






For Lab 2 a new kernel and the associated header files need to be installed on all the Ultra96 boards. This fixes a bug with inserting kernel modules. It also requires a new system.dtb

The files are located here:

[http://projects.ece.utexas.edu/courses/spring\\_22/ee382n-16775/arch/labs/SP22\\_LAB\\_2/](http://projects.ece.utexas.edu/courses/spring_22/ee382n-16775/arch/labs/SP22_LAB_2/)

You will see the following when you follow the link:

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
 <a href="#">Parent Directory</a>		-	
 <a href="#">LAB_2_Spring_2022.pdf</a>	2022-01-28 09:44	1.1M	
 <a href="#">header_files.tar.gz</a>	2022-02-02 10:26	906M	
 <a href="#">system.dtb</a>	2022-02-02 10:25	50K	
 <a href="#">system.dts</a>	2022-02-02 10:25	58K	

Connect the ULTRA96 to the internet via Wi-Fi. Using the Firefox browser go to the link above. Download both the header\_files.tar.gz and the system.dtb files into your home directory

Execute the following commands to install the new header files. Remember to run `sync` when you write large files to the SD card.

```
sudo bash
cd /usr/src
mv 4.14.0-xilinx-v2018.3 4.14.0-xilinx-v2018.3.old
tar xvf ~/header_files.tar.gz .
sync
```

Execute the following commands to install the new DTB and ulmage (kernel):

```
cd /media/
mount /dev/mmcblk0p1 BOOT/
cd BOOT
mv system.dtb system.dtb.2.1.22
cp ~/system.dtb .

cp uImage uImage.2.1.22
cp /usr/src/4.14.0-xilinx-v2018.3/arch/arm64/boot/uImage .
sync
```

Double check that the DTB and ulmage file exists in the /media/BOOT directory before rebooting.