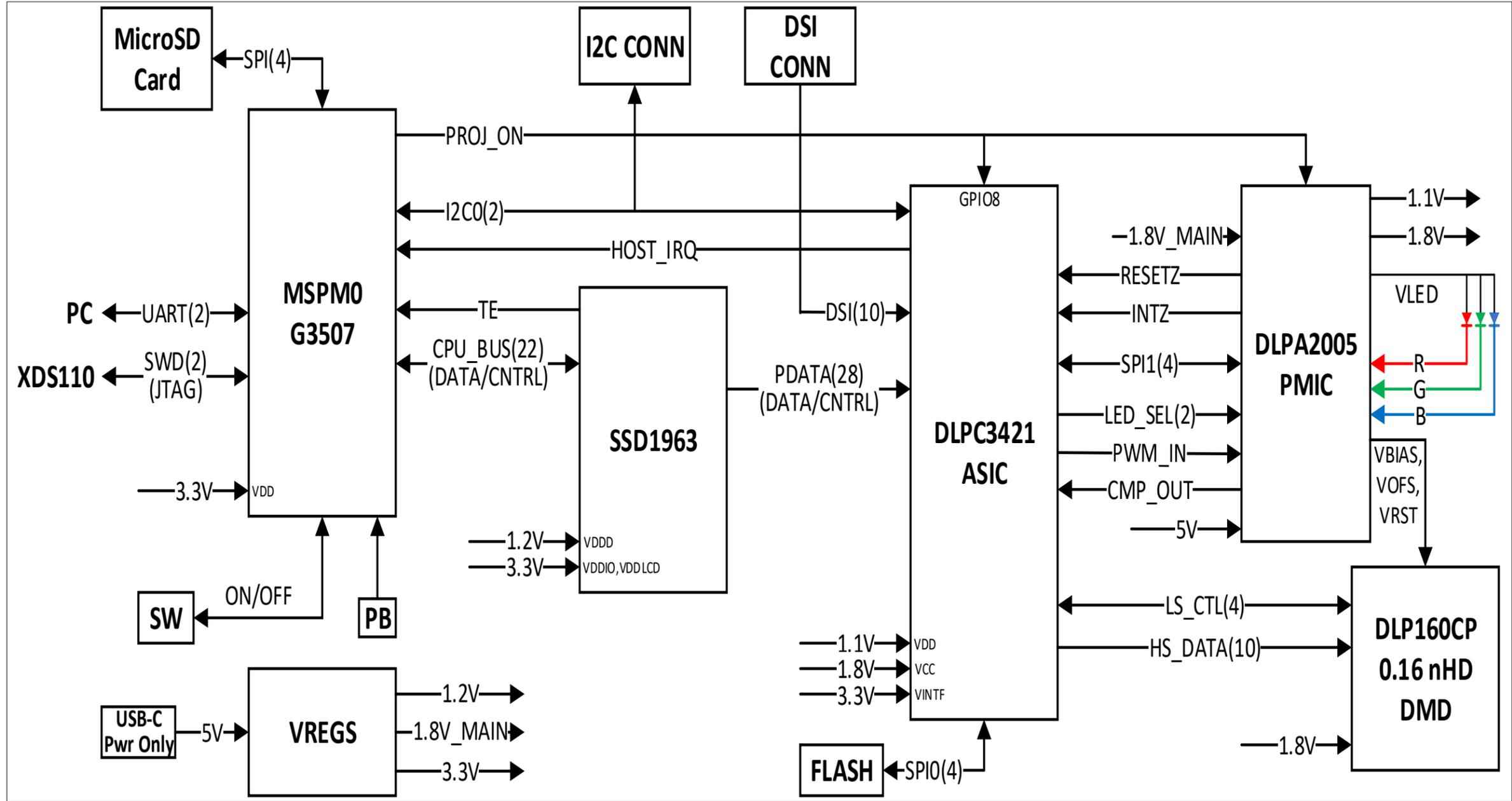


COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY			
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	10/13/2023	R. PERRY

DLPDLCR160CPEVM FORMATTER BOARD

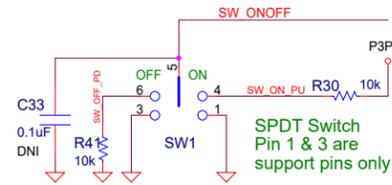
DWN	Roger Perry	DATE	JAN-31-2023	TEXAS INSTRUMENTS - DLP® Products	
ENGR	Roger Perry	DATE	JAN-31-2023	(C) COPYRIGHT 2023 Texas Instruments Inc. All Rights Reserved	
SYS	Roger Perry	DATE	JAN-31-2023	TITLE DLPDLCR160CPEVM FORMATTER BOARD	
APVD	Jeff Dennis	DATE	JAN-31-2023	DRAWING NO	DLP094
QA				REV	A
		11 x 17		Cadence Allegro v17.2 SHEET 1 of 10	



