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Block Diagram

haathi_block.sch

Schematic

haathi_schematic.sch

Schematic Google Sheet: https://goo.gl/2Ju1re
Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby

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File: haathi.sch

Title: haathi_cam

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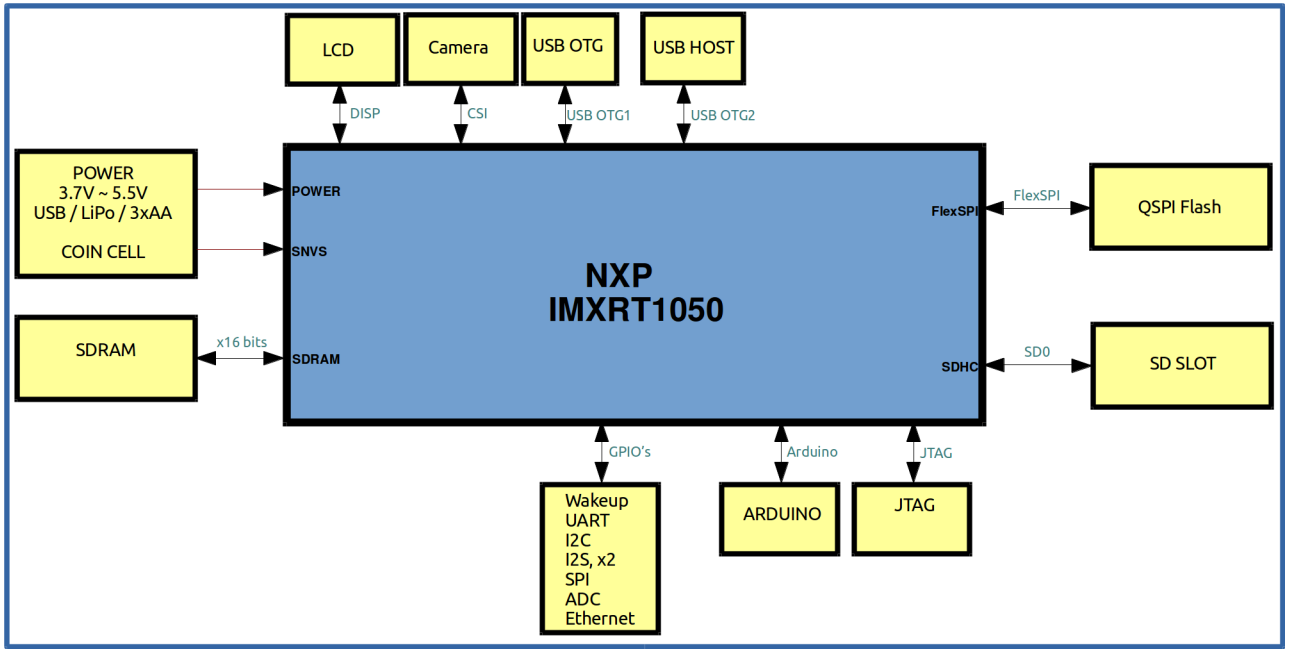

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Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby

