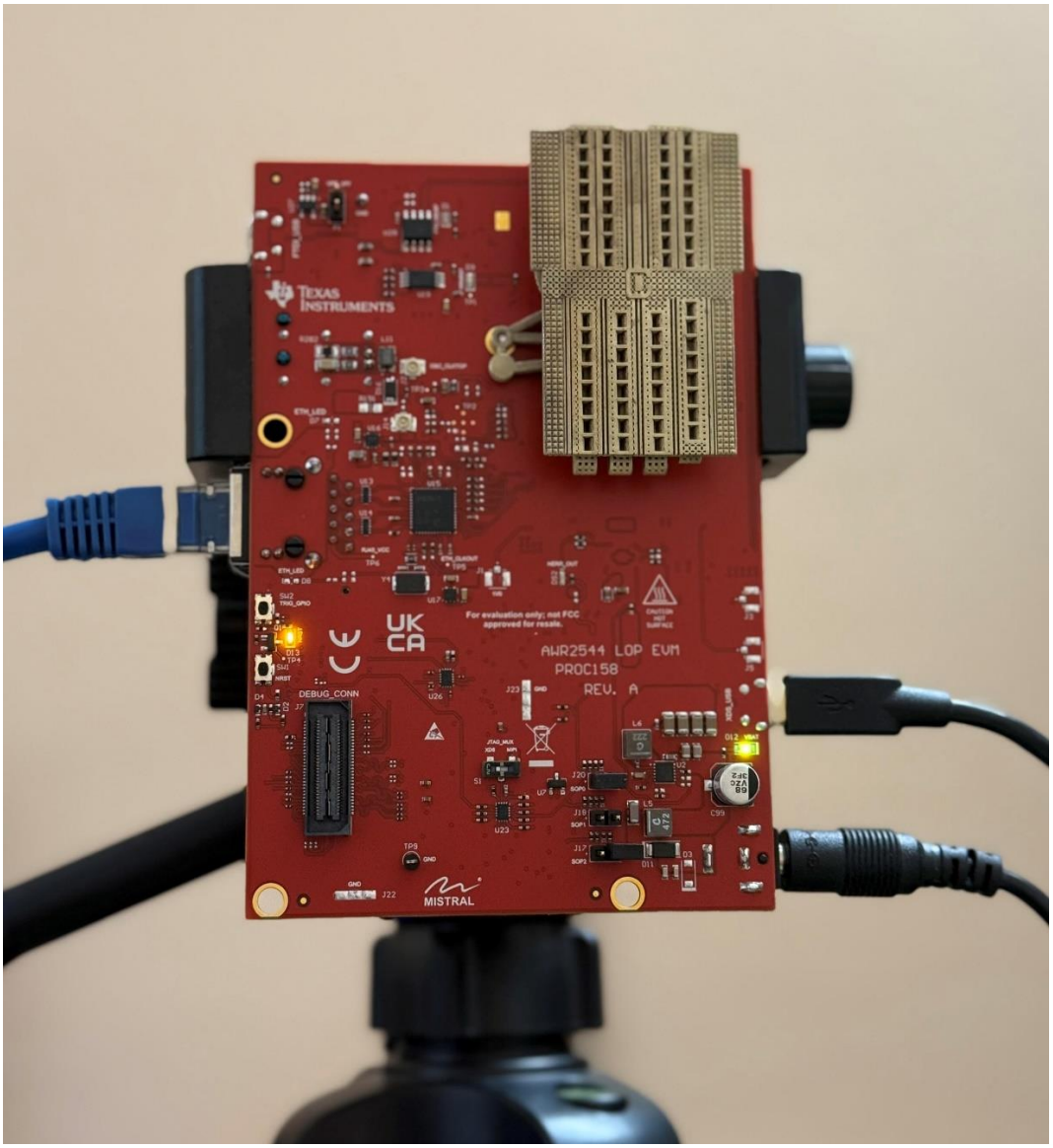
AWR2544 - mmWave Visualizer Demo Setup

By Quoc Lam – V1.0

Hardware Setup

Please make sure AWR2544 hardware is programmed with awr2544 demo application. Following the picture below for the hardware setup:

