Port status

You may find more information about the status of the port on the Sam7 port page.

Prerequisites

We will use the sam7_ex256_demo application. It runs on a Olimex SAM7-EX256 development board.

We'll assume you have

- a working sam7-ex256 board,
- a running OpenOCD daemon connected to it,
- the MutekH source-tree in `/path/to/mutekh`,
- working gcc & binutils for ARM. Using `arm-unknown-elf` target is the default, but you may use your own toolchain

Using a demo application

Demo application is located in trunk/mutekh/examples/sam7_ex256_demo directory.

To compile this application, go to a new directory and type:

```
$ make \
           -f /path/to/mutekh/Makefile \
           CONF=/path/to/mutekh/examples/sam7_ex256_demo/config_sam7 \
           BUILD_DIR=$PWD \
           SRC_DIR=/path/to/mutekh
```

For more information about the meaning of the arguments, see BuildSystem.

Got the kernel

You should now have a tree of built objects on `obj-simple-arm` and two versions of the kernel:

`kernel-simple-arm.out`
: The ELF binary kernel, it can be used for GDB or other debugging purposes

`kernel-simple-arm.bin`
: This is the file you may flash to the Sam7 through openocd.

Testing

You may connect to the board through the first UART, 38400,8,n,1, and see:

- A lua prompt asking for commands
- Some messages when you touch the buttons or the joystick

On the lua prompt, you may try:

`lcd_reblit()`
: Will blit a default image to the LCD

`lcd_blit_block(lba, x, y)`
: Blits a 18x18 block from SD/MMC to the LCD at x,y. it is 18x18 because it fits in a 512-byte block of SD/MMC. Encoding is packed 12-bit RGB-444.

`lcd_backlight(bool)`
: Sets the backlight value (0/1)

`lcd_invert(bool)`
: Sets the backlight inversion mode (0/1)

`lcd_set_contrast(n)`
: Sets the contrast of LCD

`block_hexdump(lba)`
: Hexdump the SD/MMC block at lba

`sd_mmc_rehash()`
: Reinitialize the SD/MMC card, this can be used when switching cards

You may find other commands pressing the <TAB> key (yes, there is completion).