

# 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.**

### Contents

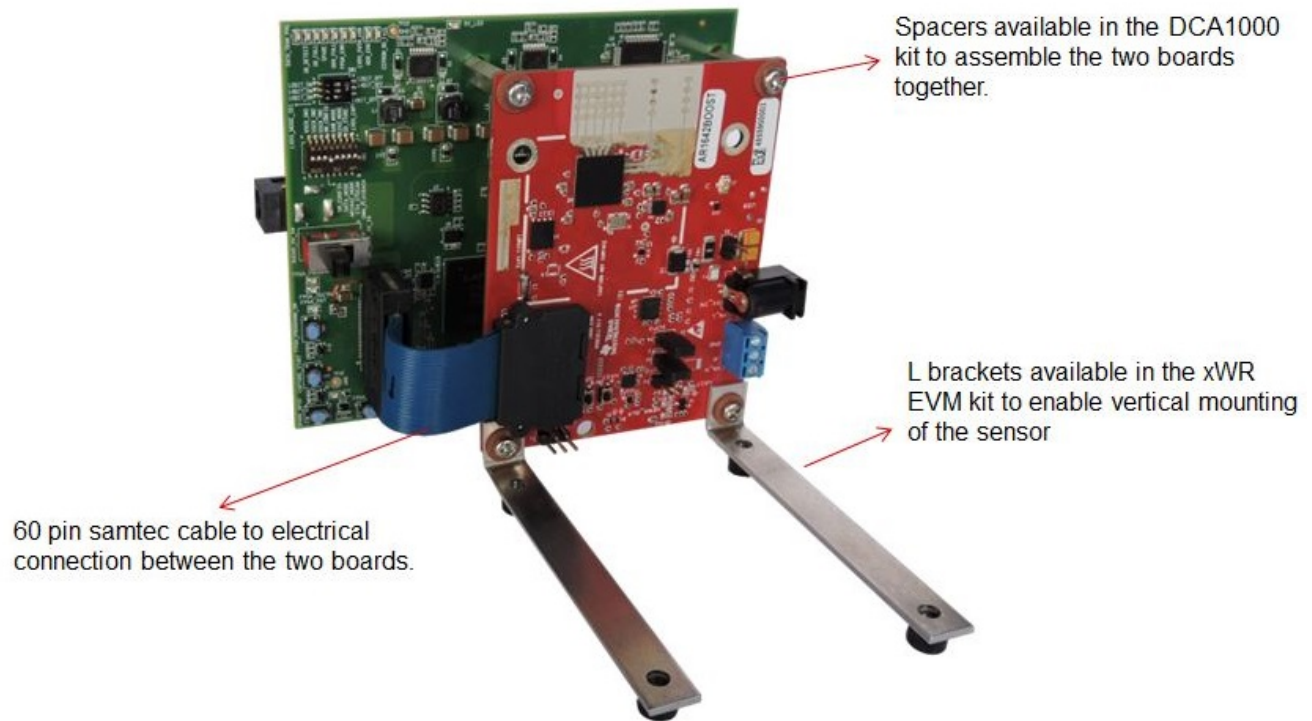
1	Getting Started .....	2
---	-----------------------	---

### List of Figures

1	Hardware Connection: DCA1000 With xWR mmWave Sensor EVMs .....	2
2	Data and Supply Cable Connections .....	2
3	Configure Static IP Address on the PC .....	3
4	COM Ports .....	3
5	Capture and Post ADC Data .....	4
6	Visualization of the Captured Raw ADC Data .....	5

