SoftConsole installers:

ftp://ftp.actel.com/incoming/tommy/softconsole

Use

Microsemi-SoftConsole-v5.2.0.13-Linux-x86-Installer

Or

Microsemi-SoftConsole-v5.2.0.13-Windows-Installer.exe
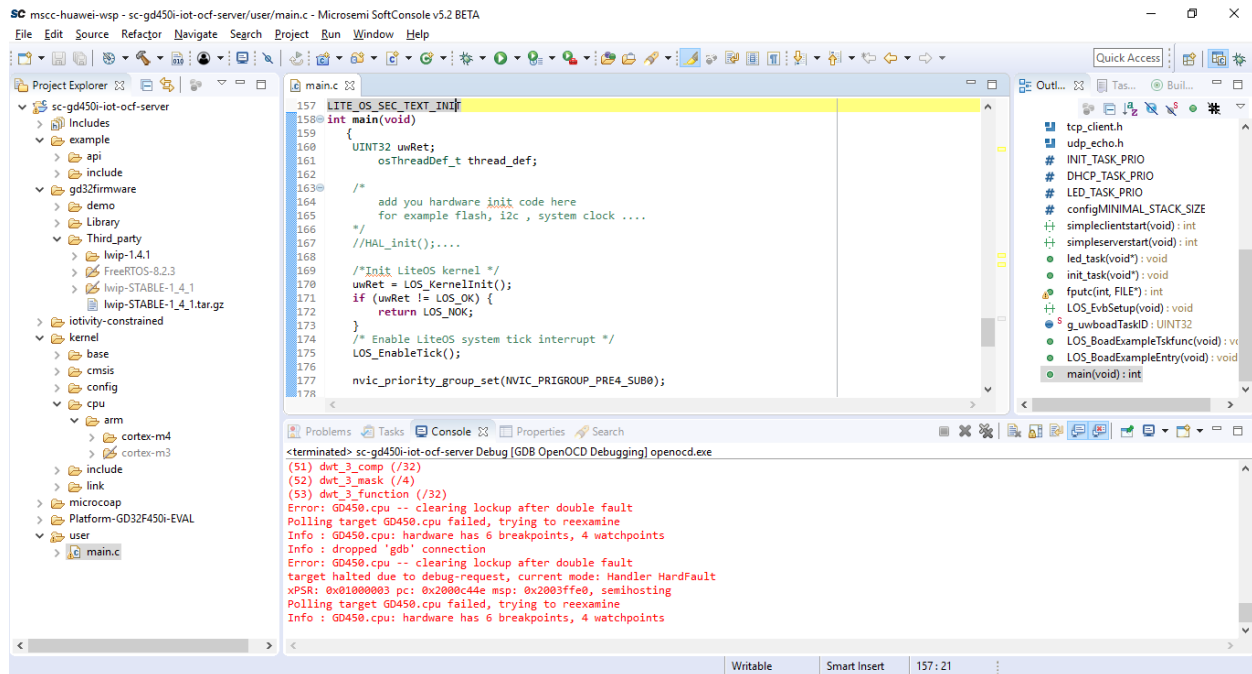
How to use SoftConsole:

After installing, open SoftConsole. It will ask for the Workspace path.

Provide path: <path on your machine>\microsemi-liteos\mscc-huawei-wsp

After you sync microsemi-liteos repo to your machine,

you will have <path on your machine>\microsemi-liteos\mscc-huawei-wsp on your machine.

You will find that the project sc-gd450i-iot-ocf-server is open in workspace.

The Miscellaneous/microsemi-cortex-m3.cfg must be copied into SoftConsole

installation path on your machine. e.g. path

C:\Microsemi\SoftConsole_v5.2.0.12\openocd\share\openocd\scripts\target

In this file the support for Cortex-M4 processor is created.

