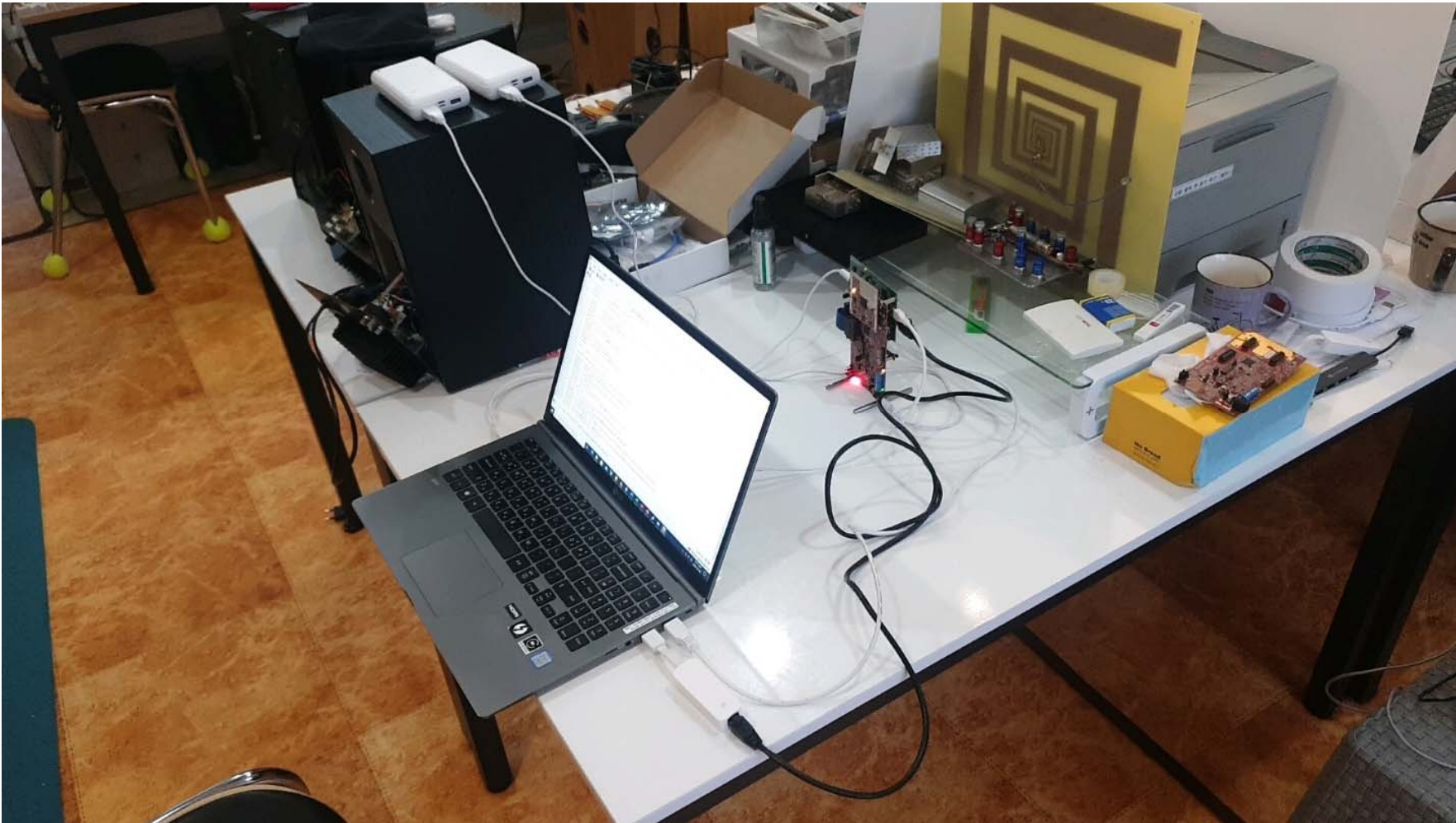
