Xilinx PicoZED EVB Image & build

1. Requirements
2. Scope of work
3. Prerequisites
4. Time estimations
5. Costs

1. Requirements

* + There is a xilinx picozed evaluation board (AES-Z7PZ-7Z030-SOM-I-G/REV-E)
  + There is a need to create separate images for u-boot, Linux kernel and initramfs filesystem
  + The board contains QSPI NOR flash and eMMC flash devices
  + The boot should be performed from QSPI flash, the FSBL bootloader and u-boot should be kept on QSPI flash
  + The Linux kernel image and initramfs image should be kept on eMMC
  + The rest of eMMC should contain two jffs2 partitions
  + The initrams should be as close as possible to Xilinx evb image contents and should mount eMMC jffs2 partitions automaticaly

2. Scope of work

* + There is a need to install the Xilinx Dev env – the petalinux and the BSP for EVB
  + There is a need to build a test image with minimal changes, to burn it to EVB and to see if it exists. (Some helloWorld app)
  + There is a need to extract the toolchain, fsbl, u-boot and kernel sources, as well – the applications list and versions that are included in the EVB userspace image from Xilinux dev env
  + There is a need to prepare build system to build whole system components and to create finally four images:
    - Fsbl (optionally)
    - U-boot
    - Kernel
    - Initramfs
  + There is a need to change u-boot's default boot parameters to boot kernel and initramfs from predefined offsets on eMMC
  + There is a need to burn all that images to EVB and to test it

3. Prerequisites

* + Petalinux installation (the version that exactly used on EVB)
  + EVB BSP package (same as already used on EVB)
  + Working EVB
  + There is an assumption that the EVB is able to boot FSBL from QSPI and FSBL is able to boot secondary bootloader (u-boot) from QSPI as well

4. Time estimations

* + Xilinx Dev Env installation – 3-4 hours
  + Extraction of toolchain, fsbl, u-boot, kernel sources from Xilinx Dev Env – 1-2 days
  + Creating list of apps and versions that used in EVB default image – 2-3 hours
  + Creating build env for building custom images: u-boot, kernel, rootfs as initrams - 1 day
  + Burning and testing – 1-2 days

Total time : 5-6 work days

5. Costs

* + The cost is 280 NIS + VAT per hour
  + In case of 5 days – 40 hours - 11200 NIS + VAT
  + In case of 6 days – 48 hours - 13440 NIS + VAT