

# Chapter 1. Install the Altera Quartus Software

Your Terasic DE0-Nano package contains a Quartus Software DVD as shown by Item #4 below:



- 1 Altera DE0-Nano Board
- 2 USB Mini-B Cable
- 3 DE0-Nano System CD
- 4 Altera Complete Design Suite Free Package
- 5 DE0-Nano Quick Start Guide

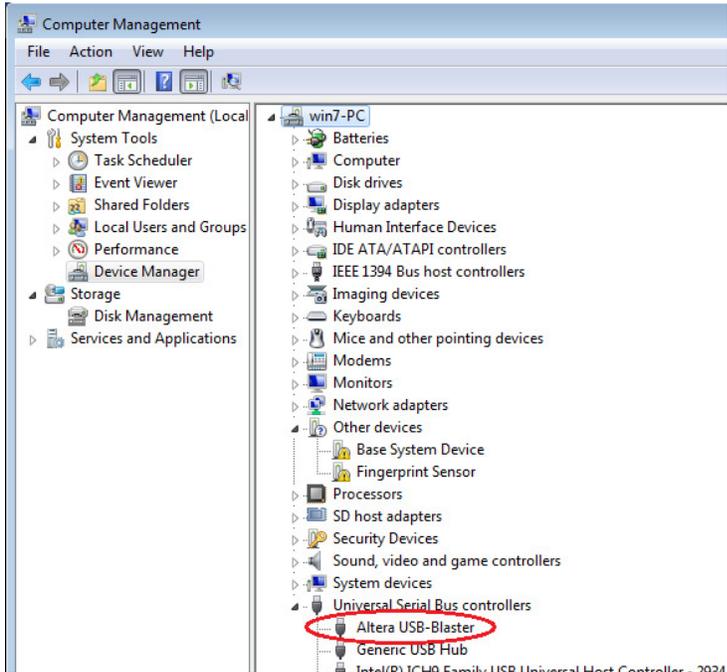
Insert the DVD in your computer then follow the instructions on your screen. After a successful installation, you may want to reboot your computer while preparing to connect Item #2 & Item #1 to your computer.

### Install the USB-Blaster Driver:

A firmware (a.k.a. FPGA program) is loaded to the DE0-Nano via USB, a special driver is used by Altera. Your Quartus installation includes the USB driver for the USB-Blaster. It can be found in:

C:\altera\11.0\quartus\drivers\usb-blaster ← (assuming you installed ver 11.0 in drive C:\ )

While the computer is idle, plug in the DE0-Nano in one of the USB ports. The “New Hardware” wizard will pop up and will guide you to install the USB driver. For detailed instructions, read Page 41 of the DE0-Nano User manual. After a successful driver installation, you must see the USB-Blaster in your “Device Manager” as shown below:

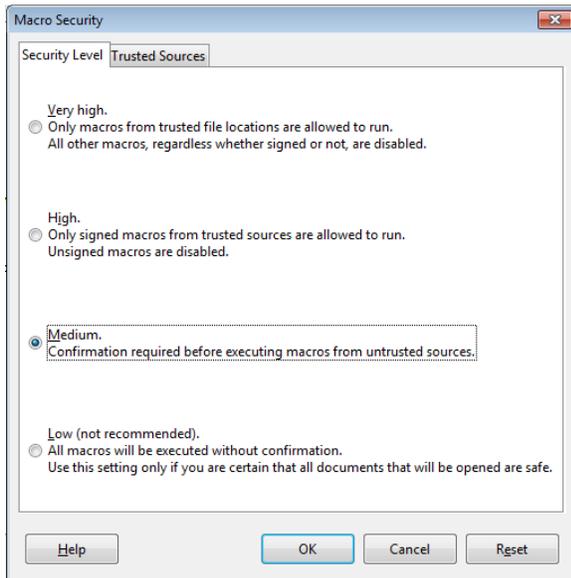


## Chapter 2. Install LibreOffice 5

Visit <https://www.libreoffice.org> to download and install LibreOffice 5.