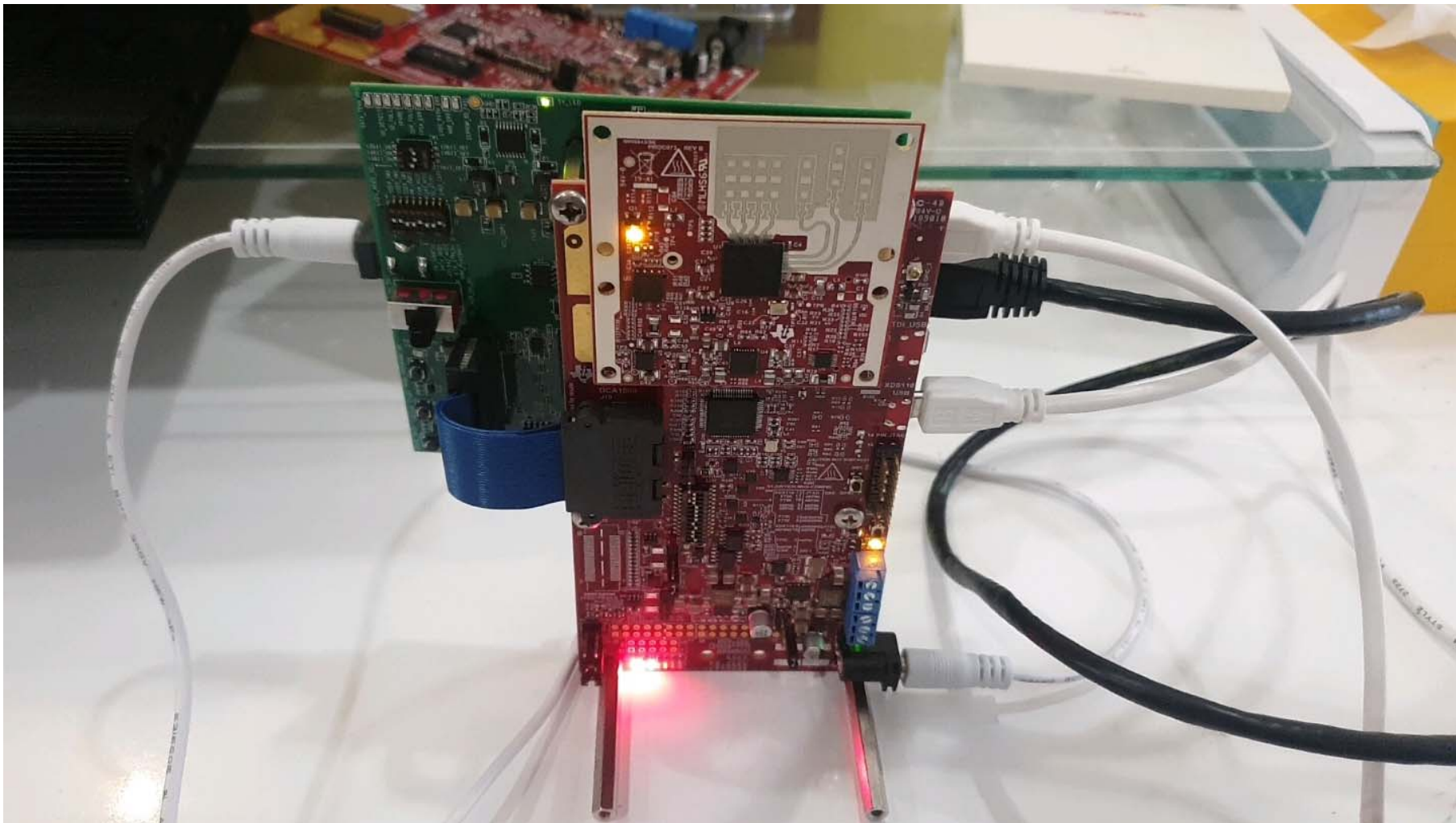