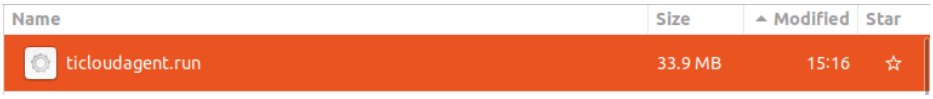
1. Power supply 12V-2.5A
2. Plug XDS_USB cable
3. SOP mode 4 – functional mode
4. S1 – XDS selection, S2 – FTDI_SPI selection
5. Ethernet cable connect directly from RJ45 connector of AWR2544 EVM to host PC



Host PC Setup

AWR2544 Demo visualizer can only run on ubuntu OS, tested on ubuntu 20.04 LTS
Some prerequisites to be installed:

1. xTerm terminal
2. A browser extension, called the TI Cloud Agent Bridge, must be installed separately to enable the browser to communicate with the main application
3. Install TICloudAgent (download and install **TICloudAgent.run)**



4. Issue permission to the serial port

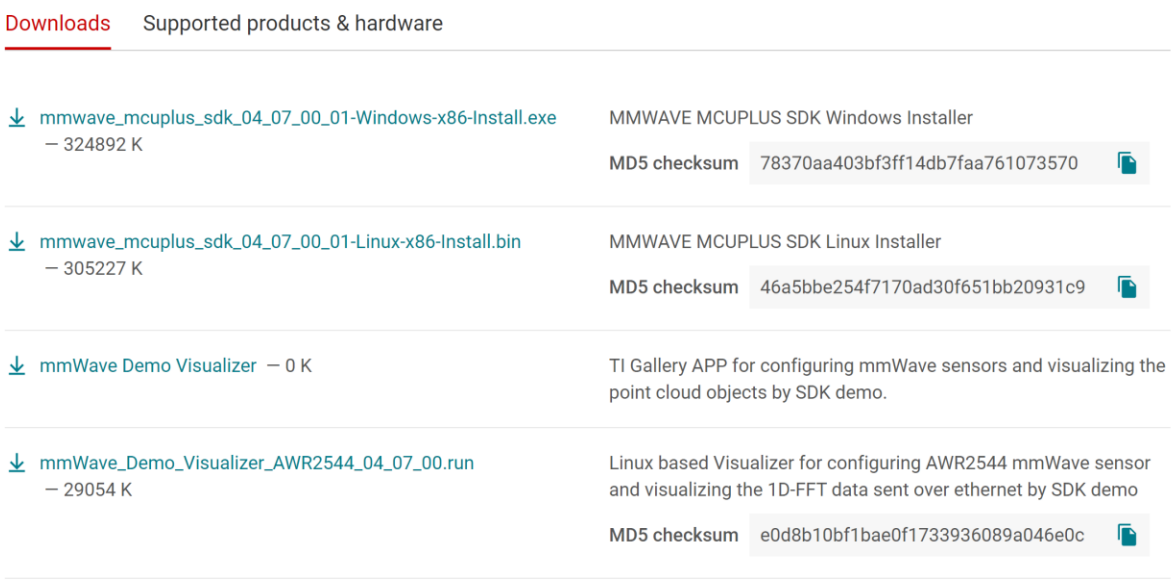
The issue with the permissions for */dev/ttyACM0* can be permanantly solved by adding yourself to the *dialout* group.
You can do this with:

sudo usermod -a -G dialout $USER

Logout and then log back in for the group changes to take effect.

