t=0x9ff84a8 [0,0]

Contents: [Dobrica PavlinuÅ¡iÄ 's random unstructured stuff]

- Dobrica PavlinuÅ¡iÄ 's random unstructured stuff (video)
- Dobrica PavlinuÅ¡iÄ 's random unstructured stuff (git)
- Dobrica PavlinuÅ¡iÄ 's random unstructured stuff (ulx3s board)
- Dobrica PavlinuÅ¡iÄ 's random unstructured stuff (build)
    - Dobrica PavlinuÅ¡iÄ 's random unstructured stuff (sumulation)
    - Dobrica PavlinuÅ¡iÄ 's random unstructured stuff (boot over serial using network)
        - Dobrica PavlinuÅ¡iÄ 's random unstructured stuff (host with ulx3s connected)
        - Dobrica PavlinuÅ¡iÄ 's random unstructured stuff (machine running litex)

video

- https://www.youtube.com/watch?v=_1yrxrl61o4
- https://www.youtube.com/watch?v=kRTs6B-kEOE

git

```
dpavlin@klin:/klin/FPGA/CFU-Playground$ git remote -v
origin  https://github.com/google/CFU-Playground.git (fetch)
origin  https://github.com/google/CFU-Playground.git (push)
dpavlin@klin:/klin/FPGA/CFU-Playground$ git submodule init
dpavlin@klin:/klin/FPGA/CFU-Playground$ git submodule update
```

ulx3s board

https://github.com/litex-hub/litex-boards/blob/master/litex_boards/targets/radiona_ulx3s.py

```
dpavlin@klin:/klin/FPGA/CFU-Playground$ find . -name radiona_ulx3s.py
./third_party/python/litex_boards/litex_boards/targets/radiona_ulx3s.py
./third_party/python/litex_boards/litex_boards/platforms/radiona_ulx3s.py
# edit fpga settings here
dpavlin@klin:/klin/FPGA/CFU-Playground$ vi ./third_party/python/litex_boards/litex_boards/targets
```

modifications for 85F litex-85f.diff

build

you really need riscv64 toolchain from
https://github.com/sifive/freedom-tools/releases/tag/v2020.04.0-Toolchain.Only

```
dpavlin@klin:/klin/FPGA/CFU-Playground/proj$ cat build.sh
#!/bin/sh -xe
```

```
echo https://github.com/google/CFU-Playground

export PATH=/opt/riscv64-unknown-elf-gcc-8.3.0-2020.04.1-x86_64-linux-ubuntu14/bin/:$PATH
export TARGET=radiona_ulx3s
export UART_SPEED=115200
time make prog load
```

sumulation

```
dpavlin@klin:/klin/FPGA/CFU-Playground/proj/avg_pdti8$ time make PLATFORM=sim load -j 4
```

boot over serial using network

host with ulx3s connected

root@pihdmi:/home/pi# socat /dev/ttyUSB0,b115200,raw,echo=0 TCP:10.60.0.92:2003

machine running litex

dpavlin@klin:/klin/FPGA/CFU-Playground/proj/hps_accel$ socat TCP-LISTEN:2003 PTY,link=ttyV2,raw

1. re-run terminal with new virtal ttyV2

```
dpavlin@klin:/klin/FPGA/CFU-Playground/proj/hps_accel$ /klin/FPGA/CFU-Playground/soc/bin/litex_te

litex> serialboot
Booting from serial...
Press Q or ESC to abort boot completely.
sL5DdSMmkekro
[LXTERM] Received firmware download request from the device.
[LXTERM] Uploading /klin/FPGA/CFU-Playground/proj/hps_accel/build/software.bin to 0x40000000 (131
[LXTERM] Upload complete (9.9KB/s).
[LXTERM] Booting the device.
[LXTERM] Done.
Executing booted program at 0x40000000

--============== Liftoff! ================--
Hello, World!
```