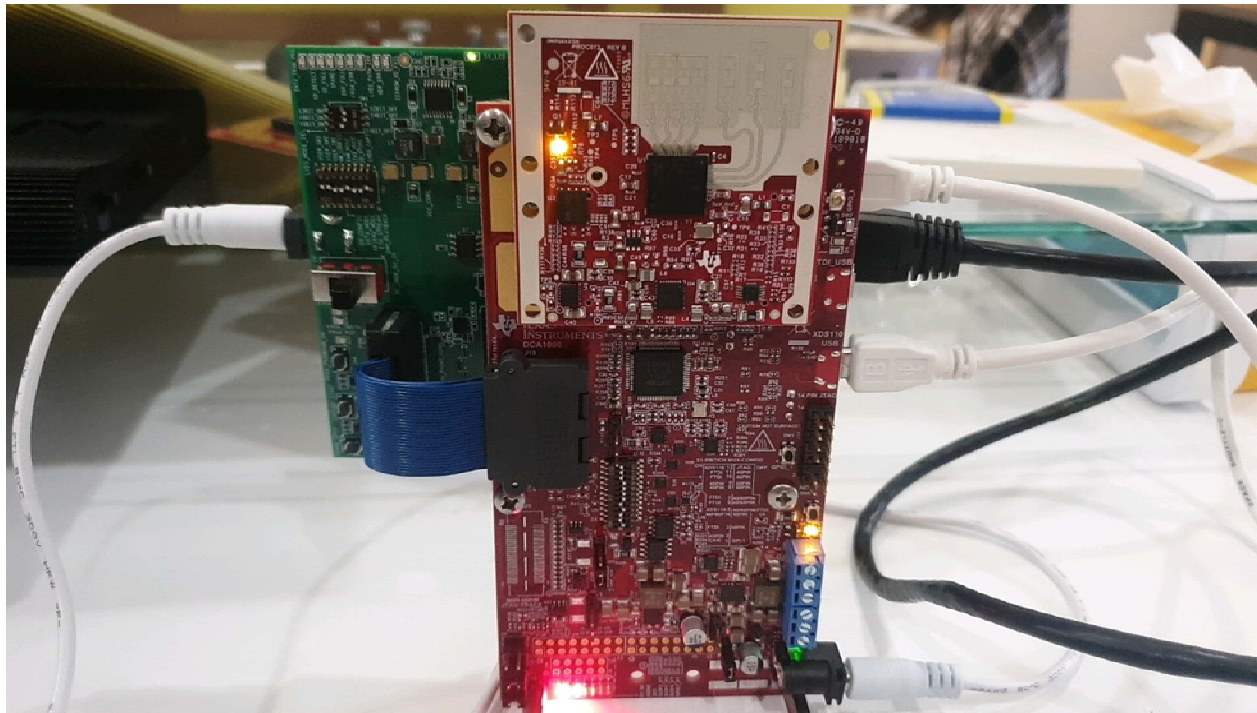
Hardware set-up 1



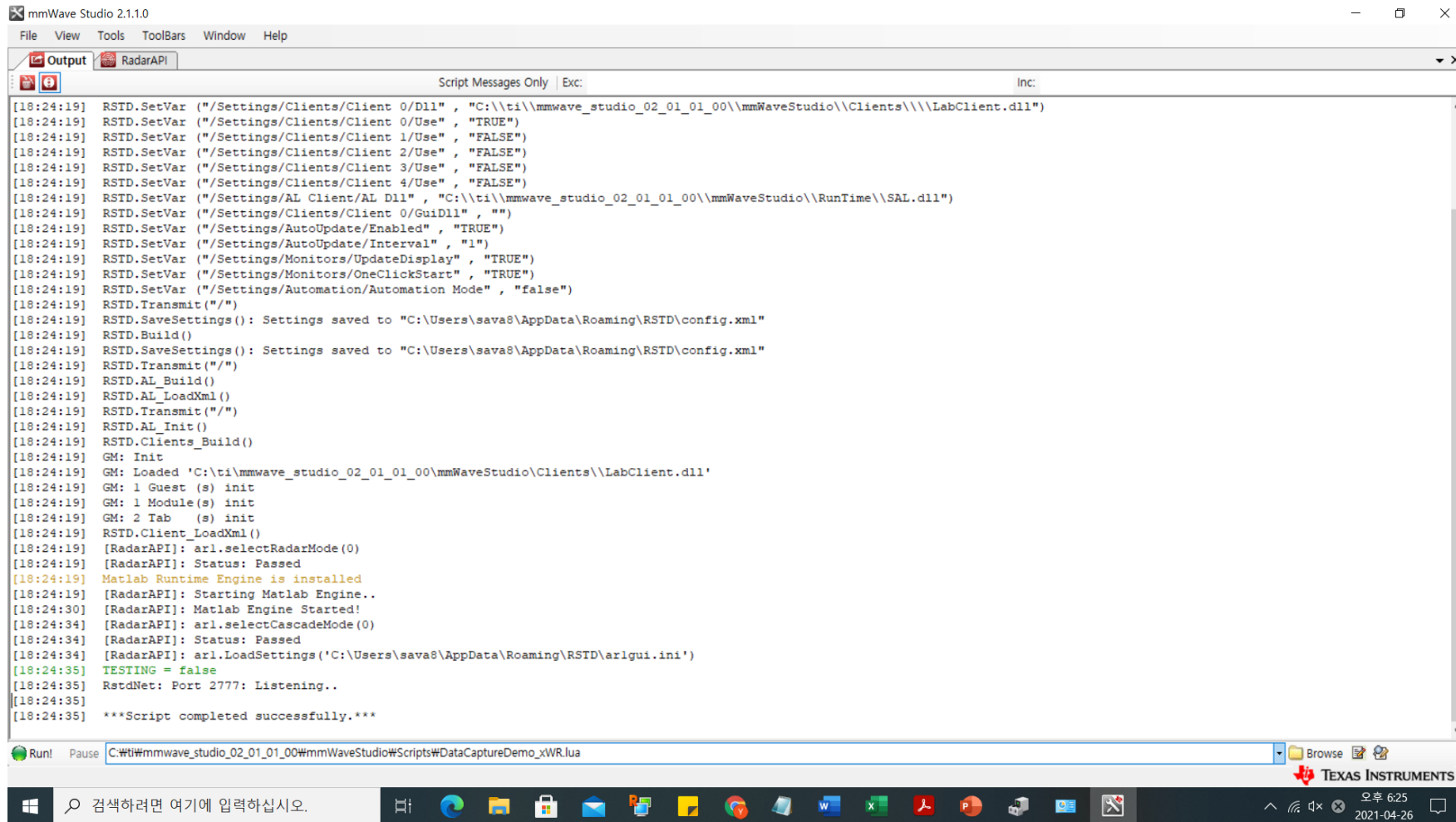
Hardware set-up 2



Hardware set-up 3



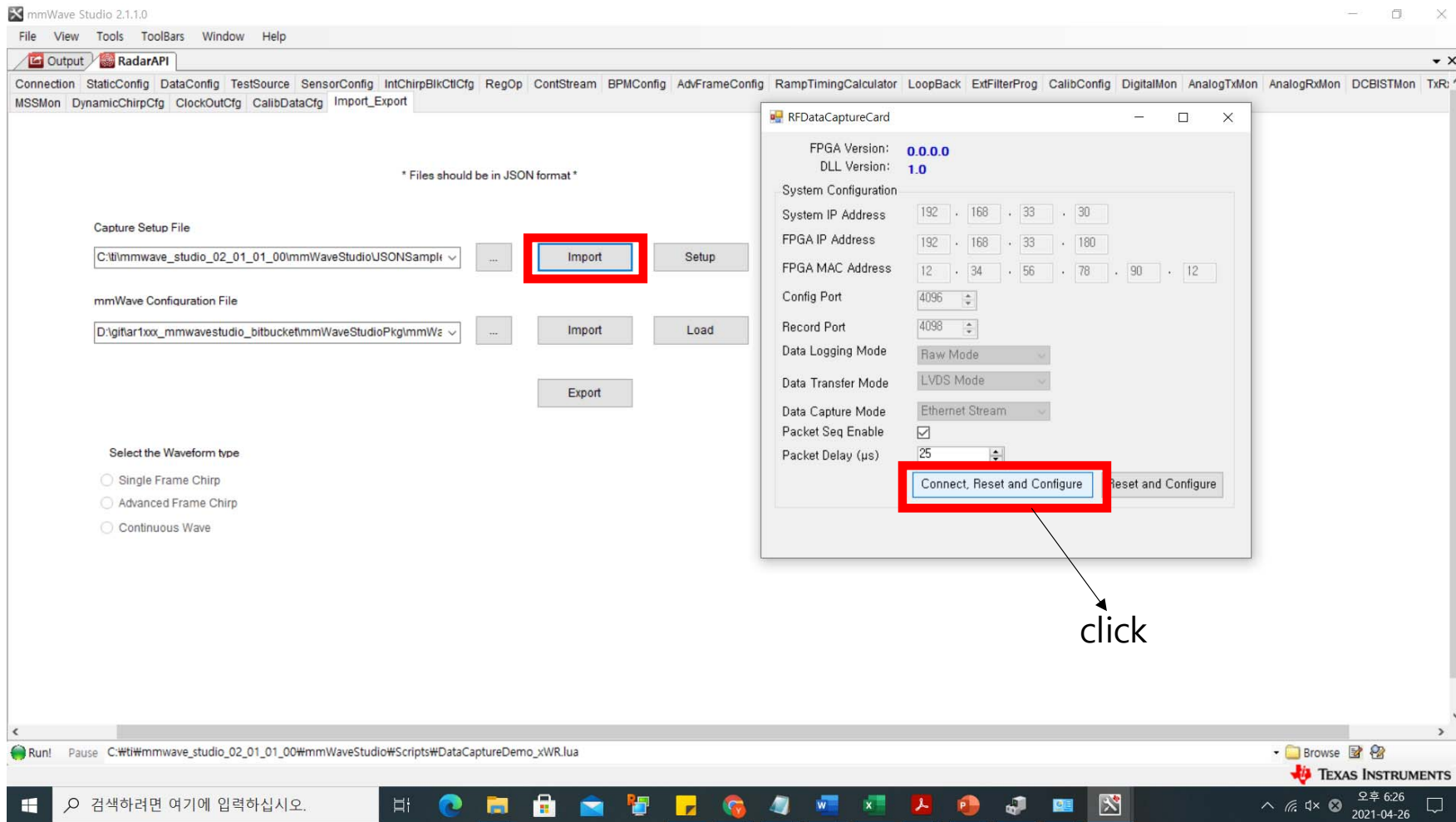
Step1 >> Start mmWave Studio 2.1.1.0



The screenshot displays the mmWave Studio 2.1.1.0 application window. The 'Output' tab is active, showing a log of script messages. The script is executed in the 'Script Messages Only' view. The log shows the initialization of the RSTD client, setting various configuration variables, and the successful completion of the script. The script path is 'C:\ti\mmwave_studio_02_01_00\mmWaveStudio\Scripts\DataCaptureDemo_xWR.lua'. The log also indicates that the Matlab Runtime Engine is installed and started.

```
[18:24:19] RSTD.SetVar ("/Settings/Clients/Client 0/Dll" , "C:\\ti\\mmwave_studio_02_01_00\\mmWaveStudio\\Clients\\LabClient.dll")
[18:24:19] RSTD.SetVar ("/Settings/Clients/Client 0/Use" , "TRUE")
[18:24:19] RSTD.SetVar ("/Settings/Clients/Client 1/Use" , "FALSE")
