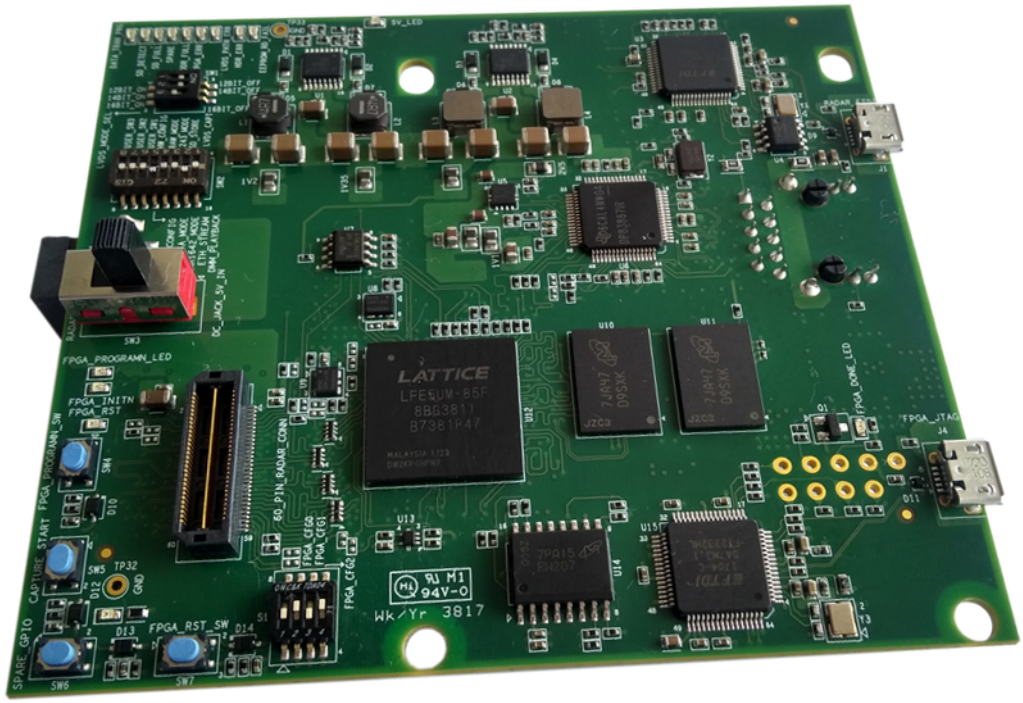
DCA1000EVM Quick Start Guide



This guide describes how to get started with raw ADC data capture from the xWR mmWave sensor EVMs.

WARNING

This is a Class A product. In a domestic environment, this product may cause radio interference, and the user may be required to take adequate measures.

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1. Interface the DCA1000 board with the xWR mmWave sensor EVMs, as shown in Figure 1.