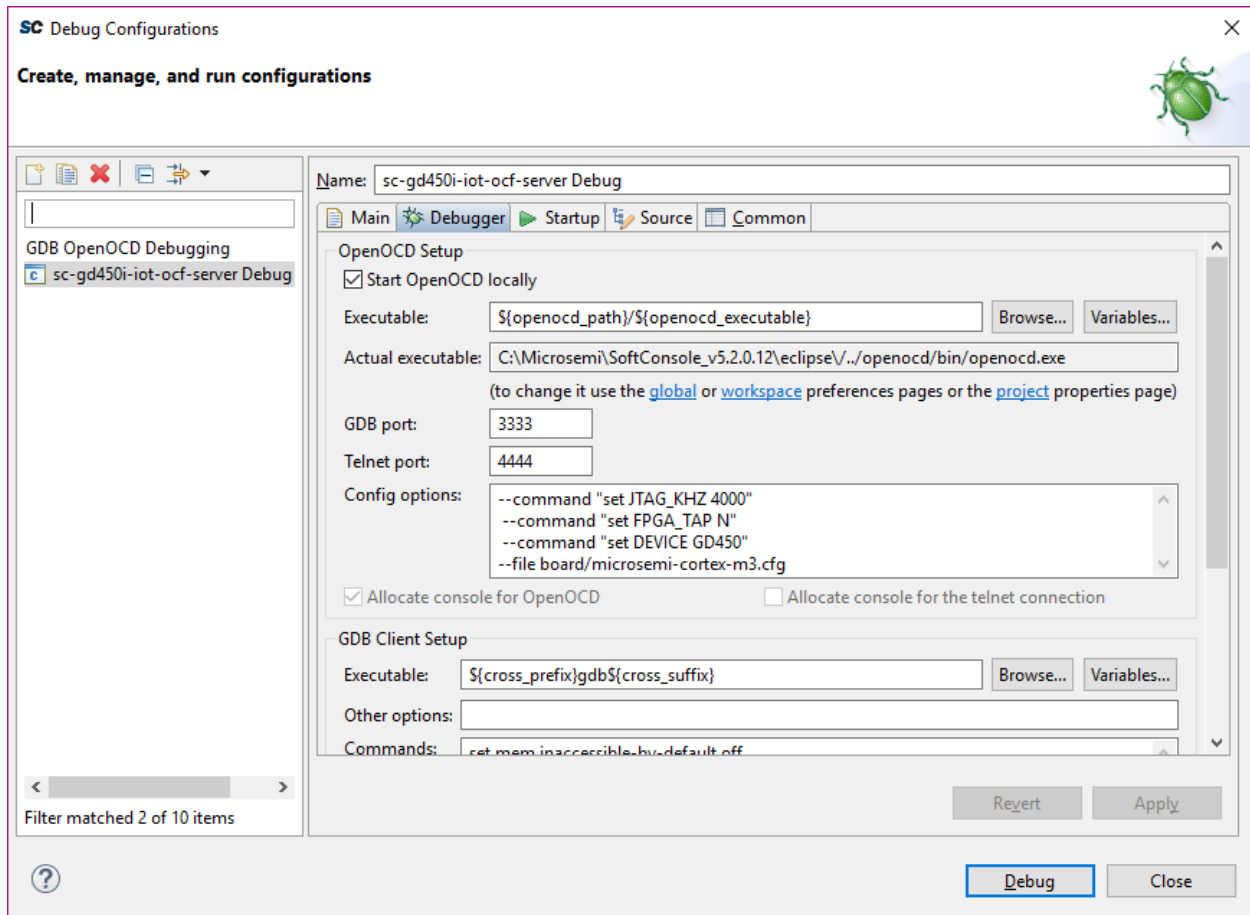**Note: Flash downloading is not yet supported.**

In your CM4 project, following values should be provided in debugger config options

in debug configuration.

