GETTING STARTED

This Quick Start Card provides step-by-step instructions to assemble the kit and run a simple TX-RX over-the-air loopback design. You will capture and display the received data in the frequency domain using the Analog Devices IIO Oscilloscope application.

Hardware Setup

1. Assemble the SOM and FMC Carrier boards as shown.
2. Provide an internet connection by attaching the Ethernet cable to the carrier Ethernet 1 jack and a networked router with DHCP.
3. Connect the 12V power supply as shown.
4. Connect an HDMI monitor (resolution ≥ 720p).
5. Connect the included USB adapter to the USB OTG port and set the VBUS jumper as shown.
6. Connect a USB mouse and keyboard through a USB hub.
7. Attach the Pulse LTE/MIMO antenna to PicoZed SDR using the included U.FL-to-SMA cables, as shown below.
8. Insert the microSD card into the SD adapter.
9. Configure the SOM switches SW1, SW3, and SW4 as shown.
Demo Setup
1. Insert the included microSD card into a laptop or PC.
2. Open the folder named `zynq-picozed-sdr2-fmc`
3. Copy files `BOOT.BIN` and `devicetree.dtb` into the SD card root directory.
4. Safely eject the microSD card and insert into the PicoZed SDR carrier using the SD adapter.

**NOTE**: the included SD card contains an HDL and Linux image from Analog Devices. For data streaming to MATLAB and Simulink you must re-image a fresh SD card

```
www.mathworks.com/help/supportpkg/xilinxzynqbasedradio
```

Running The Demo
1. Connect hardware as described in the Hardware Setup section of this guide.
2. Turn the PicoZed SDR FMC Carrier power switch (S5) to ON.
3. Wait ~45 seconds for Linux to boot and display on your monitor.
4. Double-click the ADI Update Tools desktop icon to get the latest version of ADI Linux applications.
5. Double-click the ADI Update Boot desktop icon to get the latest version of Zynq boot files.
6. Restart the system using the Log Out desktop icon.
7. Configure the following parameters in IIO Oscilloscope
   a. FMComms2/3/4 tab → Controls
      i. Set RX and TX LO Frequency = 2400 MHz
      ii. Check that TX and RX LO frequencies match
      iii. All other settings default
   b. Capture window
      i. Activate channel: `voltage0`, de-select the other channels
      ii. Plot type: ‘Frequency Domain’
      iii. FFT Average: 5
      iv. Click ‘capture’ (triangle icon) to start data acquisition
8. Observe the frequency spectrum of the received AD9361 ADC data.

Please visit www.picozed.org/sdr for the complete Getting Started Guide with detailed project and demo instructions.
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