P2597-B02

Tegra X1 Jetson CV-B
HDMI, USB, PCIe, SATA, Gbe

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P2597 I2C Port Assignments

Slave Device	BUS:Device address
INA3221 (Power measurement)	I2C Gen 2 : 7'h42
INA3221 (Power measurement)	I2C Gen 2 : 7'h43
TCA9539 (GPIO Expander)	I2C Gen 2 : 7'h74
TCA9539 (GPIO Expander)	I2C Gen 2 : 7'h77
BOARDID EEPROM	I2C Gen 3 : 7'57h

P2180 I2C Port Assignments

Slave Device	BUS:Device address
TMP451 (Thermal)	I2C Gen 1 : 7'h4C
ADS1015 (ACA detection)	I2C Gen 2 : 7'h4A
INA226 (Power measurement)	I2C Gen 2 : 7'h46
INA3221 (Power measurement)	I2C Gen 2 : 7'h40

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$CDS_IMAGE{clipboard_0_14.jpg|6701|4215

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PAGE DETAIL	Block Diagram

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Power Tree

$CDS_IMAGE|clipboard_2_0.jpg|9097|6847

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PAGE DETAIL	Power Tree

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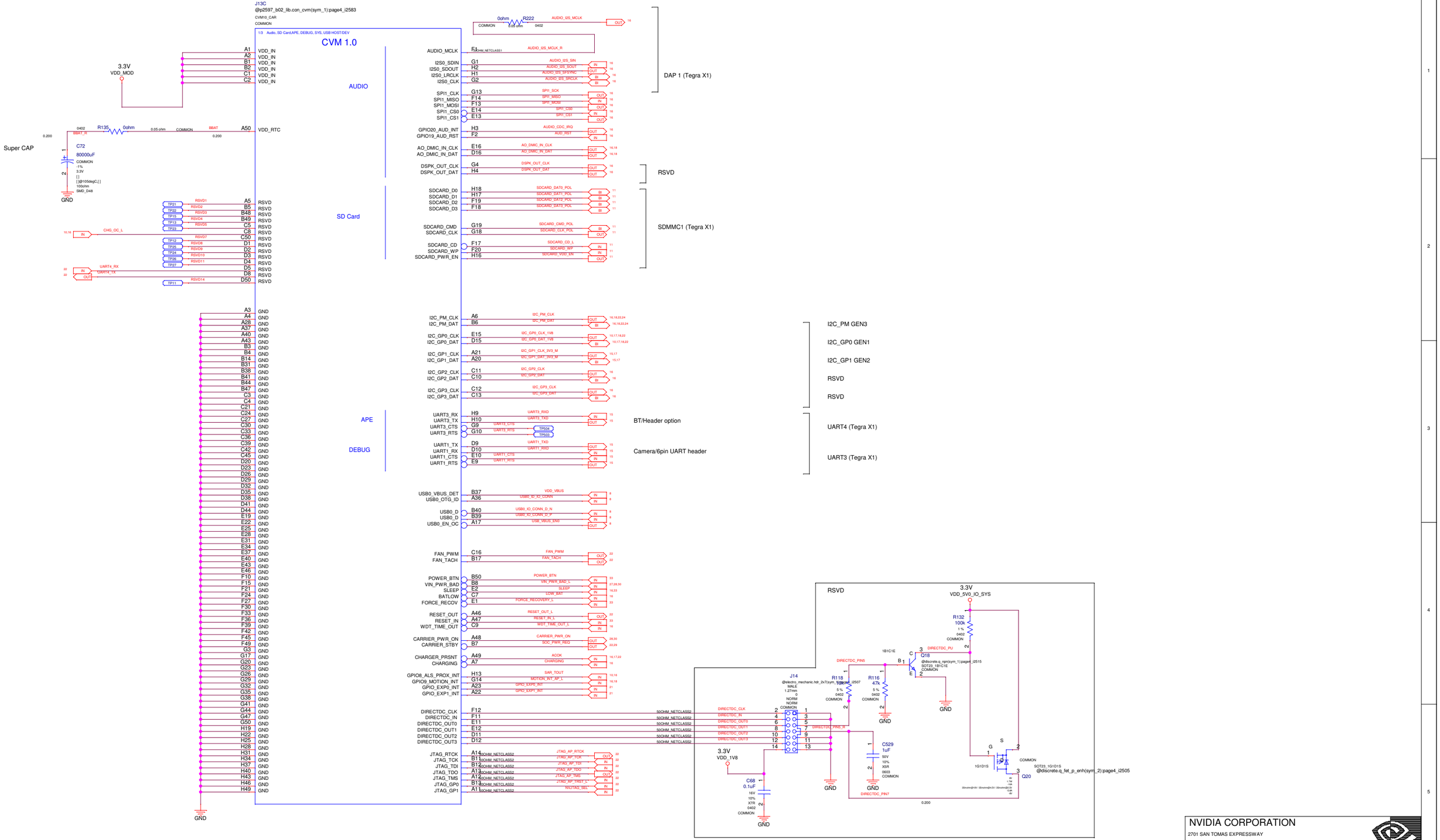

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PAGE DETAIL	IO connector 1/3

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J13A
@p2597_b02_lib.con_cvm(sym_2):page5_j124
CVM10_CAR
COMMON

2/3 CSI, DSI, EDP, HDMI, TOUCH

CVM 1.0

DP0

EDP_TXD3_P	H36	DP0_TX3
EDP_TXD3_N	H35	DP0_TX3
EDP_TXD2_P	G37	DP0_TX2
EDP_TXD2_N	G36	DP0_TX2
EDP_TXD1_P	F38	DP0_TX1
EDP_TXD1_N	F37	DP0_TX1
EDP_TXD0_P	H39	DP0_TX0
EDP_TXD0_N	H38	DP0_TX0
EDP_AUX_CH0_P	B35	DP0_AUX_CH
EDP_AUX_CH0_N	B34	DP0_AUX_CH
DP_HPD0_AP	B36	DP0_HPD

DP1 / HDMI1

DP1_TXD3_P	E36	DP1_TX3	HDMI1_TXC
DP1_TXD3_N	E35	DP1_TX3	HDMI1_TXC
DP1_TXD2_P	D37	DP1_TX2	HDMI1_TX0
DP1_TXD2_N	D36	DP1_TX2	HDMI1_TX0
DP1_TXD1_P	C38	DP1_TX1	HDMI1_TX1
DP1_TXD1_N	C37	DP1_TX1	HDMI1_TX1
DP1_TXD0_P	E39	DP1_TX0	HDMI1_TX2
DP1_TXD0_N	E38	DP1_TX0	HDMI1_TX2
HDMI_DDC_SCL_POL	A35	DP1_AUX_CH	
HDMI_DDC_SDA_POL	A34	DP1_AUX_CH	
HDMI_HPD	A33	DP1_HPD	
HDMI_CEC	B33	HDMI_CEC	

TO DISPLAY MODULE

SPI TOUCH
SPI4 (Tegra X1)

SPI0_CLK	E3	SPI0_CLK
SPI0_MISO	E4	SPI0_MISO
SPI0_MOSI	F4	SPI0_MOSI
SPI0_CS0	F3	SPI0_CS0
TOUCH_INT	B25	GPIO6_TOUCH_INT
TOUCH_RST	B23	GPIO7_TOUCH_RST
TOUCH_CLK	B24	TOUCH_CLK
LCD_EN	B26	LCD_VDD_EN
LCD_BL_EN	B28	LCD_BKLT_EN
LCD_BL_PWM	B27	LCD0_BKLT_PWM
LCD1_BKLT_PWM	A24	LCD1_BKLT_PWM
LCD_TE	A25	LCD_TE
GS_H	A26	GSYNC_HSYNC
GS_V	A27	GSYNC_VSYNC

I2C_CAM_CLK	C6	CAM_I2C_SCL
I2C_CAM_DAT	D6	CAM_I2C_SDA
CAM0_MCLK	F9	CAM0_MCLK
GPIO0_CAM0_PWR	G8	CAM0_PWDN
GPIO2_CAM0_RST	H8	CAM0_RST_L
GPIO4_CAM_STROBE	G7	FLASH_STROBE
GPIO5_CAM_FLASH_EN	D7	FLASH_EN
CAM_VSYNC	E8	CAM_VSYNC
CAM1_MCLK	F8	CAM1_MCLK
GPIO1_CAM1_PWR	F7	CAM1_PWDN
GPIO3_CAM1_RST	H7	CAM1_RST_L
CAM2_MCLK	E7	CAM2_MCLK

CSI0_CLK	G28	CON_CSI_A_CLK_P
CSI0_CLK	G27	CON_CSI_A_CLK_N
CSI0_D0	F29	CON_CSI_A_D0_P
CSI0_D0	F28	CON_CSI_A_D0_N
CSI0_D1	H27	CON_CSI_A_D1_P
CSI0_D1	H26	CON_CSI_A_D1_N
CSI1_CLK	D28	CON_CSI_B_CLK_P
CSI1_CLK	D27	CON_CSI_B_CLK_N
CSI1_D0	C29	CON_CSI_B_D0_P
CSI1_D0	C28	CON_CSI_B_D0_N
CSI1_D1	E27	CON_CSI_B_D1_P
CSI1_D1	E26	CON_CSI_B_D1_N
CSI2_CLK	G25	CON_CSI_C_CLK_P
CSI2_CLK	G24	CON_CSI_C_CLK_N
CSI2_D0	F26	CON_CSI_C_D0_P
CSI2_D0	F25	CON_CSI_C_D0_N
CSI2_D1	H24	CON_CSI_C_D1_P
CSI2_D1	H23	CON_CSI_C_D1_N
CSI3_CLK	D25	CON_CSI_D_CLK_P
CSI3_CLK	D24	CON_CSI_D_CLK_N
CSI3_D0	C26	CON_CSI_D_D0_P
CSI3_D0	C25	CON_CSI_D_D0_N
CSI3_D1	E24	CON_CSI_D_D1_P
CSI3_D1	E23	CON_CSI_D_D1_N
CSI4_CLK	G22	CON_CSI_E_CLK_P
CSI4_CLK	G21	CON_CSI_E_CLK_N
CSI4_D0	F23	CON_CSI_E_D0_P
CSI4_D0	F22	CON_CSI_E_D0_N
CSI4_D1	H21	CON_CSI_E_D1_P
CSI4_D1	H20	CON_CSI_E_D1_N
CSI5_CLK	D22	CON_CSI_F_CLK_P
CSI5_CLK	D21	CON_CSI_F_CLK_N
CSI5_D0	C23	CON_CSI_F_D0_P
CSI5_D0	C22	CON_CSI_F_D0_N
CSI5_D1	E21	CON_CSI_F_D1_P
CSI5_D1	E20	CON_CSI_F_D1_N

DSI0_CLK	G33	CON_DSI_A_CLK_P
DSI0_CLK	G34	CON_DSI_A_CLK_N
DSI0_D0	F34	CON_DSI_A_D0_P
DSI0_D0	F35	CON_DSI_A_D0_N
DSI0_D1	H32	CON_DSI_A_D1_P
DSI0_D1	H33	CON_DSI_A_D1_N
DSI1_CLK	D33	CON_DSIB_CLK_P
DSI1_CLK	D34	CON_DSIB_CLK_N
DSI1_D0	C34	CON_DSI_A_D2_P
DSI1_D0	C35	CON_DSI_A_D2_N
DSI1_D1	E32	CON_DSI_A_D3_P
DSI1_D1	E33	CON_DSI_A_D3_N
DSI2_CLK	G30	CON_DSI_B_CLK_P
DSI2_CLK	G31	CON_DSI_B_CLK_N
DSI2_D0	F31	CON_DSI_B_D0_P
DSI2_D0	F32	CON_DSI_B_D0_N
DSI2_D1	H29	CON_DSI_B_D1_P
DSI2_D1	H30	CON_DSI_B_D1_N
DSI3_CLK	D30	CON_DSI4_CLK_P
DSI3_CLK	D31	CON_DSI4_CLK_N
DSI3_D0	C31	CON_DSI_B_D2_P
DSI3_D0	C32	CON_DSI_B_D2_N
DSI3_D1	E29	CON_DSI_B_D3_P
DSI3_D1	E30	CON_DSI_B_D3_N

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J13B
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CVM10_CAR
COMMON
3/3 GBE, WIFI, BT, MODEM, GPS, PCIE, SATA, USB

CVM 1.0

GBE_MDI0_P	E48	GBE_MDI0	
GBE_MDI0_N	E49	GBE_MDI0	
GBE_MDI1_P	F47	GBE_MDI1	
GBE_MDI1_N	F48	GBE_MDI1	
GBE_MDI2_P	G48	GBE_MDI2	
GBE_MDI2_N	G49	GBE_MDI2	
GBE_MDI3_P	H47	GBE_MDI3	
GBE_MDI3_N	H48	GBE_MDI3	
GBE_LED0_SPICSB	E47	GBE_LINK_ACT	
GBE_LED1_SPISCK	F50	GBE_LINK100	
GBE_LED2	F46	GBE_LINK1000	
GBE_CTREF	H50	GBE_CTREF	
SDIO_D0	B32	SDIO_D0	WIFI
SDIO_D1	A32	SDIO_D1	
SDIO_D2	A31	SDIO_D2	
SDIO_D3	A30	SDIO_D3	
SDIO_CMD	B29	SDIO_CMD	
SDIO_CLK	B30	SDIO_CLK	
WIFI2_EN	A29	SDIO_RST	
WIFI2_WAKE_AP_L	B20	GPIO10_WIFI_WAKE_AP	
AP_WAKE_MDM_1V8	A8	GPIO14_AP_WAKE_MDM	
I2S2_SDIN	G6	I2S2_SDIN	BT
I2S2_SDOUT	H6	I2S2_SDOUT	
I2S2_LRCLK	H5	I2S2_LRCLK	
I2S2_CLK	G5	I2S2_CLK	
UART2_TXD	B16	UART2_TX	
UART2_RXD	B15	UART2_RX	
UART2_RTS	A16	UART2_RTS	
UART2_CTS	A15	UART2_CTS	
BT2_EN	B21	GPIO12_BT_EN	
BT2_WAKE_AP_L	B22	GPIO13_BT_WAKE_AP	
AP_WAKE_BT	B19	GPIO11_AP_WAKE_BT	
I2S1_SDIN	C14	I2S1_SDIN	MODEM
I2S1_SDOUT	D14	I2S1_SDOUT	
I2S1_LRCLK	D13	I2S1_LRCLK	
I2S1_CLK	C15	I2S1_CLK	
MDM_COLDBOOT_1V8	B10	GPIO18_MDM_COLDBOOT	
MDM2AP_READY_1V8	B9	GPIO17_MDM2AP_READY	
AP2MDM_READY	A9	GPIO15_AP2MDM_READY	
MDM_WAKE_AP_1V8	A10	GPIO16_MDM_WAKE_AP	
UART0_TXD	H12	UART0_TX	
UART0_RXD	G12	UART0_RX	
UART0_RTS	G11	UART0_RTS	
UART0_CTS	H11	UART0_CTS	
I2S3_CLK	E6	I2S3_CLK	
I2S3_LRCLK	F5	I2S3_LRCLK	
I2S3_SDIN	E5	I2S3_SDIN	
I2S3_SDOUT	F6	I2S3_SDOUT	
SPI2_SCK	H14	SPI2_CLK	
SPI2_MISO	H15	SPI2_MISO	
SPI2_MOSI	G15	SPI2_MOSI	
SPI2_CS0	G16	SPI2_CS0	
SPI2_CS1	F16	SPI2_CS1	
GNSS_PPS	B18	GNSS_PPS	