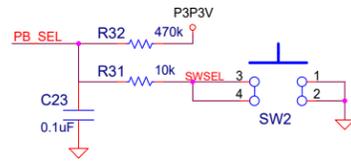
BLOCK DIAGRAM

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	ISSUE DATE 01/31/2023	SIZE D	SHEET 2 OF 10	

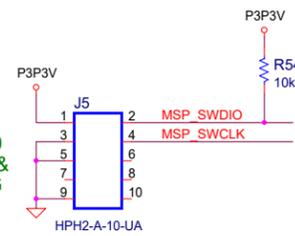
POWER ON SWITCH



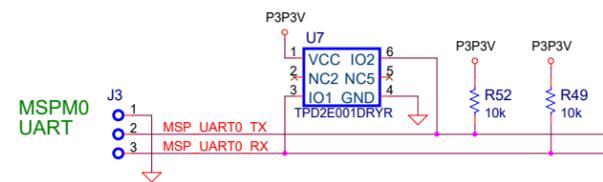
PUSH-BUTTON SWITCH



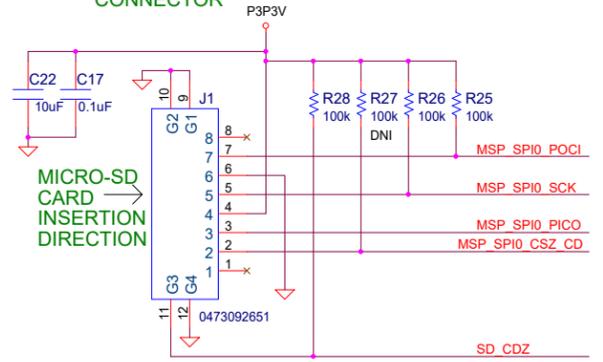
MSPM0 PROG & DEBUG



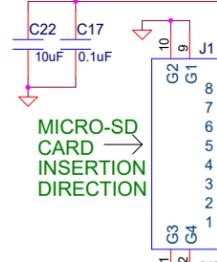
MSPM0 UART



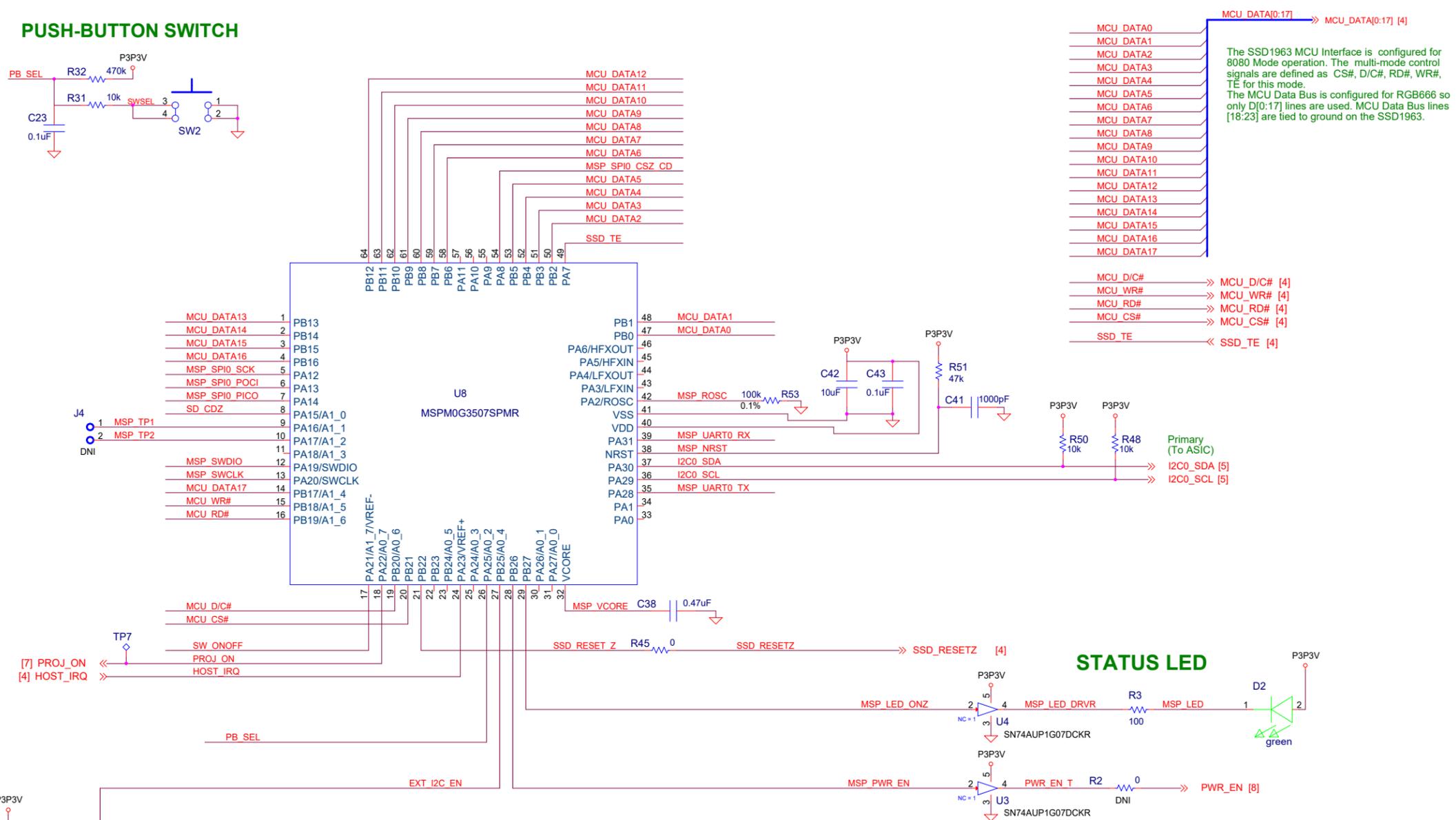
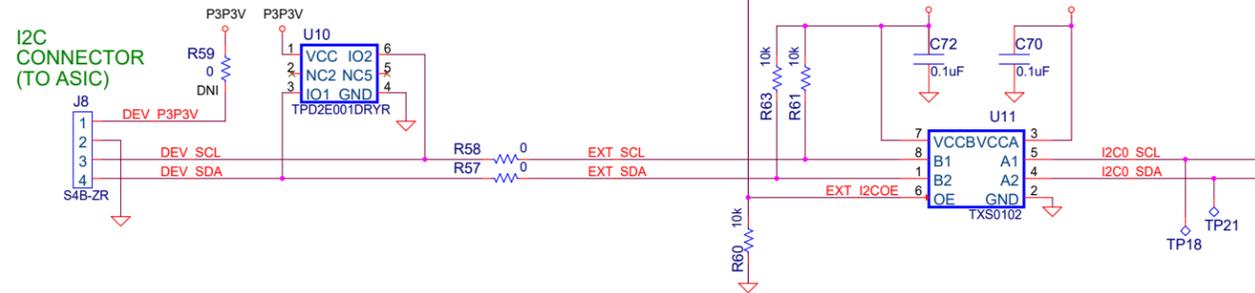
MICRO-SD CARD HALF-HEIGHT CONNECTOR