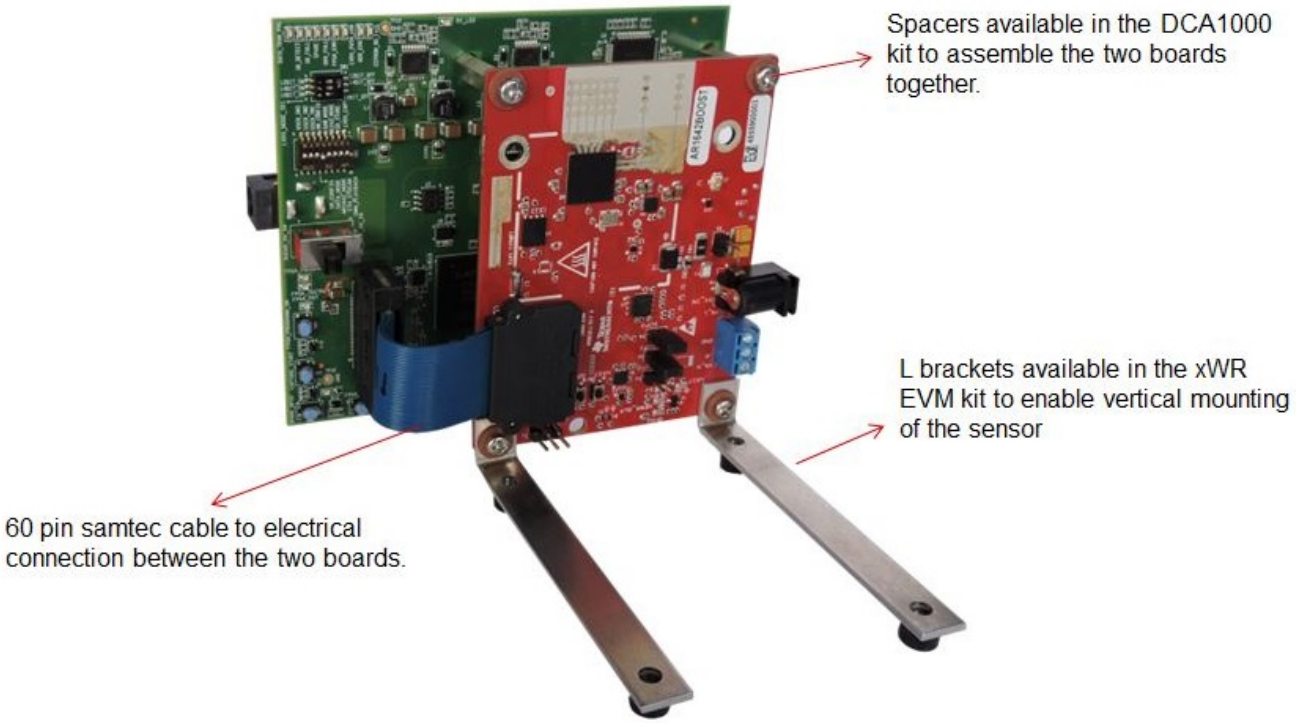

Figure 1. Hardware Connection: DCA1000 With xWR mmWave Sensor EVMs

2. Connect the microUSB and Ethernet cables to the PC interface, as shown in Figure 2. The DCA1000 and the xWR EVM are powered with 5-V, 2.5-A supplies.

