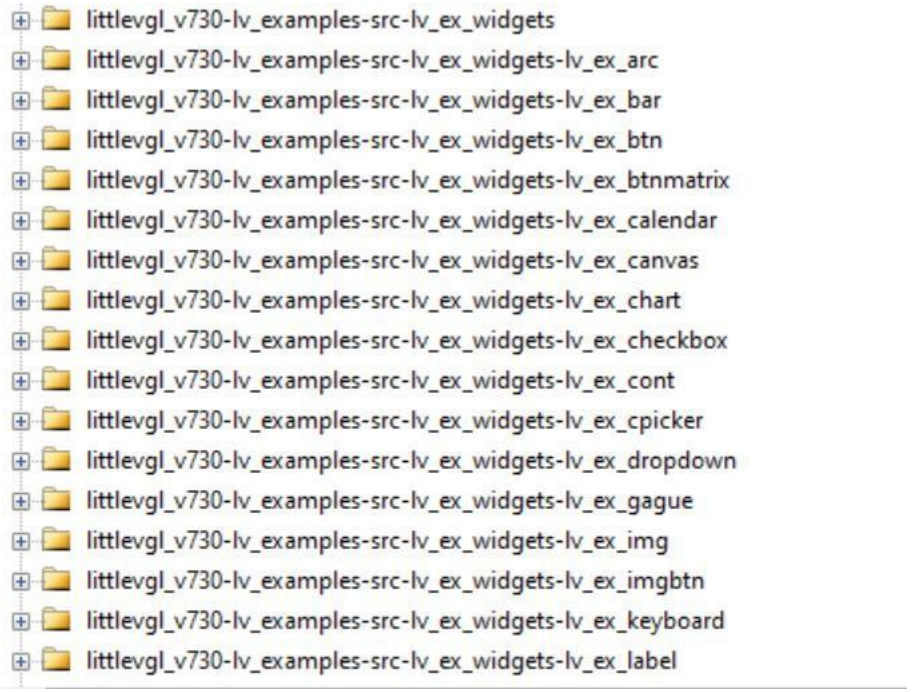
4. Network info area will display connection status(Disconnected,Connecting, Connected)

5. Status roller to provided animation indication of the the connection status.

6. To Learn other build in Littlevgl Demos

1. This MDK sample project have includes all official demos and examples
2. You can use it as a start point to learn littlevgl GUI immediately





7. Remove WiFi task and use LVGL only

1. In order to learn and use LVGL GUI only, firstly to remove FreeRTOS WiFi task
2. Remove wifi task tick hook function
3. #define WIFI_TASK_REMOVE macro in wifi_config.h

```
/*
 * Wifi extra debug options
 */
#undef CONFIG_WIFI_EXTRA_DEBUG
#undef CONFIG_WIFI_EVENTS_DEBUG
#undef CONFIG_WIFI_CMD_RESP_DEBUG
#undef CONFIG_WIFI_SCAN_DEBUG
#undef CONFIG_WIFI_IO_INFO_DUMP
#undef CONFIG_WIFI_IO_DEBUG
#undef CONFIG_WIFI_IO_DUMP
#undef CONFIG_WIFI_MEM_DEBUG
#undef CONFIG_WIFI_AMPDU_DEBUG
#undef CONFIG_WIFI_TIMER_DEBUG
#undef CONFIG_WIFI_SDIO_DEBUG

// ADDED
#define WIFI_TASK_REMOVE (1)
```

8. Choose your LVGL demo to work

1. Choose a lvgl demo insider FreeRTOS lvgl task
2. For example comment out lv_demo_wifi() and uncomment lv_demo_btn_1()

```
//lv_demo_widgets();
//lv_demo_printer();
//lv_demo_stress();
//lv_demo_benchmark();
//lv_demo_benchmark();
//lv_ex_switch_1();
//lv_ex_btn_1();
//lv_ex_img_1();

lv_demo_wifi();

for (;;)
{
    lv_demo_wifi_status_update();
    lv_task_handler();
    vTaskDelay(5);
}
```

```
s_lvgl_initialized = true;

//lv_demo_widgets();
//lv_demo_printer();
//lv_demo_stress();
//lv_demo_benchmark();
//lv_demo_benchmark();
//lv_ex_switch_1();
lv_ex_btn_1();
//lv_ex_img_1();

//lv_demo_wifi();

for (;;)
{
    lv_demo_wifi_status_update();
    lv_task_handler();
    vTaskDelay(5);
}
```

9. Flash the new lvgl into flash

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