MICRO-SD CARD INSERTION DIRECTION



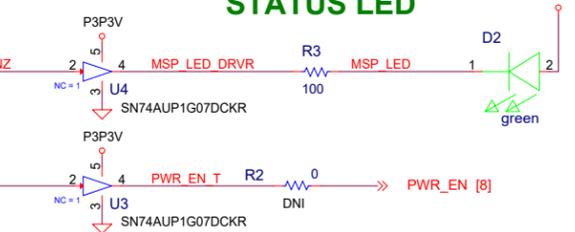
I2C CONNECTOR (TO ASIC)



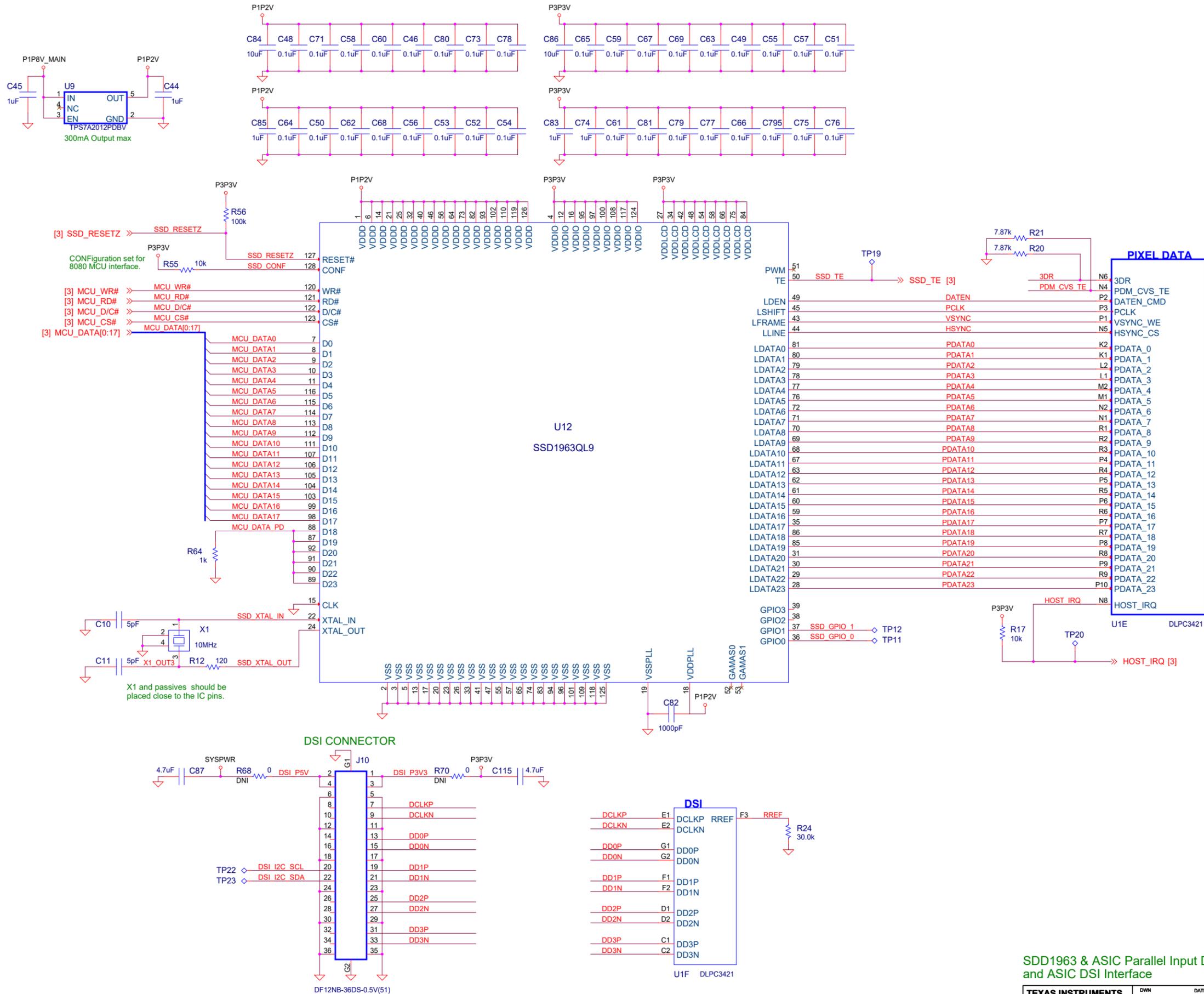
MCU_DATA0:17 → MCU_DATA[0:17] [4]
 The SSD1963 MCU Interface is configured for 8080 Mode operation. The multi-mode control signals are defined as CS#, D/C#, RD#, WR#, TE for this mode.
 The MCU Data Bus is configured for RGB666 so only D[0:17] lines are used. MCU Data Bus lines [18:23] are tied to ground on the SSD1963.

- MCU_DATA0 → MCU_DATA0 [4]
- MCU_DATA1 → MCU_DATA1 [4]
- MCU_DATA2 → MCU_DATA2 [4]
- MCU_DATA3 → MCU_DATA3 [4]
- MCU_DATA4 → MCU_DATA4 [4]
- MCU_DATA5 → MCU_DATA5 [4]
- MCU_DATA6 → MCU_DATA6 [4]
- MCU_DATA7 → MCU_DATA7 [4]
- MCU_DATA8 → MCU_DATA8 [4]
- MCU_DATA9 → MCU_DATA9 [4]
- MCU_DATA10 → MCU_DATA10 [4]
- MCU_DATA11 → MCU_DATA11 [4]
- MCU_DATA12 → MCU_DATA12 [4]
- MCU_DATA13 → MCU_DATA13 [4]
- MCU_DATA14 → MCU_DATA14 [4]
- MCU_DATA15 → MCU_DATA15 [4]
- MCU_DATA16 → MCU_DATA16 [4]
- MCU_DATA17 → MCU_DATA17 [4]
- MCU_D/C# → MCU_D/C# [4]
- MCU_WR# → MCU_WR# [4]
- MCU_RD# → MCU_RD# [4]
- MCU_CS# → MCU_CS# [4]
- SSD_TE → SSD_TE [4]

