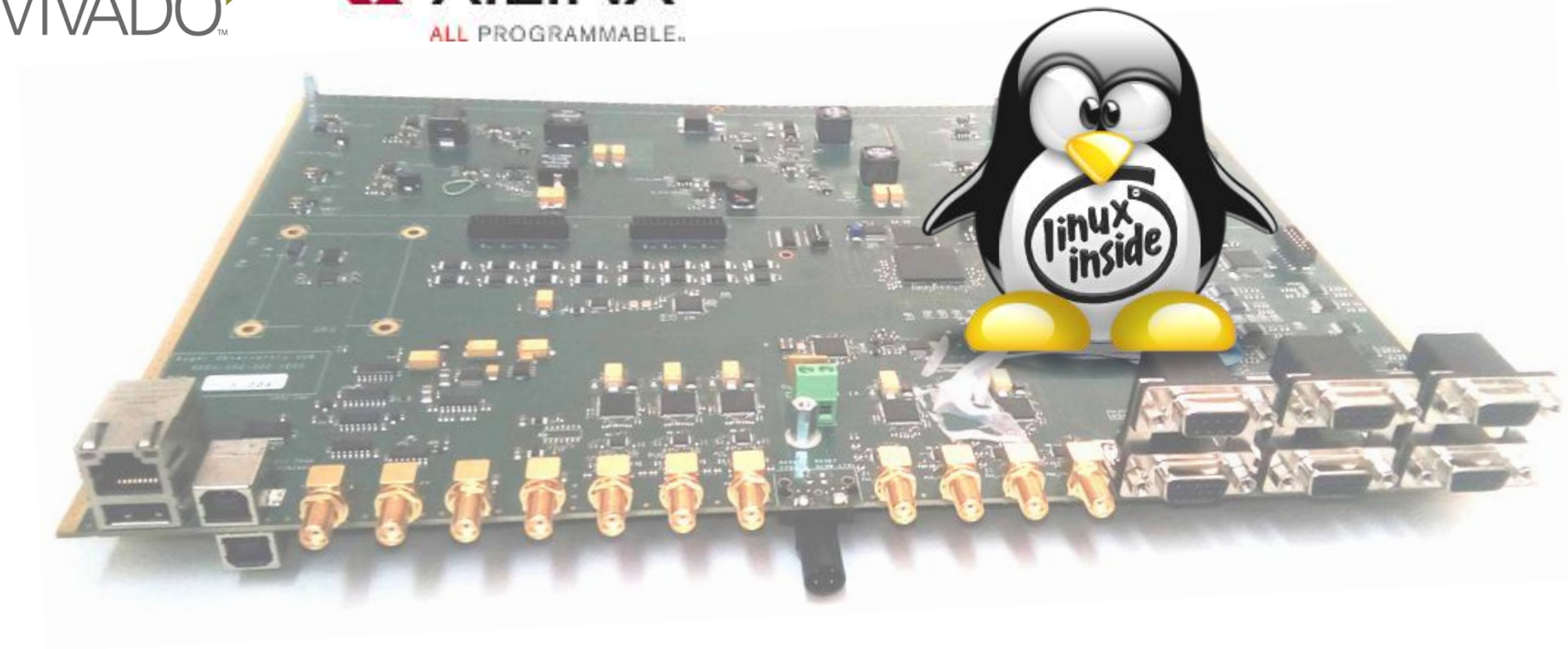
WP1- Documentation

