

## BBB - Mother Noob Guide

First, download a demo or mother zipfile and look at Makefile and memmap.lds. You will need to run this Makefile with "make".

I code on a Windows [:-()] laptop, so I use the GNUwin32 [:-)] "make" utility from a DOS prompt. Cygwin sucks and Linaro is worse. Also, Eclipse is a waste of time IMHO. I use Notepad++ for editing and build with "make". The load script memmap.lds tells Makefile how to build the image. Do not touch them until you know what you are doing. "Embedded Programming with the GNU Toolchain" by Vijay Kumar at bravegnu.org will teach you the fundamentals of image building. But skip all this for now.

The Makefile compiler/assembler/linker uses the arm-none-eabi toolchain. So you must install that from the nice folks at GNU also.

Once you build the image successfully, you will need to copy it to an SD-card or use X-modem for booting. Procedures for that are on the TI website and beagleboard forums. I use a jtag cable (XDS100V2 \$70) to load/boot from the DOS prompt with loadti. The zipfile contains a premade bootable image for you doubting Thomases.

Get the AM335x tech ref manual called spruh73x.pdf and ARM C/Assembly language references etc... from ARM and TI and GNU. "The ARM System Developer's Guide" by Sloss et al will teach you basic ARM architecture.

You must get a grip on all this. It is hard at first, but it gets easy because it all makes sense and builds upon a structure. I provide the all the build files and documented driver code with tested demos. That should save you about a year.

If you are a complete noob to ARM Assembly, get a Raspberry Pi [:-(\*)] and do the youtube tutorial series on Assembly programming by "Computer Science Videos". It will give you a taste of the raw power of bare metal. The Pi is not truly open-source and their docs suck.

If you do not like Assembly, have no fear. You can skip all this and use the drivers from within a C main program, as in the demos.

happy hacking.....dd