STATUS LED

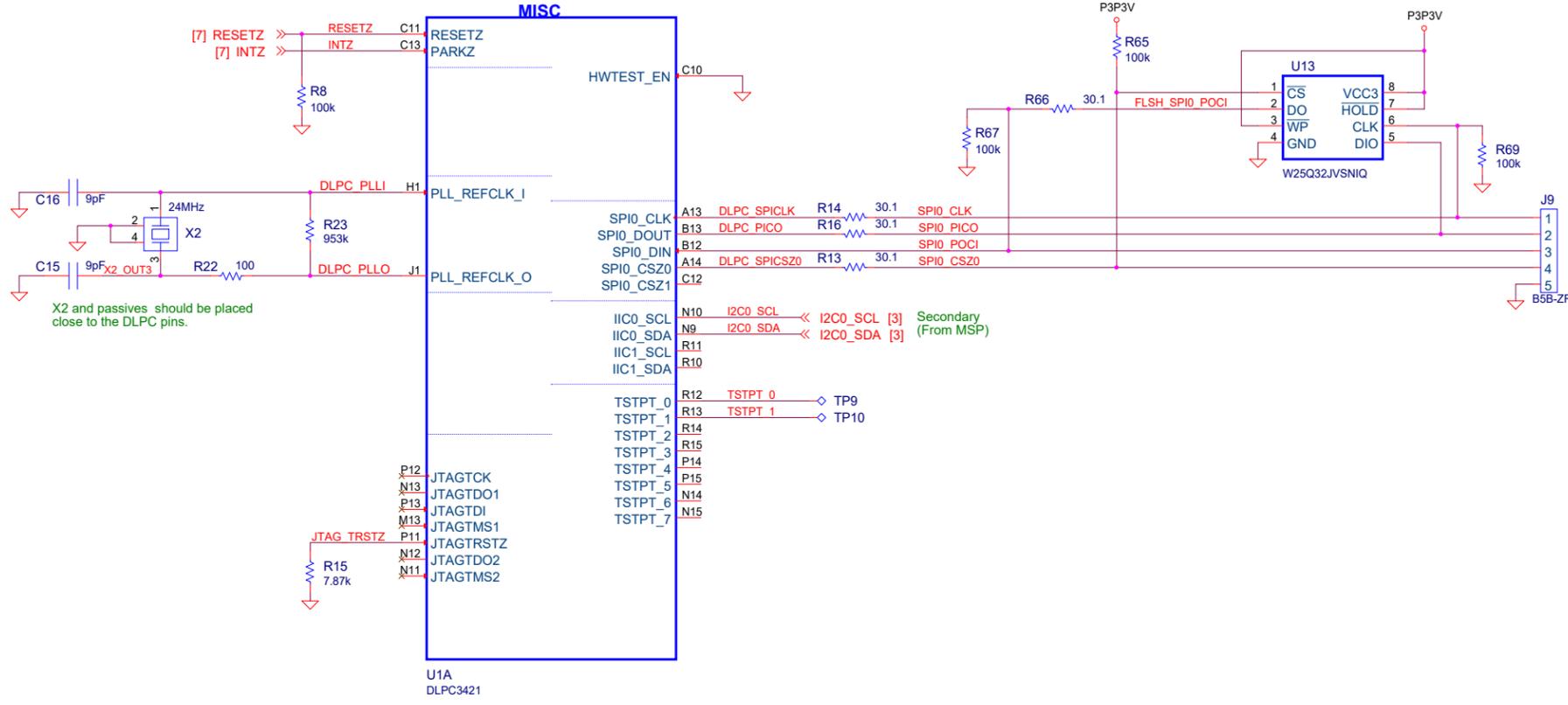


MSPM0, JTAG, Micro SD CARD I/F, ETC



SDD1963 & ASIC Parallel Input Data Interface and ASIC DSI Interface

DLPC3421 Clock, Reset, SPI and Flash Memory



DLPC3421, Flash

Use DMD mapping option 2 in the DLPC342x.

ASIC Pin Name	DMD Signal Name
DMD_HS_WDATA_F_P	=> HS_WDATA1_P
DMD_HS_WDATA_F_N	=> HS_WDATA1_N
DMD_HS_WDATA_E_P	=> HS_WDATA0_P
DMD_HS_WDATA_E_N	=> HS_WDATA0_N
DMD_HS_CLK_P	=> HS_CLK_P
DMD_HS_CLK_N	=> HS_CLK_N
DMD_HS_WDATA_D_P	=> HS_WDATA3_P
DMD_HS_WDATA_D_N	=> HS_WDATA3_N
DMD_HS_WDATA_C_P	=> HS_WDATA2_P
DMD_HS_WDATA_C_N	=> HS_WDATA2_N