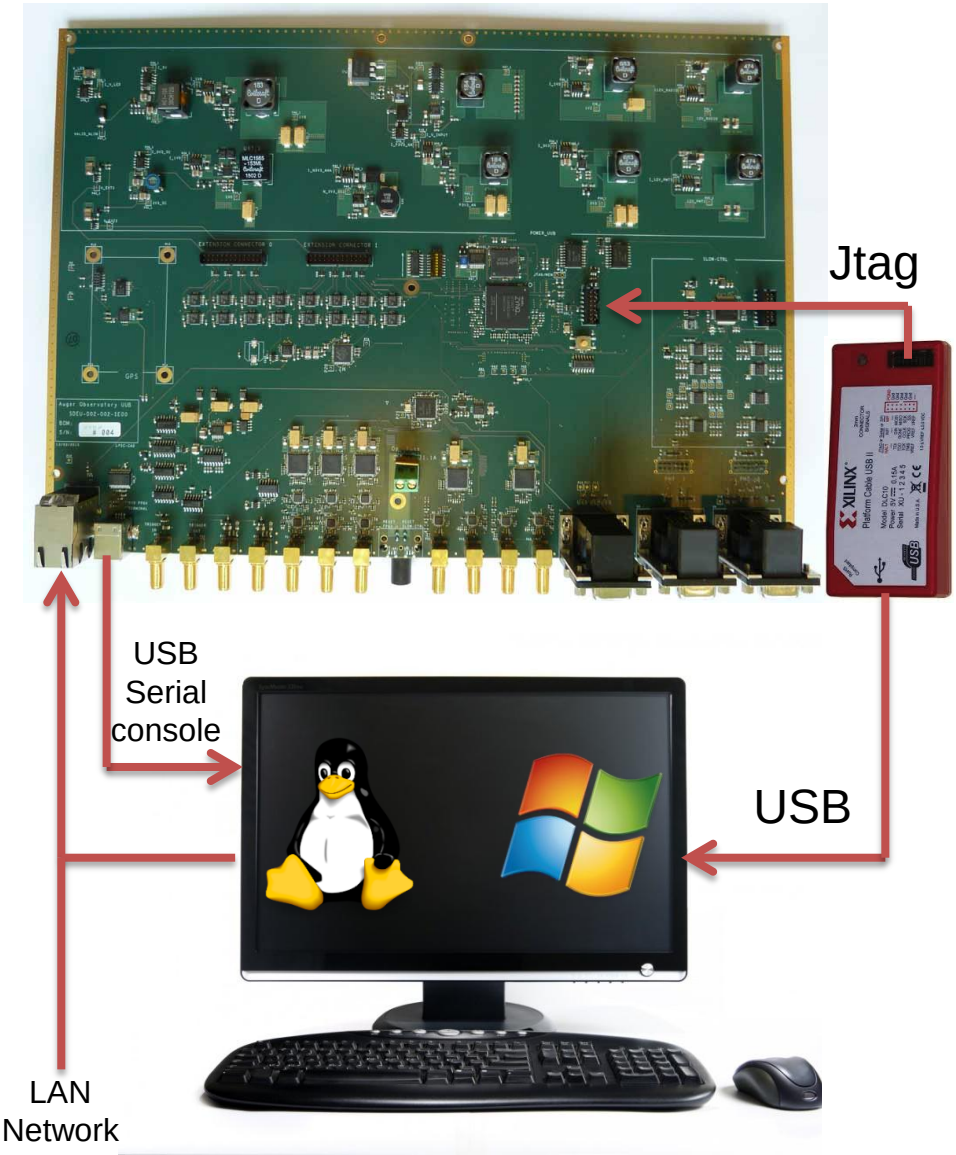
How to flash petalinux image on UUB's QSPI