5. Install code composer studio and xds100 driver for auto-reset functionality

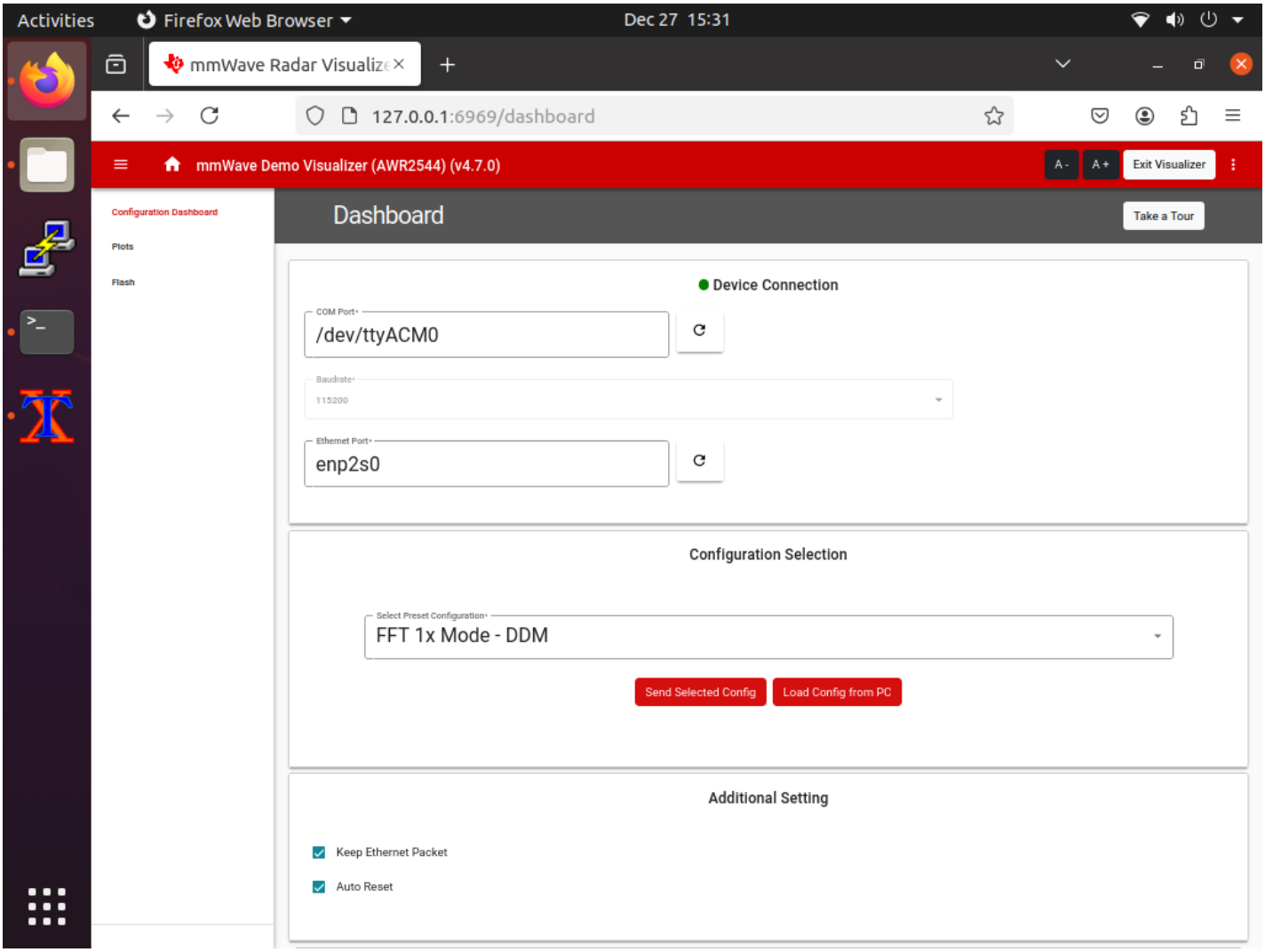
The executable (mmWave_Demo_Visualizer_AWR2544.run) file of the Visualizer can be downloaded from https://www.ti.com/tool/download/MMWAVE-MCUPLUS-SDK/<version>.