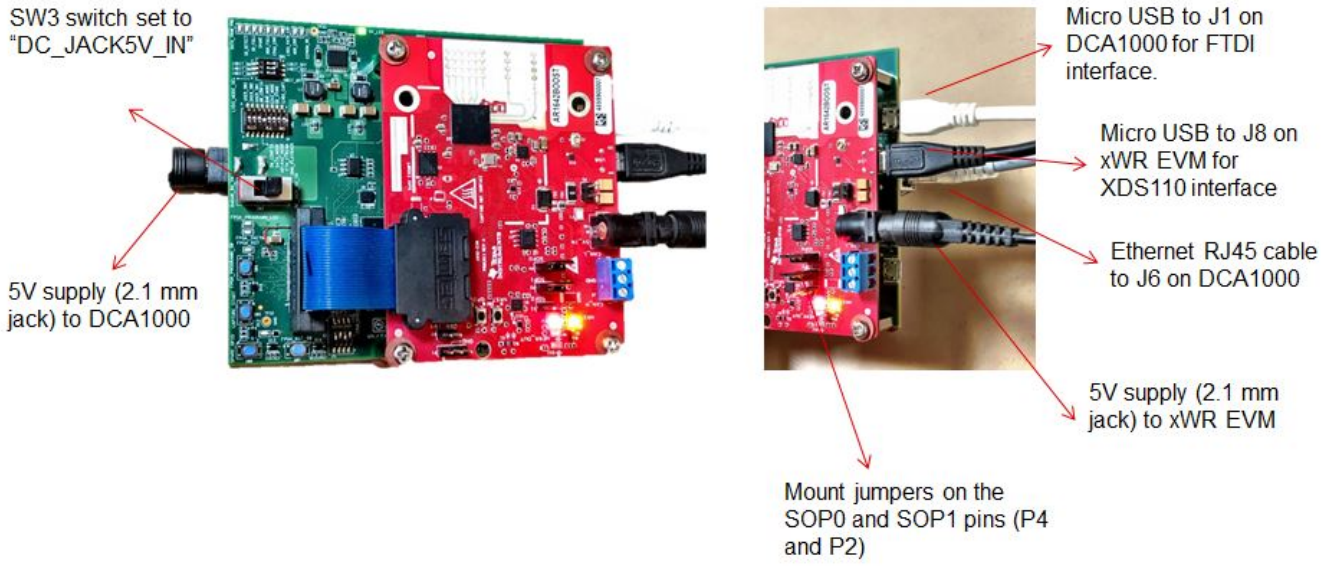

Figure 2. Data and Supply Cable Connections

3. Select the static IP address in the PC local area network properties, as shown in Figure 3.

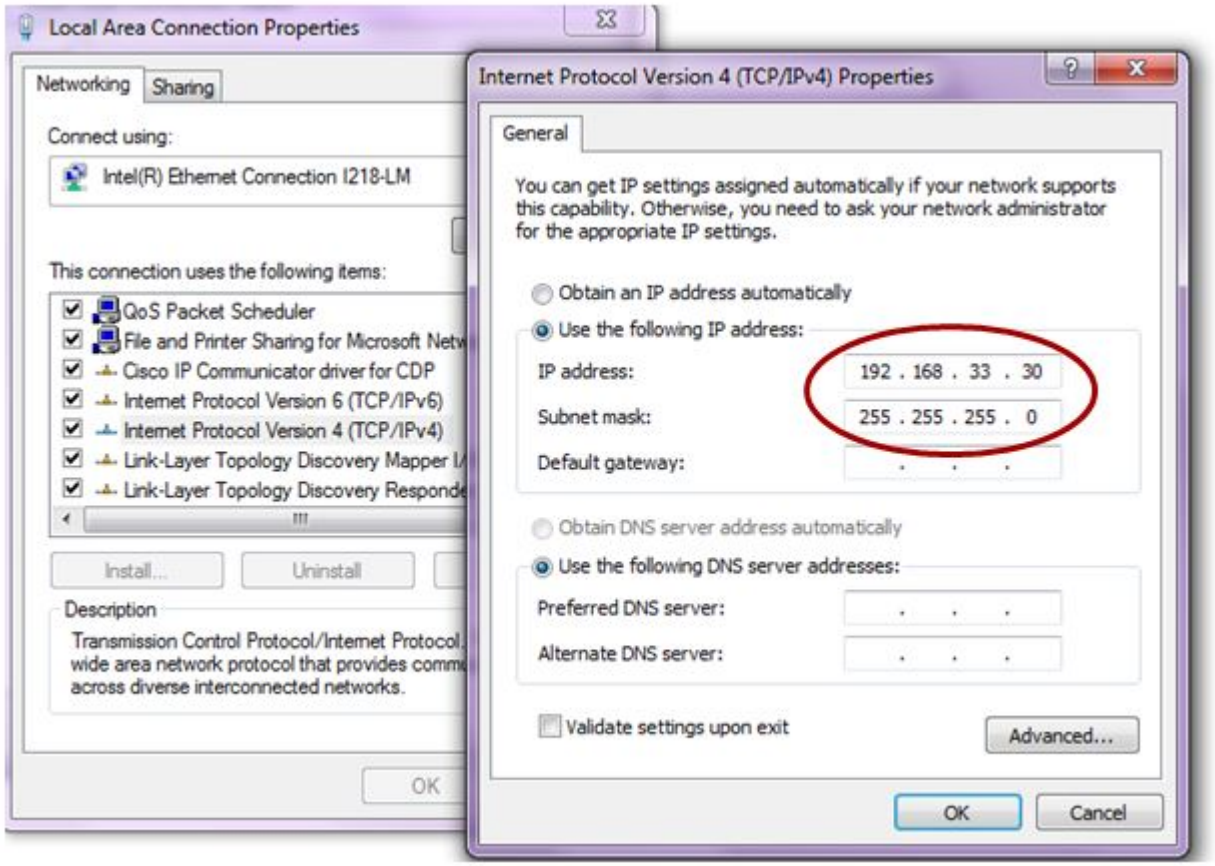

Figure 3. Configure Static IP Address on the PC

4. Download and install the mmWave Studio tool from the following link: http://www.ti.com/tool/MMWAVE-STUDIO. Install the Matlab Runtime Engine from here.
5. When the EVMs are powered and connected to the PC, install the FTDI drivers available from the mmWave Studio installer package. For details on the FTDI driver installation, refer to the mmWave Studio User Guide.
6. The device manager shows the COM ports, as shown in Figure 4. The RS232 COM port is shown as XDS110 Class Application/User UART.

