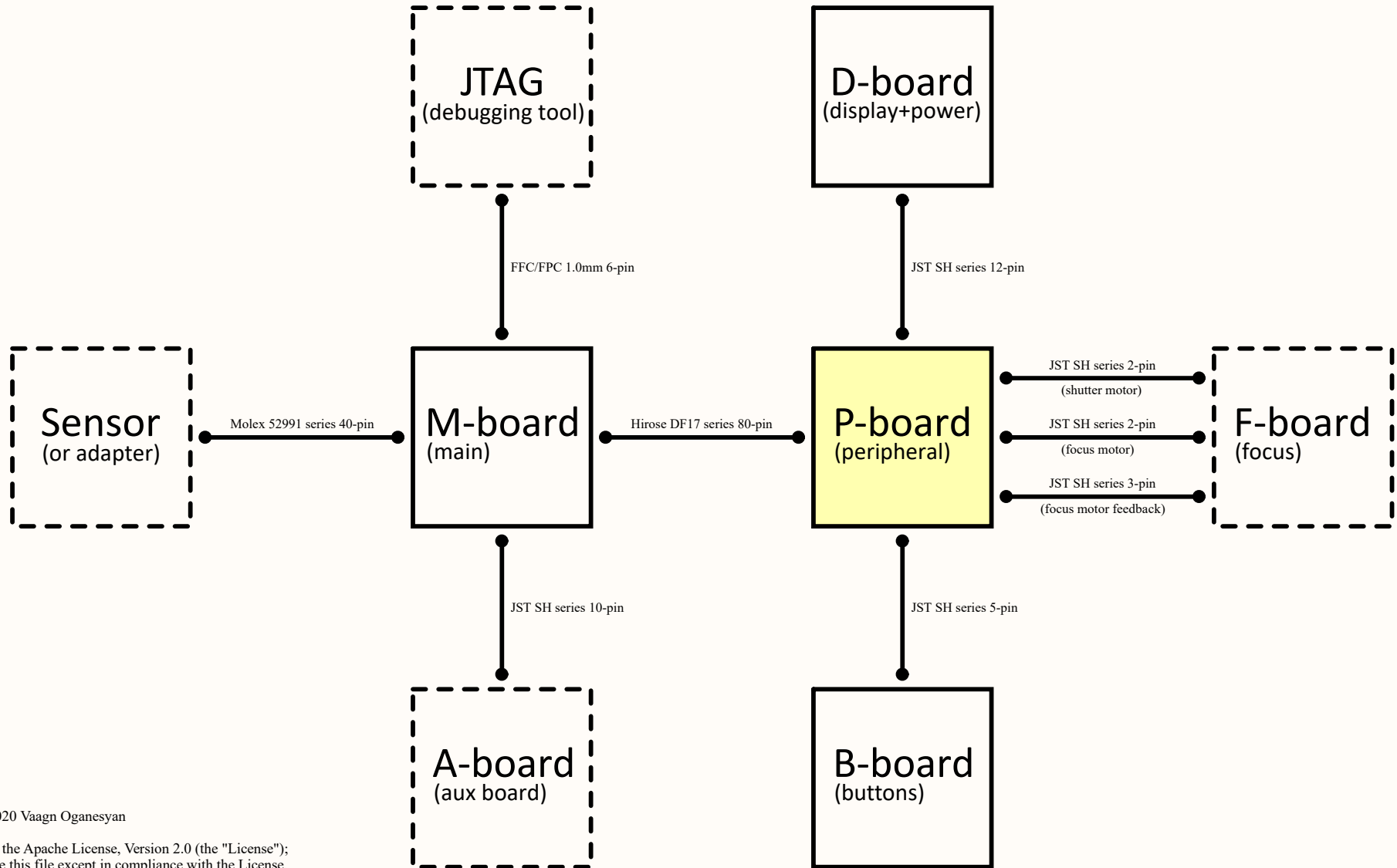
 - optional



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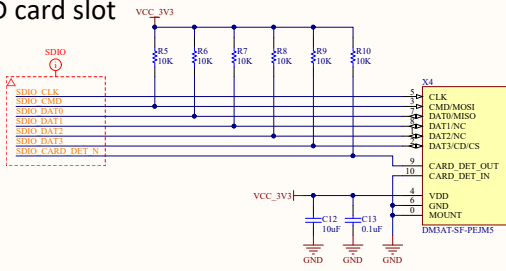
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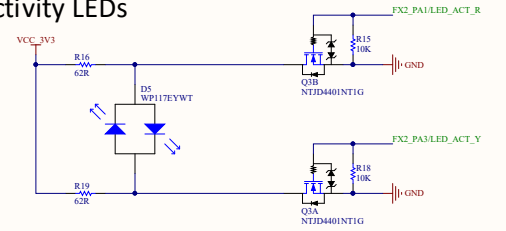
|                                   |                        |                             |
|-----------------------------------|------------------------|-----------------------------|
| Title: <b>P-board.Header</b>      |                        |                             |
| File: <b>0_HEADER.SchDoc</b>      | Size: <b>A4</b>        |                             |
| Drawn by: <b>Vaagn Oganessian</b> | Version: <b>v0.2.0</b> |                             |
| Date: <b>23.10.2020</b>           | Time: <b>21:10:59</b>  | Sheet: <b>1</b> of <b>5</b> |