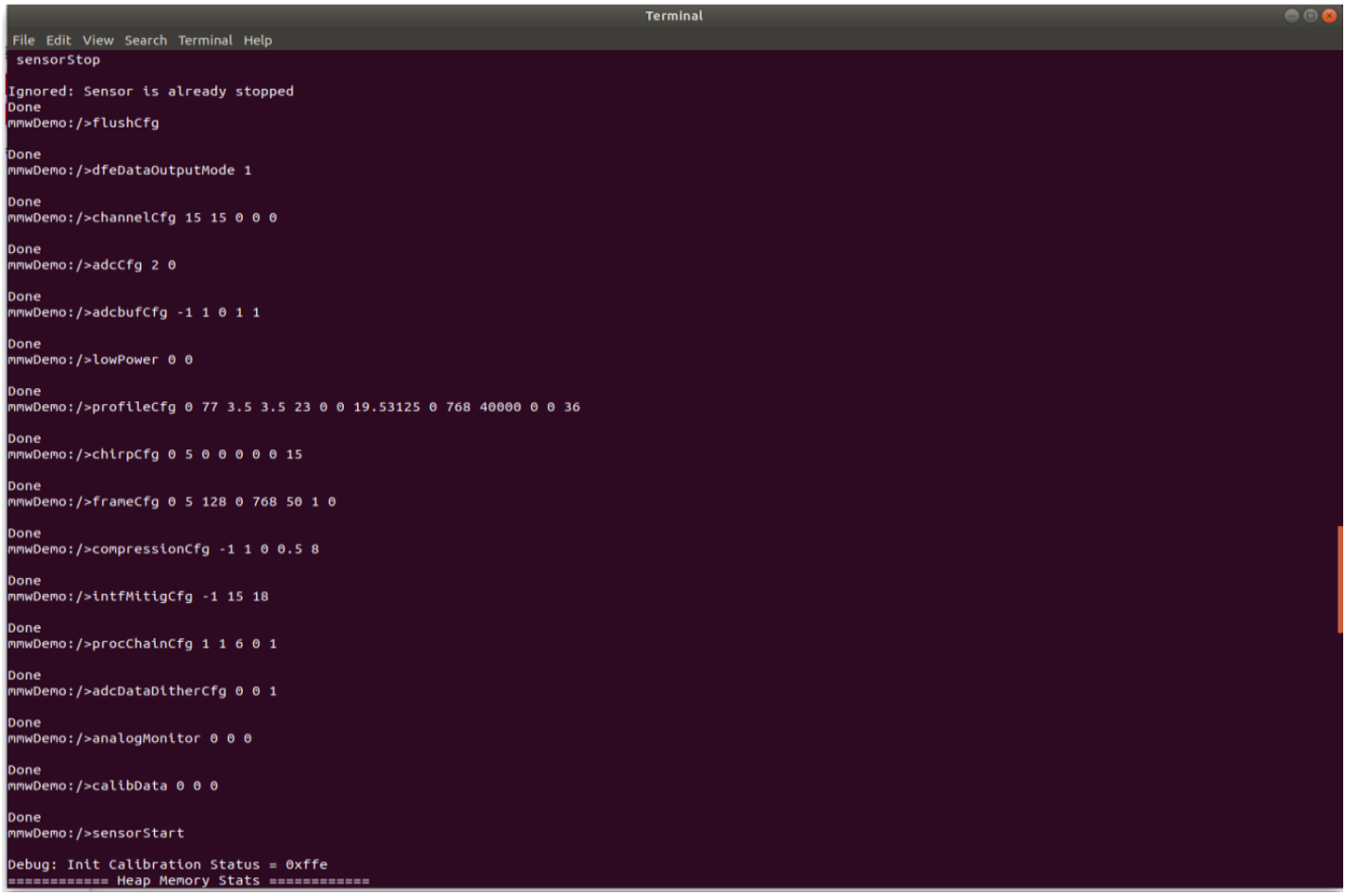
To run the application user need to open the terminal at the location and type ***./visualizer.run***.When the above executable is run, the Visualizer application opens up in the system default browser with the Home Page as shown below**.** This page provides links to various documentation that can be referred to while working with the mmWave device and the Visualizer, along with short descriptions of the different application tabs.

Note: *Before running the Visualizer application please make sure you have changed the mode for execution. For this, open terminal on visualizer folder and type* ***chmod +x visualizer.run*** *on the terminal.*