[18:24:19] RSTD.SetVar ("/Settings/Clients/Client 2/Use" , "FALSE")
[18:24:19] RSTD.SetVar ("/Settings/Clients/Client 3/Use" , "FALSE")
[18:24:19] RSTD.SetVar ("/Settings/Clients/Client 4/Use" , "FALSE")
[18:24:19] RSTD.SetVar ("/Settings/AL Client/AL Dll" , "C:\\ti\\mmwave_studio_02_01_00\\mmWaveStudio\\Runtime\\SAL.dll")
[18:24:19] RSTD.SetVar ("/Settings/Clients/Client 0/GuiDll" , "")
[18:24:19] RSTD.SetVar ("/Settings/AutoUpdate/Enabled" , "TRUE")
[18:24:19] RSTD.SetVar ("/Settings/AutoUpdate/Interval" , "1")
[18:24:19] RSTD.SetVar ("/Settings/Monitors/UpdateDisplay" , "TRUE")
[18:24:19] RSTD.SetVar ("/Settings/Monitors/OneClickStart" , "TRUE")
[18:24:19] RSTD.SetVar ("/Settings/Automation/Automation Mode" , "false")
[18:24:19] RSTD.Transmit("/")
[18:24:19] RSTD.SaveSettings(): Settings saved to "C:\\Users\\sava8\\AppData\\Roaming\\RSTD\\config.xml"
[18:24:19] RSTD.Build()
[18:24:19] RSTD.SaveSettings(): Settings saved to "C:\\Users\\sava8\\AppData\\Roaming\\RSTD\\config.xml"