--command "set JTAG_KHZ 4000"

 --command "set FPGA_TAP N"

 --command "set DEVICE GD450"

--file board/microsemi-cortex-m3.cfg

Linker script:

The linker script used to run the project from RAM is located

\microsemi-liteos\microsemi-liteos\mscc-huawei-wsp\sc-gd450i-iot-ocf-server\Platform-GD32F450i-EVAL\ debug-in-gd450-ram.ld
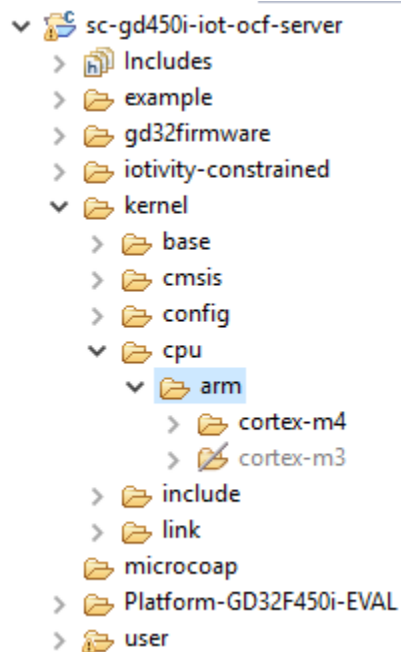
The startup code required with GCC for the GD450 processor is added in

startup_gd32f4xx.S

newlib_stubs.c

```
∨ 🗁 gd32firmware
  > 🗁 demo
  ∨ 🗁 Library
    ∨ 🗁 Firmware
      ∨ 🗁 CMSIS
        ∨ 🗁 GD
          ∨ 🗁 GD32F4xx
            > 🗁 Include
            ∨ 🗁 Source
              ∨ 🗁 GCC
                > .c newlib_stubs.c
                > .S startup_gd32f4xx.S
              > .c system_gd32f4xx.c
```

Not all files in the project are compiled. The files those are not required for this project are avoided using "resource configuration --> Exclude from build" option. As example, cortex-m3 folder is excluded from the build.

```
∨ 📚 sc-gd450i-iot-ocf-server
  > 🔖 Includes
  > 🗁 example
  > 🗁 gd32firmware
  > 🗁 iotivity-constrained
  ∨ 🗁 kernel
    > 🗁 base
    > 🗁 cmsis
    > 🗁 config
    ∨ 🗁 cpu
      ∨ 🗁 arm
        > 🗁 cortex-m4
        > 🗁 cortex-m3
    > 🗁 include
    > 🗁 link
    🗁 microcoap
  > 🗁 Platform-GD32F450i-EVAL
  > 🗁 user
```

Right click on the project name and select "project properties" in the "Project Explorer" to view all the properties of the project

SC mscc-huawei-wsp - sc-gd

File Edit Source Refactc

Project Explorer

- sc-gd450i-iot-ocf-ser
  - Includes
  - example
  - gd32firmware
  - iotivity-constraine
  - kernel
    - base
    - cmsis
    - config
    - cpu
      - arm
        - cortex-
        - cortex-
    - include
    - link
  - microcoap
  - Platform-GD32F4!
  - user

Copy	Ctrl+C
Paste	Ctrl+V
Delete	Delete
Remove from Context	Ctrl+Alt+Shift+Down
Source	>
Move...	
Rename...	F2
Import...	
Export...	
Build Project	
Clean Project	
Refresh	F5
Close Project	
Close Unrelated Projects	
Build Targets	>
Index	>
Build Configurations	>
Show in Remote Systems view	
Profiling Tools	>
Validate	
Run As	>
Debug As	>
Profile As	>
Restore from Local History...	
Run C/C++ Code Analysis	
Team	>
Compare With	>
Configure	>
Source	>
Properties	Alt+Enter

