Project: ***DM1098FFC***
Current Revision: ***R0M0E0***

DM1098FFC Revision History:

Date	Revision	Reason for Change	Changes Implemented
11/29/2019	R0M0E0 -> R1M1E1	1) Updating board to be aligned with Gen2 1099 boards, with SPI and uSD 2) Standardize FFC connector alignment with edge of board when connector is closed. 3) Existing design was not standardized on LuxonisMaster library format	1) Leveraged 1098OBC connector schematic. Updated J1 Hirose connector to be the Gen2 version with proper pin names, Added three 10-pin headers (not populated) to break out AUX io, SPI io, and uSD io, same as on 1098OBC. Updated schematic net names, harnesses and connections to accommodate the Gen2 changes. 2) Moved each of the FFC connectors toward the board edge so that they are flush with edge when closed. 3) Updated schematic and component information to align with LuxonisMaster library system
8/3/2020	R1M1E1 -> R1M1E2	1) Shutter sync updated to ext_strb	1) Removed R9, R14 (PN CRCW06030000Z0EA), added R10, R12 (PN CRCW060300000Z0EA)
12/28/2020	R1M1E2 -> R0M0E0	1) ESD protection 2) FFC connector stronger mechanics 3) Updating board with overvoltage protection and ideal diode to or USB VBUS and Barrel jack 5V 4) Outdated stack 5) Unused reset circuit 6) Unused strobe configuration resistors	1) Added protection diodes to MIPI lines 2) Changed FFC with Molex 505278 series 3) Added ideal diodes and zener diode for protection 4) Standarized 4L stackup rerouted all diferential pairs and tuned lengths 5) Deleted reset circuit and its components and rerouted signals 6) Deleted strobe configuration resistors with coresponding silk and tracks

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Drawn by: ***David Malovrh***			

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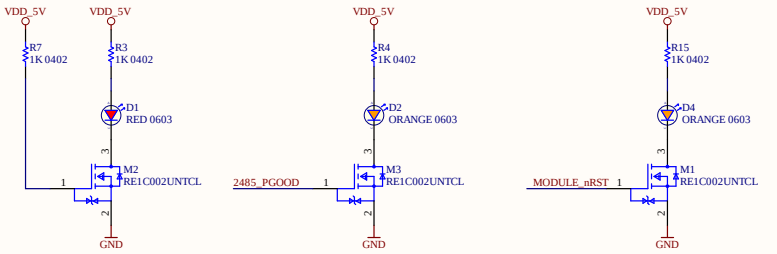
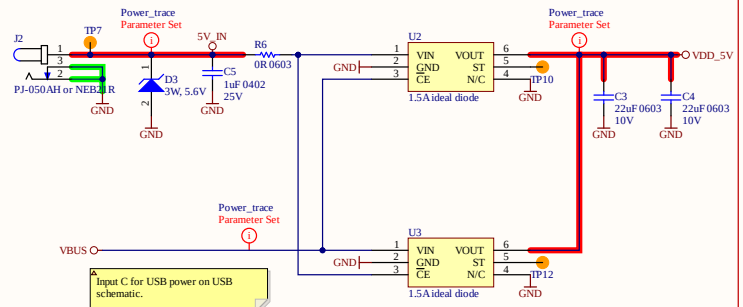
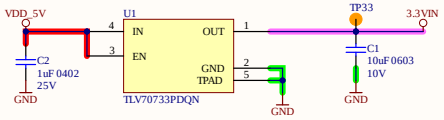


2485_PGOOD and MODULE_nRST both have pull ups to 1.8V on 1099 module. 2485_PGOOD is held low by open-drain output on 1099 PMIC until power is good. MODULE_nRST rises with 1.8V at POR, but can be held low by user button or 1099 JTAG.