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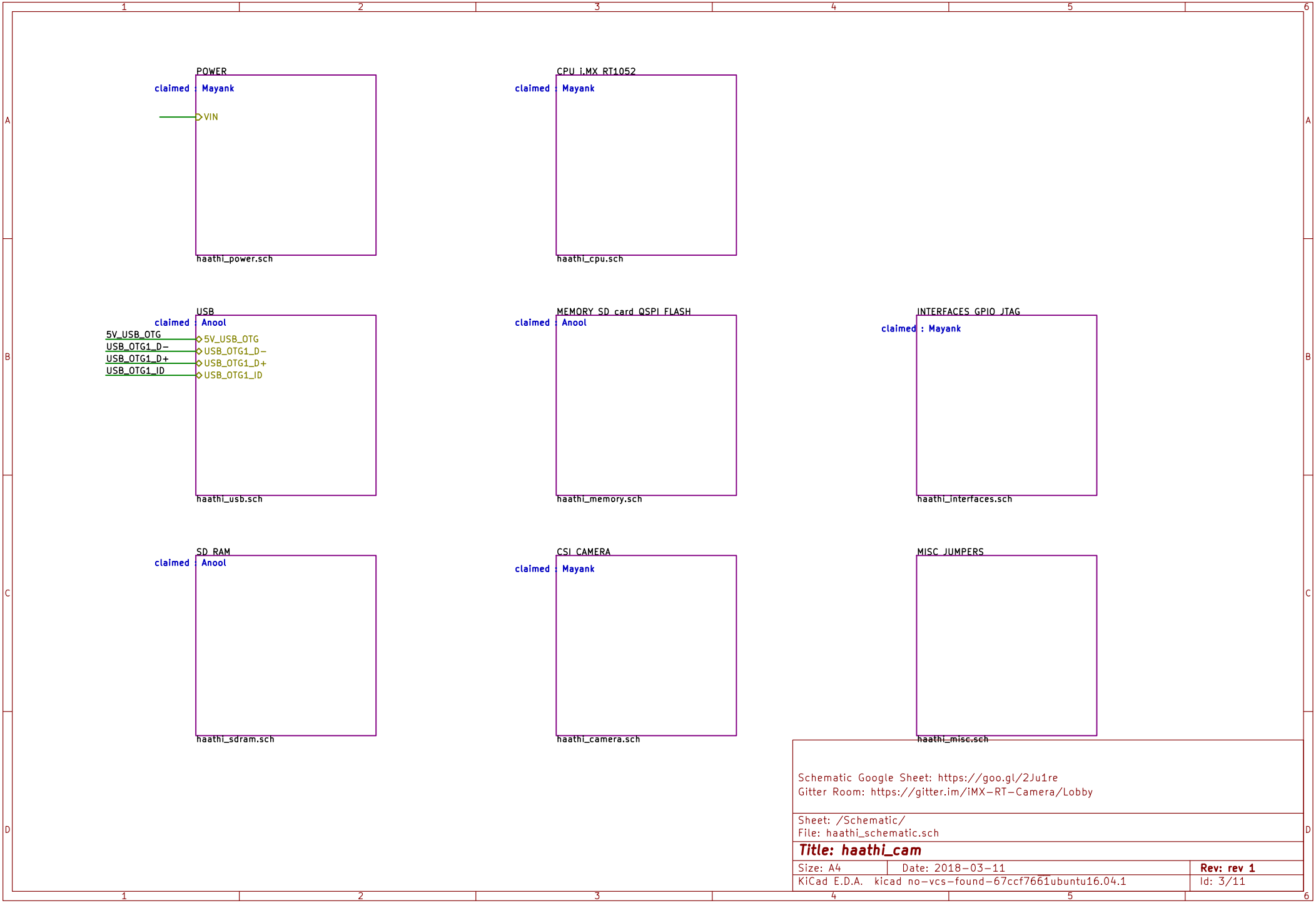
POWER
claimed : Mayank
VIN
haathi_power.sch
CPU i.MX RT1052
claimed : Mayank
haathi_cpu.sch
USB
claimed : Anool
5V_USB_OTG
USB_OTG1_D−
USB_OTG1_D+
USB_OTG1_ID
haathi_usb.sch
MEMORY SD card QSPI FLASH
claimed : Anool
haathi_memory.sch
INTERFACES GPIO JTAG
claimed : Mayank
haathi_interfaces.sch
SD RAM
claimed : Anool
haathi_sdram.sch
CSI CAMERA
claimed : Mayank
haathi_camera.sch
MISC JUMPERS
haathi_misc.sch
Schematic Google Sheet: https://goo.gl/2Ju1re
Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby
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Title: haathi_cam
Size: A4
Date: 2018-03-11
Rev: rev 1
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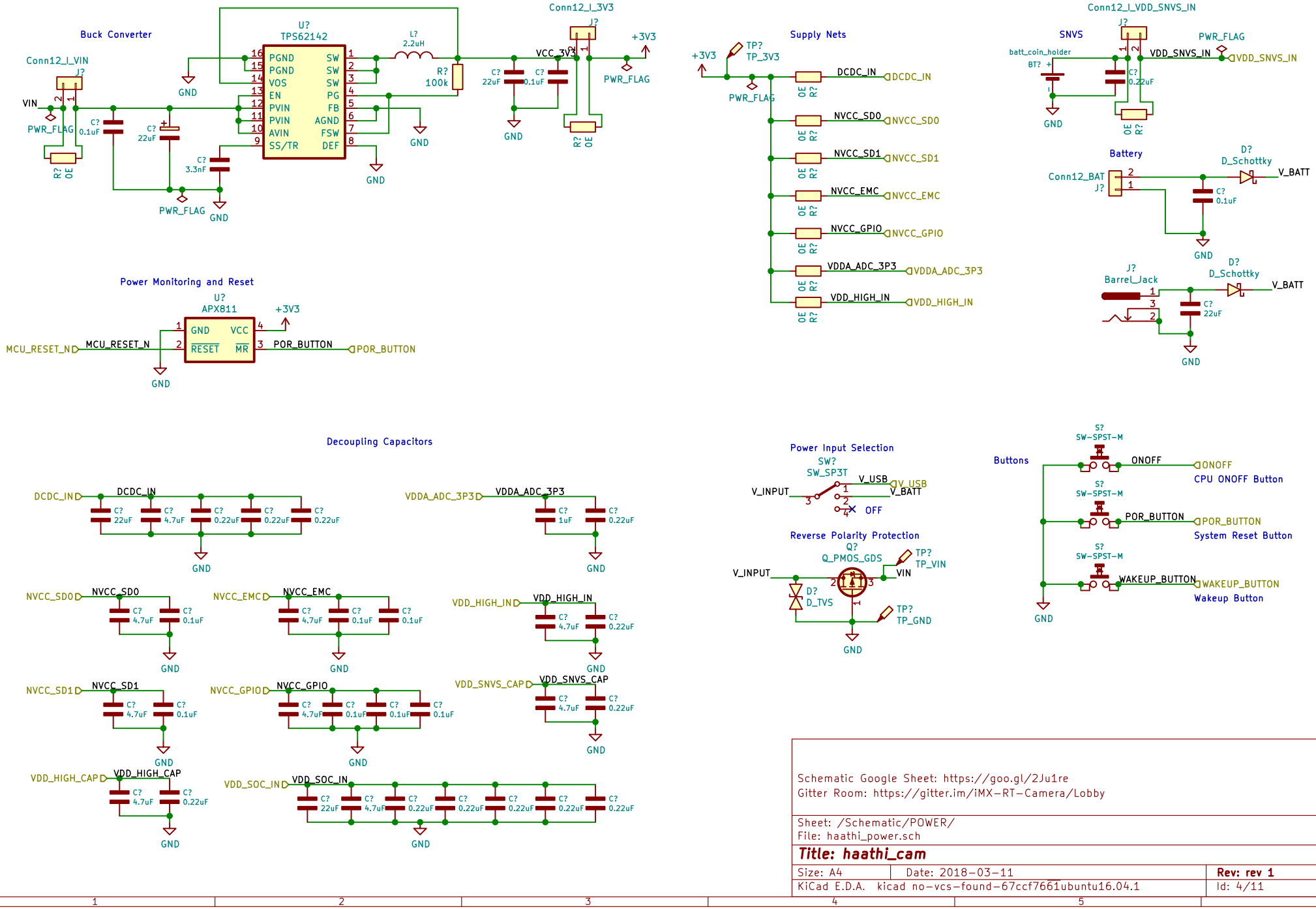
Id: 3/11