[18:24:19] RSTD.Transmit("/")
[18:24:19] RSTD.AL_Build()
[18:24:19] RSTD.AL_LoadXml()
[18:24:19] RSTD.Transmit("/")
[18:24:19] RSTD.AL_Init()
[18:24:19] RSTD.Clients_Build()
[18:24:19] GM: Init
[18:24:19] GM: Loaded 'C:\\ti\\mmwave_studio_02_01_00\\mmWaveStudio\\Clients\\LabClient.dll'
[18:24:19] GM: 1 Guest (s) init
[18:24:19] GM: 1 Module(s) init
[18:24:19] GM: 2 Tab (s) init
[18:24:19] RSTD.Client_LoadXml()
[18:24:19] [RadarAPI]: arl.selectRadarMode(0)
[18:24:19] [RadarAPI]: Status: Passed
[18:24:19] Matlab Runtime Engine is installed
[18:24:19] [RadarAPI]: Starting Matlab Engine..
[18:24:30] [RadarAPI]: Matlab Engine Started!
[18:24:34] [RadarAPI]: arl.selectCascadeMode(0)
[18:24:34] [RadarAPI]: Status: Passed
[18:24:34] [RadarAPI]: arl.LoadSettings('C:\\Users\\sava8\\AppData\\Roaming\\RSTD\\arlgui.ini')
[18:24:35] TESTING = false
[18:24:35] RstdNet: Port 2777: Listening..
[18:24:35] ***Script completed successfully.***
```