SDMMC3 (Tegra X1) TO M.2

DAP3 (Tegra X1)

M.2 connector

Header
DAP5 (Tegra X1)

Debug UART / Header Mux
UART1 (Tegra X1)

DAP4 (Tegra X1)

Connects to SPI on Camera and Display headers. CS_0/1 selects which one to use

RSVD

PEX_WAKE	D48	PCIE_WAKE_L	
PEX0_RST	C49	PCIE0_L0_RST	TO X4 PCIE
PEX0_CLKREQ	C48	PCIE0_L0_CLKREQ	
PEX0_REFCLK	A44	PEX_CLK0_P	PEX_CLK0 is PEX_CLK1 on Tegra X1
PEX0_REFCLK	A45	PEX_CLK0_N	
PEX0_RX	H44	PEX_RX4_P	
PEX0_RX	H45	PEX_RX4_N	
PEX0_TX	E44	PEX_TX4_P	
PEX0_TX	E45	PEX_TX4_N	
PEX1_RST	E50	PCIE_L1_RST	TO M.2
PEX1_CLKREQ	C47	PCIE_L1_CLKREQ	PEX_CLK1 is PEX_CLK2 on Tegra X1
PEX1_REFCLK	B45	PEX_CLK1_P	
PEX1_REFCLK	B46	PEX_CLK1_N	
PEX1_RX	H41	PEX_RX0_AP_P	
PEX1_RX	H42	PEX_RX0_AP_N	
PEX1_TX	E41	PEX_TX0_AP_P	
PEX1_TX	E42	PEX_TX0_AP_N	
PEX2_RST	D49	PEX2_RST_L	
PEX2_CLKREQ	C46	PEX2_CKREQ_L	
PEX2_REFCLK	A41	PEX2_REFCLK_P	
PEX2_REFCLK	A42	PEX2_REFCLK_N	
PEX2_RX	F40	PEX_RX2_P	TO X4 PCIE
PEX2_RX	F41	PEX_RX2_N	
PEX2_TX	C40	PEX_TX2_P	
PEX2_TX	C41	PEX_TX2_N	
PEX_RFU_RX	G39	PEX_RX1_P	
PEX_RFU_RX	G40	PEX_RX1_N	
PEX_RFU_TX	D39	PEX_TX1_P	
PEX_RFU_TX	D40	PEX_TX1_N	
SATA_RX	G45	SATA_RX_P	
SATA_RX	G46	SATA_RX_N	
SATA_TX	D45	SATA_TX_P	
SATA_TX	D46	SATA_TX_N	
SATA_DEV_SLP	D47	SATA_DEV_SLP	
USB_SS0_RX	F43	USB3_RX1_P	TO USB TYPE A PEX5 (Tegra X1)
USB_SS0_RX	F44	USB3_RX1_N	
USB_SS0_TX	C43	USB3_TX1_P	
USB_SS0_TX	C44	USB3_TX1_N	
USB_SS1_RX	G42	PEX_RX3_P	TO X4 PCIE
USB_SS1_RX	G43	PEX_RX3_N	
USB_SS1_TX	D42	PEX_TX3_P	
USB_SS1_TX	D43	PEX_TX3_N	
USB1_D	A38	USB1_D_P	TO USB TYPE A
USB1_D	A39	USB1_D_N	
USB1_EN_OC	A18	USB_VBUS_EN1	
USB2_D	B42	USB2_D_P	TO M.2
USB2_D	B43	USB2_D_N	
USB2_EN_OC	A19	USB_VBUS_EN2	
CAN_WAKE	C20	CAN_WAKE	RSVD
CAN0_STBY	E17	CAN0_STBY	
CAN0_RX	D18	CAN0_RX	
CAN0_TX	D19	CAN0_TX	
CAN0_ERR	E18	CAN0_ERR	
CAN1_STBY	C17	CAN1_STBY	
CAN1_RX	D17	CAN1_RX	
CAN1_TX	C18	CAN1_TX	
CAN1_ERR	C19	CAN1_ERR	

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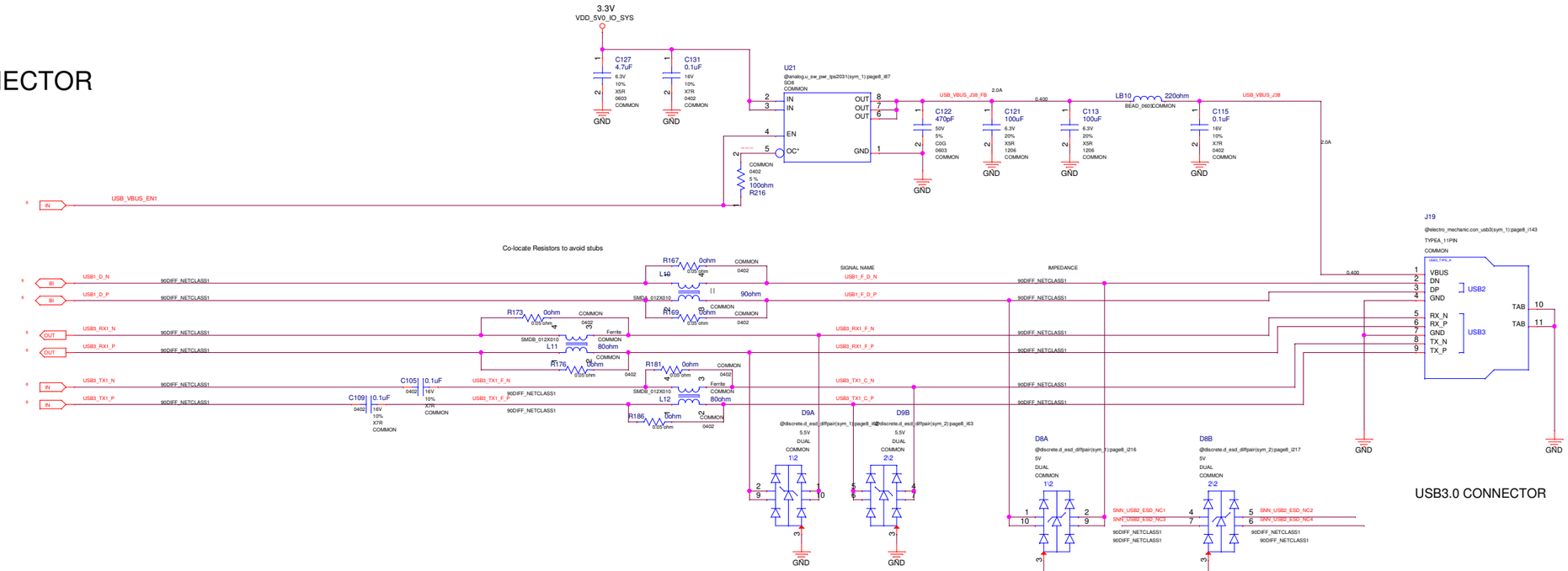
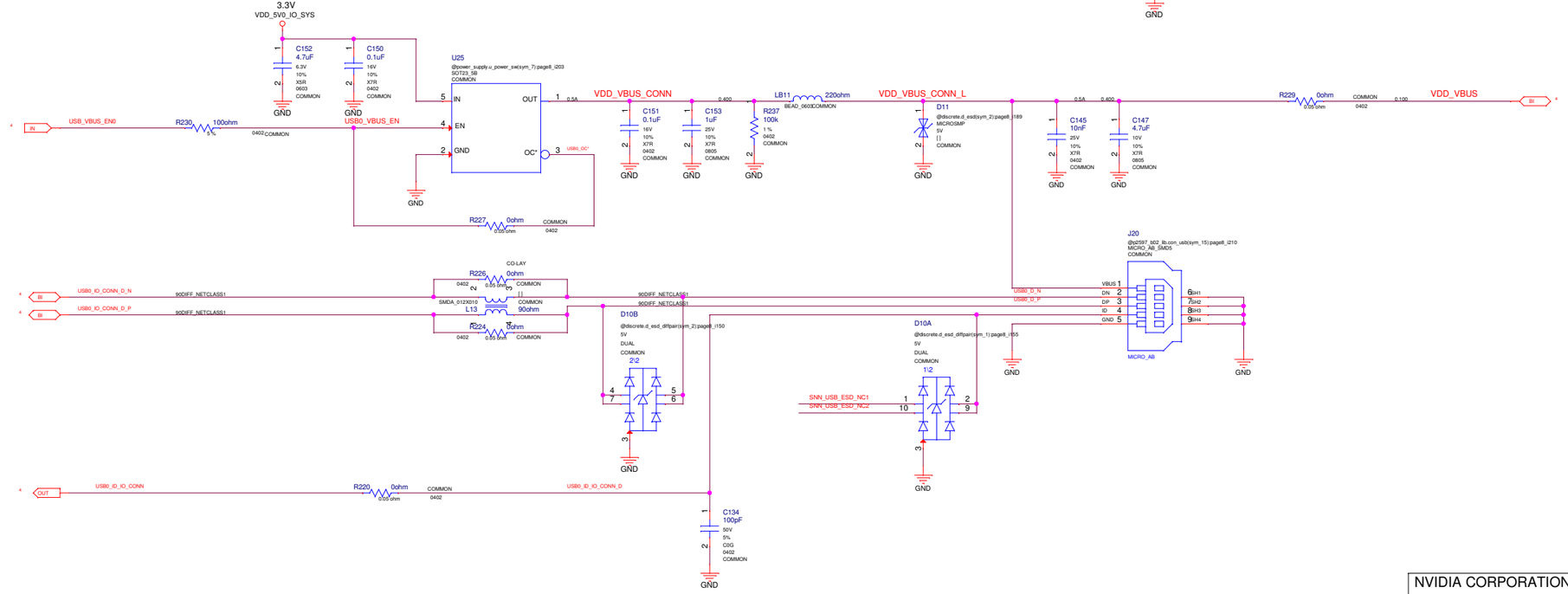
USB 3.0 TYPE A CONNECTOR



MICRO AB USB 2.0 CONNECTOR



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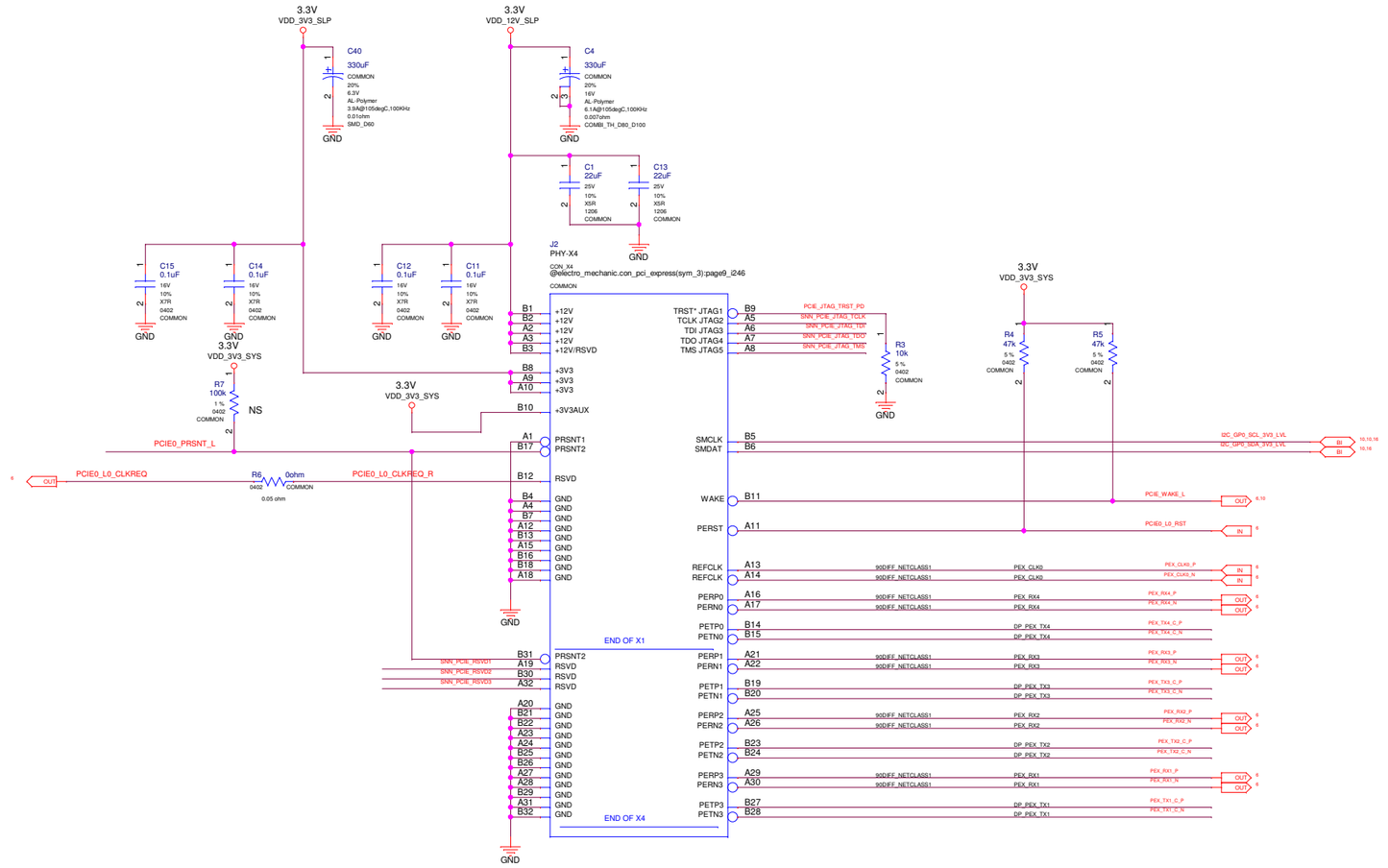