After a successful installation, open LibreOffice Calc to change the security settings:

Tools->Options->LibreOffice->Security . then click the “Macro Security” Button at the right. Change the selection to “Medium” as shown below:



Click OK, OK, and close LibreOffice Calc.

## Chapter 3. Install the USB-UART-TTL driver

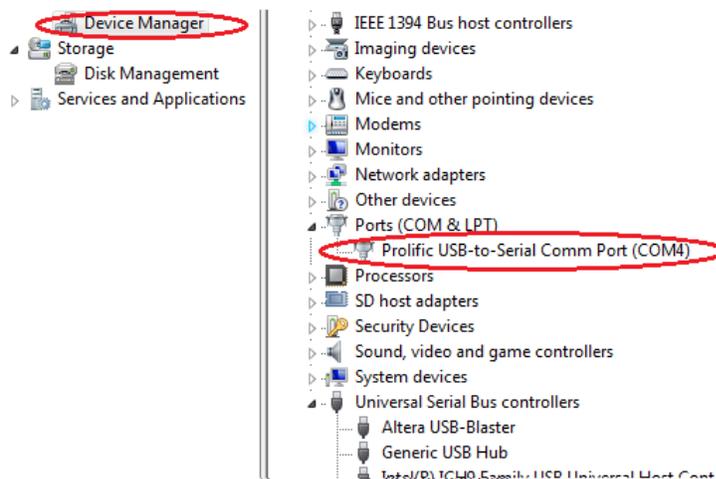
The Renegade software communicates to the DE0-Nano via UART (popularly known as RS232) at TTL levels. You can find a good USB-to-UART-TTL from the internet like the one shown below, I recommend a converter using a PL2303 chip made by Prolific.



Before plugging-in your brand new USB-UART-TTL converter, you must install the drivers first. It is very easy to find from the internet the installer:

PL2303\_Prolific\_DriverInstaller\_v1.7.0.exe

then run (For Windows 7, you may need “Run as Administrator”), and follow the instructions. After a successful installation, plug-in your USB-UART-TTL converter, wait for a while, then you must see the new COM port in your “Device Manager”: Write down the COM #, you will need it in Chapter 4.



If you cannot see the new Prolific Comm Port, make sure that your USB port is not the old version 1. You must use a computer with USB 2.0 in it.

BEWARE: The Prolific PL2303 is known not to work when plugged in an external/internal USB **HUB**.

## Chapter 4. Install the Renegade Software

From the downloaded Renegade package, extract the folder “Renegade” then copy it to the root folder of drive C:\

C:\Renegade

Important: Edit your computer’s Environment Variable settings to include the binaries of C:\Renegade to your computer search path. To do this, open

Computer->Properties->Advanced system settings->Environment Variables->User Variables for->PATH

then click the “Edit” button. In the Variable Value, append the string

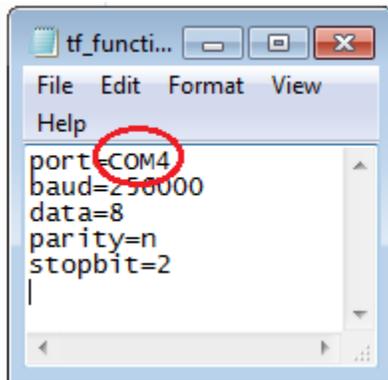
;C:\Renegade\bin

click OK to close everything.

Open the file C:\Renegade\bin\tf\_functions.ini with notepad.

Make sure that the COM # encircled below matches the COM # from Chapter 3.

Always perform this check in Chapter 3 after plugging-in the USB-UART-TTL converter, especially when you plugged it in a different USB port as previously.



IMPORTANT: Regularly look at Device Manager (Chapter 3) after plugging-in the USB-UART-TTL converter, especially when you plugged it in a different USB port as previously. Windows assign a different COM # depending on the current USB port usage.

At this point, you may want to copy the example test programs to a convenient location.

When ready, read the UserGuide to load and run a test program.