POWER INPUT - DIODE OR

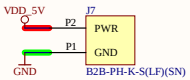


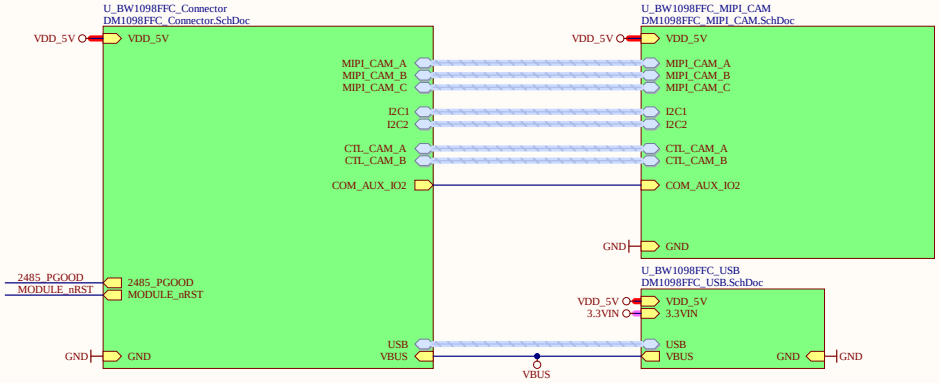
POWER REGULATION

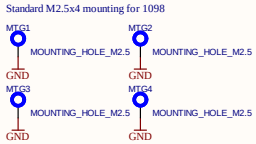


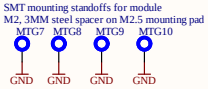
FAN CONTROLLER

5V header for fansink









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VDD_5V

VBUS

GND

VDD_5V drawn by BW1099 can be up to 1A

VBUS on BW1099 is only sense input

MIPI Lanes:
DPHYv1.2
Max 2.1 Gbps / lane

MISC1

Layout guide for BW1099

Parameter Set

MIPI_CAM_A

J1

DF40HC(3.0)-100DS-0.4V_BW1099G2 Receptacle
3mm

1099 only accepts 1.8V input on GPIOs.