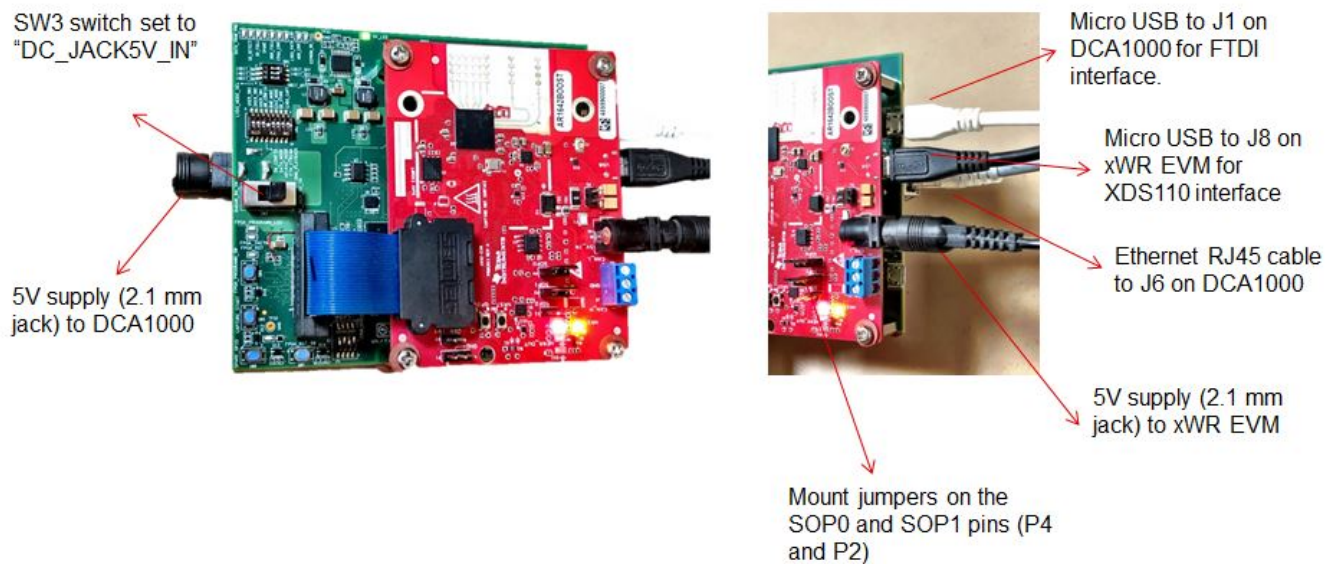
## 1 Getting Started

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.

