

Weekly Progress Report

Capstone Team 8 RISC-V CleanFlight/BetaFlight Port

Week #14

Date: 04/06 - 04/13

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Summary:

Bliss check-ins:

- Monday

- **Done**

- Figuring out how to flash the board using Kflash
- Flashing gpio_led example to the board using Kendryte SDK
- Created documentation on how to compile a examples in the Kendryte SDK
- Created documentation on how to flash the board using KFlash
- Flashed the gpio_led example and got an LED blinking on the Kendryte board.

- **Doing**

- Putting gpio_led code inside Betaflights main.c to confirm Betaflight can in a barebones sense be flashed to the board.
- Confirming way to convert .hex files to .bin via the “xxd” command in Linux.

- Tuesday

- **Done**

- **Doing**

- Putting gpio_led code inside Betaflights main.c to confirm Betaflight can in a barebones sense be flashed to the board.
- Confirming way to convert .hex files to .bin via the “xxd” command in Linux.

- Wednesday

- **Done**

- Putting gpio_led code inside Betaflight's main.c to confirm Betaflight can in a barebones sense be flashed to the board.
 - Confirming way to convert .hex files to .bin via the "xxd" command in Linux.
- **Doing**
 - Finding a way to debug the board either with GDB, OpenOCD or UART.
 - Determining if additional JTAG hardware is needed for debugging
- **Thursday**
 - **Done**
 - **Doing**
 - Finding a way to debug the board either with GDB, OpenOCD or UART.
 - Determining if additional JTAG hardware is needed for debugging
- **Friday**
 - **Done**
 - Finding a way to debug the board either with GDB, OpenOCD or UART.
 - Determining if additional JTAG hardware is needed for debugging
 - **Doing**
 - Writing documentation on using Minicom to debug the board serially.

Eric check-ins:

- **Monday**
 - **Done**
 - Created documentation for K210 port process (list of steps for what we've done up to this point).
 - **Doing**
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- **Tuesday**
 - **Done**
 - **Doing**
 - Debugging capstone-port branch code to try to get a file assembled in BF to blink LED on Maixbit board.
- **Wednesday**
 - **Done**
 - **Doing**
 - Other classwork
- **Thursday**
 - **Done**
 - *Makefile
 - --Uncommented LD_FLAGS
 - --Removed \$(ROOT)/lib/main/RISCV_K210/bsp and \$(ROOT)/lib/main/RISCV_K210/drivers from SRC_DIR (ln 61). Added to VPATH at the bottom of MAIXBIT.mk.
 - --Changed argument of CSOURCES back to SRC_DIR

- --Reintroduced ARM gcc toolchain (In 224)
- --Added control statement to determine whether ARM or RISCV gcc tools get used (In 232)
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- *MAIXBIT.mk
- -- Commented ASFLAGS (looks like this is being overwritten in the Makefile anyway)
- **Doing**
- Friday
 - **Done**
 - **Doing**
 - Other classwork

Niko check-ins:

- Monday
 - **Done**
 - Got a stable binary file, met with the sponsor
 - **Doing**
 - Testing different Linker Flags
- Tuesday
 - **Done**
 - Modified the MAIXBIT.mk and built an LED example
 - **Doing**
- Wednesday
 - **Done**
 - Made small changes to Makefile
 - **Doing**
- Thursday
 - **Done**
 - Team meetings, email to the team - next week's plan and survey results
 - **Doing**
- Friday
 - **Done**
 - Team meetings
 - **Doing**
 - Addendum

Ruben check-ins:

- Monday
 - **Done**

- Over the weekend, I updated some code and incorporated platform.h code and uncommented more code
 - Emailed Sipeed to ask about the Maixbit board's peripherals like flash memory, soc, and others' TRM or vendor info so we can research datasheets
 - Email Canaan to know ETA on TRM and cc team and roy
- **Doing**
- **Tuesday**
 - **Done**
 - **Doing**
 - Other classwork
- **Wednesday**
 - **Done**
 - Sipeed replied and mentioned Canaan doesn't have TRM and Sipeed didn't mention anything about the other chips on the maixbit board
 - **Doing**
 - Other classwork
- **Thursday**
 - **Done**
 - Other classwork
 - **Doing**
 - clean up from Niko's led uart code
- **Friday**
 - **Done**
 - Met with Andrew and Mark for project update
 - Met with Eric to discuss which files each will clean up from Niko's led uart code
 - **Doing**
 - clean up from Niko's led uart code

Weekly Issues:

1. Ex
2. Ex2

Notes:

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