EVB KSZ9477 Source Build Instructions

Rev 0.2

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This document contains how to download and build images for EVB-KSZ9477 evaluation board which has an Atmel SAMA5D3 SOC and a KSZ9477 Ethernet switch.

Note: Buildroot procedure requires below tools and can be installed as below on Ubuntu Linux (Tested on Ubuntu 14.04 LTS x64 version).
apt-get install sed make binutils gcc g++ bash patch gzip bzip2 perl tar cpio python unzip rsync wget libncurses-dev libc6-i386 lib32stdc++6 lib32z1 libblkid-dev

The buildroot for Atmel SAMA5 processors are listed in
http://www.at91.com/linux4sam/bin/view/Linux4SAM/BuildRootBuild

1. Create the source tree

$ git clone https://github.com/Microchip-Ethernet/EVB-KSZ9477.git
Or download the zip file from the following location and extract them on to your working folder.
https://github.com/Microchip-Ethernet/EVB-KSZ9477

2. Change directory to KSZ folder

$ cd EVB-KSZ9477/KSZ

3. Export KSZ_HOME variable to KSZ folder

$ export KSZ_HOME=`pwd`

4. Change directory to Atmel_SOC_SAMA5D3/buildroot

$ cd Atmel_SOC_SAMA5D3/buildroot

5. Decide whether you need NAND flash image or SD card image

If you need NAND flash image:
$ make atmel_sama5d3_xplained_ksz9897_defconfig

If you choose SD card image:
$ make atmel_sama5d3_xplained_ksz9897_mmc_defconfig

6. Build

$ make

7. The images will be created @ $KSZ_HOME/Atmel_SOC_SAMA5D3/buildroot/output/images

9. Flashing NAND image to EVB-KSZ9477:

1. Connect the micro-USB (J12) connector of the EVB-KSZ9477 to the Linux PC.

2. Connect the 5V power to EVB-KSZ9477 board
3. Remove the NAND enable (J13) jumper and hit the Master Reset button (the /dev/ttyACM0 created. You can see this by executing command '$ tail –f /var/log/kernel.log')
4. Insert NAND enable (J13) jumper
5. Change directory to $KSZ_HOME/Atmel_SOC_SAMA5D3/buildroot
   $ cd $KSZ_HOME/Atmel_SOC_SAMA5D3/buildroot
6. If you are using x86 system then run the 'flash_board' script in the terminal window. If you are using x64 system then run execute 'flash_board_x64' script.

$ sudo KSZ_HOME=$KSZ_HOME flash_board
Or
$ sudo KSZ_HOME=$KSZ_HOME flash_board_x64

10. Using SD card image to boot EVB-KSZ9477:

The SD card image `sdcard.img` is located $KSZ_HOME/Atmel_SOC_SAMA5D3/buildroot/output/images.

Please use the procedure described in the *EVB-KSZ9477_Image_Programming_Guide.pdf*. The document is available at https://github.com/Microchip-Ethernet/EVB-KSZ9477/releases