**OpenRV**

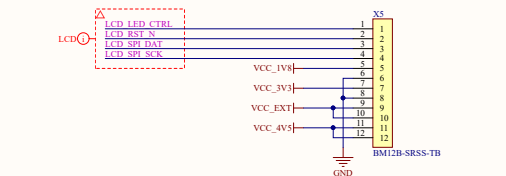
## SD card slot



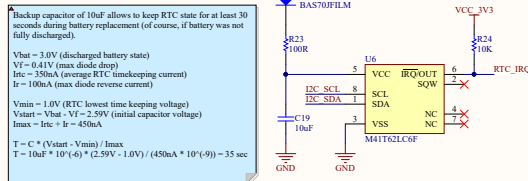
## Activity LEDs



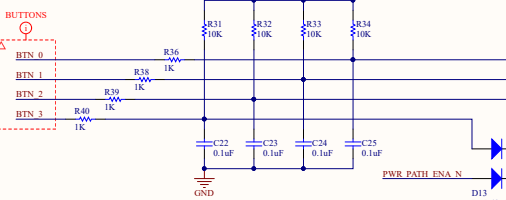
## Display &amp; AUX power connector



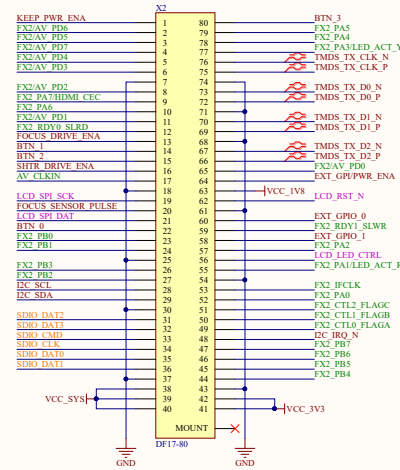
## Real time clock



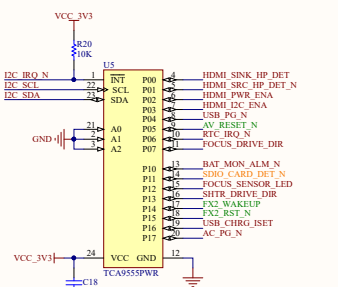
## Buttons connector



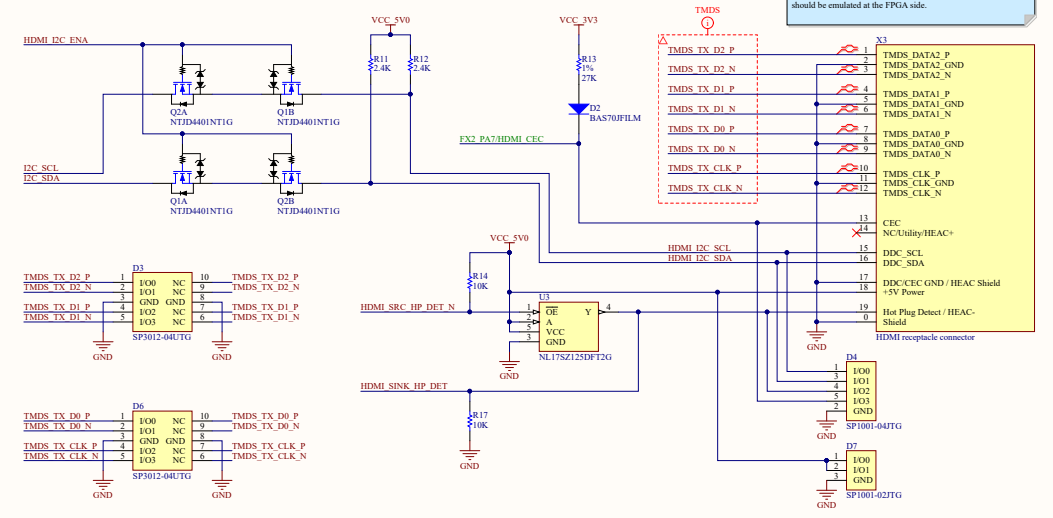
## M-board connector



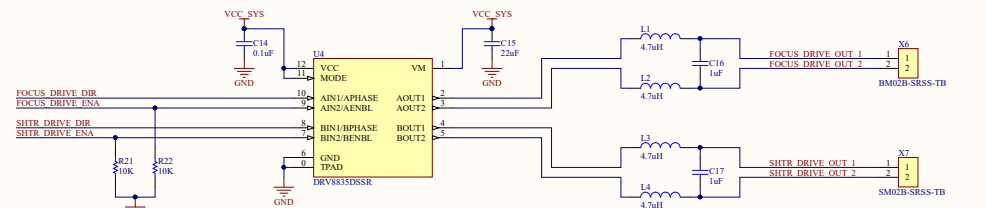
## I2C I/O expander



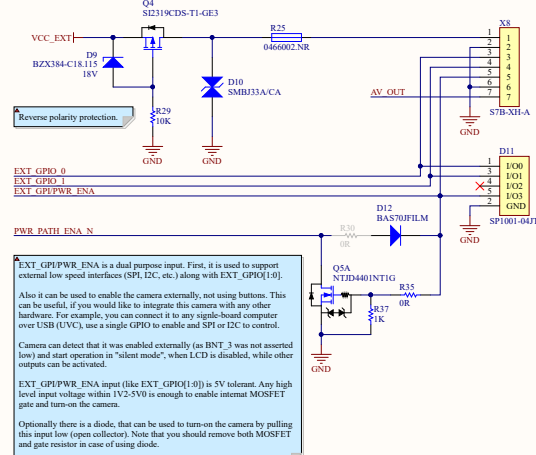