Buck Converter
Conn12_I_VIN
TPS62142
Conn12_I_3V3
Supply Nets
Conn12_I_VDD_SNVS_IN
Power Monitoring and Reset
APX811
Battery
Decoupling Capacitors
Power Input Selection
Reverse Polarity Protection
Buttons
ONOFF
CPU ONOFF Button
POR_BUTTON
System Reset Button
WAKEUP_BUTTON
Wakeup Button
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Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby
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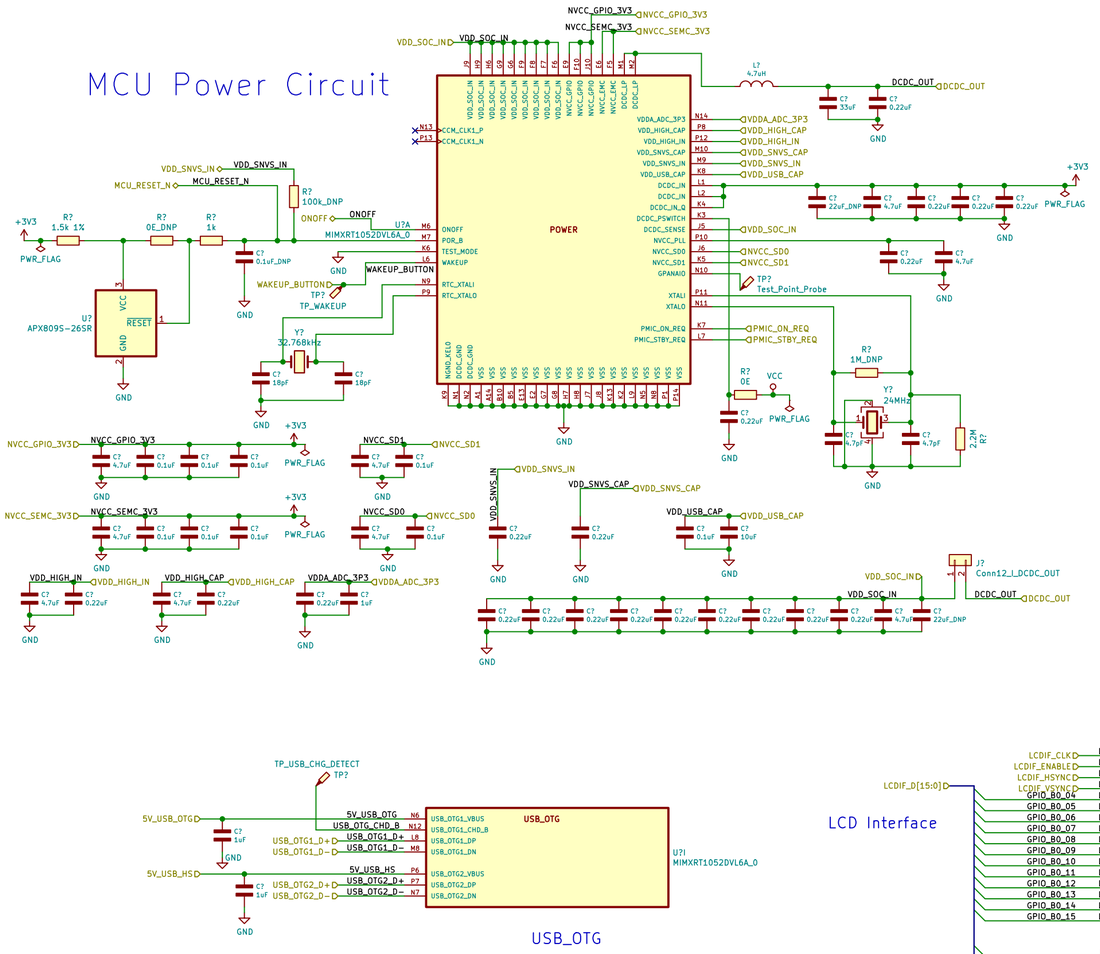
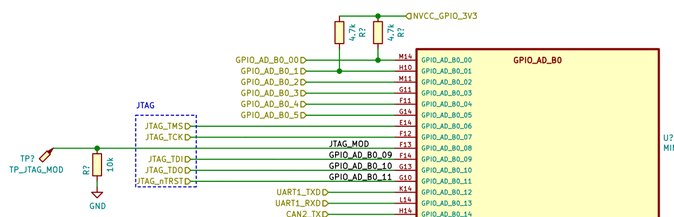
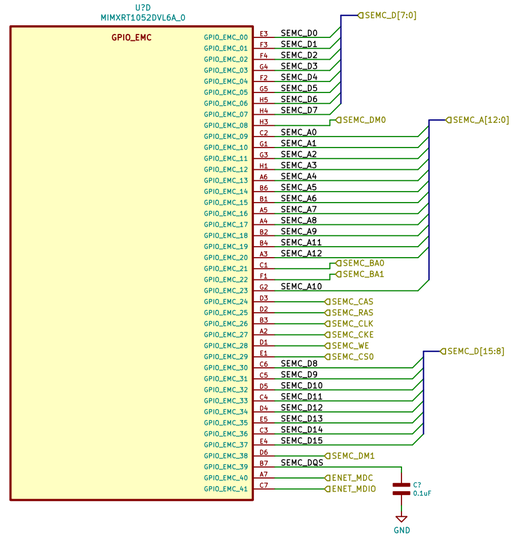
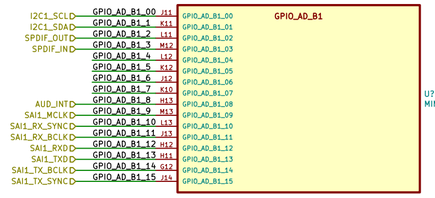
Title: haathi_cam
Size: A4
Date: 2018-03-11
Rev: rev 1
KiCad E.D.A. kicad no-vcs-found-67ccf7661ubuntu16.04.1
Id: 4/11

