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Analog Devices Wiki

This version (20 Apr 2017 09:52) was *approved* by mhennerich.
The Previously approved version (11 Apr 2017 22:02) is available.
Approve document

Windows Drivers

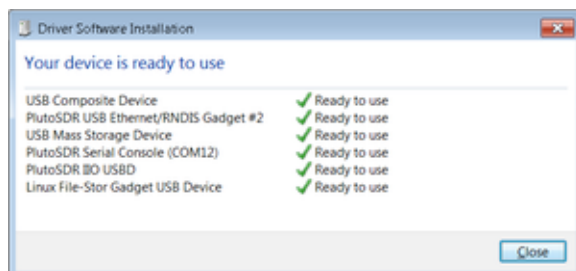There are different aspects of the software for the ADALM-PLUTO and ADALM2000:

- device drivers, which allows your PC to properly set up communication between your PC and the actual device, and
- application code, like MATLAB, Simulink, GNU Radio, iio-oscilloscope (aka osc), or scopy.
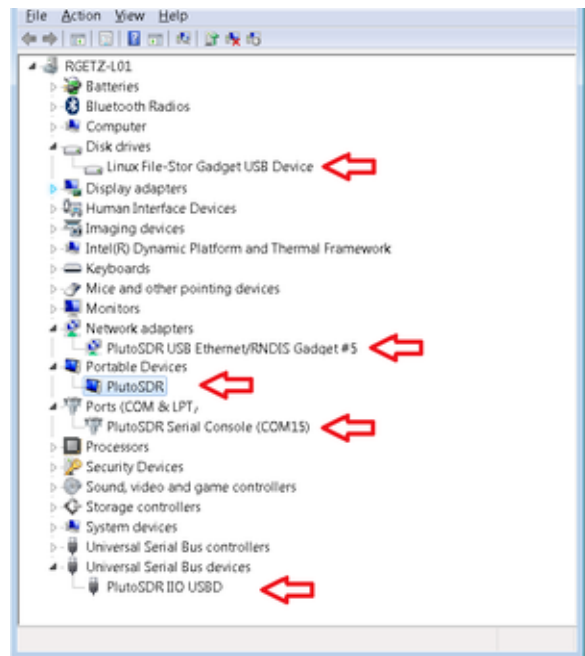
To install the drivers, it's a simple matter of downloading and running the driver installer.

This download should support all of : Windows 10, Windows 8.1, Windows 8, Windows 7 Service Pack 1. If you run into issues, please let us know [http://ez.analog.com/community/university-program].

- Windows USB drivers for PlutoSDR and M2k (Windows 32-bit / 64-bit) [https://github.com/analogdevicesinc/plutosdr-drivers-win/releases]

At the end, you should see a picture like:

Driver Software Installation

Your device is ready to use

USB Composite Device	✓ Ready to use
PlutoSDR USB Ethernet/RNDIS Gadget #2	✓ Ready to use
USB Mass Storage Device	✓ Ready to use
PlutoSDR Serial Console (COM12)	✓ Ready to use
PlutoSDR IIO USBD	✓ Ready to use
Linux File-Stor Gadget USB Device	✓ Ready to use

Close

Device Manager

Drivers uninstall

From the control panel navigate to Programs and Features. Double click or right click and select Uninstall. Uninstalling the PlutoSDR-M2k-USB-Win-Drivers package will automatically remove the Windows Driver Packages (USBser, WinUSB and Net) shown below as well.
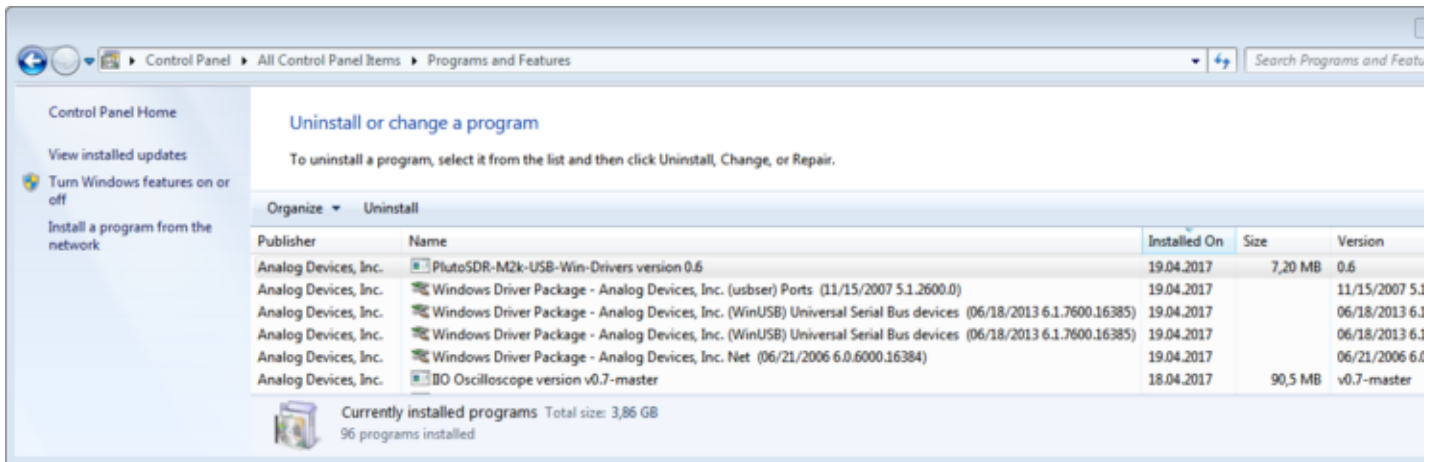
USB Devices