DMD INTERFACE

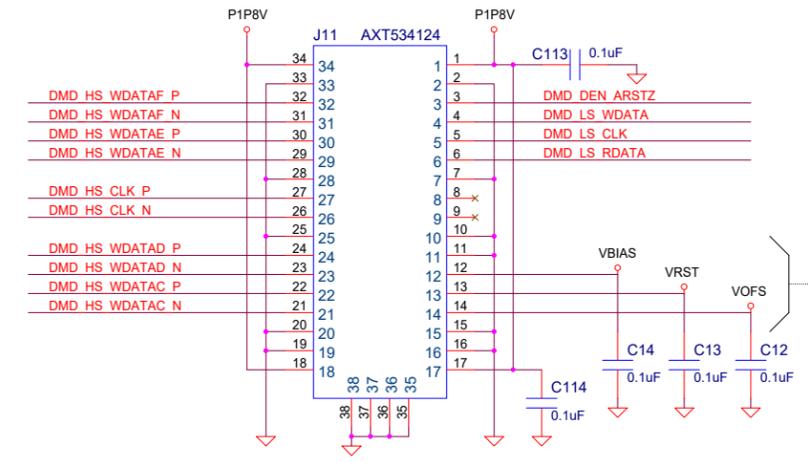
DMD_LS_CLK	A1	LS_CLK	R19	43	DMD_LS_CLK
DMD_LS_WDATA	A2	LS_WDATA	R18	43	DMD_LS_WDATA
DMD_DEN_ARSTZ	B1				DMD_DEN_ARSTZ
DMD_LS_RDATA	B2				DMD_LS_RDATA
DMD_HS_WDATAH_P	A3				
DMD_HS_WDATAH_N	B3				
DMD_HS_WDATAG_P	A4				
DMD_HS_WDATAG_N	B4				
DMD_HS_WDATAF_P	A5	DMD_HS_WDATAF_P			
DMD_HS_WDATAF_N	B5	DMD_HS_WDATAF_N			
DMD_HS_WDATAE_P	A6	DMD_HS_WDATAE_P			
DMD_HS_WDATAE_N	B6	DMD_HS_WDATAE_N			
DMD_HS_CLK_P	A7	DMD_HS_CLK_P			
DMD_HS_CLK_N	B7	DMD_HS_CLK_N			
DMD_HS_WDATAD_P	A8	DMD_HS_WDATAD_P			
DMD_HS_WDATAD_N	B8	DMD_HS_WDATAD_N			