Step2 >> RFDataCaptureCard and Click Connect, Reset and Configure



Step3 >> Output result

The screenshot displays the mmWave Studio 2.1.1.0 interface. The Output window on the left shows a log of system messages and script execution. A red box highlights a section of the log where the script attempts to read the FPGA version from the DCA1000 device but fails with an error.

```
[18:24:19] GM: 1 Guest (s) init
[18:24:19] GM: 1 Module(s) init
[18:24:19] GM: 2 Tab (s) init
[18:24:19] RSTD.Client_LoadXml()
[18:24:19] [RadarAPI]: arl.selectRadarMode(0)
[18:24:19] [RadarAPI]: Status: Passed
[18:24:19] Matlab Runtime Engine is installed
[18:24:19] [RadarAPI]: Starting Matlab Engine..
[18:24:30] [RadarAPI]: Matlab Engine Started!
[18:24:34] [RadarAPI]: arl.selectCascadeMode(0)
[18:24:34] [RadarAPI]: Status: Passed
[18:24:34] [RadarAPI]: arl.LoadSettings('C:\Users\sava8\AppData\Roaming\RSTD\arlgui.ini')
[18:24:35] TESTING = false
[18:24:35] RstdNet: Port 2777: Listening..
[18:24:35]
[18:24:35] ***Script completed successfully.***
[18:26:22] [RadarAPI]: arl.GetCaptureCardDllVersion()
[18:26:22] [RadarAPI]: Sending dll_version command to DCA1000
[18:26:22] [RadarAPI]:
[18:26:22] DLL Version : 1.0
[18:26:22] [RadarAPI]: arl.SelectCaptureDevice("DCA1000")
[18:26:22] [RadarAPI]: Status: Passed
[18:26:22] [RadarAPI]: arl.frequencyBandSelection("60G")
[18:26:22] [RadarAPI]: arl.frequencyBandSelection("60G")
[18:26:22] Capture Setup JSON Configuration is imported and loaded. DONE.
[18:30:24] [RadarAPI]: arl.CaptureCardConfig_EthInit("192.168.33.30", "192.168.33.180", "12:34:56:78:90:12", 4096, 4098)
[18:30:24] [RadarAPI]: arl.CaptureCardConfig_Mode(1, 2, 1, 2, 3, 30)
[18:30:24] [RadarAPI]: arl.CaptureCardConfig_PacketDelay(25)
[18:30:24] [RadarAPI]: Sending fpga command to DCA1000
[18:30:34] [RadarAPI]:
[18:30:34] FPGA Configuration :
[18:30:34] Timeout Error! System disconnected
[18:30:34] [RadarAPI]: Sending record command to DCA1000
[18:30:44] [RadarAPI]:
[18:30:44] Configure Record :
[18:30:44] Timeout Error! System disconnected
[18:30:44] [RadarAPI]: arl.GetCaptureCardFPGAVersion()
[18:30:44] [RadarAPI]: Sending fpga_version command to DCA1000
[18:30:54] [RadarAPI]:
[18:30:54] Unable to read FPGA Version. [error -5]
[18:30:54]
```