B1
Off-Mom, 50mA

TP2

TP6

SPI
Parameter Set

SDIO
Parameter Set

CTL_CAM_A

CTL_CAM_B

MIPI_CAM_B

MIPI_CAM_C

USB

AUX IO HEADER

SPI HEADER

3.3V SD HEADER

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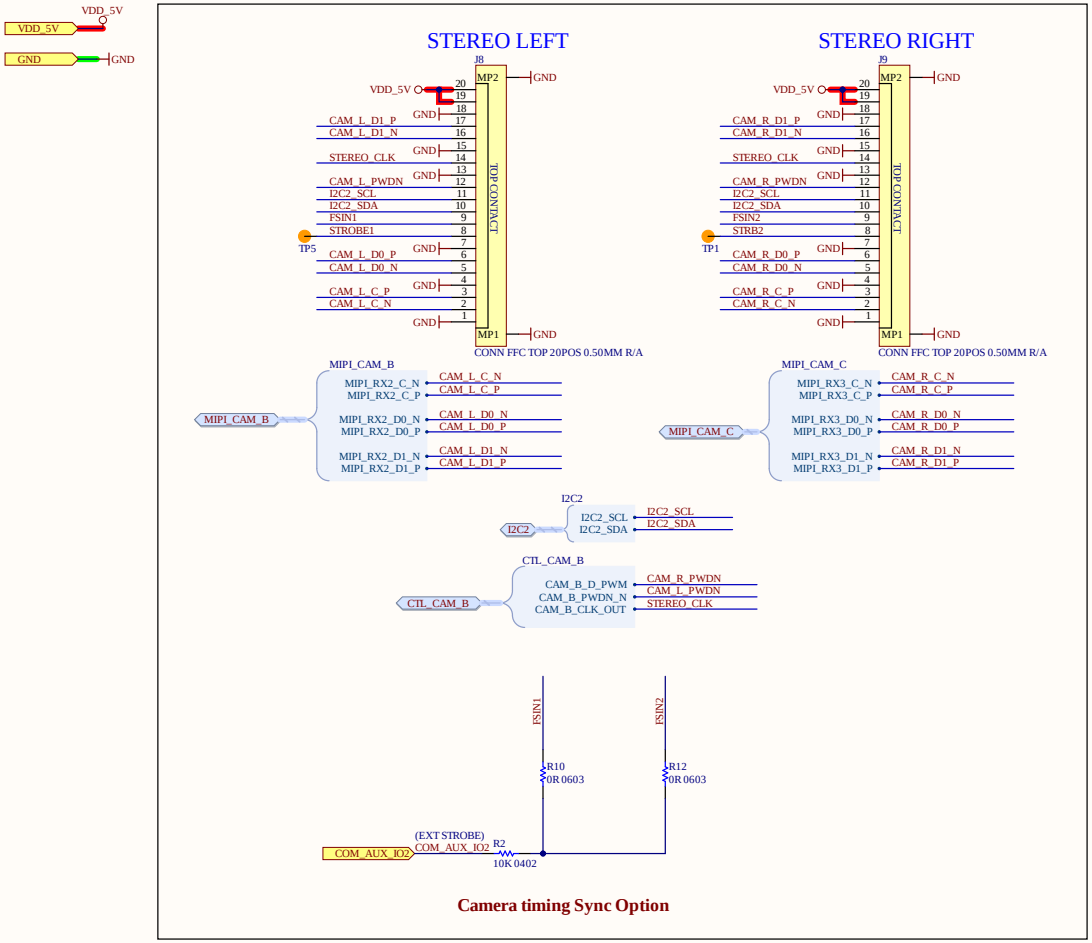
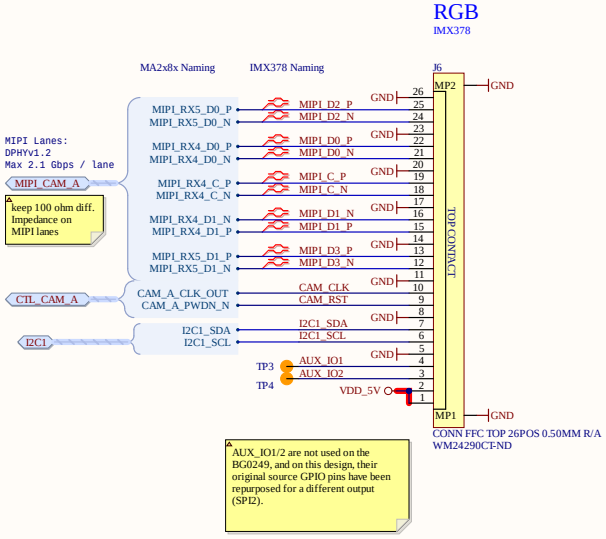
STEREO CAMERA PAIR