## HDMI



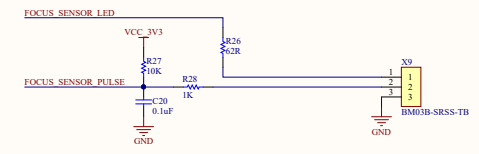
## Shutter &amp; focus motor control



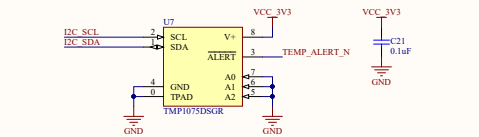
## AV &amp; GPIO external connector



## Focus sensor connector



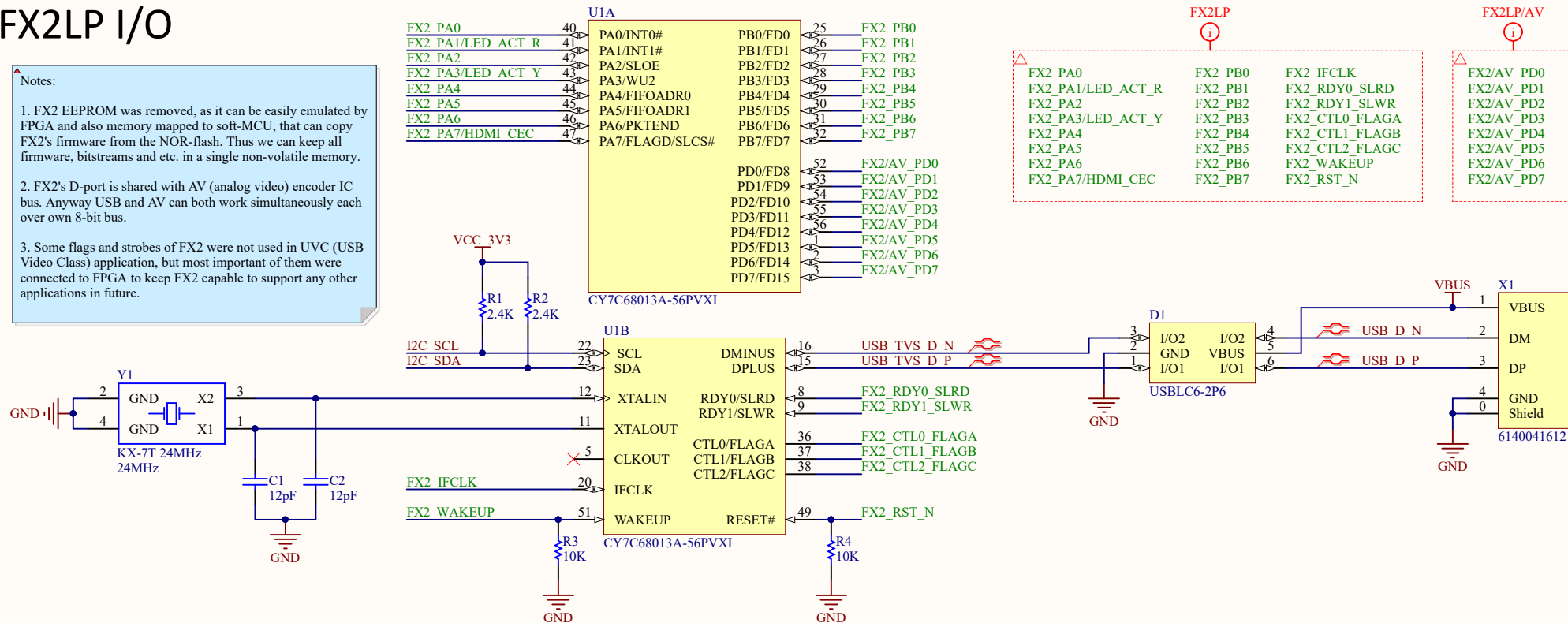
## Temperature sensor



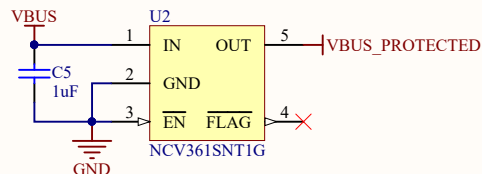
# FX2LP I/O

## Notes:

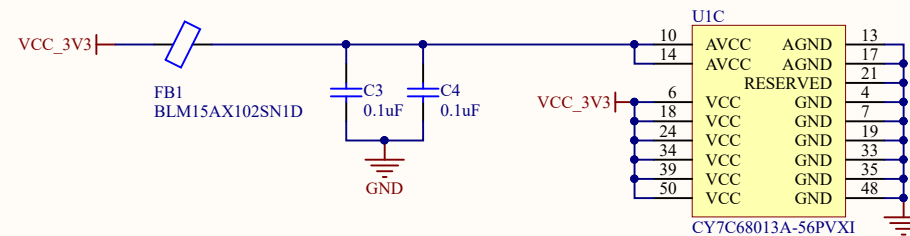
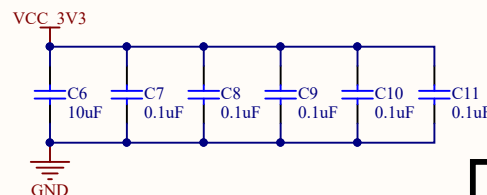
1. FX2 EEPROM was removed, as it can be easily emulated by FPGA and also memory mapped to soft-MCU, that can copy FX2's firmware from the NOR-flash. Thus we can keep all firmware, bitstreams and etc. in a single non-volatile memory.
2. FX2's D-port is shared with AV (analog video) encoder IC bus. Anyway USB and AV can both work simultaneously each over own 8-bit bus.
3. Some flags and strobes of FX2 were not used in UVC (USB Video Class) application, but most important of them were connected to FPGA to keep FX2 capable to support any other applications in future.