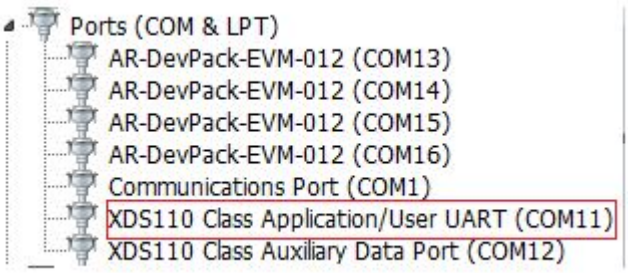

Figure 4. COM Ports

NOTE: If the XDS110 ports do not appear in the device manager, install the EMUPACK from http://processors.wiki.ti.com/index.php/XDS_Emulation_Software_Package.

7. Issue a board reset and connect the RS232 COM port.
8. Select the DataCapturedemo_xWR.lua file from the \mmwaveStudio\Scripts\ folder by clicking on the browse button, then click on the run button.

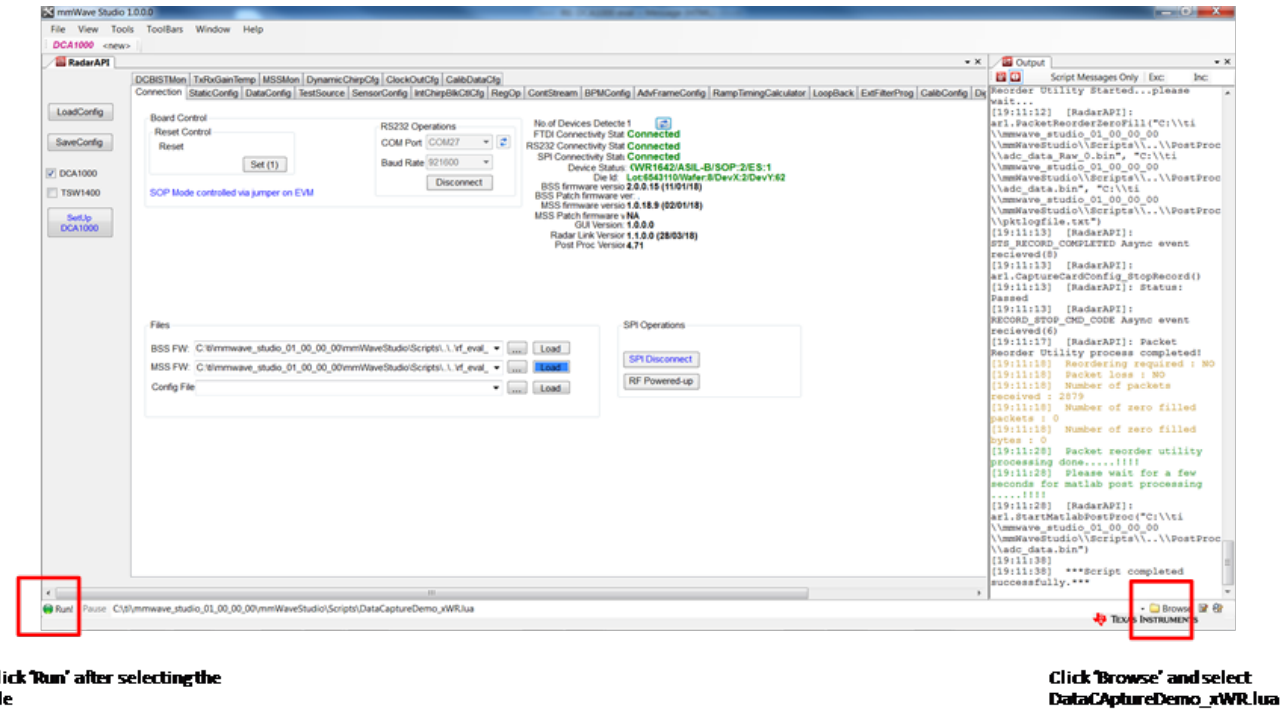

Figure 5. Capture and Post ADC Data

Data is captured by the captured card for a sample profile and frame, and the captured data is processed and displayed as shown in Figure 6.