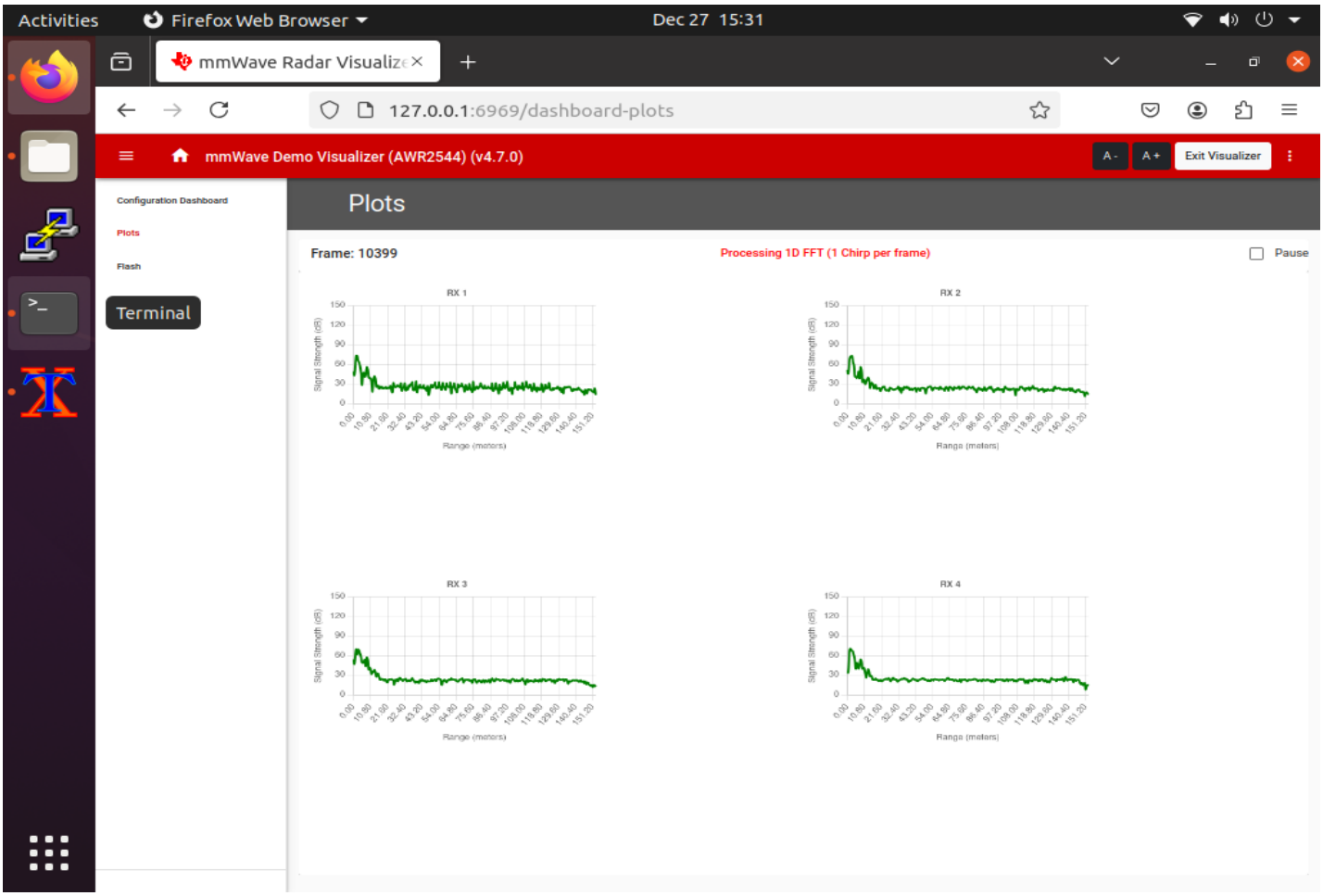
6. Configuration settings: Com Port (/dev/ttyACM0), Com port should be auto-detect by Visualizer
7. Ethernet port (enp2s0), please use ***ifconfig*** command to identify the ethernet port
8. Set Xterm permission to write output.pcap files and folders (***chmod -R 777 ./***)



9. Configuration Selection: This section enables the configuration of the device with preset config files (*.cfg file). A config file contains a bunch of CLI commands used to configure the device.



10. Plots: This tab shows four RX plots that can be used for further analysis viz., RX1, RX2, RX3, RX4 along with the Frames received.


Activities
Firefox Web Browser
Dec 27 15:31
mmWave Radar Visualize
127.0.0.1:6969/dashboard-plots
mmWave Demo Visualizer (AWR2544) (v4.7.0)
A-
A+
Exit Visualizer
Configuration Dashboard
Plots
Flash
Terminal
Plots
Frame: 10399
Processing 1D FFT (1 Chirp per frame)
Pause
RX 1
RX 2
RX 3
RX 4
Signal Strength (dB)
Range (meters)