## USB power protection



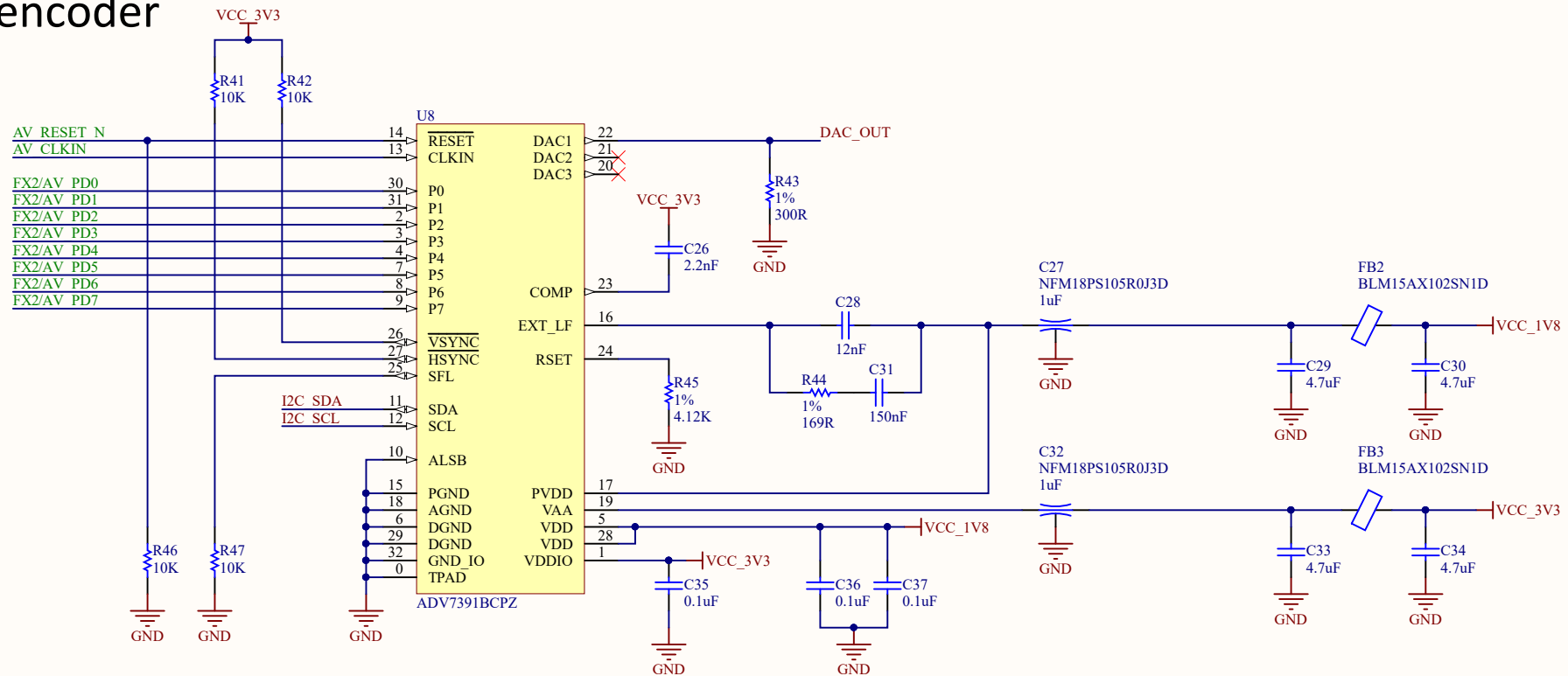
## FX2LP power



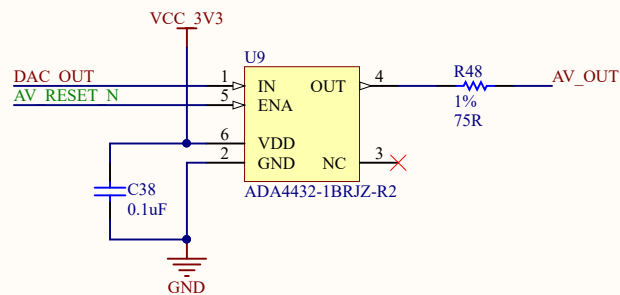
|                            |                 |
|----------------------------|-----------------|
| Title: P-board.USB         |                 |
| File: 2_USB.SchDoc         | Size: A4        |
| Drawn by: Vaagn Oganessian | Version: v0.2.0 |
| Date: 23.10.2020           | Time: 21:10:59  |
| Sheet: 3                   | of 5            |

