

AUTO-DRIVING / ... / Radar_20210828























TR_Tin_AreaScannerRadar_20211107



Created by tin.giang.s2.tt

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<input type="checkbox"/> Name	Date modified	Type	Size
 .metadata	10/19/2021 3:39 AM	File folder	
<input checked="" type="checkbox"/>  area_scanner	10/19/2021 3:39 AM	File folder	
 automated_doors_and_gates	10/19/2021 3:39 AM	File folder	
 common	10/19/2021 3:39 AM	File folder	
 gesture_recognition	10/19/2021 3:39 AM	File folder	
 level_sensing	10/19/2021 3:39 AM	File folder	
 long_range_people_detection	10/19/2021 3:39 AM	File folder	
 out_of_box_demo	10/30/2021 11:40 PM	File folder	
 parking_garage_sensor	10/19/2021 3:39 AM	File folder	
 people_counting	10/19/2021 3:39 AM	File folder	
 robotics	10/19/2021 3:39 AM	File folder	
 traffic_monitoring	10/19/2021 3:39 AM	File folder	
 vital_signs	10/19/2021 3:39 AM	File folder	

1. Requirements

Tool	Version	Download Link
TI mmWave SDK		MMWAVE-SDK 03_05_00_04 - TI.com
mmWave Industrial Toolbox		Industrial Toolbox (ti.com)
MATLAB Runtime	2019a (9.6)	MATLAB Runtime - MATLAB Compiler - MATLAB (mathworks.com)
Uniflash	Offline	UniFlash (ti.com)

2. Quickstart

a. Setup the EVM for Flashing Mode

1. Ensure that the SOP Switches (SW2) are set to **Flash Programming Mode**
2. Connect AoPCB Board to Host PC via USB cable.
3. Open Uniflash tool, select IWR1642 and click 'Start'.
4. Under Settings and Utilities tab, choose CFG_port as the COM port.

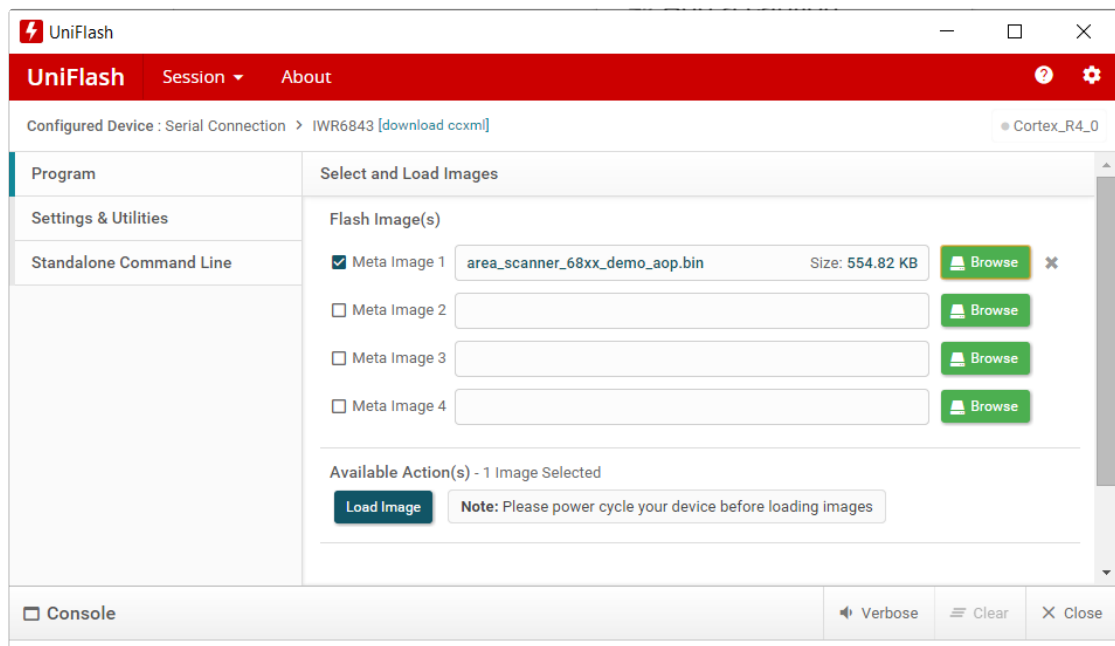
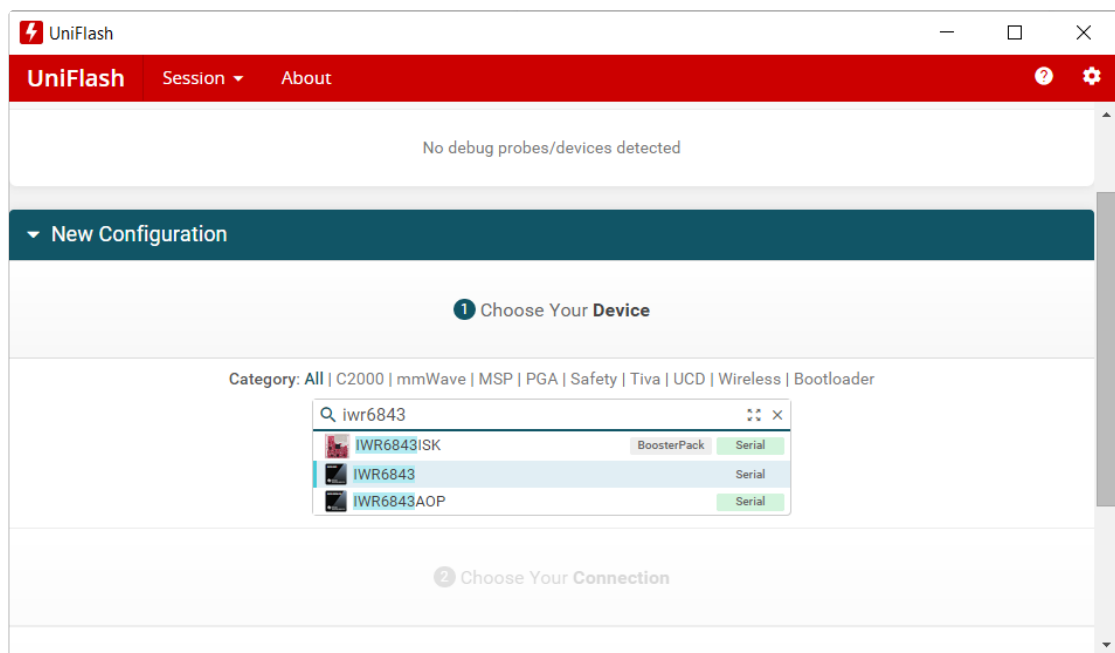
AoPCB Port	Host PC COM Ports	Port Function
CFG_port	Port: CP2105-Enhanced COM Port, Baud Rate:115200	AoPCB Programming & Configuration