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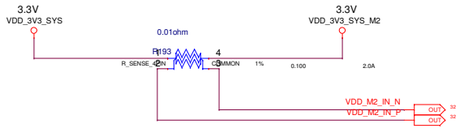
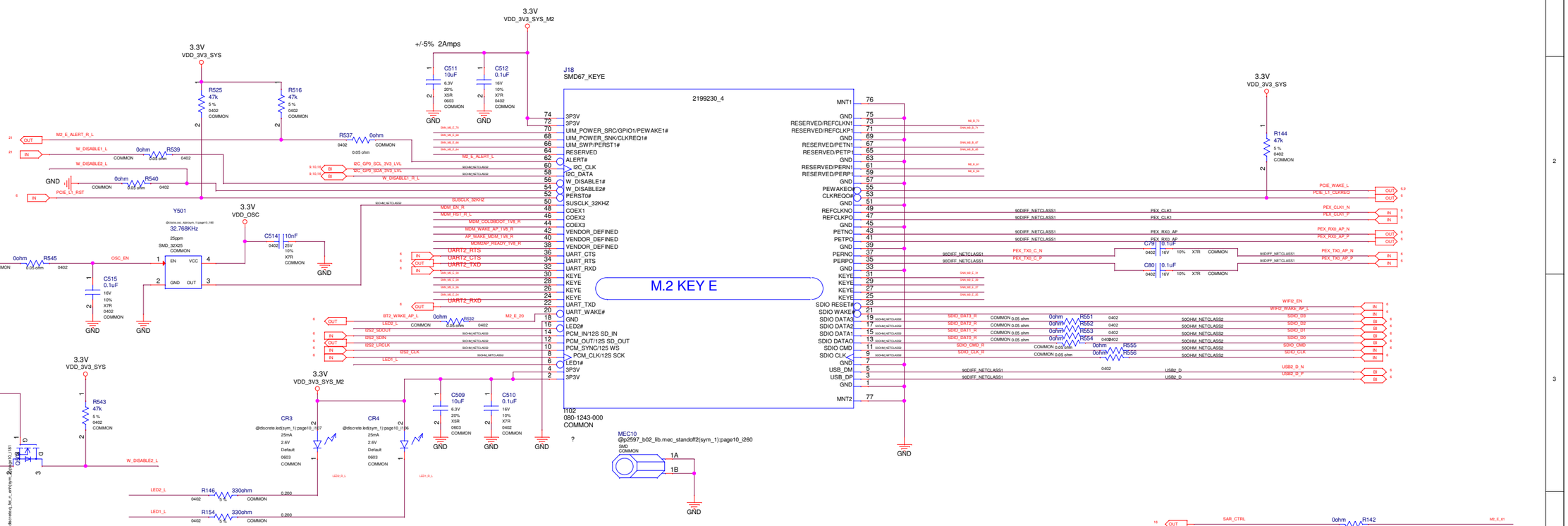
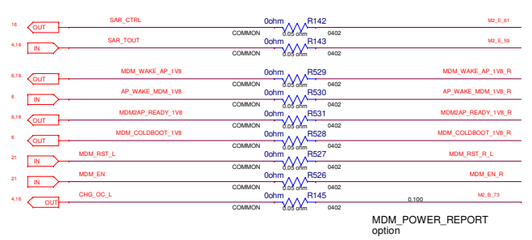
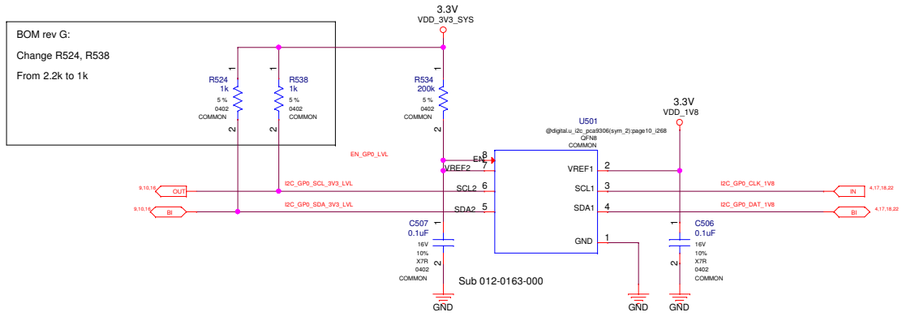
M.2 KEY E









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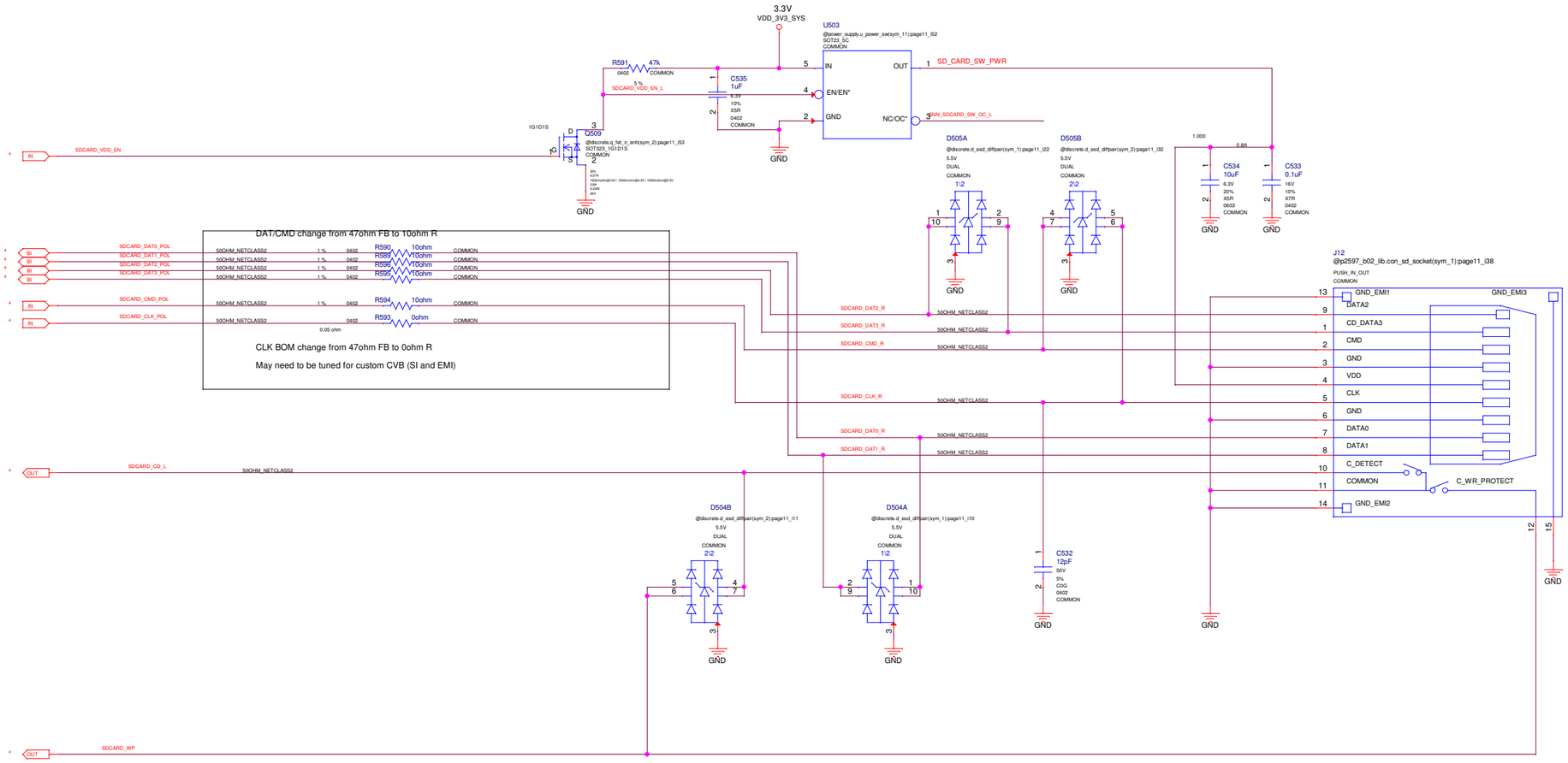
SD CARD SOCKET



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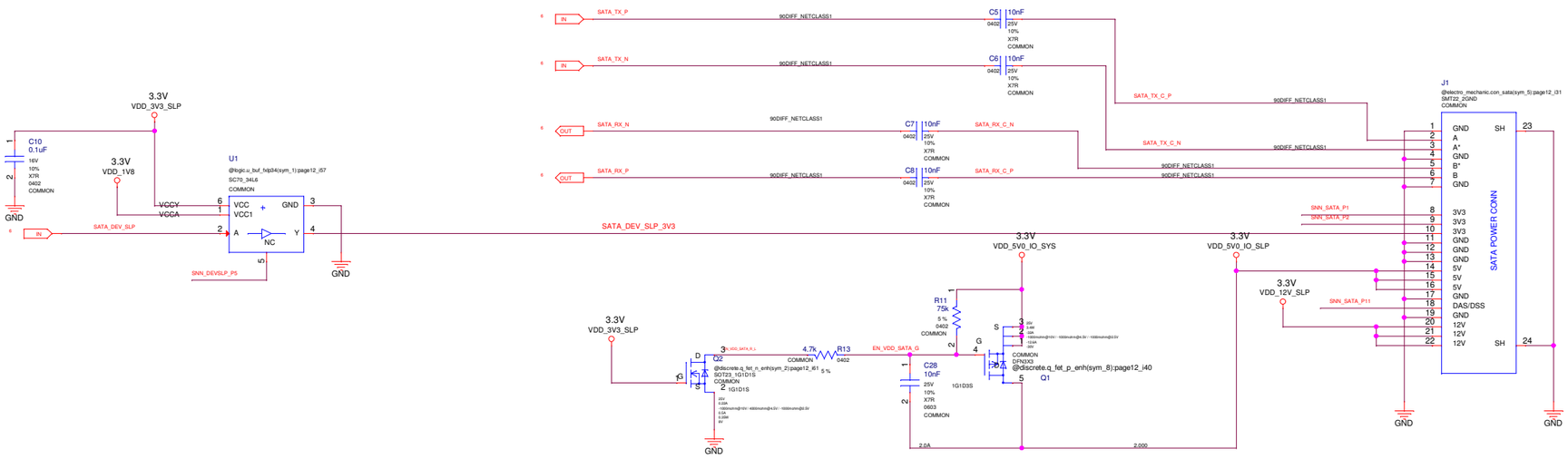
SATA Connector



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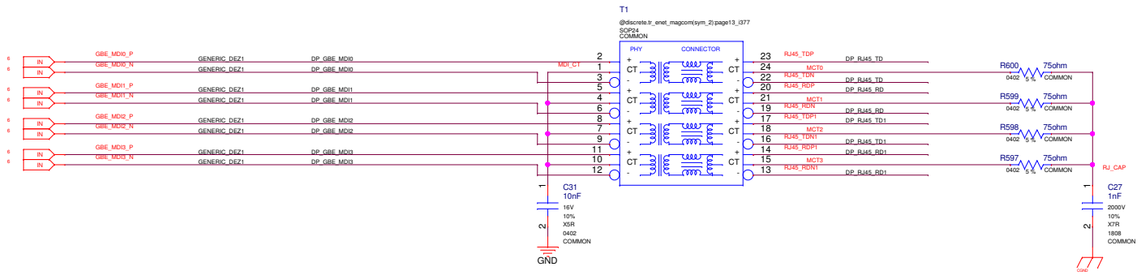
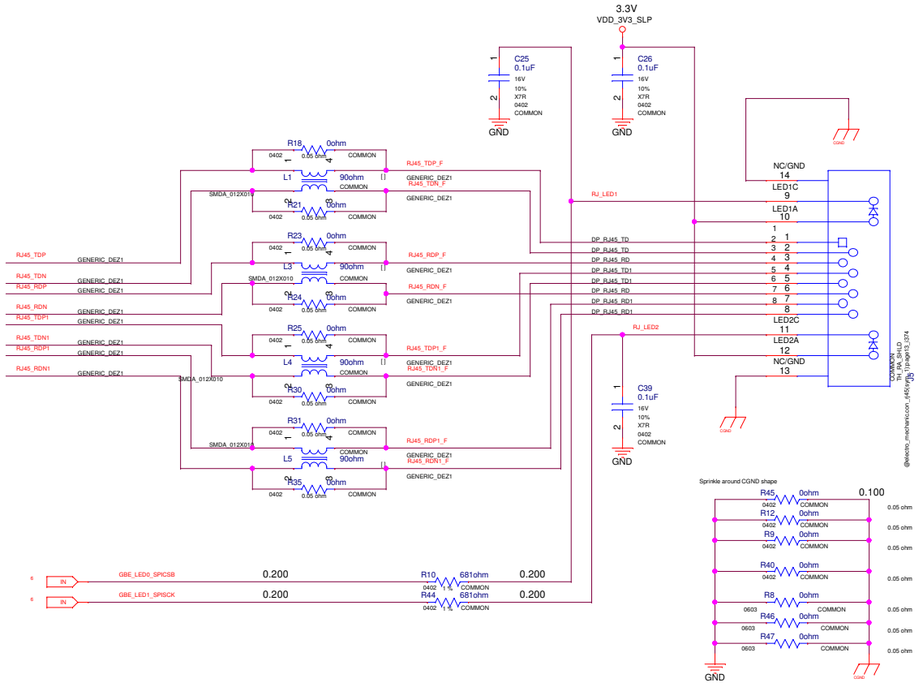
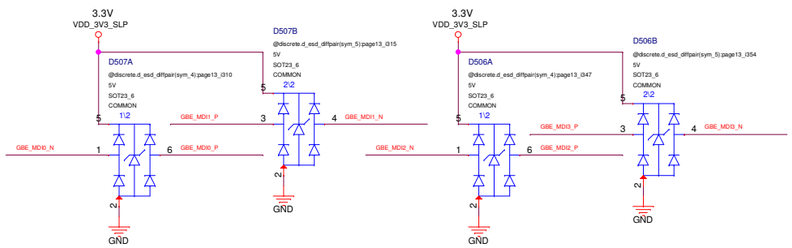
Gigiabit Ethernet







ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	Gigabit Ethernet

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HDMI Connector

3.3V
VDD_5V0_IO_SYS
LB9 30ohm BEAD_0402 COMMON
VDD_5V0_HDMI
0.1A
0.400
C81 4.7uF 6.3V 10% X5R 0603 COMMON
C82 0.1UF 16V 10% X7R 0402 COMMON
GND

3.3V
VDD_3V3_SLP
EN_HDMI
R549 0ohm 0402 0.05 0mR COMMON
R547 0ohm 0402 0.05 0mR COMMON
R548 0ohm 0402 0.05 0mR COMMON
14,21 IN 5V0_HDMI_EN
R544 47k 5 % 0402 COMMON

115-1581-000
Power Switch
@p2597_b02_lib.power_sw2(sym_11):page14_i273
U502 SON7_R
6 VIN
4 EN
5 GND
7 GNDPAD
VOUT 1
FAULT# 3
ILIM 2
i273
5v
0.3A
0.400
HDMI_SW_OC*
R550 88.7K 0402 COMMON
MINIMUM 200MA
FOR HDMI TO VGA
DONGLE

1.2V
VDD_5V0_HDMI_CON

3.3V
VDD_1V8
R570 10k 5 % 0402 COMMON
5 OUT HDMI_HPD
Q507 @discrete:q_npn(sym_3):page14_i952 DFN1006 COMMON
1B1C1E
100k R580 COMMON 1 % 0402
R578 100k 1 % 0402 COMMON
L505 1nH 0402 COMMON
C528 12pF 50V 5% C0G 0402 COMMON
C527 12pF 50V 5% C0G 0402 COMMON
HDMI_HPD_CON

DA204127/DA204138:
Change R560, R572 to 0ohm
R573 10k 5 % 0402 COMMON
R559 10k 5 % 0402 COMMON
R560 0ohm 0.05 ohm 0402 COMMON
R572 0ohm 0.05 ohm 0402 COMMON
Q508 @discrete:q_bf_n_sm(sym_2):page14_i307
Q509 @discrete:q_bf_n_sm(sym_2):page14_i312
C517 0.1UF 16V 10% X7R 0402 COMMON
R561 1.8k 5 % 0402 COMMON
R574 1.8k 5 % 0402 COMMON
5 BI HDMI_DDC_SDA_POL
5 IN HDMI_DDC_SCL_POL
50OHM_NETCLASS2
HDMI_DDC_SDA_5V
HDMI_DDC_SCL_5V
R564 0ohm 0402 0.05 0mR COMMON
R569 0ohm 0402 0.05 0mR COMMON
C520 4.7pF 50V 0.25pF C0G 0402 COMMON
C521 4.7pF 50V 0.25pF C0G 0402 COMMON

3.3V
VDD_3V3_SLP
R588 162k 1 % 0402 COMMON
Q510 @discrete:q_bf_n_sm(sym_4):page14_i317
5 BI HDMI_CEC
HDMI_CEC_Q
L502 1nH 0402 COMMON
C522 12pF 50V 5% C0G 0402 COMMON
CR501 @discrete:d_esd_diffpair(sym_4):page14_i291 70mA SOT323 DUAL COMMON
3.3V
VDD_3V3_SLP
R587 32.4k 1 % 0402 COMMON
HDMI_CEC_PU

1.2V
VDD_5V0_HDMI_CON
C73 0.1UF 16V 10% X7R 0402 COMMON
C74 10uF 6.3V 20% X5R 0603 COMMON

J16
FEMALE
HDMI_A_LONG
@electro_mechanic:con_hdmi(sym_1):page14_i338
COMMON
20 SHIELD1
21 SHIELD2
19 HP_DET
18 +5V
17 DDC/CEC_GND
16 SDA
15 SCL
14 RESERVED
13 CEC
12 CK-
11 CK_SHIELD
10 CK+
9 D0-
8 D0_SHIELD
7 D0+
6 D1-
5 D1_SHIELD
4 D1+
3 D2-
2 D2_SHIELD
1 D2+
22 SHIELD3
23 SHIELD4
GND

5 IN DP1_TXD3_N → DP_DP1_TXD3 GENERIC_DEZ1 C518 0.1uF 0402 16V 10% X7R COMMON
5 IN DP1_TXD3_P → DP_DP1_TXD3 GENERIC_DEZ1 C519 0.1uF 0402 16V 10% X7R COMMON
5 IN DP1_TXD2_N → DP_DP1_TXD2 GENERIC_DEZ1 C523 0.1uF 0402 16V 10% X7R COMMON
5 IN DP1_TXD2_P → DP_DP1_TXD2 GENERIC_DEZ1 C524 0.1uF 0402 16V 10% X7R COMMON
5 IN DP1_TXD1_N → DP_DP1_TXD1 GENERIC_DEZ1 C525 0.1uF 0402 16V 10% X7R COMMON
5 IN DP1_TXD1_P → DP_DP1_TXD1 GENERIC_DEZ1 C526 0.1uF 0402 16V 10% X7R COMMON
5 IN DP1_TXD0_N → DP_DP1_TXD0 GENERIC_DEZ1 C530 0.1uF 0402 16V 10% X7R COMMON
5 IN DP1_TXD0_P → DP_DP1_TXD0 GENERIC_DEZ1 C531 0.1uF 0402 16V 10% X7R COMMON

DP_DP1_TXD3 → HDMI_TXC_C_N → NV_NETCLASS → GENERIC_DEZ1
DP_DP1_TXD3 → HDMI_TXC_C_P → GENERIC_DEZ1
DP_DP1_TXD2 → HDMI_TXD0_C_N → GENERIC_DEZ1
DP_DP1_TXD2 → HDMI_TXD0_C_P → GENERIC_DEZ1
DP_DP1_TXD1 → HDMI_TXD1_C_N → GENERIC_DEZ1
DP_DP1_TXD1 → HDMI_TXD1_C_P → GENERIC_DEZ1
DP_DP1_TXD0 → HDMI_TXD2_C_N → GENERIC_DEZ1
DP_DP1_TXD0 → HDMI_TXD2_C_P → GENERIC_DEZ1

R563 5.6ohm 0402 5 % COMMON
L501 12ohm SMDA_0120X10 COMMON
R565 5.6ohm 0402 5 % COMMON
R568 5.6ohm 0402 5 % COMMON
L503 12ohm SMDA_0120X10 COMMON
R571 5.6ohm 0402 5 % COMMON
R577 5.6ohm 0402 5 % COMMON
L504 12ohm SMDA_0120X10 COMMON
R579 5.6ohm 0402 5 % COMMON
R583 5.6ohm 0402 5 % COMMON
L506 12ohm SMDA_0120X10 COMMON
R584 5.6ohm 0402 5 % COMMON

LB8 600ohm BEAD_0402 COMMON
LB7 600ohm BEAD_0402 COMMON
LB6 600ohm BEAD_0402 COMMON
LB5 600ohm BEAD_0402 COMMON
LB4 600ohm BEAD_0402 COMMON
LB3 600ohm BEAD_0402 COMMON
LB2 600ohm BEAD_0402 COMMON
LB1 600ohm BEAD_0402 COMMON
R562 499ohm 0402 1 % COMMON
R566 499ohm 0402 1 % COMMON
R567 499ohm 0402 1 % COMMON
R575 499ohm 0402 1 % COMMON
R576 499ohm 0402 1 % COMMON
R581 499ohm 0402 1 % COMMON
R582 499ohm 0402 1 % COMMON
R586 499ohm 0402 1 % COMMON

3.3V
VDD_3V3_SLP
R558 0ohm 0402 COMMON
EN_HDMI_TERM
14,21 IN 5V0_HDMI_EN
R557 0ohm 0402 COMMON
1G1D1S
Q505 @discrete:q_fet_n_sm(sym_2):page14_i362 DFN1006 COMMON
IFP_TERM_EN
0.400
GND

HDMI ESD, CLOSE TO INPUT CONNECTOR

1.2V
VDD_5V0_HDMI_CON
D503B @discrete:d_esd_diffpair(sym_5):page14_i285 5V SOT23_6 COMMON
HDMI_CEC_CON
HDMI_HPD_CON
D503A @discrete:d_esd_diffpair(sym_4):page14_i287 5V SOT23_6 COMMON
HDMI_DDC_SCL_5V0
HDMI_DDC_SDA_5V0

D502A @discrete:d_esd_diffpair(sym_1):page14_i329 5V DUAL COMMON
HDMI_TXD2_CON_P
HDMI_TXD2_CON_N
D501B @discrete:d_esd_diffpair(sym_2):page14_i336 5V DUAL COMMON
HDMI_TXC_CON_P
HDMI_TXC_CON_N
D502B @discrete:d_esd_diffpair(sym_2):page14_i327 5V DUAL COMMON
HDMI_TXD1_CON_P
HDMI_TXD1_CON_N
D501A @discrete:d_esd_diffpair(sym_1):page14_i334 5V DUAL COMMON
HDMI_TXD0_CON_P
HDMI_TXD0_CON_N

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	HDMI

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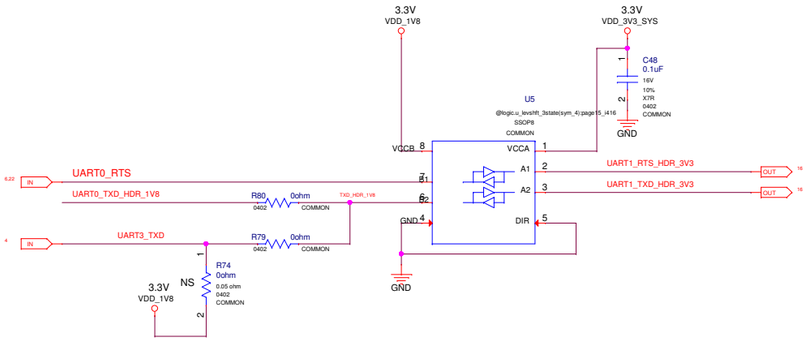
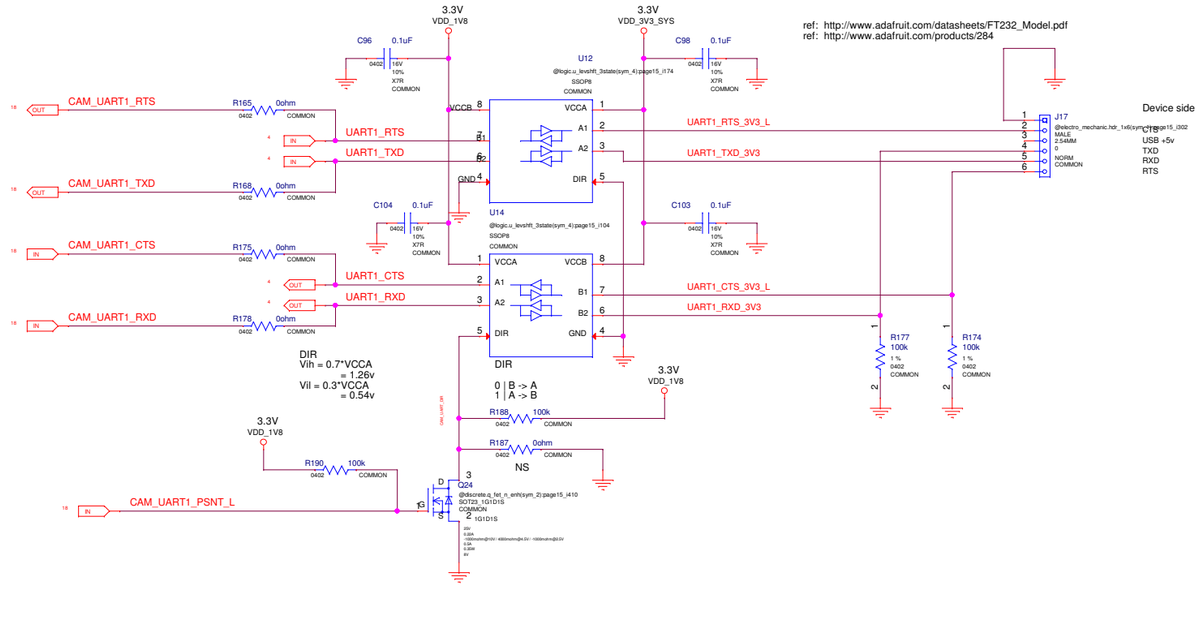
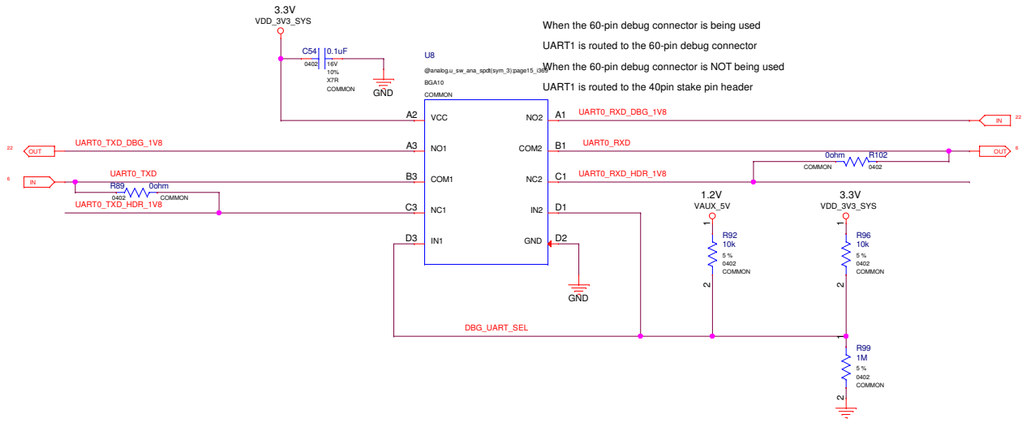
SERIAL PORT





