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Version 1.0

Ripdraw Getting Started Tutorial

Loading the IDE and tool chain for ARM processor

Purpose:

This tutorial documents the third party Integrated Development Environment (IDE), tool chain and gnu cross compiler for embedded ARM processor on a Windows platform to be used the tutorial series. Ripdraw development is tied to any specific IDE, cross compiler or tool chain, but for the purpose of a tutorial, we will use the following tools:

1. [YAGARTO Tools 20121018](http://www.yagarto.org/)
<http://www.yagarto.org/>
2. [Linaro GCC 4.8-2013.09 Gnu compiler package](http://www.linaro.org)
www.linaro.org
3. Eclipse IDE for C/C++ Developers
Version: Luna Release (4.4.0)
Build id: 20140612-0600
<https://www.eclipse.org/>

All of above tools are available from the internet, open source and free. These tools will be used to develop Ripdraw host application software for a BeagleBone Black (BBB) ARM processor board. The BBB will run a Ripdraw host application that controls the Ripdraw Display through a USB port. The Ripdraw display can be controlled across USB, SPI or Serial ports. These tutorials use the USB ports.

Things you need:

1. Internet access on the Windows to download the tools
2. BeagleBone Black (BBB) board
3. USB cable to connect Windows PC to the BBB mini USB port. Note there are two USB ports on the BBB. The mini USB is a slave USB and the A USB port is a master. The Windows PC is the USB master to the BBB. The BBB is the USB master to the Ripdraw Display.

Download the tools and install on Windows PC

- a) Download and install the YAGARTO tools and install on Windows PC. For these tutorials, we assume that this tool set is installed in the default install directory of `c:/yagarto`. If you chose another directory, you will have to make the corresponding changes in these procedure and makefiles.
- b) Download and install the Linaro Gnu compiler package and install on Windows PC. For these tutorials, we assume that this tool set is installed in the default install directory of `c:/gcc-linaro`. If you chose another directory, you will have to make the corresponding changes in these procedure and makefiles.



- c) Download and install the Eclipse IDE for C/C++ Developers and follow corresponding install instructions by Eclipse. You may also have to install Java if your Windows machine does not have it.

Setting up the YAGARTO tool chain and the Linaro Gnu compiler package is fairly straight forward and simple. The Eclipse IDE for C/C++ Developers may be a little bit more involved. Unfortunately it is beyond the scope of this tutorial to troubleshoot any Eclipse IDE install problems you may run into. However, there is plenty of helpful information and examples available on the internet.

Other Tools:

Another useful tool to install on the Windows PC is PuTTY which is Telnet and SSH for Windows. This tool allows you to open a SSH shell to the BBB and login to the linux platform on a command line from the Windows PC.

Other tutorials available at www.densitron.com

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