DATA_port	Port: CP2105-Standard COM Port, Baud Rate:921600	AoPCB MSS Logger output
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Table 2 : UART Port mapping

1. Under 'Program' tab, browse to the binary file to be programmed for 'Meta Image 1'. In the release zip package provided by Mistral, the binary file is 'MS_60GhzAoPCB_mmw_demo.bin'.
2. Click 'Load Image'.
3. Check logs in Console window to verify flashing status. After successful flashing, disconnect the board from PC.
4. Power OFF the Board.
5. Set SOP Switches back to Functional Mode for normal Radar Function

b. Flash the EVM using Uniflash



c. Setup the EVM for Functional Mode

d. Run the Lab

Setup

Visualizer Mode

Real Time

Play Back

Set COM port for real time

CFG_PORT

7

Test Connection

DATA_PORT

6

Select CFG File

CFG File

C:\immwave_industrial_toolbox_4_9_0\labs\area_scanner\68xx_area_s

Browse

Record Data

☐ Enable recording. UART stream will be saved to file.

Save Directory

C:\Users\GiangTins\Downloads\New folder

Browse

File Name

as_demo_uart_stream.txt

Sensor Information

Sensor Mounting Height [m]:

0.5

Sensor Elevation Tilt [deg]:

0

Visualizer Options

☒ Show zone occupancy

Range Critical Zone Start [m]:

0

Range Critical Zone End [m]:

8

Range Warning Zone Start [m]:

8

Range Warning Zone End [m]:

10

Projection Time [sec]:

2

Setup Complete

d. Data out format

as_demo_uart_stream.txt - Notepad

File Edit Format View Help

02 01 04 03 06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 01 00 00 00 ea d9 6e a7 00 00 00 00 02
00 00 52 a9 64 ad 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00
00 01 00 00 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03
2 01 04 03 06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 11 00 00 00 eb 59 83 ba 00 00 00 00 02
00 00 46 3d 79 c0 00 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00 00
0 01 00 00 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03
01 04 03 06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 21 00 00 00 8a 2b 96 cd 00 00 00 00 02 00
0 00 02 0d 8c d3 00 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00 00
01 00 00 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03 40
1 04 03 06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 31 00 00 00 3a fb a8 e0 00 00 00 00 02 00
00 3e dd 9e e6 00 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00 00
1 00 00 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03 40
04 03 06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 41 00 00 00 57 cb bb f3 00 00 00 00 02 00 00
0 50 ae b1 f9 00 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00 00
00 00 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03 40
4 03 06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 51 00 00 00 8b 9d ce 06 00 00 00 00 02 00 00
66 7b c4 0c 00 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00 00
0 00 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03 40
03 06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 61 00 00 00 d5 6f e1 19 00 00 00 00 02 00 00
8 4c d7 1f 00 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00 00
00 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03 40
3 06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 71 00 00 00 88 3b f4 2c 00 00 00 00 02 00 00
1b ea 32 00 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00 00
0 00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03 40
06 05 08 07 04 00 05 03 40 00 00 00 43 68 0a 00 81 00 00 00 40 0c 07 40 00 00 00 00 02 00 00
b fc 45 00 00 00 00 02 00 00 00 00 00 00 00 00 00 00 00 00 00 01 00 00 00 00 00 00 08 00 00
00 00 00 00 08 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 02 01 04 03 06 05 08 07 04 00 05 03 40

Ln 1, Col 1100%Windows (CRLF)UTF-8

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