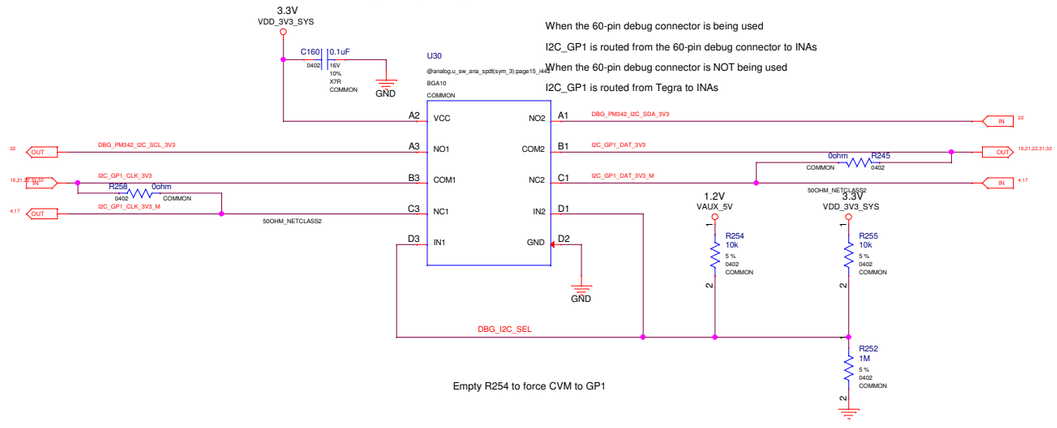
UART1 MUX

When the 60-pin debug connector is being used
UART1 is routed to the 60-pin debug connector
When the 60-pin debug connector is NOT being used
UART1 is routed to the 40pin stake pin header



DBG I2C MUX

When the 60-pin debug connector is being used
I2C_GP1 is routed from the 60-pin debug connector to INAs
When the 60-pin debug connector is NOT being used
I2C_GP1 is routed from Tegra to INAs



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	Serial port and JTAG

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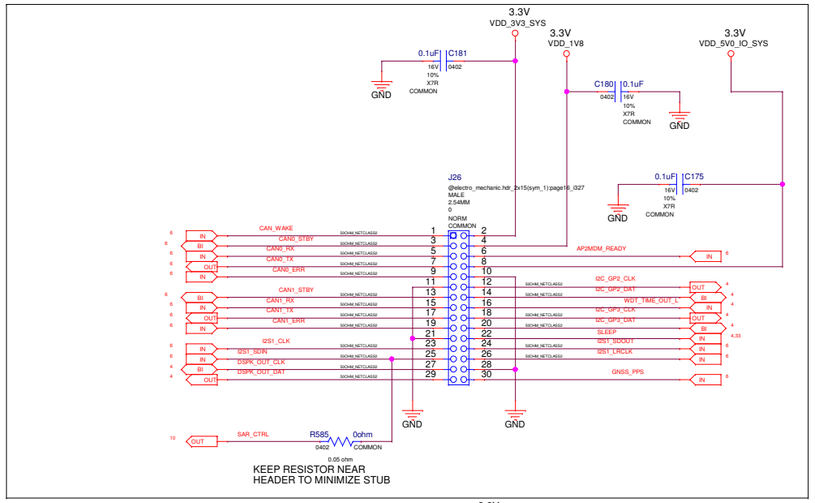
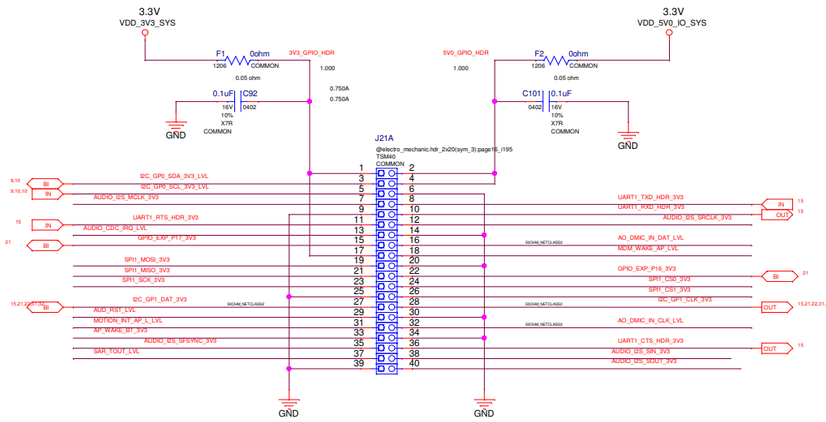
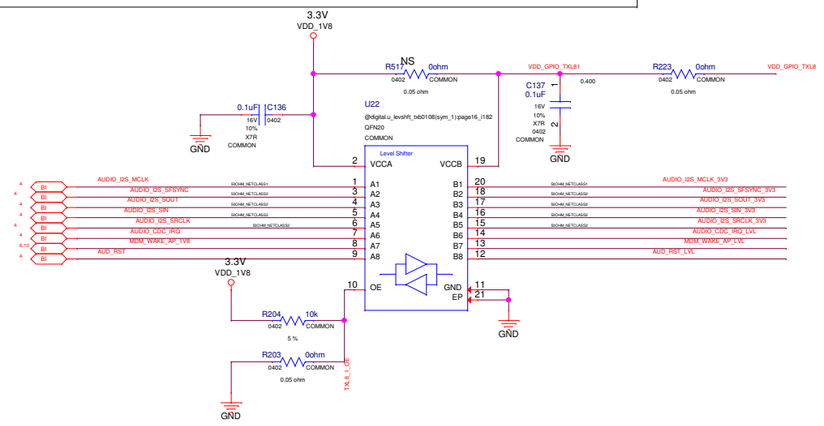
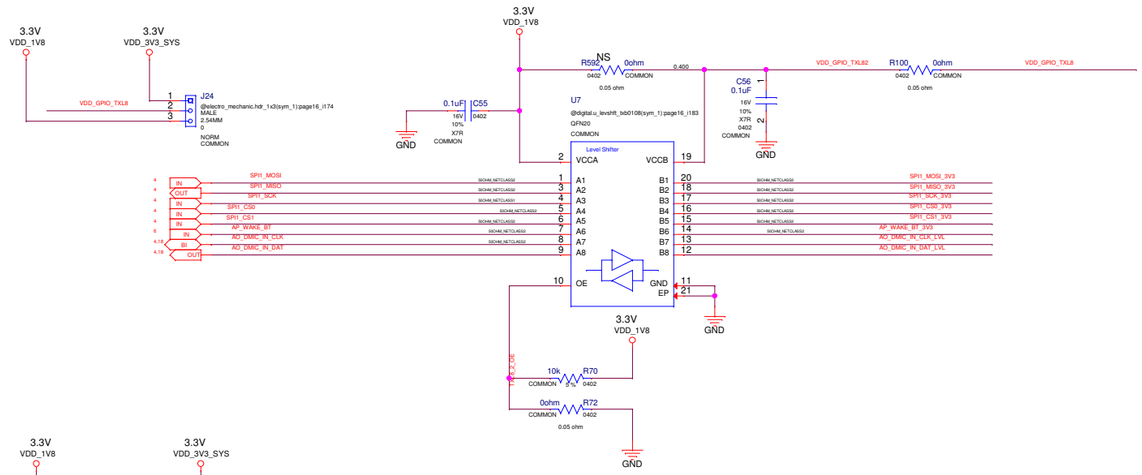
GPIO Expansion Headers

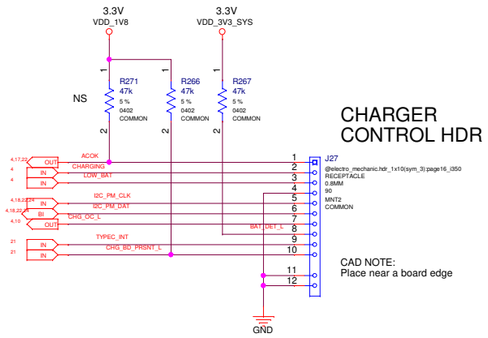


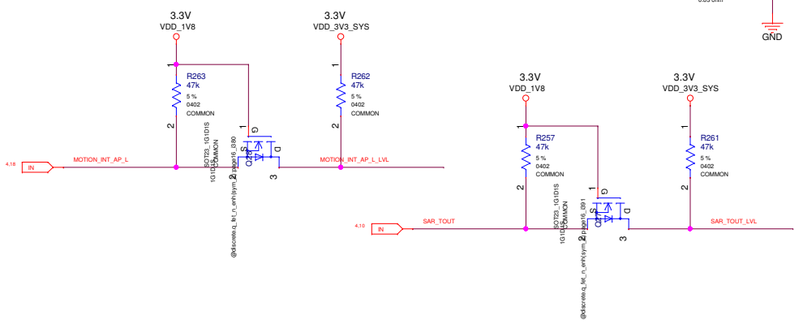


GPIO_PK0 I2S5B_FS
GPIO_PK2 I2S5B_SDOUT
GPIO_PK1 I2S5B_SDIN









ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	IO Expansion Connector

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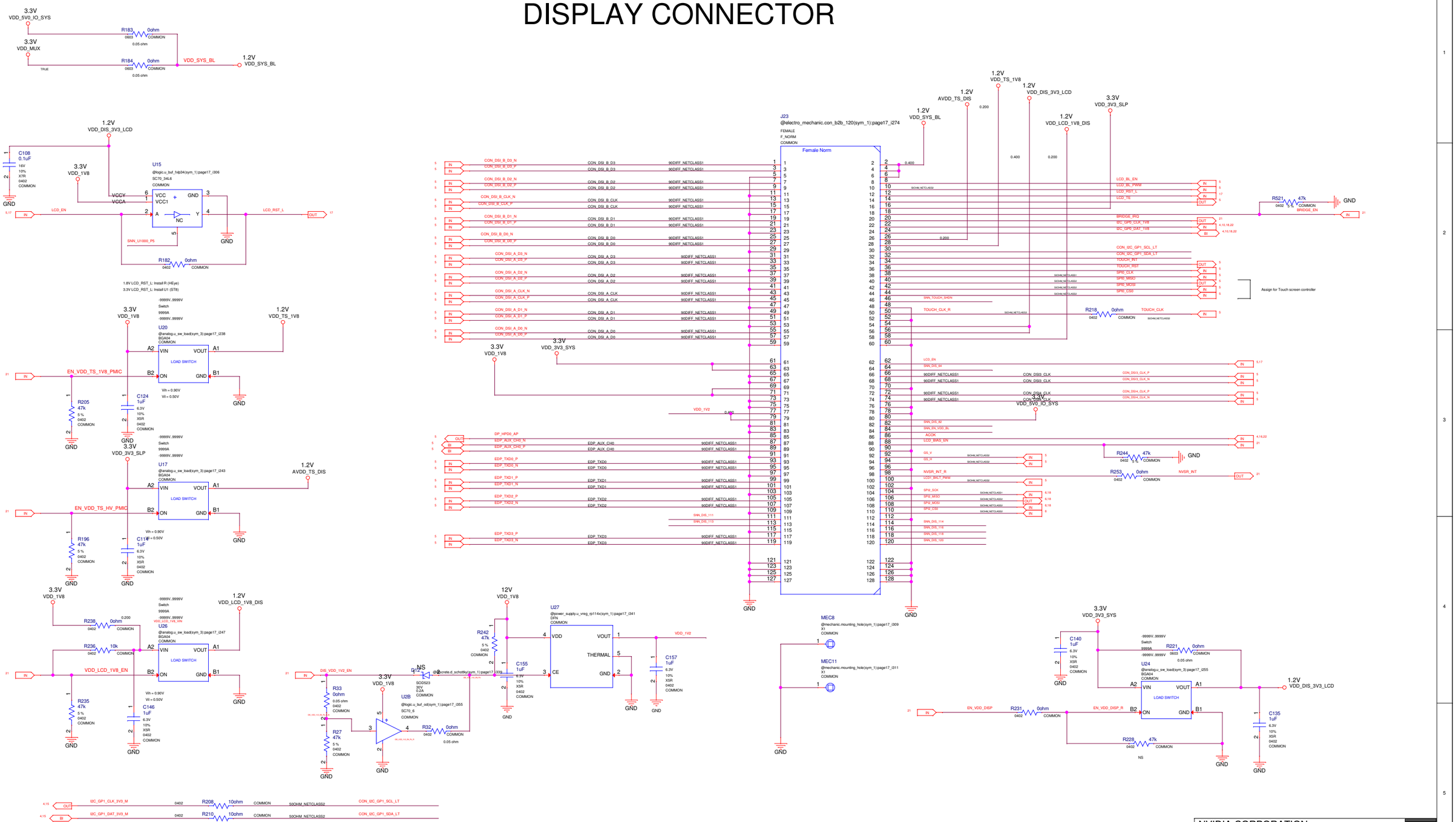
DISPLAY CONNECTOR