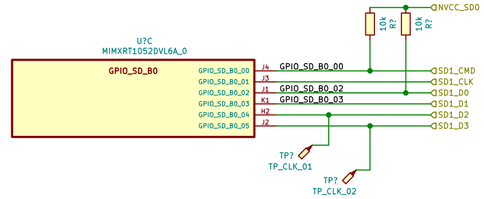
MCU Power Circuit



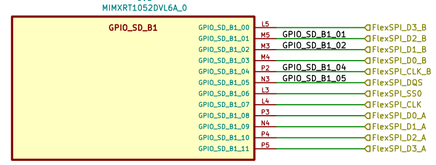








SD Interface



USB_OTG

LCD Interface

Boot Configuration

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Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby

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File: haathi_cpu.sch

Title: haathi_cam

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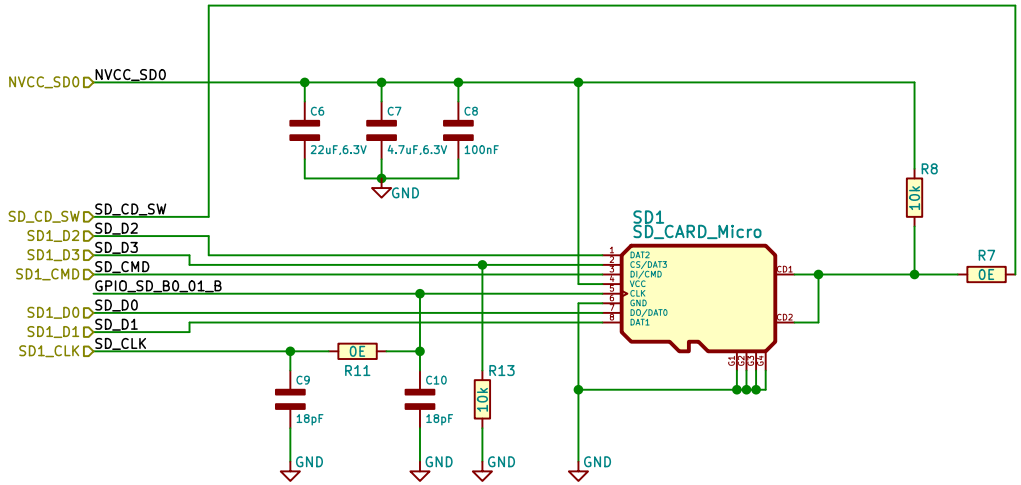