DMD_HS_WDATAC_P	A9	DMD_HS_WDATAC_P			
DMD_HS_WDATAC_N	B9	DMD_HS_WDATAC_N			
DMD_HS_WDATAB_P	A10				
DMD_HS_WDATAB_N	B10				
DMD_HS_WDATAA_P	A11				
DMD_HS_WDATAA_N	B11				

U1B
DLPC3421

Route LS signals as 68 ohm. Match LS_WDATA to LS_CLK +/- 0.1".

Route 100 ohm differential. Match P & N lengths within a pair +/- .010". Match HS_WDATA to HS_CLK +/- 0.250".

J11 is on BOTTOM side of PCB. Pin 34 of AXT534 mates to pin 1 of AXT634 on DMD Flex Cable.



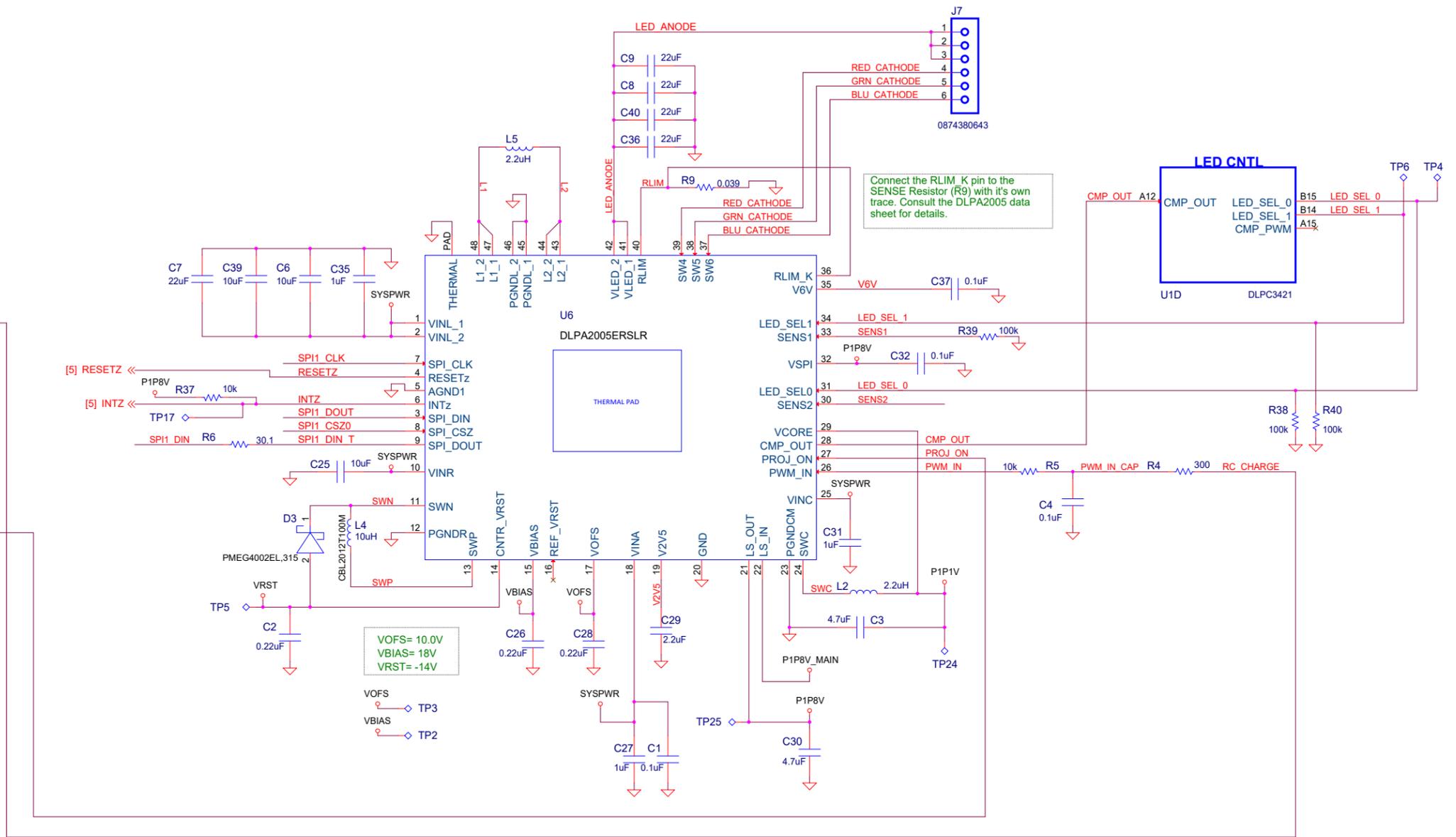
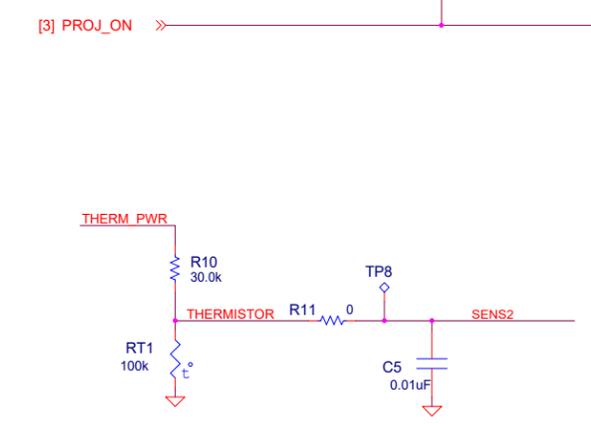
Minimum width is 0.015".