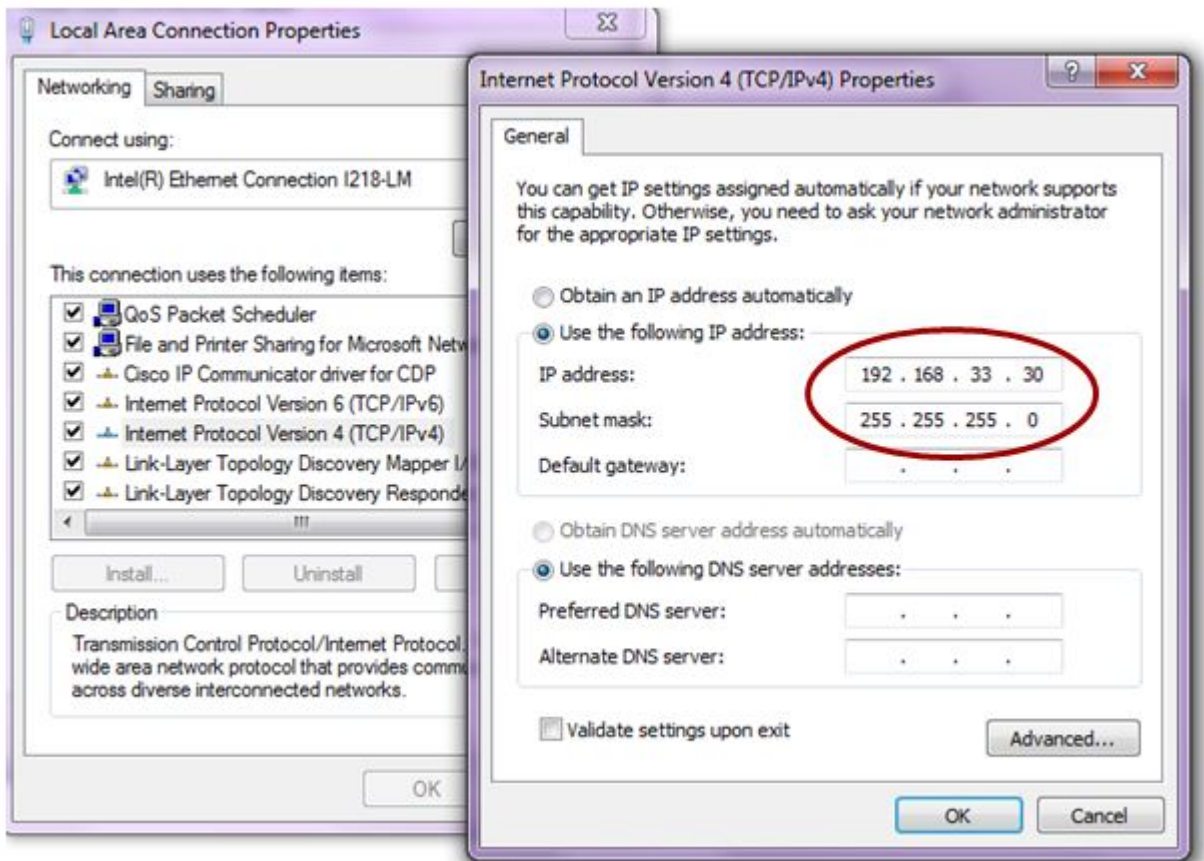


Figure 3. Configure Static IP Address on the PC

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.

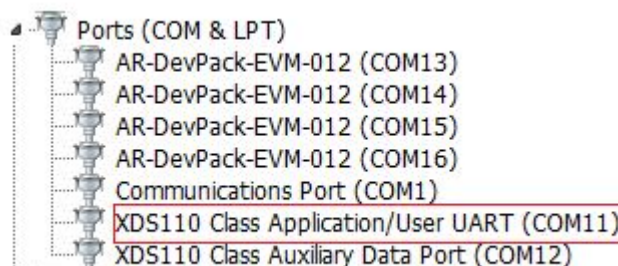
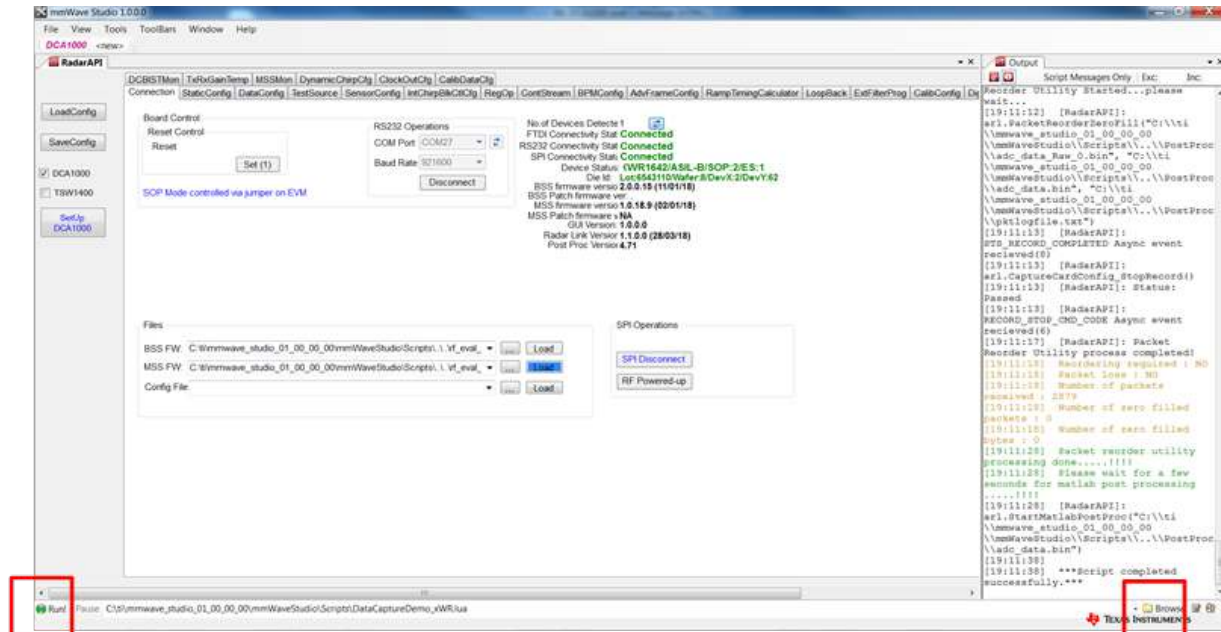