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	DSI Connector

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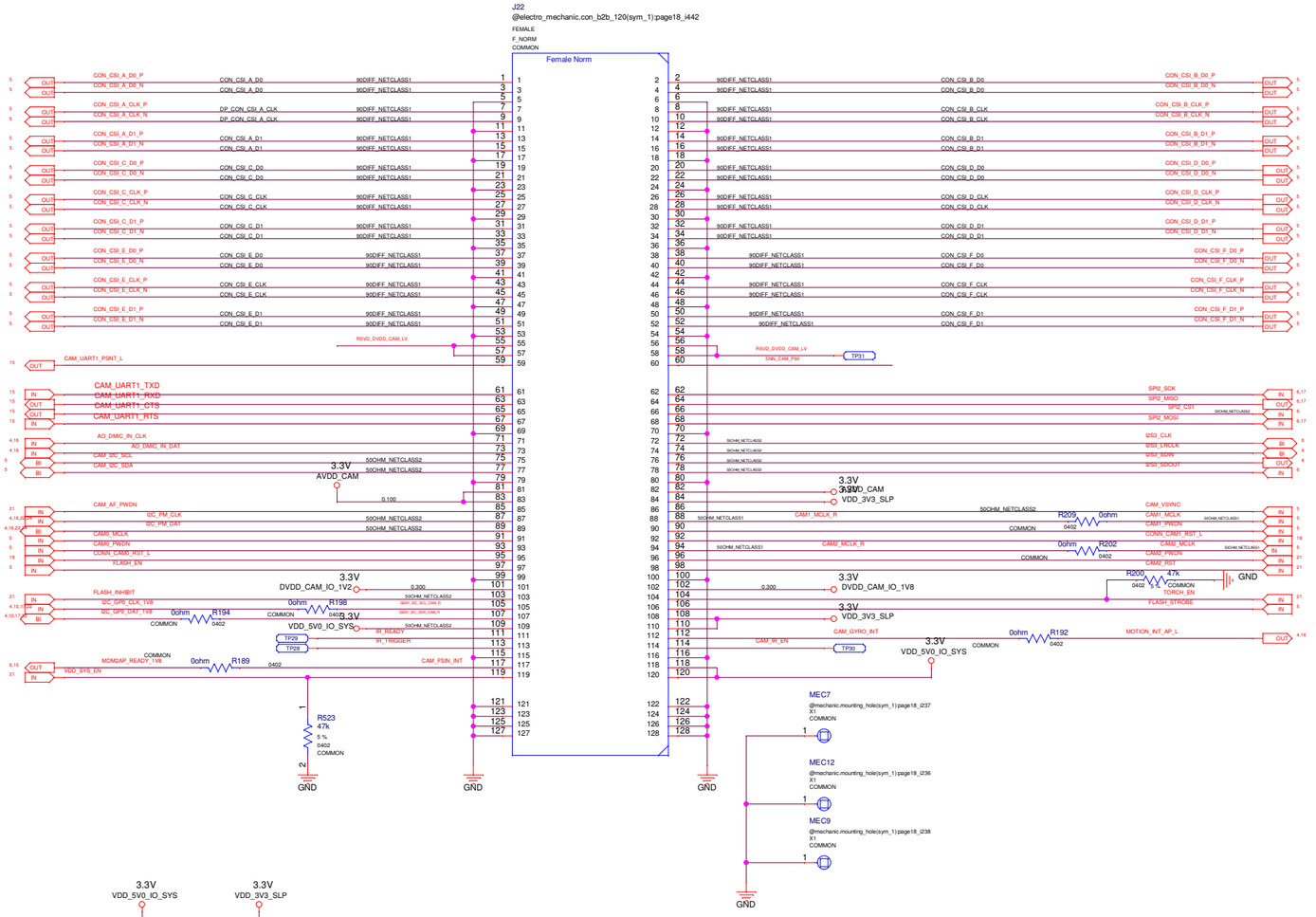
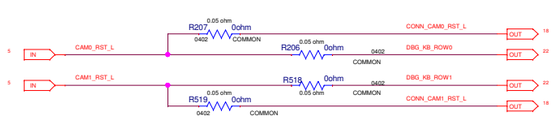
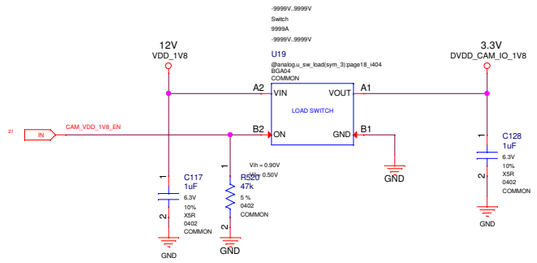
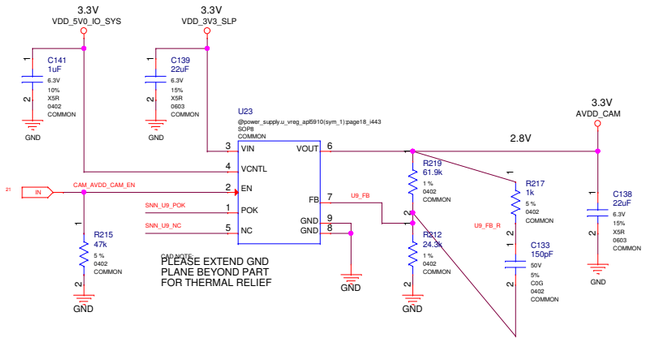
Camera Expansion

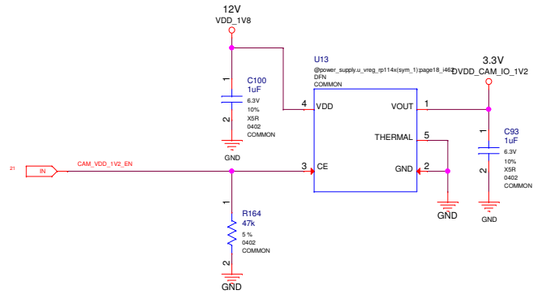


DEBUG GPIO STUFF OPTIONS









ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	CSI Connector

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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	BLANK

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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
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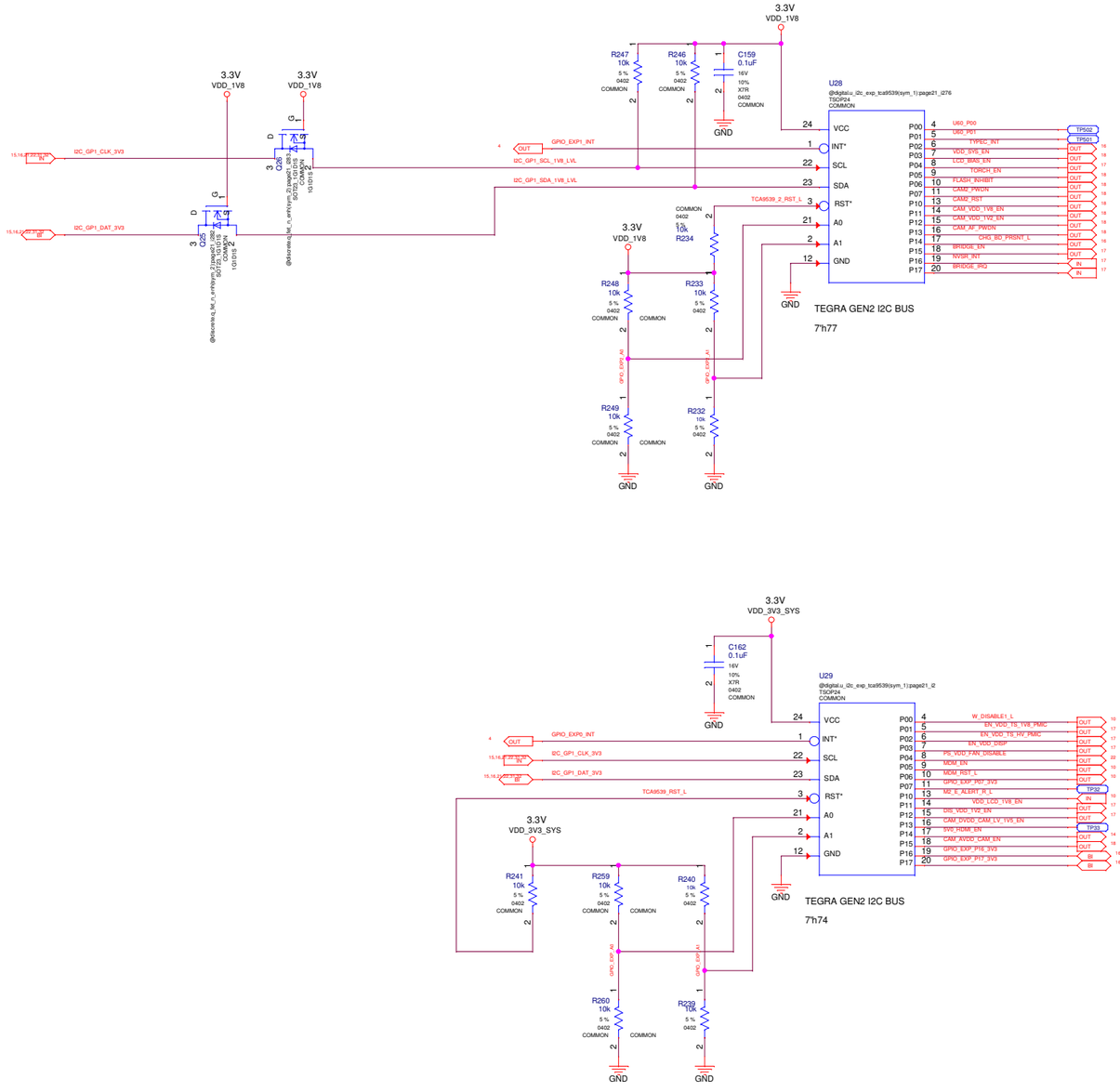
GPIO EXPANDERS



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	GPIO Expanders

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JTAG HEADER

Stuff R52 for boundary scan mode
OR ICT can drive JTAG_AP_TRST_L high

Empty R52 for debug mode

DA204193:
Empty R26

Short for boundary scan test

SoC Fan Header 4pin

BOM rev F:
Empty R113
Stuff R112
Bug 1673009

Default UART0_CTS/RTS to debug pins

MUX option for GP1 to debug
Stuff R107/R108 for no mux
Stuff R103/R110 for mux

DEBUG HEADER

Rev 1.0

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	FAN AND DEBUG

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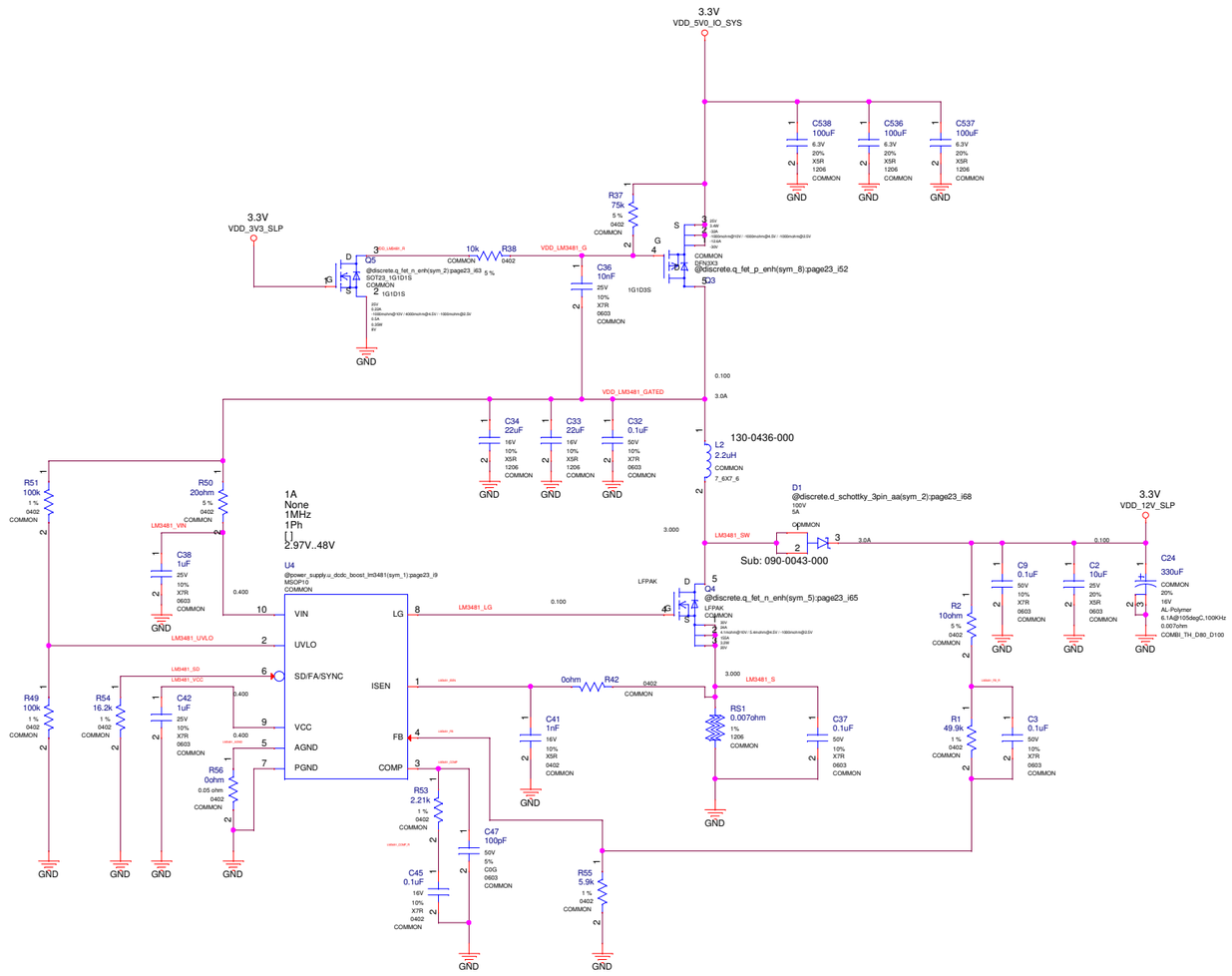

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	12V BOOST

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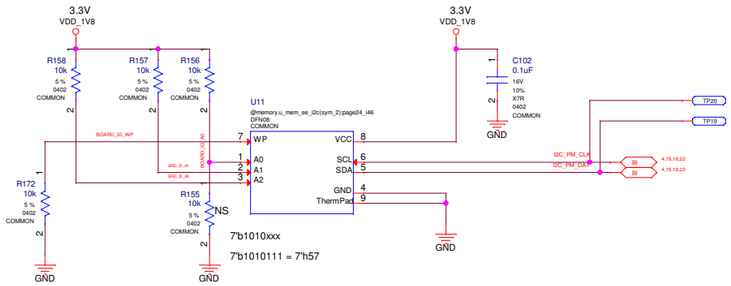
Carrier board config



BOM rev G:

Add primary part CAT24C08HU4I-GT3

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	EEPROM

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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	BLANK

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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	BLANK