Once the drivers are installed, and the device (Pluto or M2k) is plugged in, the following subsystems should be ready to use:

- USB Composite Device (The device is a single USB gadget that has the ability to perform more than one function, and needs to be exposed to the operating system as multiple devices)
- USB Ethernet/RNDIS Gadget (Remote Network Driver Interface Specification (RNDIS [http://en.wikipedia.org/wiki/RNDIS]) is a Microsoft proprietary protocol used mostly on top of USB. It provides a virtual Ethernet link to most versions of the Windows, Linux and OS X operating systems. To the host, the usb device acts as an external Ethernet card)
- USB Mass Storage (USB Mass Storage [http://en.wikipedia.org/wiki/USB_mass_storage_device_class] is a set of protocols defined by the USB Implementers Forum that makes a USB device accessible to any host computing device and enables file transfers between the host and the USB device. To a host, the usb device acts as an external hard drive.)
- Serial Console (115200-8N1), in this case COM15, but it will be different on your PC.
- IIO USBD
- Linux File-Stor Gadget USB Device (which allows the USB mass storage to work properly).

Serial

You need to have find your favorite Terminal program, here are a few of the ones we use (but don't support - if you have questions, please check with the internet/google).

- Putty [http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html]
- Tera Term [https://en.osdn.jp/projects/ttssh2/releases/]
- Or other Terminal program

The terminal settings are 115200 baud, 8 bits, no parity, 1 stop bit. This is referred to as 115200-8N1. The default username is `root`, and the default root password is `analog`.

Finding the serial port (which constantly changes, every time you plug a device in), is just matter of checking device manager (see above).