DMD INTERFACE

GPIO

GPIO_0	C14			SPI1 DIN
GPIO_1	C15	GPIO 1	R7 30.1	SPI1 CLK
GPIO_2	D14	GPIO 2	R44 30.1	SPI1 DOUT
GPIO_3	D15	GPIO 3	R36 30.1	SPI1 CSZ0
GPIO_4	E14	GPIO 4		TP15
GPIO_5	E15	GPIO 5		TP16
GPIO_6	F14	GPIO 6		TP13
GPIO_7	F15	GPIO 7		TP14
GPIO_8	G14	PROJ_ON		
GPIO_9	G15			
GPIO_10	H14	RC_CHARGE		
GPIO_11	H15	THERM_PWR		
GPIO_12	J14			
GPIO_13	J15			
GPIO_14	K14			
GPIO_15	K15			
GPIO_16	L14			
GPIO_17	L15			
GPIO_18	M14			
GPIO_19	M15			

U1C DLPC3421

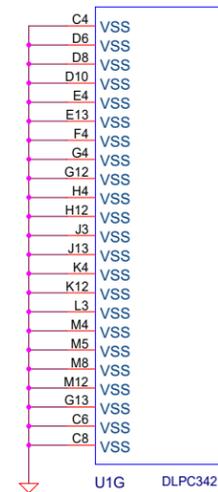