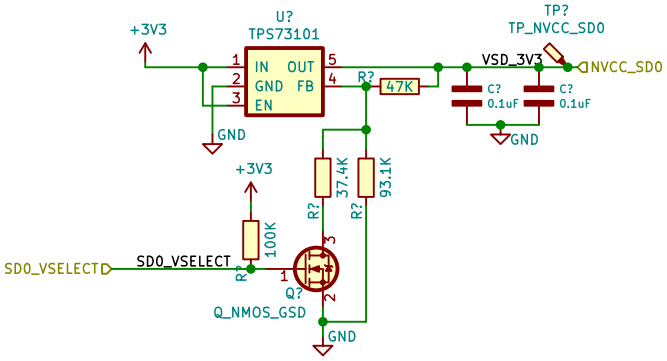

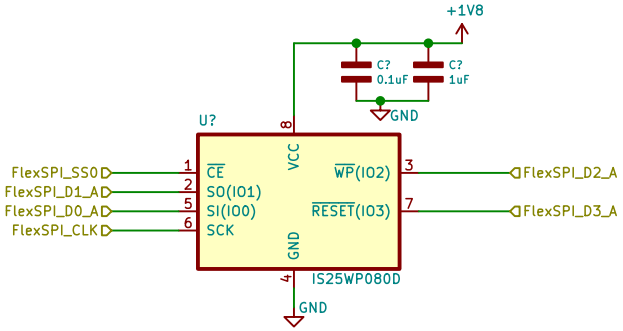

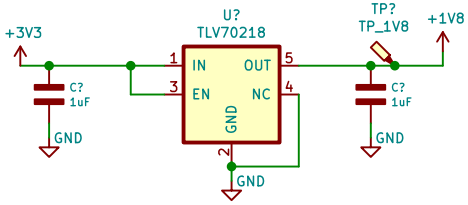

Schematic Google Sheet: https://goo.gl/2Ju1re
Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby

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Title: haathi_cam

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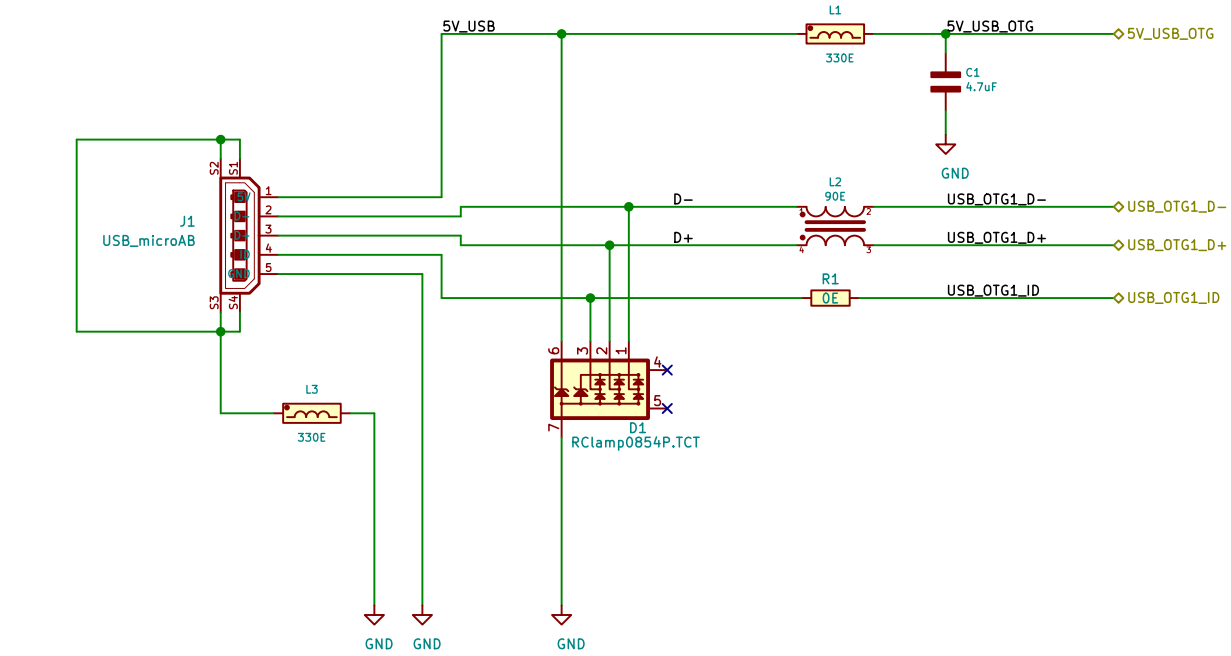