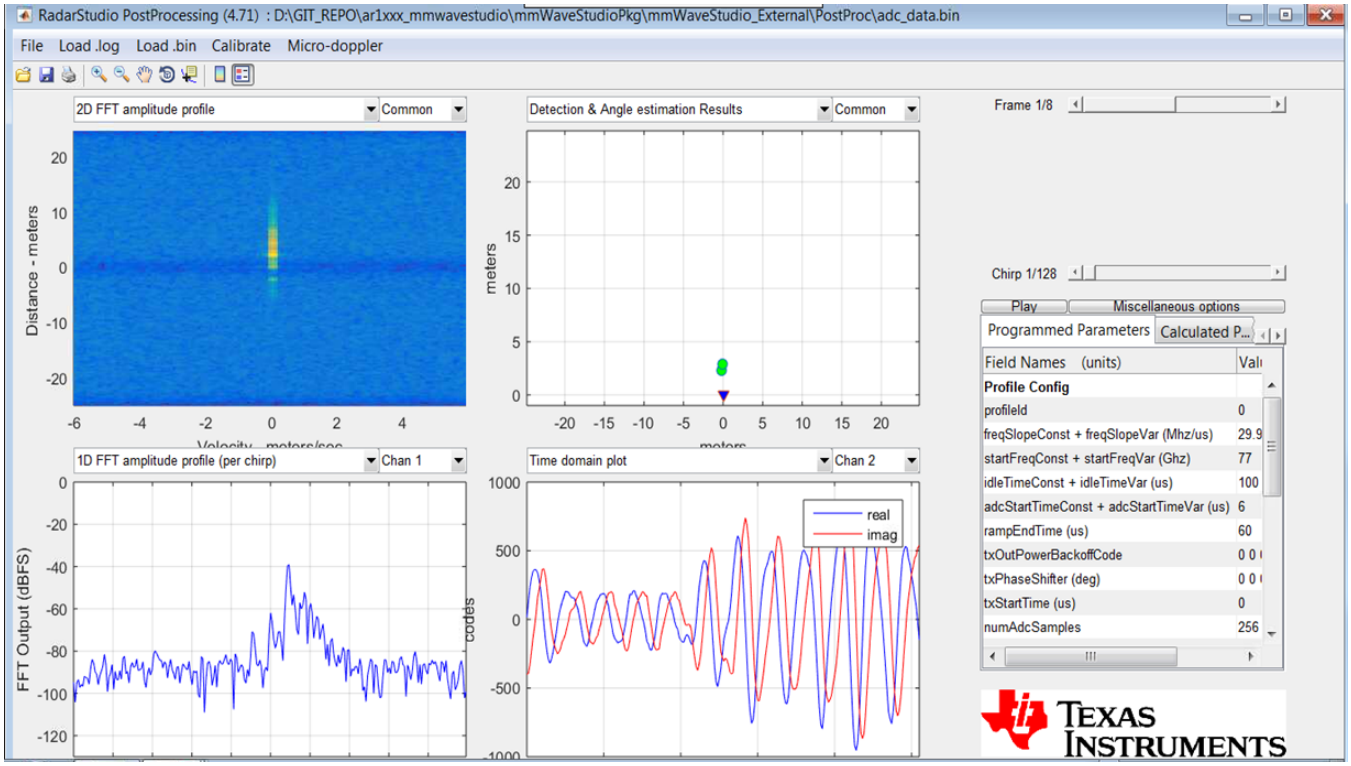

Figure 6. Visualization of the Captured Raw ADC Data

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