Overview

This manual guides you through setting up the EE2033 software environment in Windows. Four software will be installed or set up.
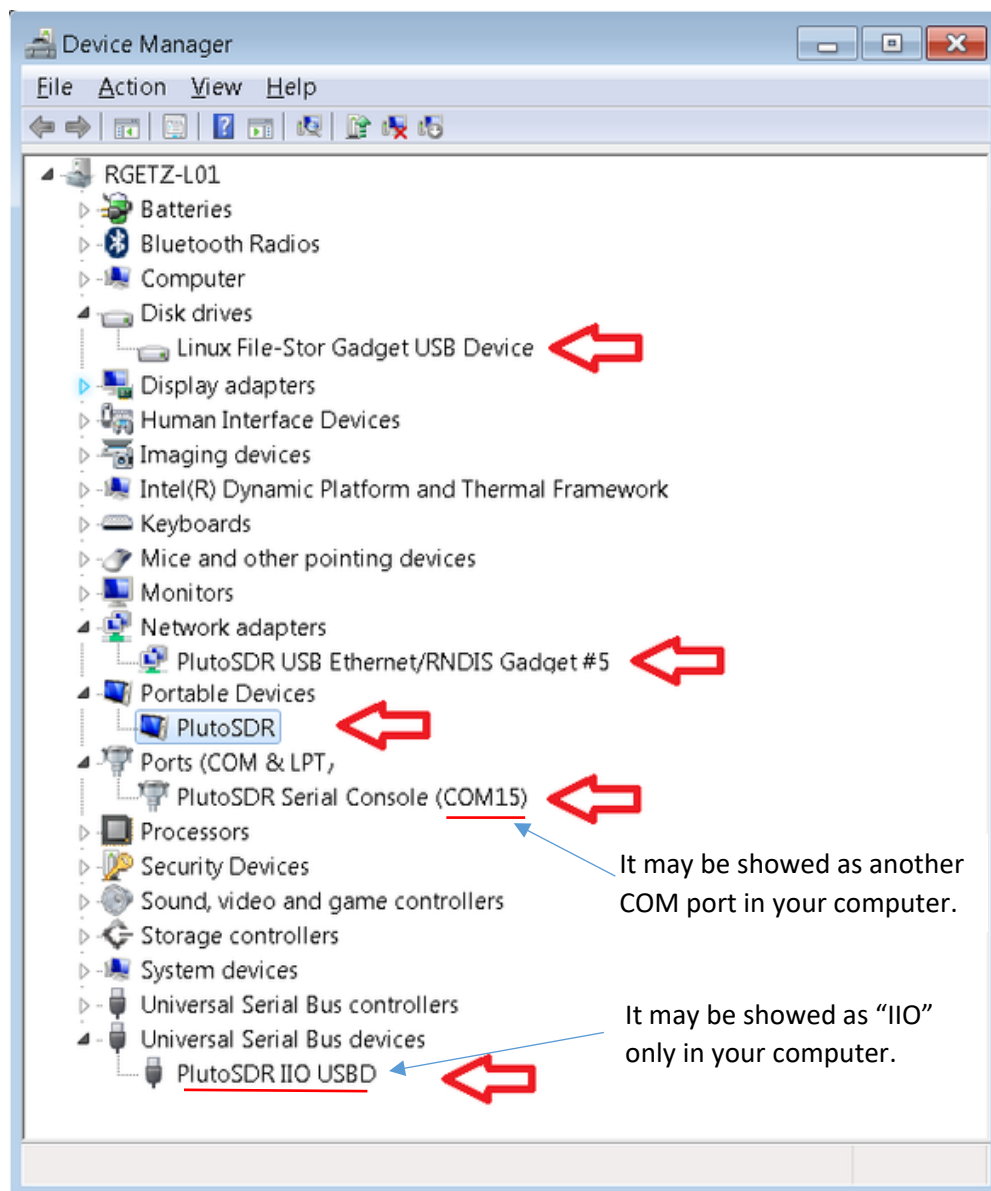
1. GNURadio:
    a. Uncompress the GNURadio installed folder from the zip file, downloadable from the EE2033 LumiNUS page Files->Lab Manual->Lab0 folder.
    b. Install drivers for the Adalm Pluto and RTLSDR.
2. WaveForms for AD2.
3. LTSpice XVII
4. FilerPro

