

CA Software: FAQ

Password for user: `useruser`

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Quartus related:

Quartus does not see the device

- Need to press **hardware setup** in **programmer** and choose **USB Blaster [1 - 2]** in drop down menu
- **VirtualBox Extension Pack** is not installed
- Drivers are not installed (If running on **Windows**).
 - Navigate to app folder (right click shortcut -> navigate to location)
 - Find "drivers" folder: `quartus/drivers/`

- Run `dpinst.exe` located inside
 - Enjoy installed drivers
- If linux host is used, make sure your user is in `vboxusers` user group


```
sudo usermod -a -G vboxusers $USER
```

 You need to logout for changes to apply

VirtualBox cannot launch VM (virtualization error)

- Need to **enable virtualization** in BIOS
- If the machine is running **32 bit system**, the work of Quartus software is **impossible**

Quartus gives an error or stuck when a project is created

- The project folder should be different from `/home/user/intelFPGA_lite/17.1/` since the user has no permission to write to this folder

Quartus cannot compile the project after a new file is created

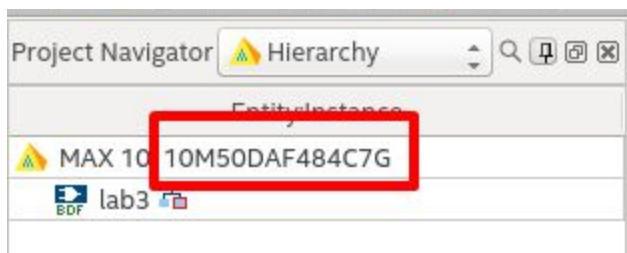
- There is some **conflict** with module **names**. The easiest ad-hoc solution is to **remove old files** and **create the project from scratch**

All possible pins are listed in pin planner

- After creating AND2 schema, I went to the Assignment -> Pin planner and I got a lot lot of Nodes pre-installed (not only three: 2 for input and 1 for output). Possibly the easiest solution is to create the project from scratch.

Desired pins are not available in pin planner

- The FPGA chip is **specified incorrectly**. Need to **modify current device** in the project settings and recompile

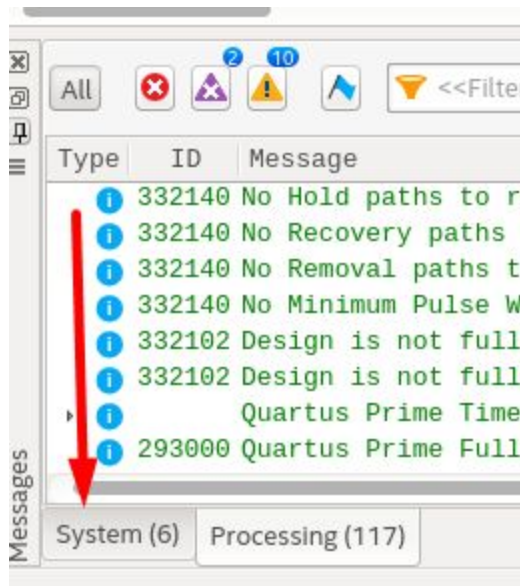


On Windows, the driver is installed, but Quartus does not detect the device automatically

- Can force to **auto detect** the device, but the flashing file is not available. **Solution unknown**

Error flashing the device

- Check the System error log



While flashing firmware, JTAG complains on the device code

- The FPGA chip is **specified incorrectly**. Need to **modify current device** in the project settings and recompile



While flashing firmware, an error appears (Unable to read device chain error 89)

- Most likely you are running quartus on linux and you are missing one library. Try executing

```
sudo ln -s /lib/x86_64-linux-gnu/libudev.so.1 \
/usr/lib/libudev.so.0
```
- In case the same error persists try running jtagd in debugging mode

```
~/intelFPGA_lite/17.1/quartus/bin/jtagd --foreground --debug
```


And resolve the errors
- After the error with libraries are resolved you need to make sure that udev rules are properly set (next issue)

While flashing firmware, after a long period of waiting failure occurs (Can't access JTAG Chain)

- USB permissions are insufficient. Need to:
 - ```
sudo mv /etc/udev/rules.d/51-usbblaster.rules \
/etc/udev/rules.d/91-usbblaster.rules
```

  
And reboot the virtual machine
  - If the above solution doesn't work, try:  

```
sudo killall -9 jtagd
```

```
sudo /home/user/intelFPGA_lite/17.1/quartus/bin/jtagd
```

After uploading the firmware, the board does not react to the change of inputs

- Most likely the project was not **recompiled** after assigning pins in the **Pin Planner**

Top level design entity is undefined

- The name of the main module in verilog file should match the filename

## ModelSim Related:

### Could not find ModelSim executable

- If you installed ModelSim on your linux machine, the path to executable is  
`~/intelFPGA_lite/17.1/modelsim_ase/linuxaloem/vsim`

### ModelSim won't start

- If you installed ModelSim on your linux machine, you need to make sure x32 libraries are available  

```
sudo apt-get install libstdc++6:i386 libc6:i386 libx11-dev:i386 \
libxext-dev:i386 libxau-dev:i386 libxdmcp-dev:i386 \
libfreetype6:i386 fontconfig:i386 libxft-dev:i386 \
Libncurses5-dev:i386
```
- If the same problem persists, try running `vsim` from the terminal. It will give you the information about missing libraries. Install missing libraries.

### Font in ModelSim source editor is tiny

- Need to modify the file `~/.modelsim`: change `textFontV2 {monospace 12 normal roman}` to `textFontV2 {monospace -12 normal roman}`

## MARS related Problems:

### Don't have MARS installed

- You can download MARS from [here](#)

### Don't know how to run jar files

- Install Java Runtime from
  - [official website](#)
  - or from your packet manager

```
apt-get install default-jre
```
- Run JAR file
  - On Windows: Right Click -> Open with Java Runtime
  - On Linux: make the file executable and double click it