We are trying to extract raw ADC data from the AWR1843BOOST and DCM1000EVM board through mmWave Studio. But we are facing multiple errors while doing the same.

We are following the <u>youtube video</u> for the setup of the board with mmWave Studio.

We have been referring to the video, user-guide and multiple queries on the official TI forum.

Steps followed were:

- 1. Have connected the correct COM port (Application Port to the recommended BAUD rate).
- 2. Have loaded the correct firmware versions, which were available from the mmwave_studio package that came installed, for the BSS and MSS files.
- 3. The SOP mode has been set to dev mode (SOP 0 is 1 SOP 0 is 1 and SOP 2 is 2).
- 4. Everything until loading these files works fine, but when we try to connect SPI it gives me an error.

ihell 🖉 🔝 R	RadarAPI		• ×	Output
M	ISSMon DynamicChirpCfg ClockOutCfg Ca	libDataCfg Import_Export		Script Messages Only Exc:
ng Ci	Connection StaticConfig DataConfig TestSo	urce SensorConfig IntChirpBlkCtlCfg I	RegOp ContStream BPMConfig AdvFrameConfig RampTimingCalculator LoopBack ExtFilterProg CalibConfig DigitalMon AnalogTxMon Analo	[17:41:39] [RadarAPI]: arl.Connect
	Devel Overheit		No of Devices Detected: 0	(6,115200,1000)
	Deard Control	RS232 Operations	FTDI Connectivity Status: Connected	arl.Calling_IsConnected()
	Deart	COM Port COM6 V	RS232 Connectivity Status: Connected	[17:41:41] [RadarAPI]:
ot	Reset		SPI Connectivity Status: Disconnected	[17:41:41] [RadarAPI]: Status: Pas
	Set (1)	Baud Rate 115200 V	Device Status: XWR1843(ASIL-B/SOP:2/ES:2	[17:41:41] [RadarAPI]:
m	SOP Mode controlled via jumper on EVM	Disconnect (2)	Die kt. Lot4537834Wafer18/DevK:22/DevY:9	[17:41:41] [RadarAPI]: Status: Pas
			BSS INTRACES VESSOL 2.2.0.1 (US1017) DPC Date Environment 1.2.2 (1000/100)	[17:41:41] [RadarAPI]:
			MSS from a to the first sector of the first se	arl.deviceVariantSelection("XWR1843
2			MSS Patch firmware ver. NA	[17:41:41] [RadarAPI]:
3	Operating Frequency	Device Variant	GUI Version: 2.1.1.0	arl.frequencyBandSelection("776")
	O 60 GHz	○ XWH120X ○ XWH6843	Radar Link Version: 2.0.9.0 (31/07/19)	arl.SelectChipVersion("XWR1843")
	0 77 GHz	O XWR16W	Post Proc Version: 4.86	[17:41:41] [RadarAPI]: Status: Pas
		- O America		B/SOP:2/ES:2
				[17:41:41] [RadarAPI]: arl.SaveSet
	Files		SPI Operations	('C:\Users\BITSPILANI\AppData\Roami \RSTD\arlqui.ini')
				[17:41:45] [RadarAPI]: arl.Downlos
	BSS FW: C:thmmwave_studio_02_01_01_00irf_eval_firmware/radarss/owr18xx_radar		Darss.bin v Load (3)	("C:\\ti\\mmwave_studio_02_01_01_00
	MSS FW: C18Immwave_studio_02_01_01_00/uf_eval_firmwareImasterssixwr18xx_m		asterss.bin v Load (4)	\\xwrl0xx_radarss.bin")
	Contro File:		RF Power-up (6)	[17:41:45] [RadarAPI]: Downloading
				[17:41:53] [RadarAPI]:
				arl.GetBSSFuVersion()
				(02.00.00.01 (05/10/17))
				[17:41:54] [RadarAPI]:
				[17:41:54] [RadaraPI1:
				BSSPatchFwVersion: (01.02.05.02
				(30/04/19)) (17:41-581 (Reder&PT): ar) Downlow
				("C:\\ti\\mmwave_studio_02_01_01_0
				\\rf_eval_firmware\\masterss
				[17:41:59] [RadarAPI]: Downloadin
				RPRC Binary
				arl.GetMSSFwVersion()
				[17:42:10] [RadarAPI]: MSSFwVersi
				[17:42:12] [RadarAPI]: arl.PowerG
				1000, 0, 0)
				RADAR INTERFACE ERROR
				[17:42:17] MSS Power Up async eve
				not received!
ise				· Derrouse 12 AP

The error faced is

[17:42:12] Status: Failed, Error Type: RADAR INTERFACE ERROR [17:42:17] MSS Power Up async event was not received!

We have searched up this error on the TI forums but have not been able to find any fix for the same. We have connected the correct ports, selected the right SOP modes.

On startup of the device, the DS1 NERR LED is switched on RED. On searching up this we found out that this means a HW error. But this red light would go away once the MSS file was loaded. Attaching the hardware setup picture for your reference.



The same set of errors keep repeating in a cycle without changing any of the settings. Yesterday we somehow managed to reach the "SensorConfig tab" after successful setup of the previous steps, while setting up the DCA1000, it gave an error saying FGPA version not available. After which when we tried to reset the device, the above mentioned set of errors started to appear.