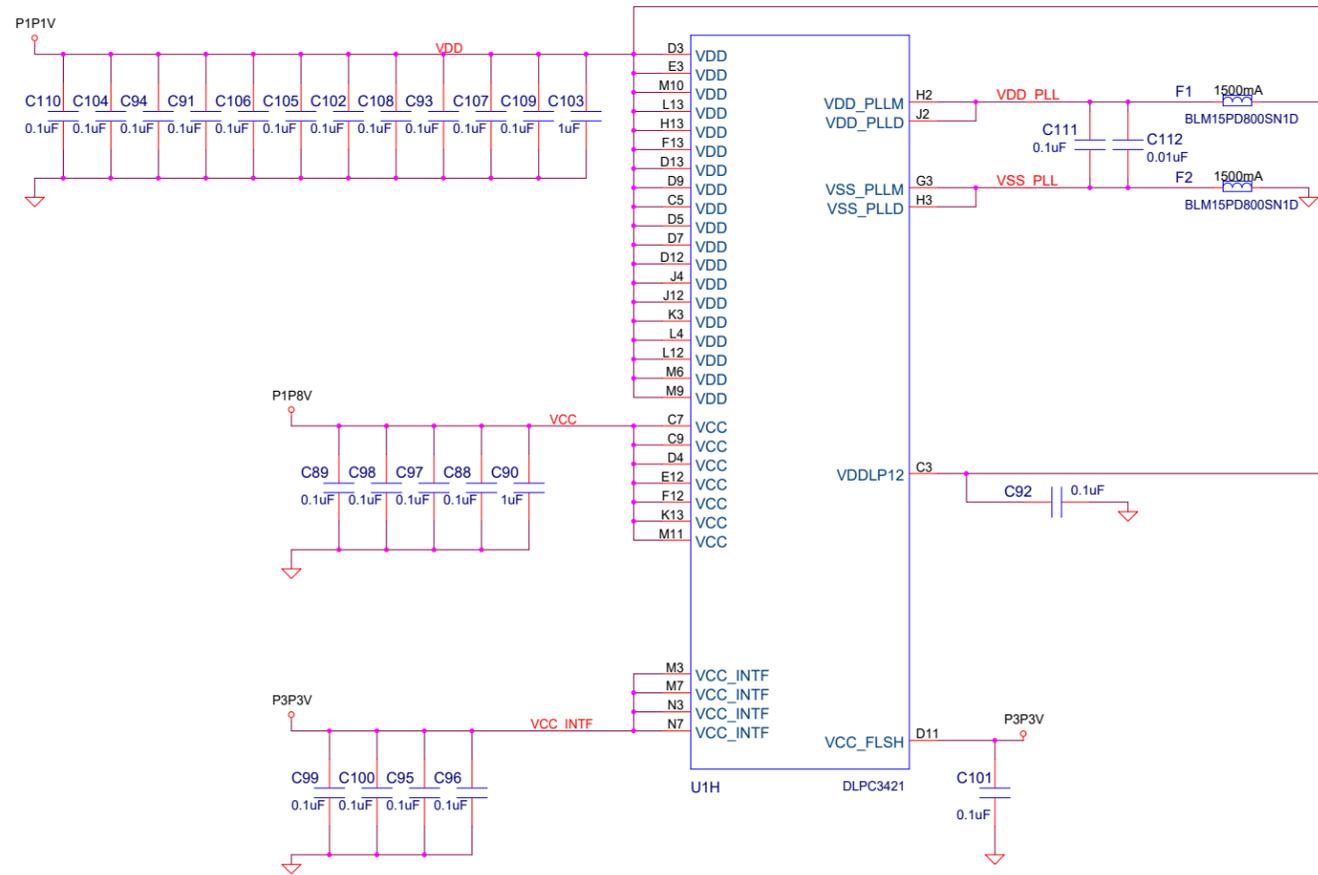
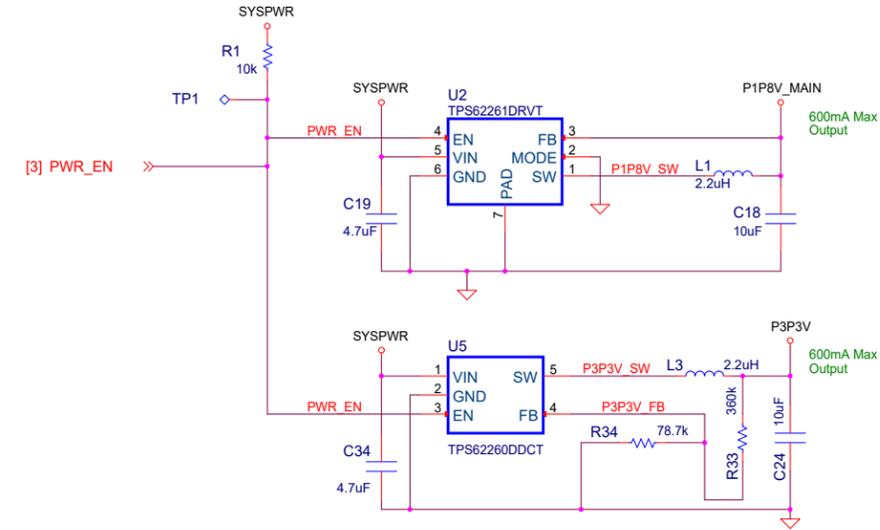
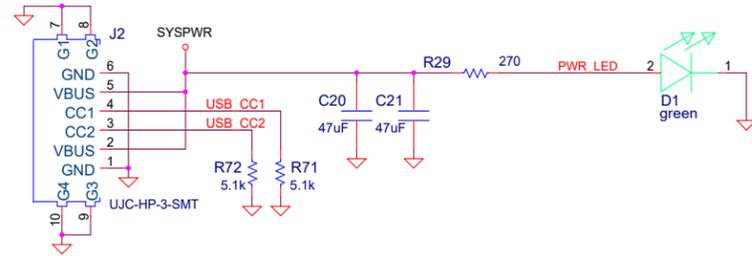


Connect the RLIM_K pin to the SENSE Resistor (R9) with it's own trace. Consult the DLPA2005 data sheet for details.

ASIC GPIO & DLPA2005 PMIC/LED DRIVER

EXTERNAL POWER INPUT

USB - TYPE C
POWER ONLY
5V @ 3A MAX



DLPC3421 POWER & GND

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REVISIONS

REVISION HISTORY

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