

# 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).