Mass Storage

It should be a simple matter of opening the drive, in this case, double click on "D", to get at the info.html page.
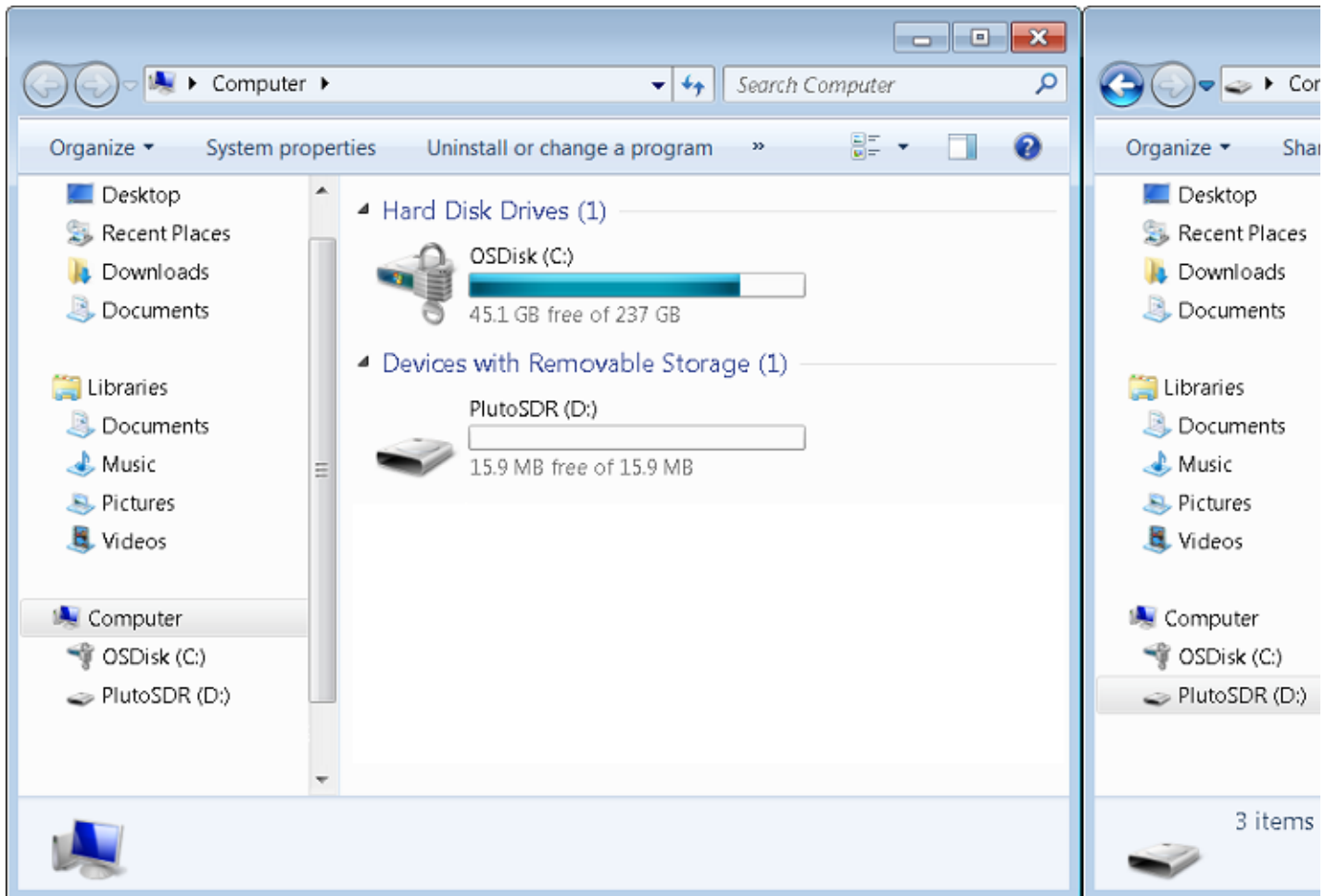
Ethernet

Ethernet Warning

Like most of the network settings on Pluto or the M2k - things are meant to be easy to use. This also means things are inherently insecure.

For example - the root password of Pluto is `analog`. We post it on the Internet. Think about that for a moment. This could allow anyone with an IP connection to take over the device and use it for malicious purposes.

Never set up a bridge between the Internet and a network connected Pluto with the default images.

Unfortunately - nothing on your host understands the what the IP address of the usb device is. You, the human behind the keyboard need to understand this before any sort of networking will work. There are two main ways to do this:

Determine the IP number

The IP number is set by the device, and can be found by looking inside the ADALM-PLUTO's mass storage device, and the `info.html` page. Just lick on the `version` button at the top of the page:
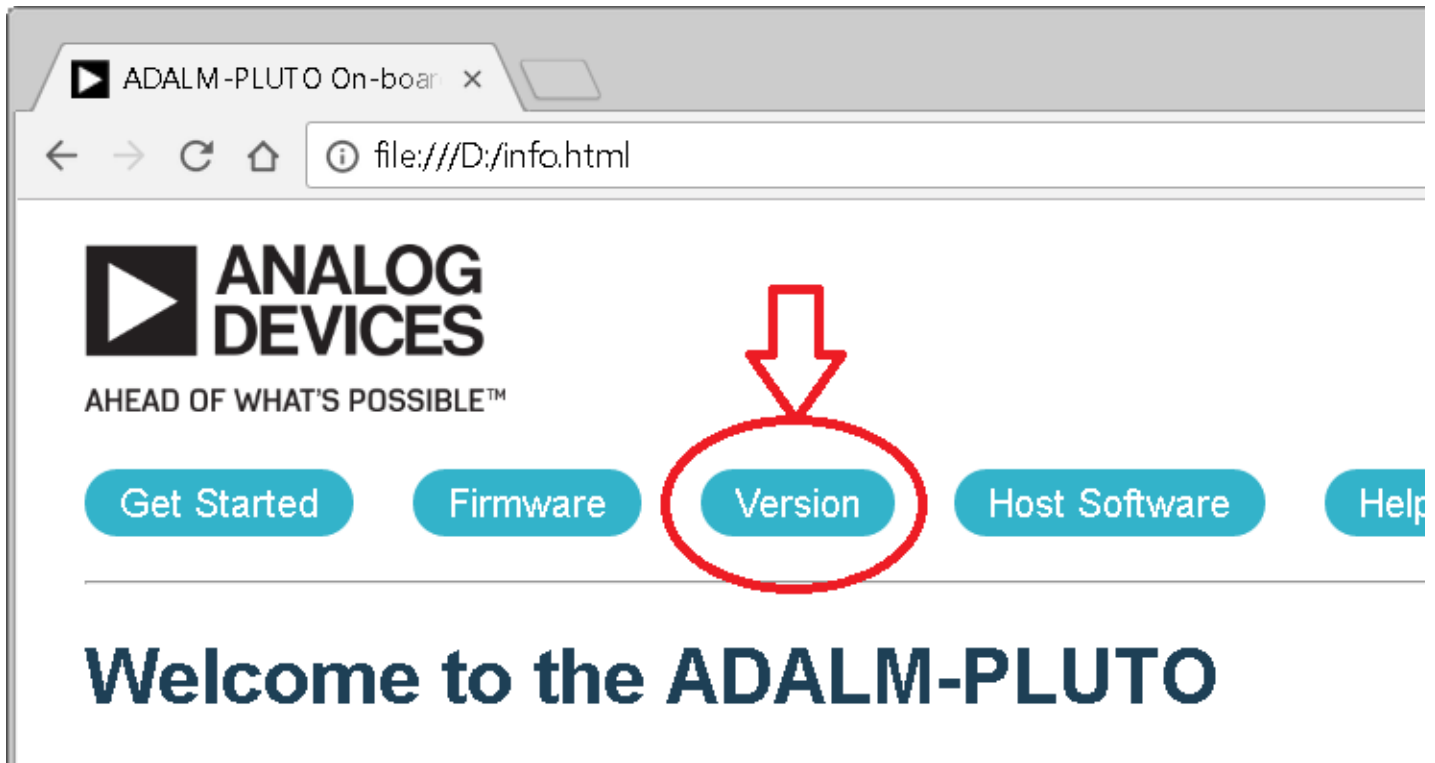
and then check out the Pluto IP address, and the host IP address.

Version Information:

The various parts of the firmware all have their own unique versions as well:

Model	Analog Devices PlutoSDR Rev.B (Z7010-AD
Serial	104473222a870006ebff0c00f839d58b53
Build	v0.12-4-g32cb-dirty
Linux	Linux pluto 4.6.0-g1470706-dirty #66 SMP PREE
U-Boot	
FPGA	2016_r2-30-gc78c
Root FS	v0.1-23-g611ce7
IIO	Library version: 0.8 (git tag: v0.8)

On the root file system, there are configuration settings that can modify the defa

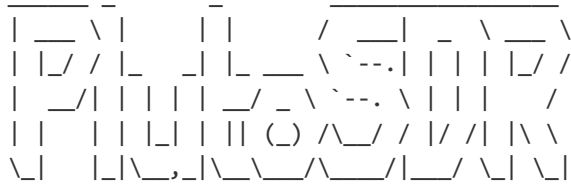| IP Address (PLUTO)	192.168.2.1
IP Address (HOST)	192.168.2.10
Netmask	255.255.255.0
MAC Address (PLUTO)	00:05:f7:64:30:10
MAC Address (HOST)	00:e0:22:08:2a:96

To change these settings, check the on-line documentation.

In this case, the IP address of the PLUTO device is `192.168.2.1` (which is the default for all devices). If you need to change this (if you have multiple devices), please check the customizing Pluto documentation.

Checking from serial port

Open your favourite serial application:

```
Welcome to Pluto
```

```
pluto login: root
Password: analog
Welcome to:


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http://wiki.analog.com/university/tools/pluto

# ifconfig usb0
usb0      Link encap:Ethernet  HWaddr 00:05:F7:64:30:10
          inet addr:192.168.2.1  Bcast:192.168.2.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:502 errors:0 dropped:115 overruns:0 frame:0
          TX packets:7 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:66132 (64.5 KiB)  TX bytes:2420 (2.3 KiB)
```

IIO devices

university/tools/pluto/drivers/windows.txt · Last modified: 20 Apr 2017 09:50 by mhennerich

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Patents

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Customers

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Years

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