Figure 4. COM Ports

**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](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.

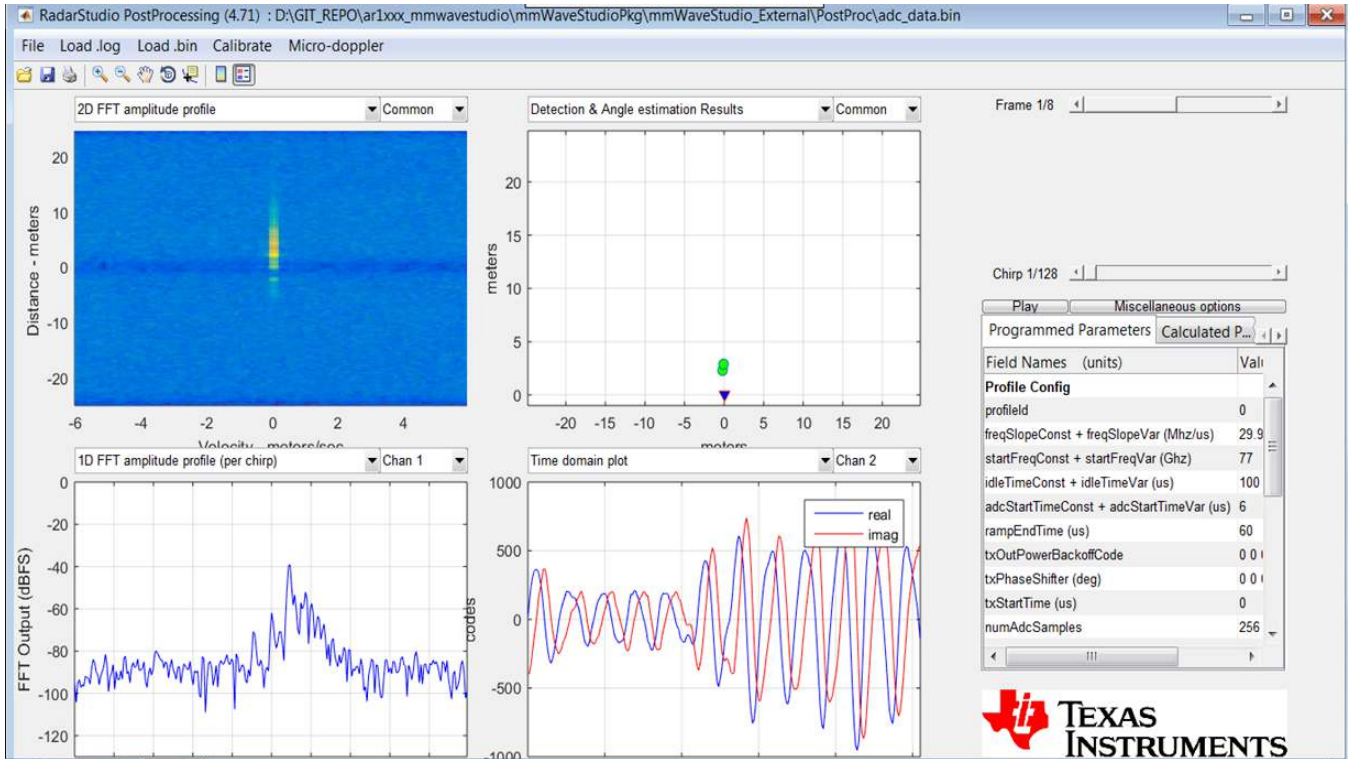


Click 'Run' after selecting the file

Click 'Browse' and select DataCaptureDemo\_xWR.lua

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**

## IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](http://ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
Copyright © 2022, Texas Instruments Incorporated