sc-gd450i-iot-ocf-server

Screenshot of the properties is given below as an example
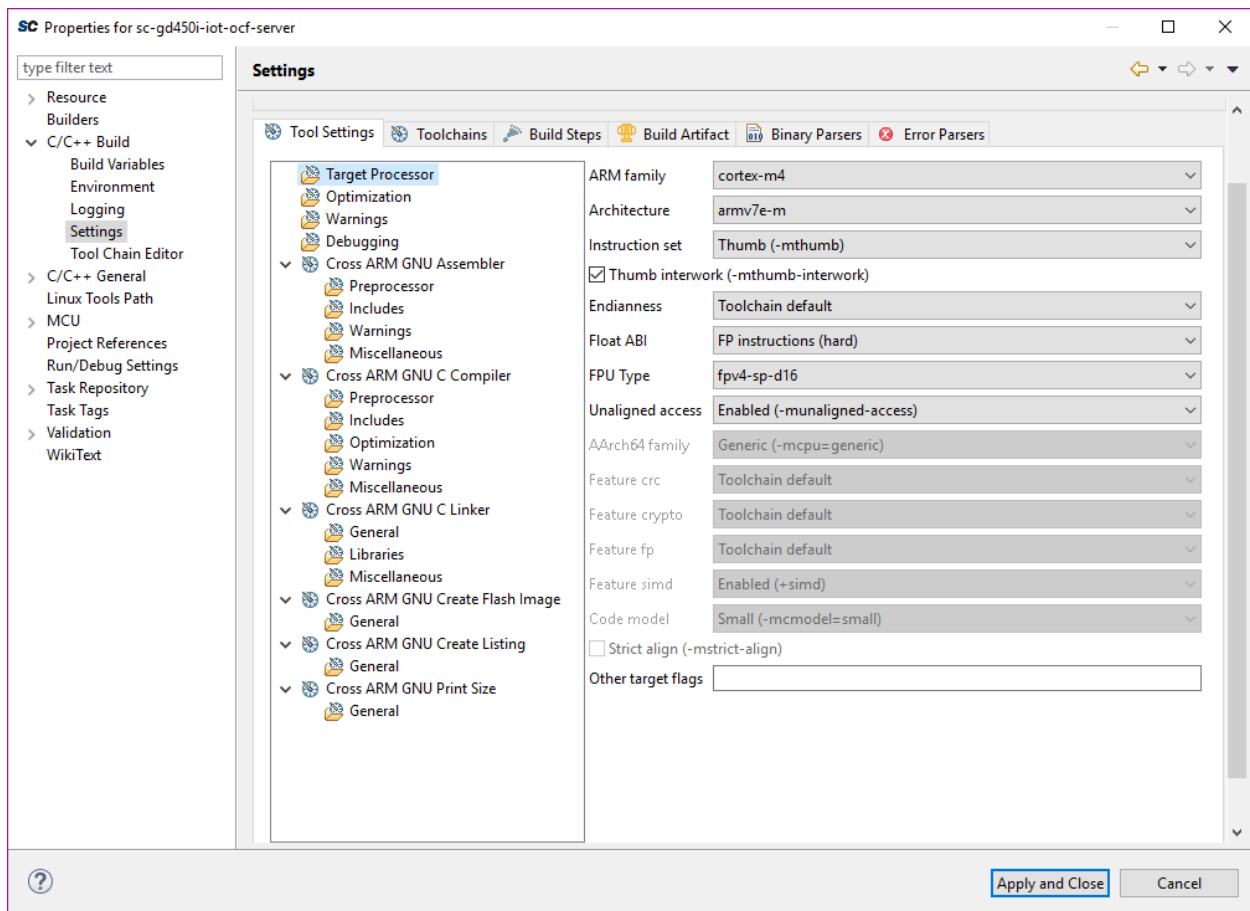
Downloading and step debug:

Use Flashpro debugger to connect to the board using USB cable.

FLashpro debugger has 10Pin JTAG. GD450 has 20pin Jtag. Use the add-on card to covert from 10opin to 20 pin Jtag.

In absence of add-on card below are the pin connection details which can be manually done using jumper wires.

1 - V3.3	2 - NC
3 - nTRST	4 - NC
5 - TDI	6 - NC
7 - TMS	8 - NC
9 – TCK	10 - NC
11- NC	12 - NC
13 – TDO	14 - NC
15 – NC	16 - NC
17 – NC	18 - NC
19 - NC	20 - GND

1 – TCK	2 – GND
3 - TDO	4 – NC
5 - TMS	6 – VJTag
7 – NC	8 - nTRST
9 - TDI	10 – NC