Zynq 7020



R. Assiro

UUB connections to flash memory with BOOT.bin

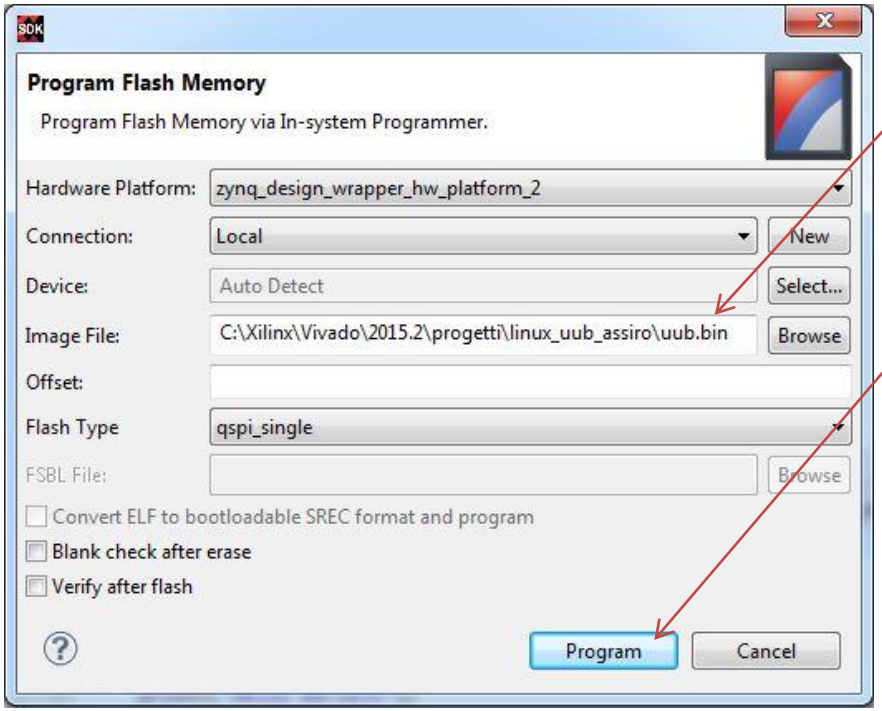


Download the zip file from:
www.github.com/assiro/UUB_PETALINUX_WP1
BOOT.bin is the file to flash in QSPI memory
By SDK is possible to open the workspace into the folder:
vivado_uub_proto.sdk
In this SDK project you can get the source programs developed in petalinux distribution for UUB and settings to flash the memory.

AFTER BOOT:
Petalinux will start after reset on USB serial console
Login: **root**
Password: **root**
MAD address: **00:0A:35:00:22:01**
Web server on IP number that you can read on booting
To watch real time data on web scope run application
scope -i to the prompt
Application implemented:
uub_init
scope
acquire
led
DEVMEM

How to flash Boot image in the QSPI memory of UUB

In SDK select from the Xilinx Tools menu "**Program flash**". This window will be displayed**.**

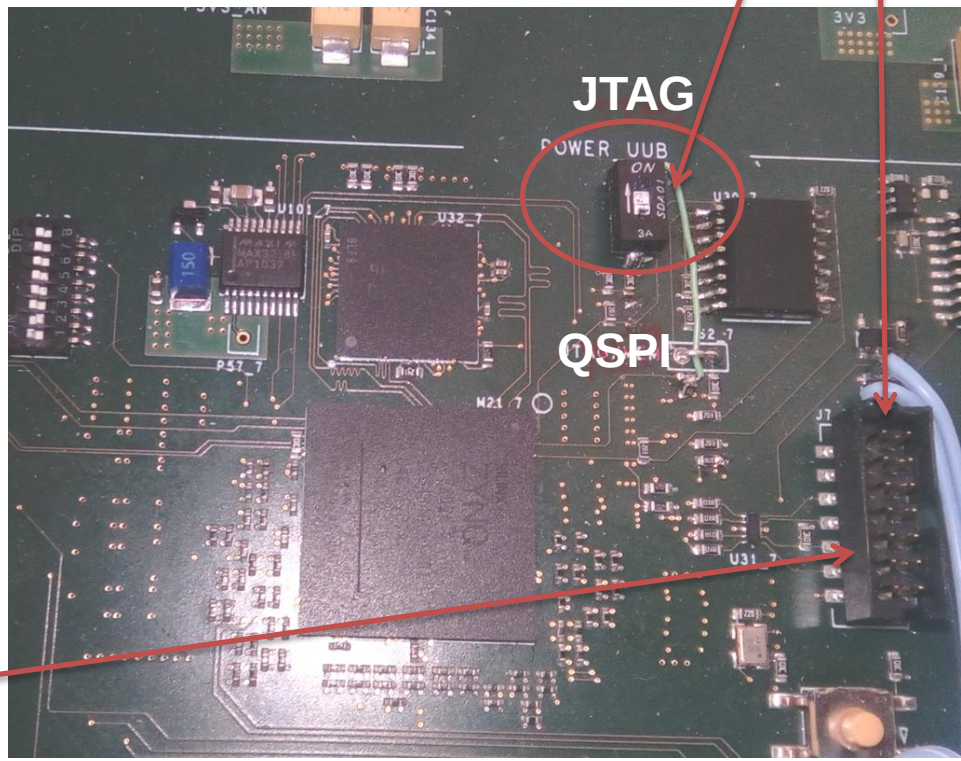


Select the image file generated (BOOT.bin)