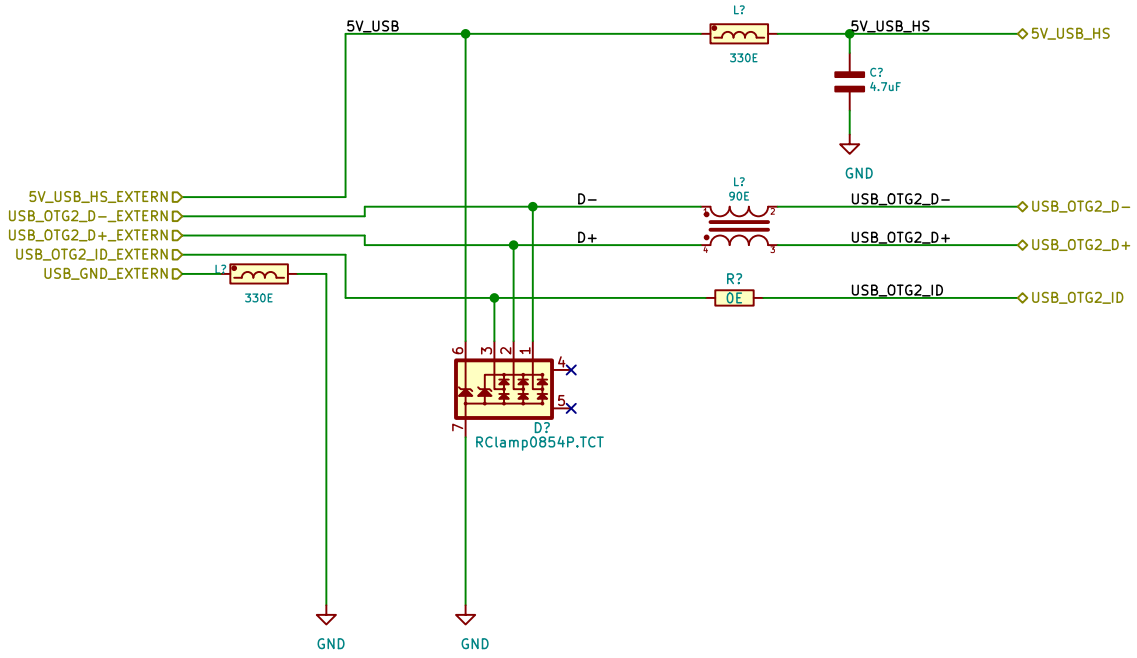

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Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby

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Title: haathi_cam

Size: A4	Date: 2018-03-11	**Rev: rev 1**
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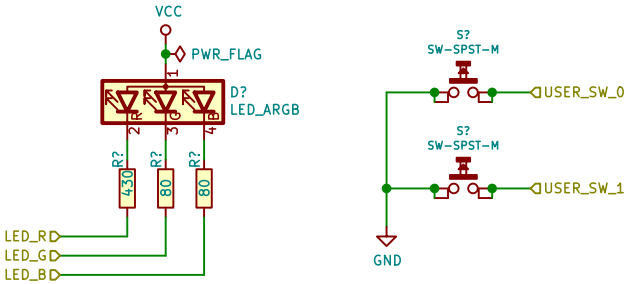
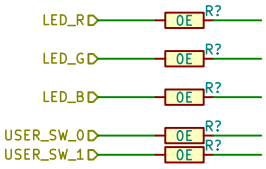
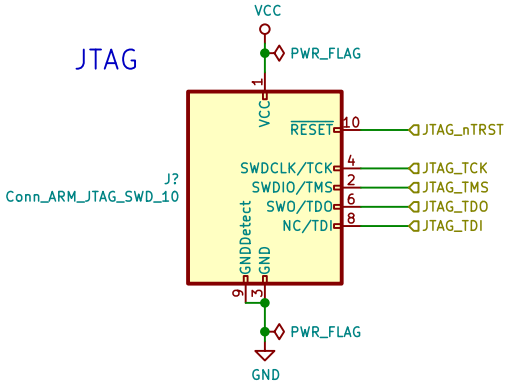
User Buttons and RGB LED

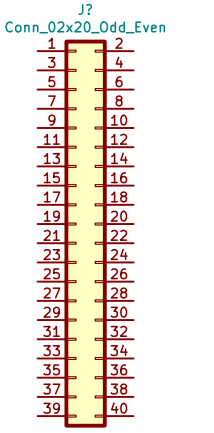




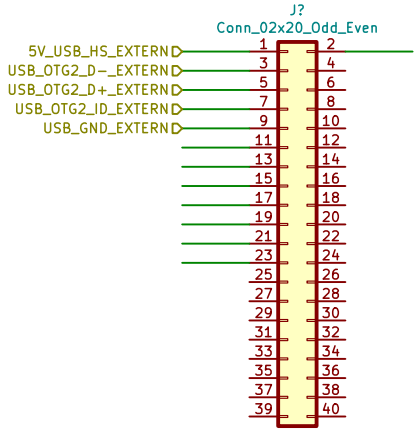
JTAG



GPIO Breakout



Raspberry Pi compatible Header



Schematic Google Sheet: https://goo.gl/2Ju1re
Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby

Sheet: /Schematic/INTERFACES GPIO JTAG/
File: haathi_interfaces.sch

Title: haathi_cam

Size: A4	Date: 2018-03-11	**Rev: rev 1**
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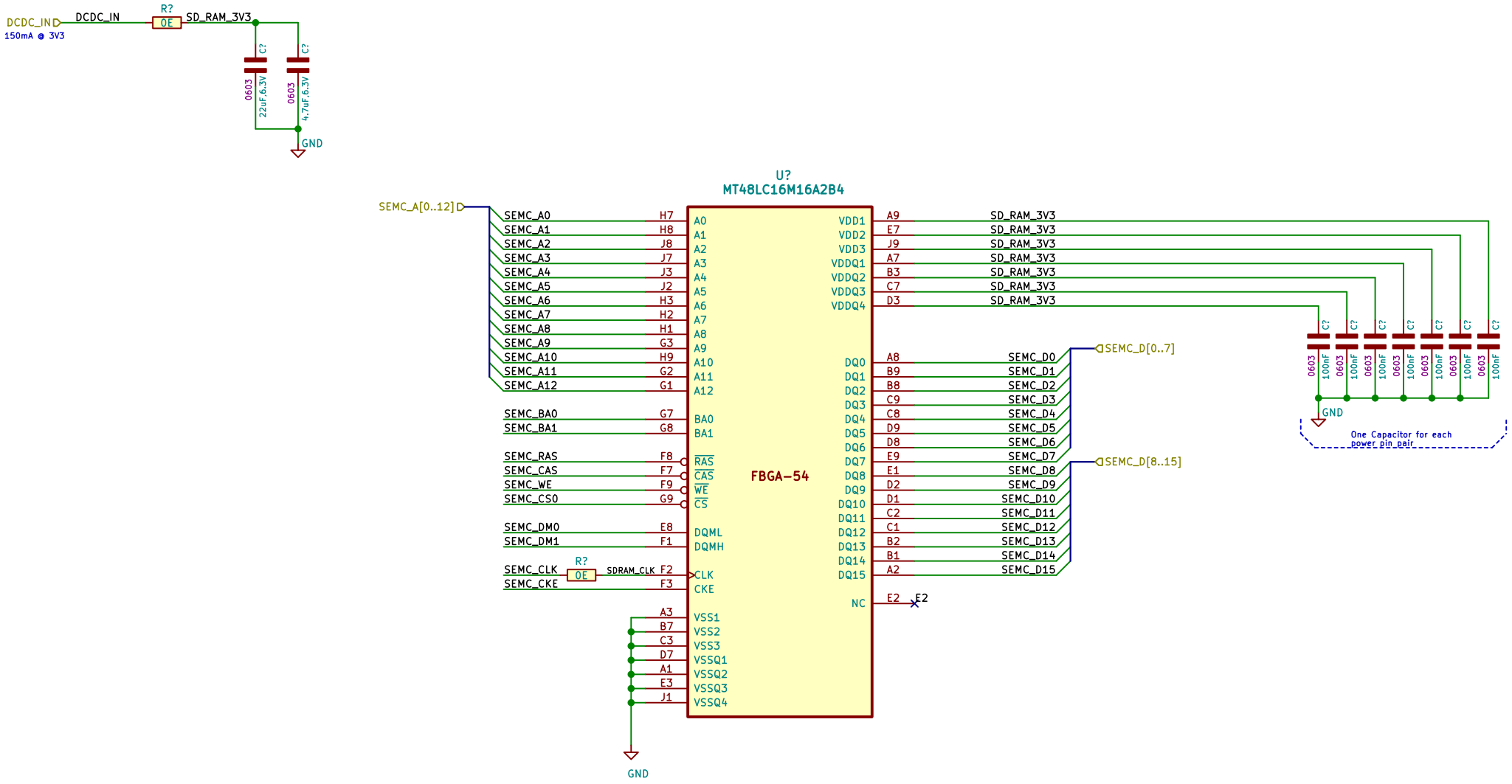
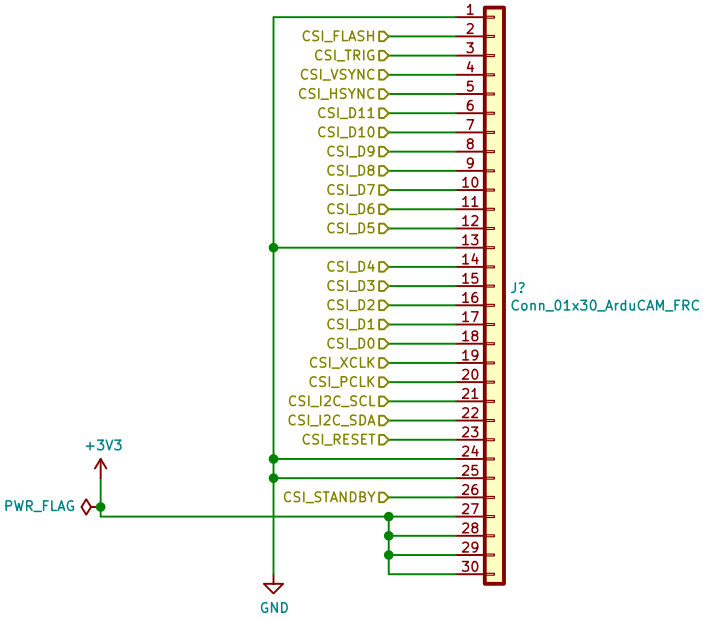
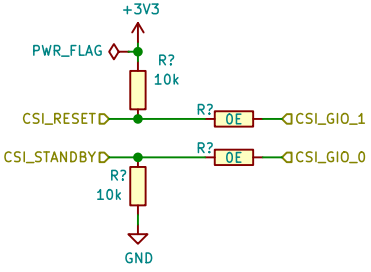
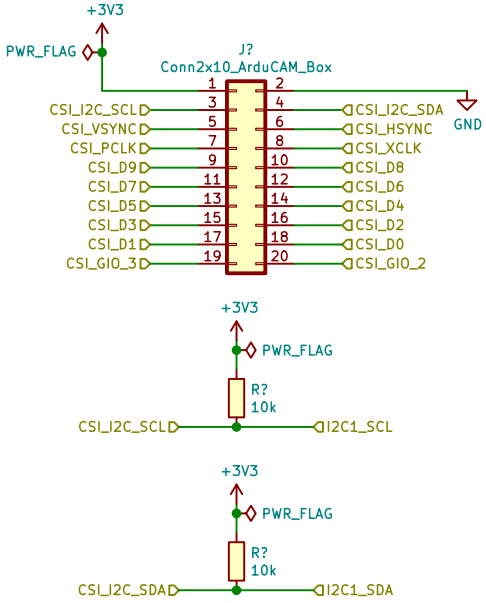