The RFDataCaptureCard configuration dialog is open on the right, showing the following settings:

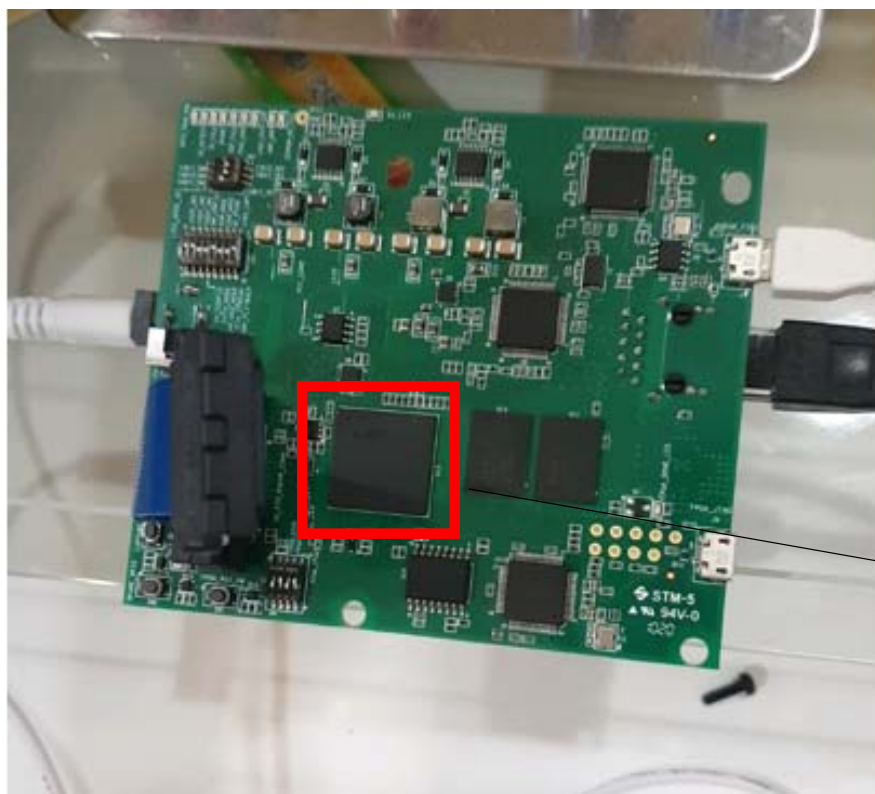
- FPGA Version: **FPGA Version 1.0**
- DLL Version: **1.0**
- System Configuration
- System IP Address: 192 . 168 . 33 . 30
- FPGA IP Address: 192 . 168 . 33 . 180
- FPGA MAC Address: 12 . 34 . 56 . 78 . 90 . 12
- Config Port: 4096
- Record Port: 4098
- Data Logging Mode: Raw Mode
- Data Transfer Mode: LVDS Mode
- Data Capture Mode: Ethernet Stream
- Packet Seq Enable: ☒
- Packet Delay (μs): 25
- Buttons: Connect, Reset and Configure; Reset and Configure

An arrow points from the error message in the log to the text "Can't read FPGA Version".

Run! Pause C:\ti\mmwave_studio_02_01_00\mmWaveStudio\Scripts\DataCaptureDemo_xWR.lua

TEXAS INSTRUMENTS

오후 6:31 2021-04-26



→ This chip Hot.