Connect the JTAG programmer to the UUB to the J7 connector

Switch up on JTAG side

Power on to the UUB (24Volt) and click on Program



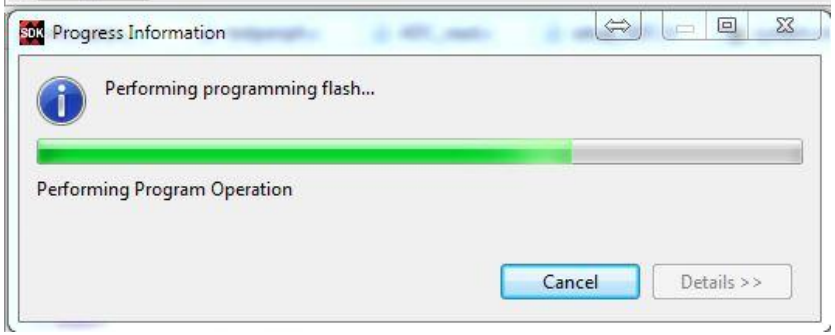
DLC10 xilinx platform cable USB JTAG programmer

The process to program the QSPI takes a very long time (about 25 minutes)

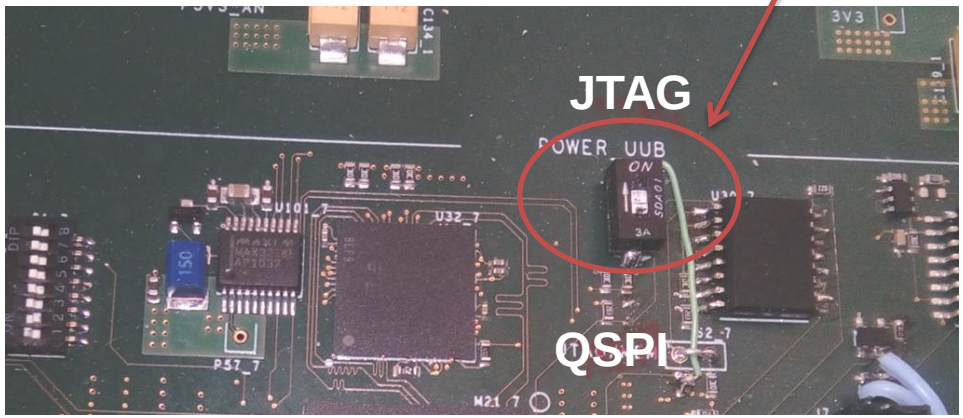
Console

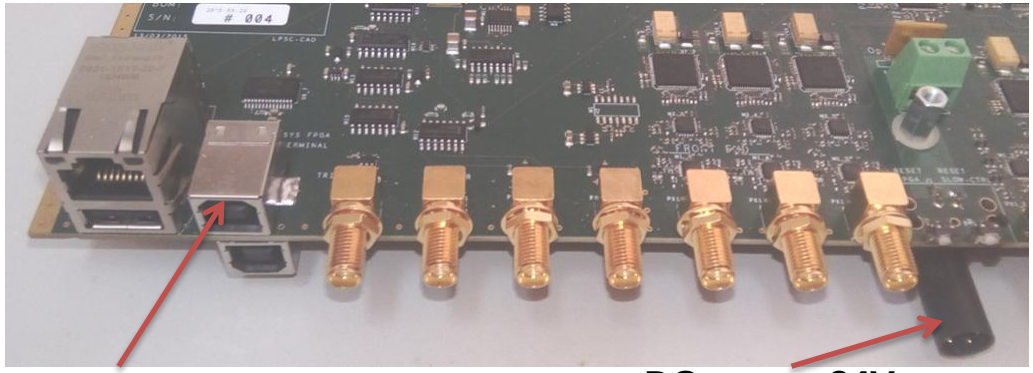
Program Flash

```
Device    ID Code          IR Length    Part Name
 1        4ba00477            4         arm_dap
 2        23727093            6         xc7z020

-----------------------------------------------------
Enabling extended memory access checks for Zynq.
Writes to reserved memory are not permitted and reads return 0.
To disable this feature, run "debugconfig -memory_access_check disable".

-----------------------------------------------------

CortexA9 Processor Configuration
-------------------------------------
Version.............................0x00000003
User ID.............................0x00000000
No of PC Breakpoints................6
No of Addr/Data Watchpoints.........4
Processor Reset .... DONE
Performing Erase Operation...
Erase Operation successful.
Performing Program Operation...
0%.....................................................................
```



When the programmig is done place the switch on **QSPI side** and reset the Zynq.
Connect a USB cable to serial console
Petalinux and his application is now runnung.in to the Zynq….





Zynq serial console (top side)

DC power 24V