DCDC_IN
150mA @ 3V3
DCDC_IN
R?
0E
SD_RAM_3V3
C?
0603
22uF,6.3V
C?
0603
4.7uF,6.3V
GND
U?
MT48LC16M16A2B4
FBGA-54
SEMC_A[0..12]
SEMC_A0
SEMC_A1
SEMC_A2
SEMC_A3
SEMC_A4
SEMC_A5
SEMC_A6
SEMC_A7
SEMC_A8
SEMC_A9
SEMC_A10
SEMC_A11
SEMC_A12
SEMC_BA0
SEMC_BA1
SEMC_RAS
SEMC_CAS
SEMC_WE
SEMC_CS0
SEMC_DM0
SEMC_DM1
SEMC_CLK
SEMC_CKE
SDRAM_CLK
VDD1
VDD2
VDD3
VDDQ1
VDDQ2
VDDQ3
VDDQ4
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
NC
VSS1
VSS2
VSS3
VSSQ1
VSSQ2
VSSQ3
VSSQ4
SD_RAM_3V3
SEMC_D[0..7]
SEMC_D[8..15]
SEMC_D0
SEMC_D1
SEMC_D2
SEMC_D3
SEMC_D4
SEMC_D5
SEMC_D6
SEMC_D7
SEMC_D8
SEMC_D9
SEMC_D10
SEMC_D11
SEMC_D12
SEMC_D13
SEMC_D14
SEMC_D15
100nF
One Capacitor for each power pin pair
Schematic Google Sheet: https://goo.gl/2Ju1re
Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby
Sheet: /Schematic/SD RAM/
File: haathi_sdram.sch
Title: haathi_cam
Size: A4
Date: 2018-03-11
Rev: rev 1
KiCad E.D.A. kicad no-vcs-found-67ccf7661ubuntu16.04.1
Id: 9/11

Camera FRC Connector

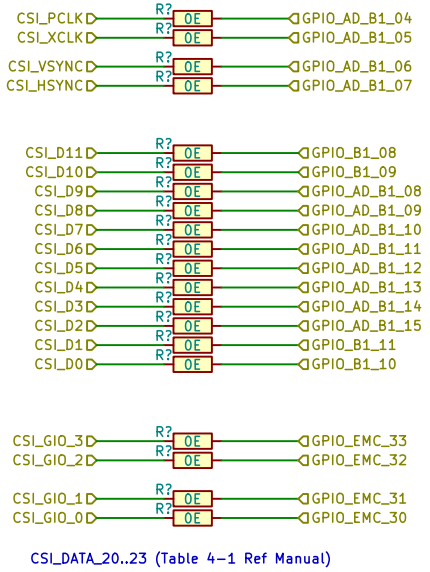




Arducam Camera Connector



CSI Pin Mappings



CSI_DATA_20..23 (Table 4-1 Ref Manual)

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Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby

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Title: haathi_cam

Size: A4	Date: 2018-03-11	**Rev: rev 1**
KiCad E.D.A. kicad no-vcs-found-67ccf7661ubuntu16.04.1		Id: 10/11

Schematic Google Sheet: https://goo.gl/2Ju1re
Gitter Room: https://gitter.im/iMX-RT-Camera/Lobby

Sheet: /Schematic/MISC JUMPERS/
File: haathi_misc.sch

Title: haathi_cam

Size: A4	Date: 2018-03-11	**Rev: rev 1**
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