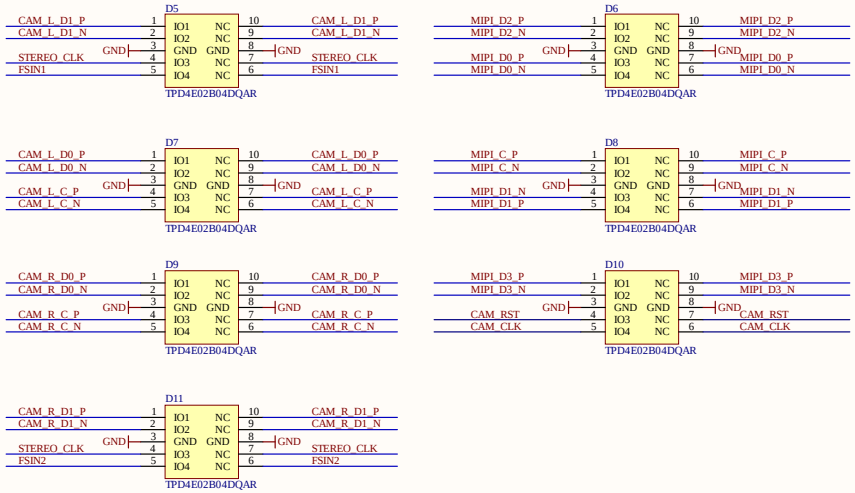


Camera timing Sync Option

RGB CAMERA



ESD PROTECTION



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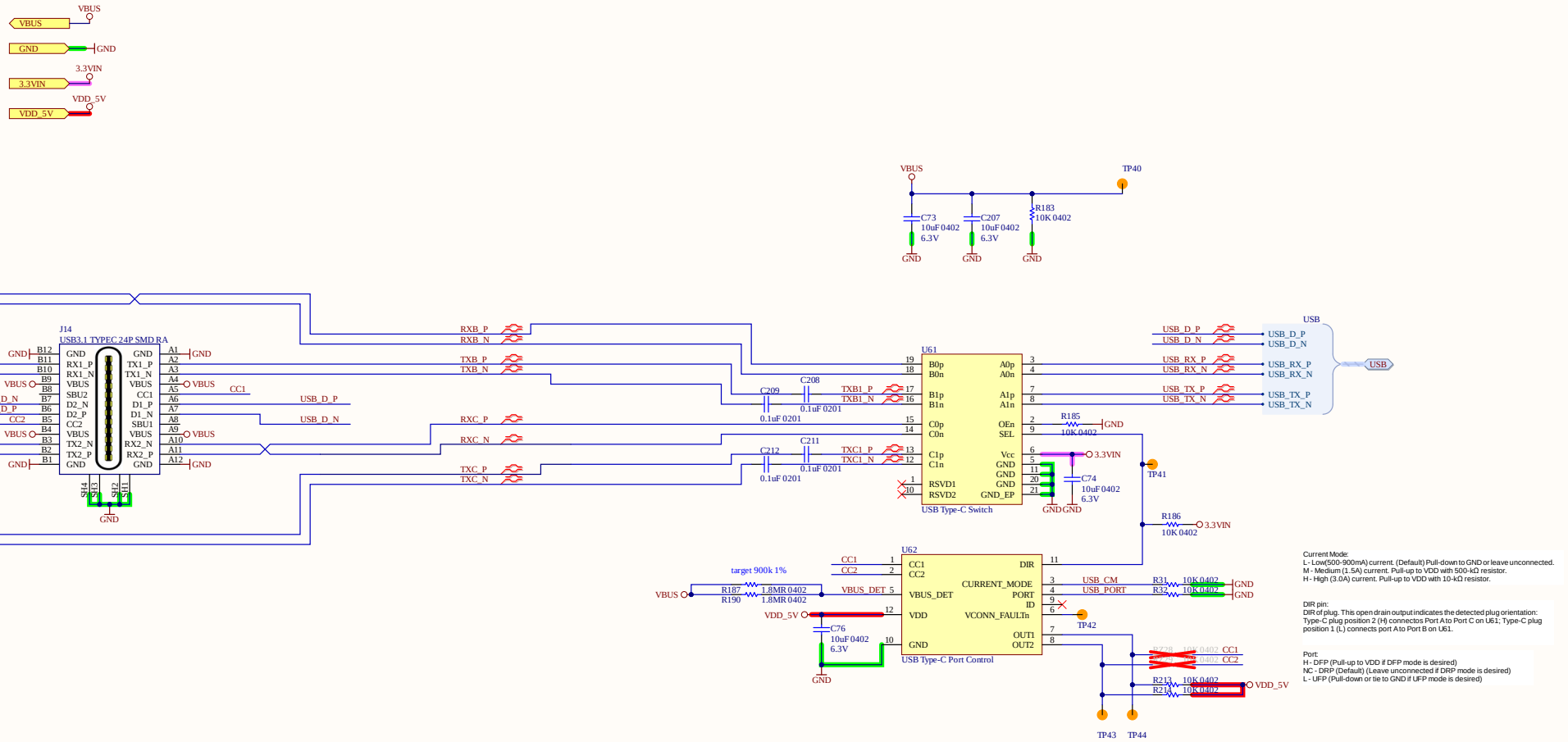

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