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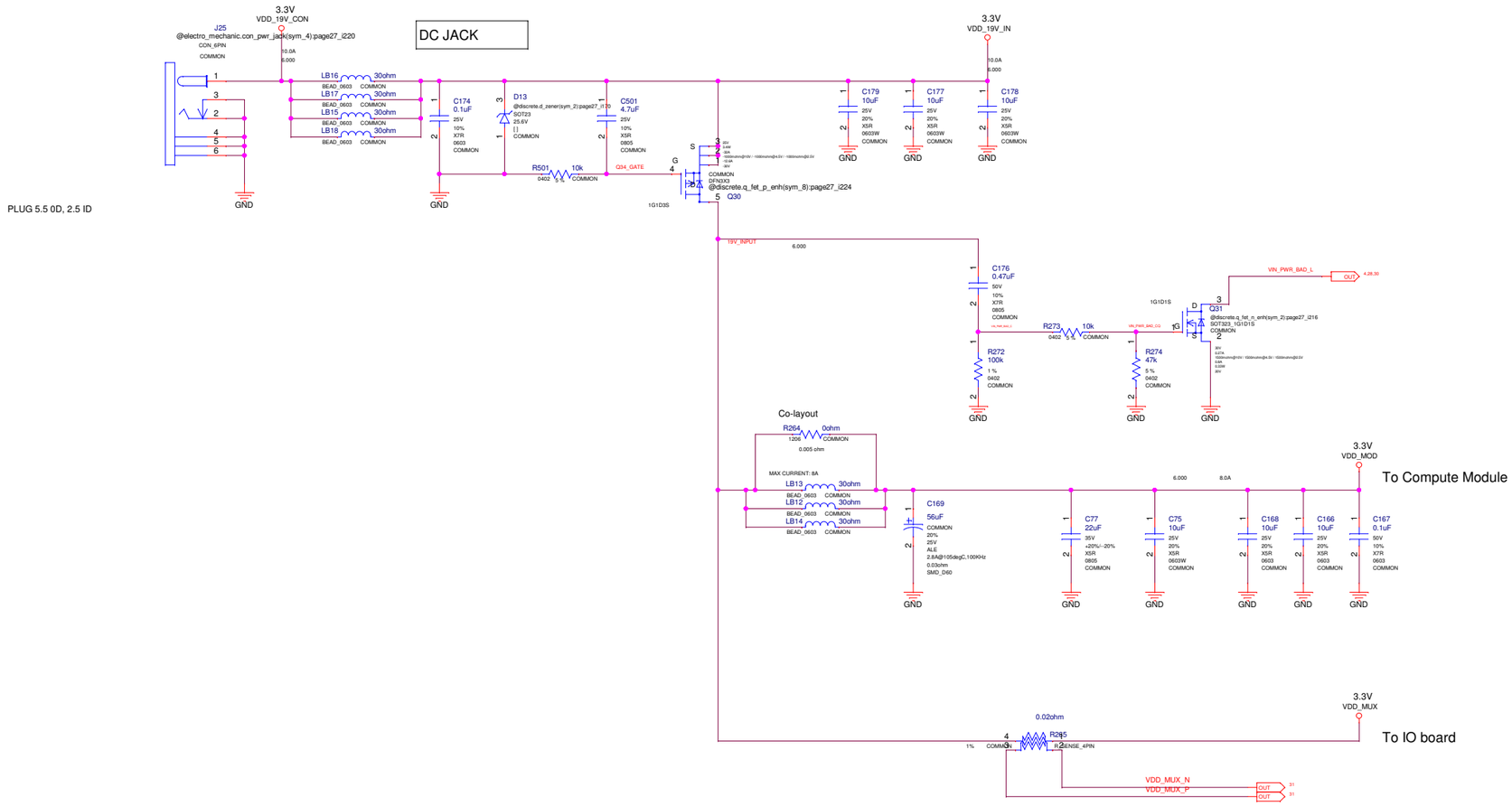
19V Jack



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	DC Jack

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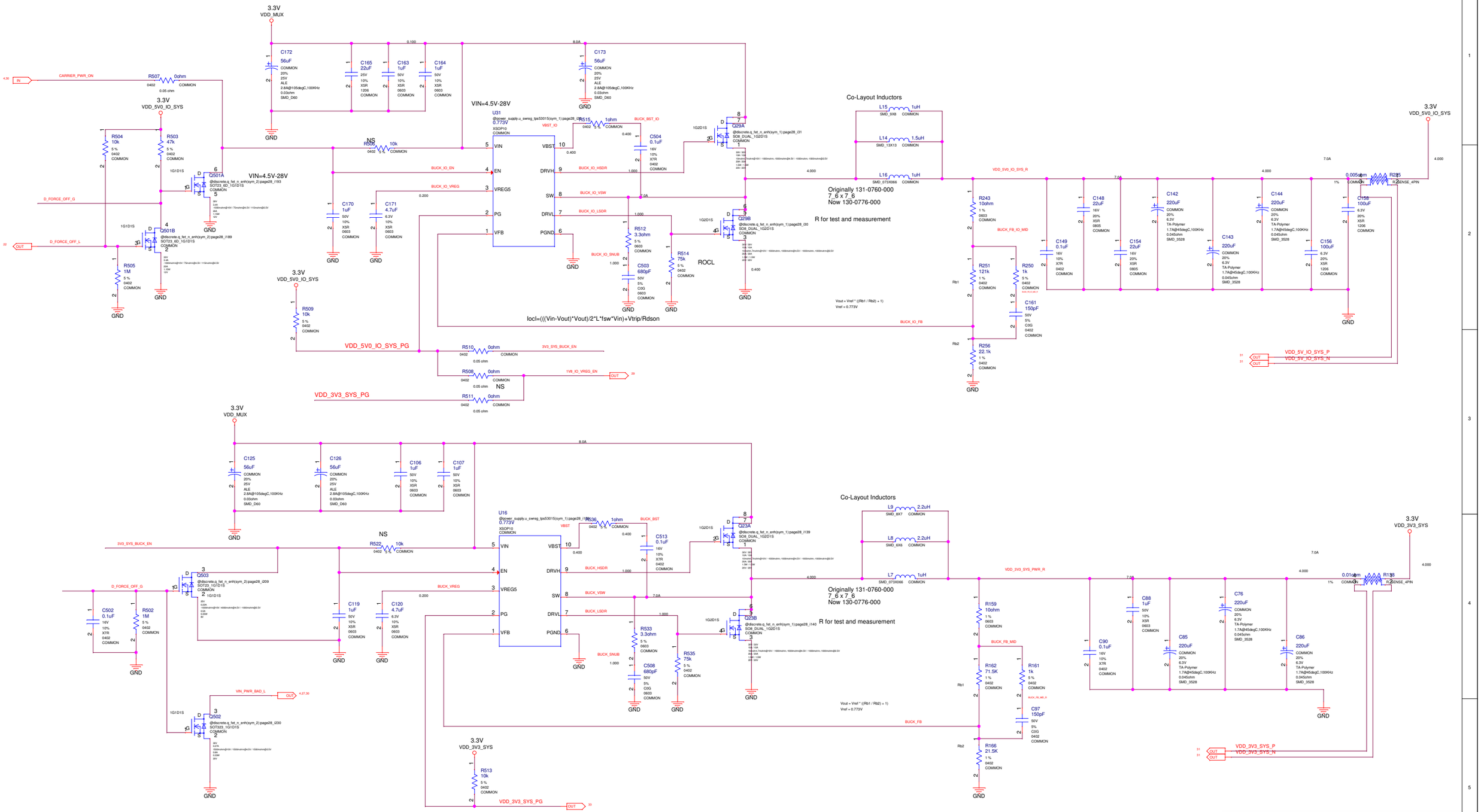
5V & 3V3 SYS POWER SUPPLIES



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	5V & 3V3 Vregs

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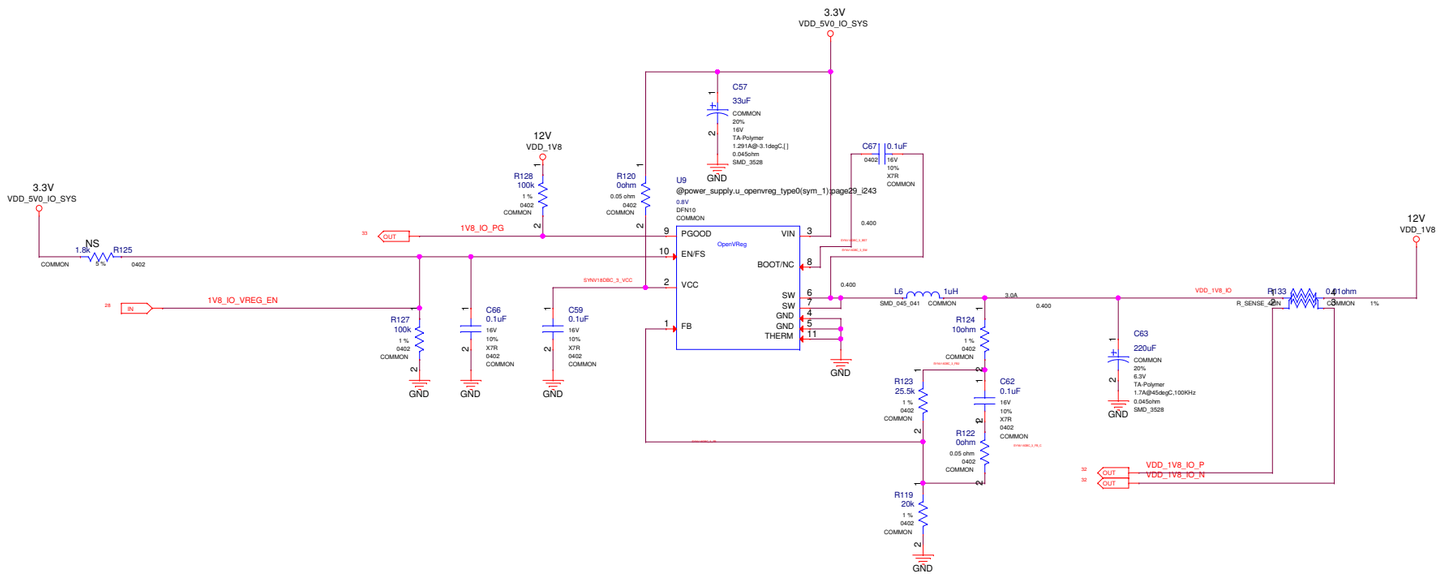
1V8 POWER SUPPLY AND 3V3_SYS



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	3V3 SLP AND 1.8V Vregs

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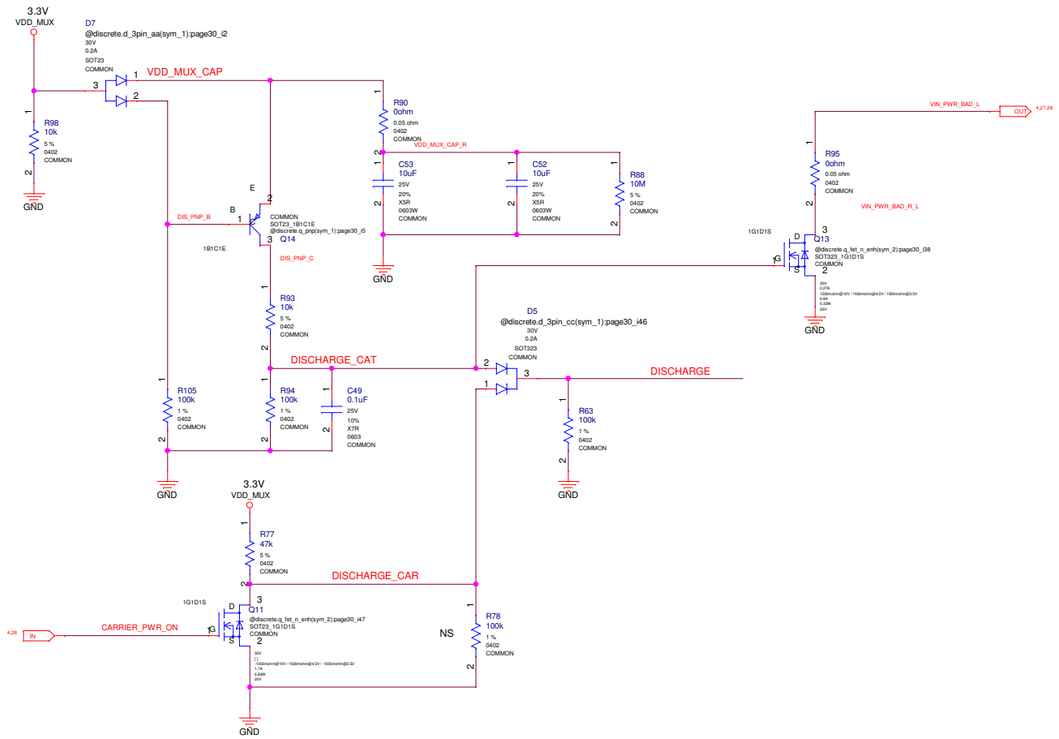
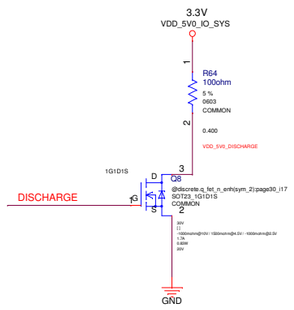
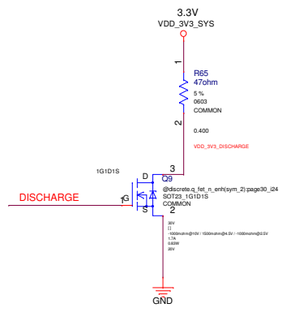
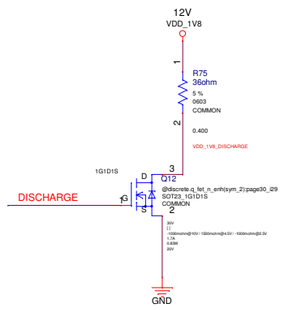
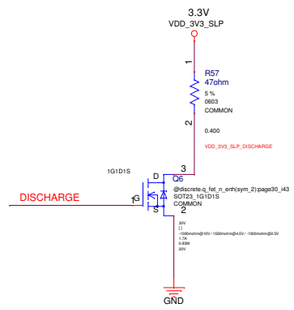
RAIL DISCHARGE











ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	Rail Discharge

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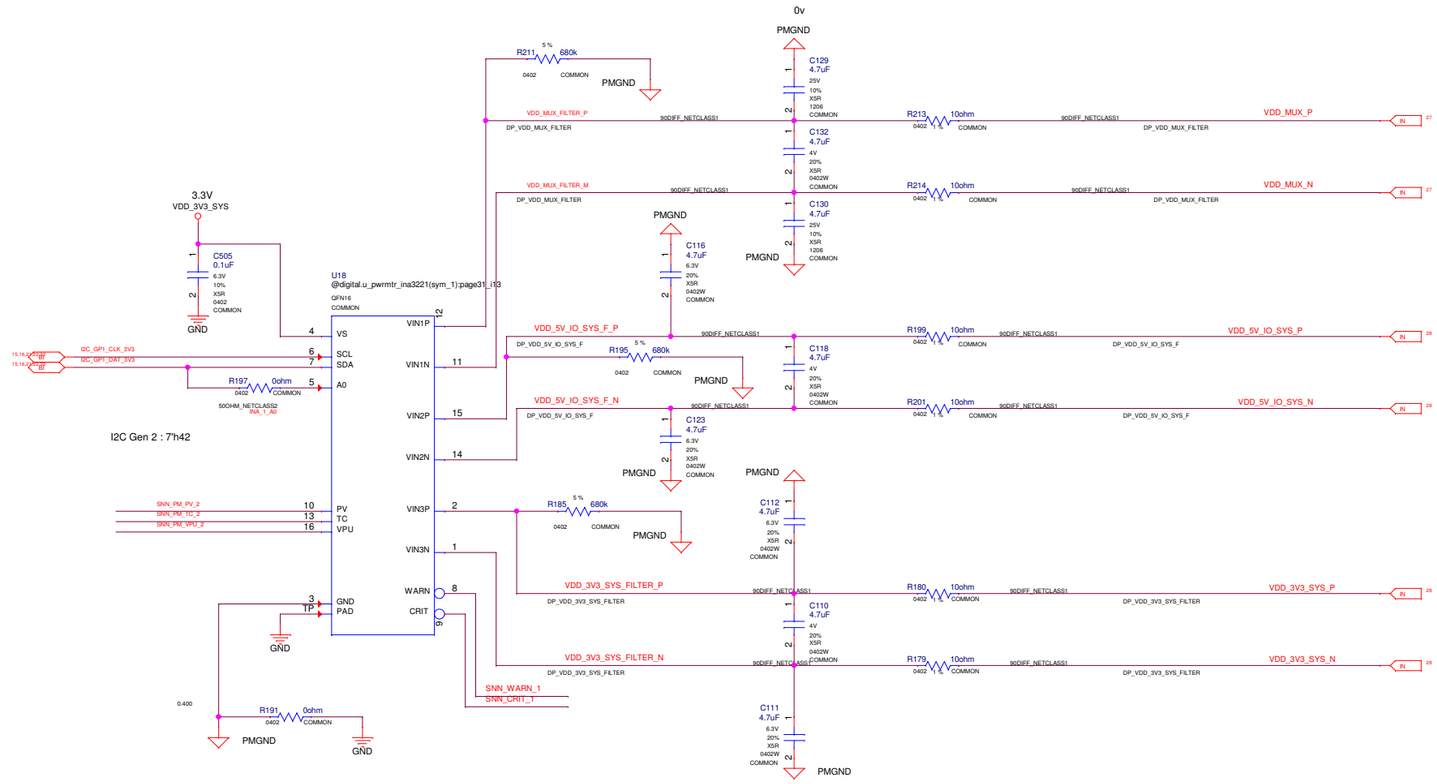
POWER MONITORS I



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	Power Monitor I

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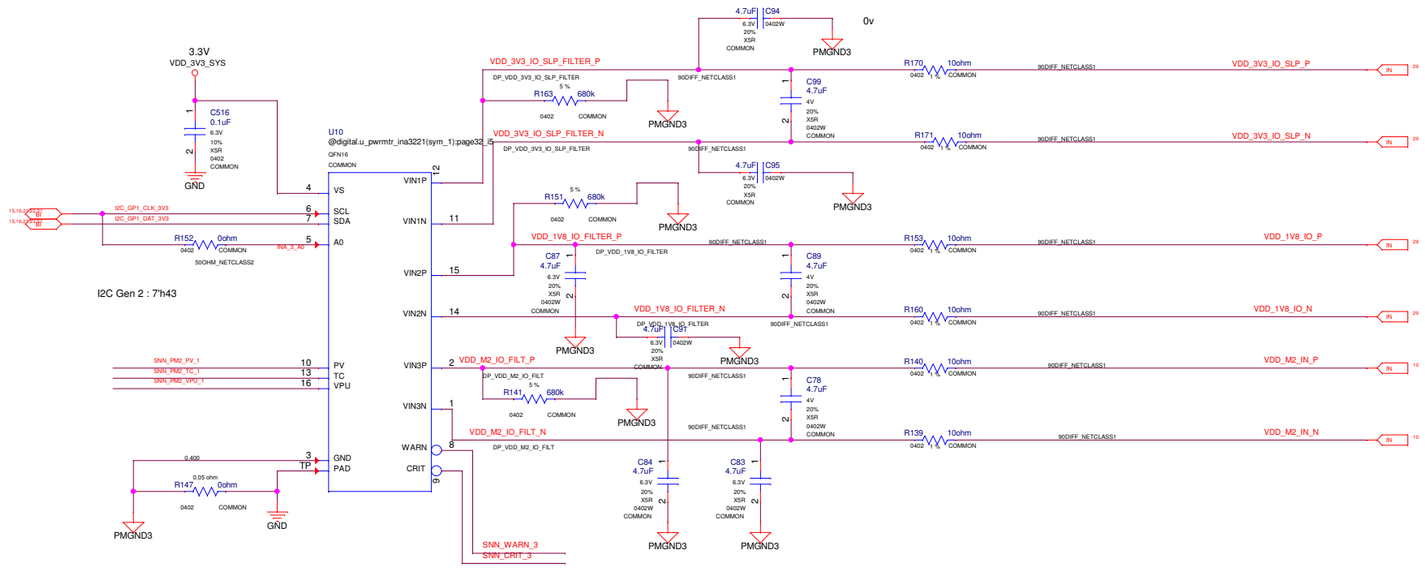
POWER MONITORS II



3V3 RUN RAIL

1.8V SYSTEM

M.2 3.3V

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	Power Monitor II

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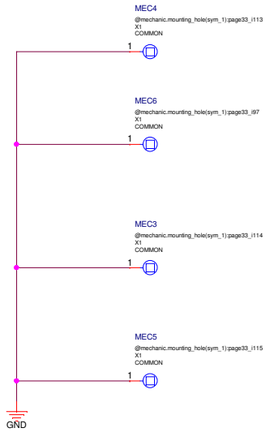
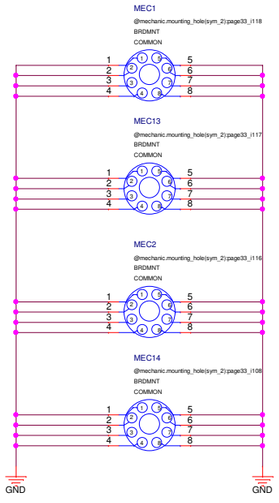
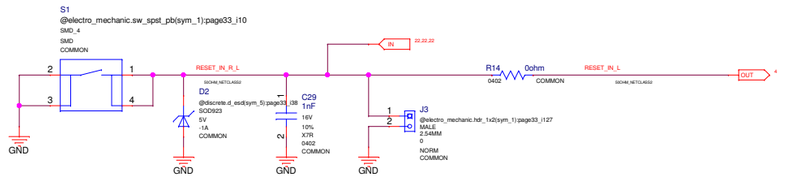
MODULE MOUNTING STANDOFFS



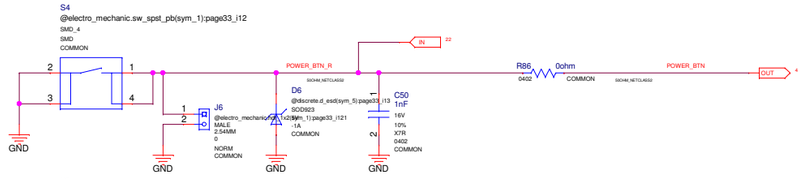
FOUR CORNER
miniITX MOUNTING HOLES



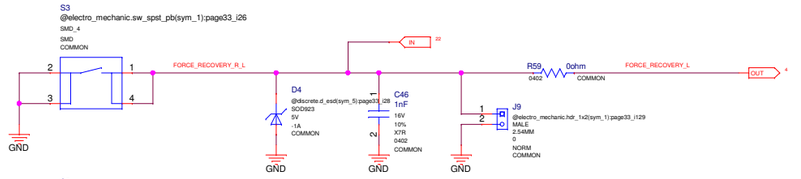
RESET



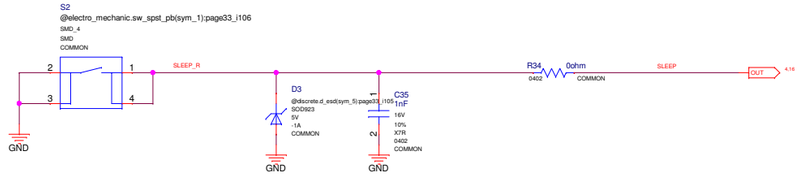
POWER



RECOVERY



VOL DOWN

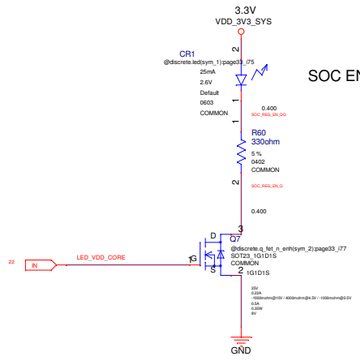


CAD NOTE:

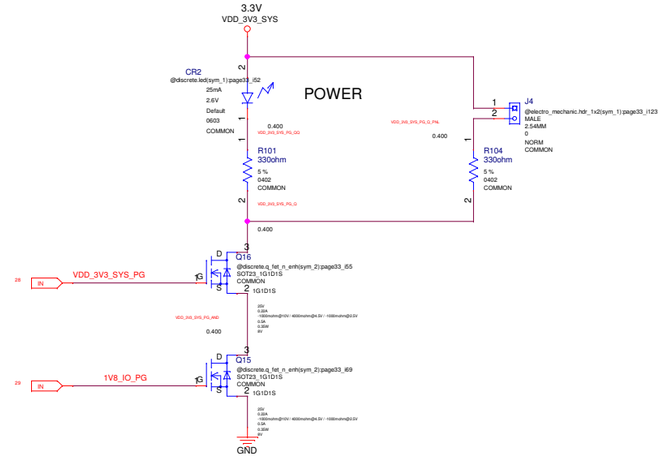
Please place LEDs near the power button in the front

label slik per text below

SOC EN



POWER



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	Buttons and Mechanical

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Revision History

P2597-B00

BOM rev B Validation Released 5/19

BOM rev C

Page 12: Changed Q1 to MDV3604URH, R11 75K, R12 4.7K, C26 10nf
Page 17: Stuffed U18 and emptied R200 for ST8 panel
(DA203081)
Page 21: Corrected text - GPIO Expanders
Page 22: Emptied U2, R25, R26, and C31
Page 23: Changed Q3 to MDV3604URH, R34 75K, R35 10K, C37 10nf
Page 27: Changed Q28 to MDV3604URH
Page 29: Changed Q20 to AM7321P, R132 75K, R135 4.7K, C76 10nf
Page 30: Stuffed R92

P2597-B01

BOM rev A

Page 4: Added UART4 TX/RX to CVM connector pins D5 and D8
Page 10: Corrected PCIe RX and TX connection to M.2 connector
Page 12: Changed Q2 to single pack FET
Page 14: Added pull down to 5V0_HDMI_EN
Page 15: Added a pullup option on UART3_TXD
Page 16: Extensive changes to J18 and J22
Changed I2C resistor R220 and R221 to 10 ohm per EMI recommendation
Page 17: Added pull down to LCD_BIAS_EN and BRIDGE_EN
VDD_LCD_1V8_EN, EN_VDD_TS_HV_PMIC, EN_VDD_TS_1V8_PMIC
Added pull down and buffer option to DIS_VDD_1V2_EN
Page 18: Added pull down to CAM_AVDD_CAM_EN, TORCH_EN, VDD_SYS_EN
CAM_VDD_1V8_EN, CAM_VDD_1V2_EN. Changed R237 to 47k stuffed
Added 0 ohm stuff option to connect debug header KB_ROW0 and
KB_ROW1 to CAM0_RST and CAM1_RST.
Page 22: Added inverter and option to use
DBG_GPIO1 or DBG_GPIO3 for NVJTAG_SEL
Added R354 to disconnect U2 output from RESET
Page 22: Changed pins 27/29 to UART4
Page 22: Added 2pin header on FORCE_OFF
Page 28: populated snubber (3.3ohm/680pf cap) on 3.3V_SYS and 5V0_SYS regulators to reduce ringing
Page 33: Added 2pin headers on RECOVERY and RESET

BOM rev B

Page 23: Changed R48 to 2.21k, C45 to 0.1uf, and C47 to 100pf (12v BOOST VR COMP)

BOM DA203849

Page 27: Changed R274 to 20mohm (INA sense resistor)

P2597-B02

Reference designators were resequenced

Page 10: Removed unconnected backup 3.8v VR
Added a pullup to M2_E_ALERT_L
Page 11: Changed SDcard 47ohm FB to 10ohm for CMD/DAT and 0ohm for CLK
Page 13: Changed Ethernet MDI route to 95ohm
Page 14: Changed R560, R572 to 0ohm (DA204127/DA204138, bug 200128580)
Page 15: Added a mux on I2C_GEN1 for PM342 DBG_I2C
Page 19: Removed empty sensors
Page 22: Added a header on RESET_OUT_L for bug 1651476
Added debug option (default) to route DBG_GPIO1 to UART0_CTS and DBG_GPIO2
to UART0_RTS at debug header per bug 1664555
Changed R109 PU to VDD_5V0_IO_SLP.
Added option to run the fan from always on 5v
Page 24: Removed empty proximity sensor
Page 28: Changed 5v and 3.3v VR input and output MLCC caps to OS_CONs and tantalums to reduce audible noise
Changed FORCE_OFF implementation to work without PM342. Added 0.1uf on D_FORCE_OFF_G.
Connected R505 and R503 to VDD_5V0_IO_SYS. Changed R503 to 47k and added 0.1uf on D_FORCE_OFF_G.
Page 29: Changed 1.8v VR input and output caps to tantalums to reduce audible noise
Page 31: Changed all INA series resistors to 10ohm, added 680k PD on _P to compensate for _N leakage
Page 32: Changed all INA series resistors to 10ohm, added 680k PD on _P to compensate for _N leakage

P2597-B02

BOM rev E (DA204193)

Page 22: Empty R26

BOM rev F

Page 22: Empty R113, stuff R112 (bug 1673009)

BOM rev G

Page 10: Change R524 and R538 to 1k (improve margin)
Page 24: Add primary EEPROM (CAT24C08HU4I-GT3)

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	REVISION HISTORY

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