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## AV encoder



## AV output buffer



Title: P-board.Analog Video

File: 3\_AVIDEO.SchDoc

Size: A4

Drawn by: Vaagn Oganessian

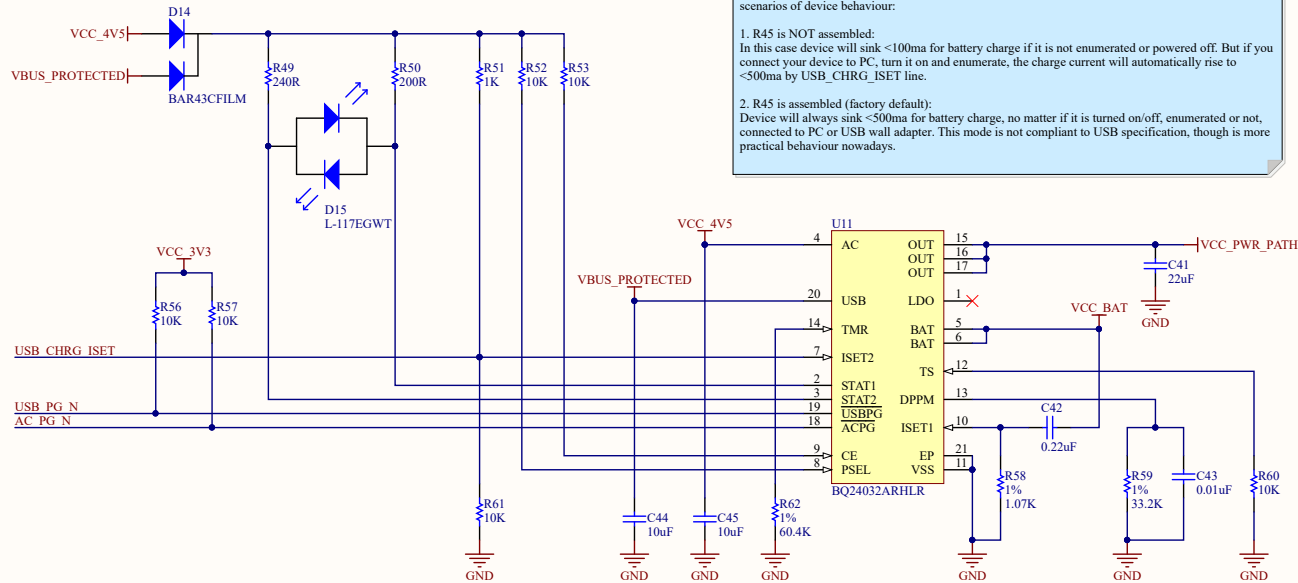
Version: v0.2.0

Date: 23.10.2020 Time: 21:10:59

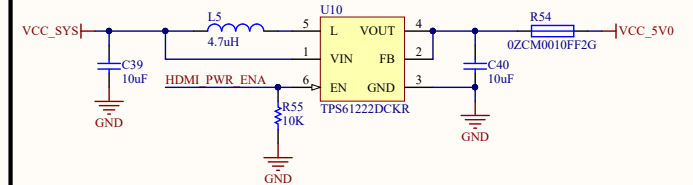
Sheet: 4 of 5

OpenIRV

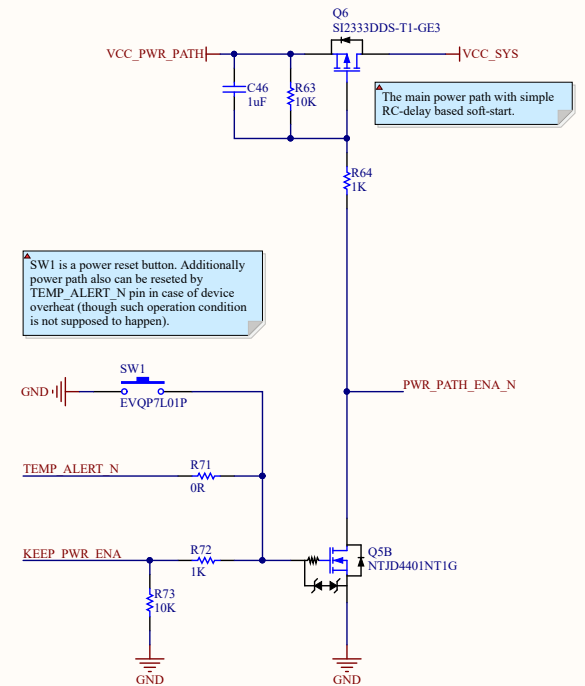
## Battery charger



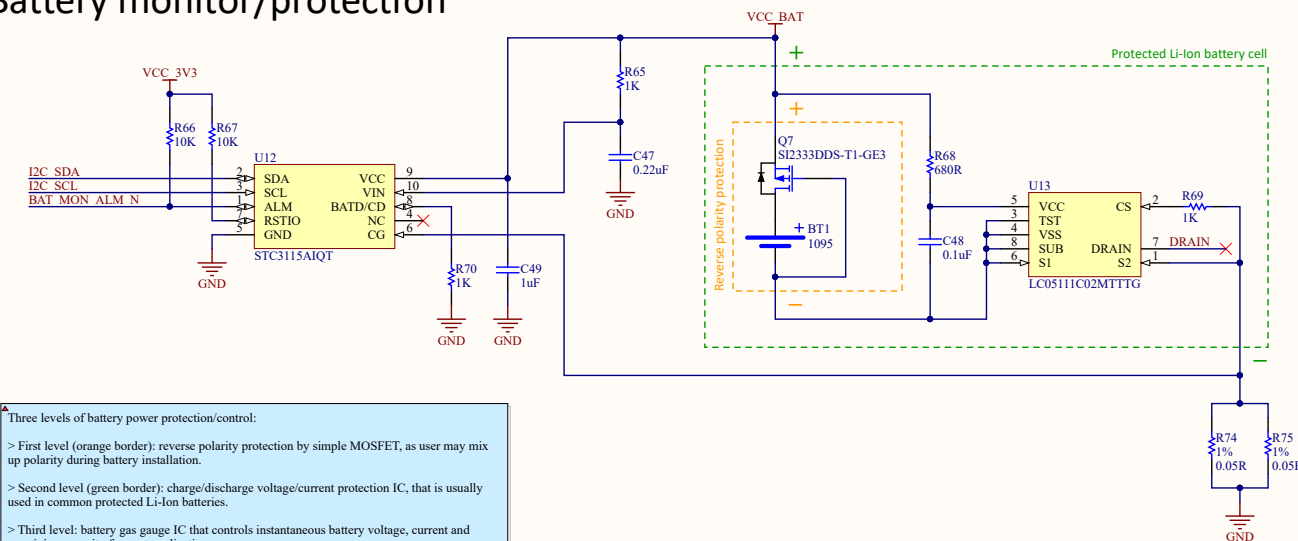
## HDMI power 5V0



## Power on circuit



## Battery monitor/protection



|                            |                 |
|----------------------------|-----------------|
| Title: P-board.Power       |                 |
| File: 4_POWER.SchDoc       | Size: A3        |
| Drawn by: Vaagn Oganessyan | Version: v0.2.0 |
| Date: 23.10.2020           | Time: 21:10:59  |
| Sheet: 5                   | of 5            |

OpenRV