1.Setup GNU Radio Companion for Windows and drivers

1.1 Download the file GNURadio(Windows).zip from the EE2033 LumiNUS page Files->Lab Manual->Lab0 folder. Uncompress the folder GNURadio-3.7-m in the zip file and copy it to your folder c:\Program Files\.
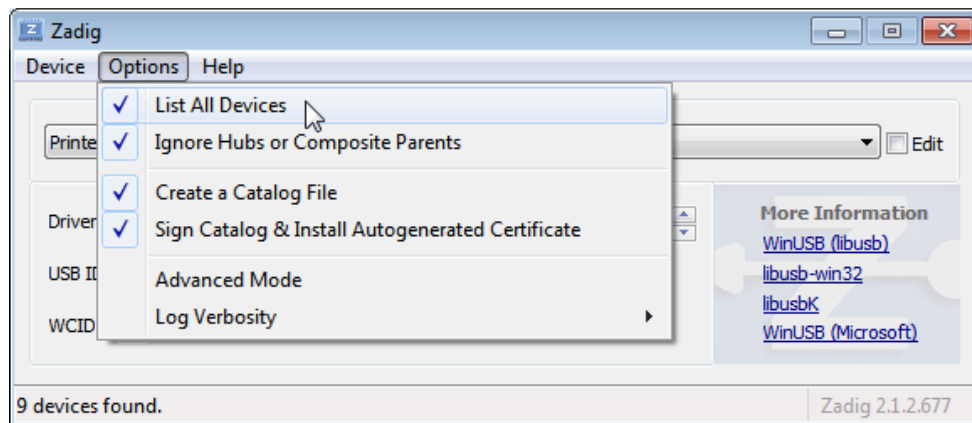
1.2 Copy the shortcut for GNURadio Companion to your desktop. You can launch GNURadio-companion by double click this shortcut later.

1.3 Locate the file "PlutoSDR-M2k-USB-Drivers.exe" in the same zip file. Plug the Adalm Pluto into a USB port of your computer with the attached USB cable. Run PlutoSDR-M2k-USB-Drivers.exe as administrator and continue the installation with default settings. After the installation is done, run the device manager and make sure five new devices are listed below. In some cases, the COM port after the PlutoSDR Serial Console can be another port. The new device under Universal Serial Bus devices may be identified as "IIO" instead of "PLUTOSDR IIO USBD".
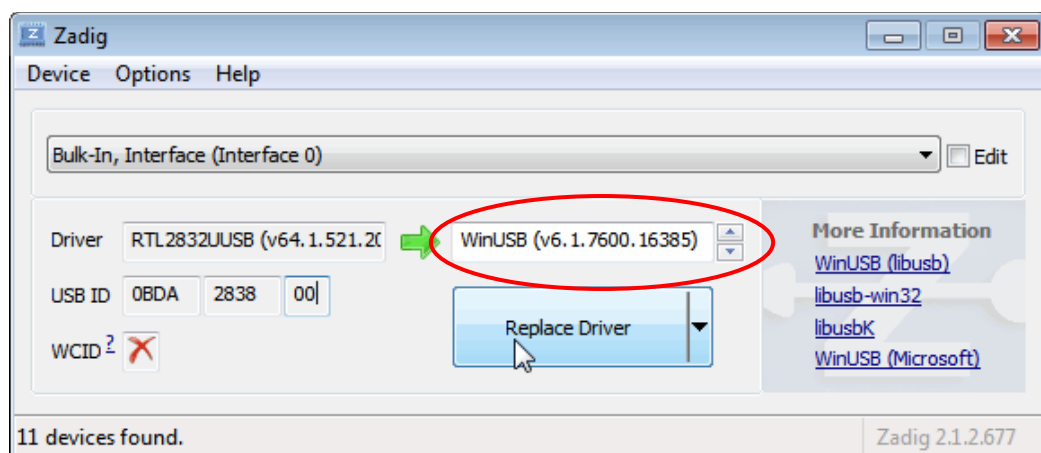
1.4 Install the drivers for RTLSDR through Zadig.

a. Unplug Adalm Pluto and plug in the RTLSDR dongle to another USB port. Wait for Windows to identify the device and install the default driver before you continue.

b. Locate Zadig-2.4.exe within the same zip file. Launch the program Zadig-2.4.exe.

c. In Zadig interface, go to "Options->List All Devices" and make sure this option is checked as the figure shown below. If you are using Windows 10, you may need to uncheck "Ignore Hubs or Composite Parents" in some cases.

d. Select "Bulk-In, Interface (Interface 0)" from the drop-down list. Note that on some PCs, you may see something like RTL2832UHIDIR or RTL2832U instead of the Bulk-in interface. This is also a valid selection. Do not select "USB Receiver (Interface 0) or Interface 1" or anything else. Otherwise, you will overwrite that driver! Double-check that USB ID shows "0BDA 2838 00" as this indicates that the dongle is selected.

e. We need to install the WinUSB driver. Hence, ensure that WinUSB is selected in the box after the arrow next to where it says Driver (this is the default selection).

2. Install the AD2 software WaveForms for Windows.

Download WaveForms from the EE2033 LumiNUS page (Files->Lab Manual->Lab0->**digilent.waveforms_v3.16.3_64bit.exe**) and install it with default settings.

3. Install the LTSpice for Windows

Download LTSpice for Windows from the EE2033 LumiNUS page (Files->Lab Manual->Lab0->**LTspiceXVII.exe**) and install it with the default settings.

4. Install the FilterPro for Windows

Download FilterPro for Windows from the EE2033 LumiNUS page (Files->Lab Manual->Lab0->**FilterProDTSetup.exe**) and install it with the default settings.