

NOTES, UNLESS OTHERWISE SPECIFIED:

1. RESISTANCE VALUES IN OHMS.
2. CAPACITANCE VALUES IN MICROFARADS.
3. REFERENCE DESIGNATORS USED:
4. ALL 0.1 uF AND 0.01uF CAPACITORS ARE DECOUPLING CAPS UNLESS OTHERWISE NOTED. THEY ARE SHOWN ON THE PAGE WITH THE INTEGRATED CIRCUITS THEY SHOULD BE PLACED NEAR.
5. OBSERVE THE LAYOUT NOTES IN SCHEMATIC.

REV	DESCRIPTION	DATE	RELEASED
A	First Released Schematic	1/10/2013	
B	Second Released Schematic	3/28/2013	
C	Third Released Schematic	5/15/2013	
D	Fourth Released Schematic	9/12/2014	

SCHEMATIC CONTENTS

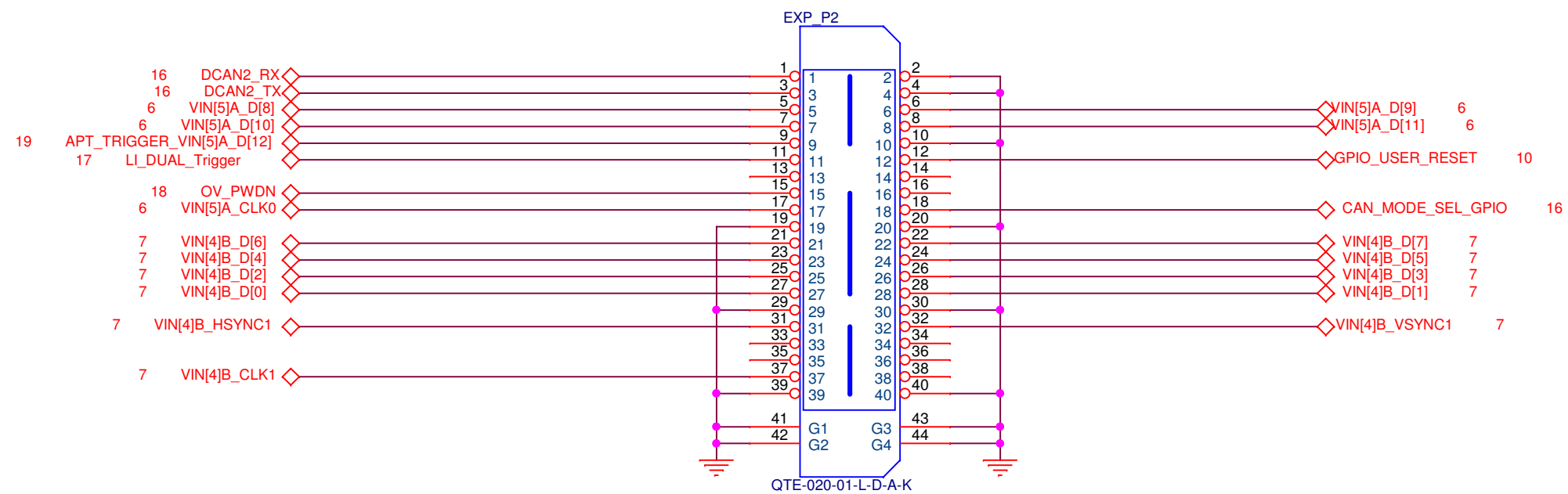
SH01 - TITLE  
 SH02 - IF CONN1  
 SH03 - IF CONN2  
 SH04 - IF CONN3  
 SH05 - MUX1 VIN1  
 SH06 - MUX2 VIN5  
 SH07 - MUX2 VIN4B  
 SH08 - MUX2 VIN2  
 SH09 - MUX2 VIN6  
 SH10 - MUX1 INPUTS  
 SH11 - MUX2 INPUTS  
 SH12 - MUX1 GND POWER  
 SH13 - MUX1 NC  
 SH14 - MUX2 GND POWER  
 SH15 - MUX2 NC  
 SH16 - CAN INTERFACE  
 SH17 - LEOPARD IMAGING  
 SH18 - OMNIVISION CONNECTOR  
 SH19 - APTINA IMAGER  
 SH20 - FPDLINK  
 SH21 - SIL9127A INTERFACE  
 SH22 - SIL9127A POWER  
 SH23 - HDMI IN PORT  
 SH24 - SIL POWER SUPPLIES  
 SH23 - VSH25 - CPLD POWER  
 SH26 - BUCK 3V3  
 SH27 - BUCK 5V  
 SH28 - 12V POWER ROUTER  
 SH29 - REV B/C CHANGES

SAMTEC .8mm MATING CONNECTORS FOR USE WITH SOCKETED CPU CARDS.  
 EXP\_P1, EXP\_P2, EXP\_P3  
 102620-0020R, CONN,SMT,HEADER,20x2,.316H,.8mm,HI-SPEED, Samtec, Inc. QTE-020-02-L-D-A-K  
 102620-0060R, CONN,SMT,HEADER,60x2,.316H,.8mm,HI-SPEED, Samtec, Inc. QTE-060-02-L-D-A-K

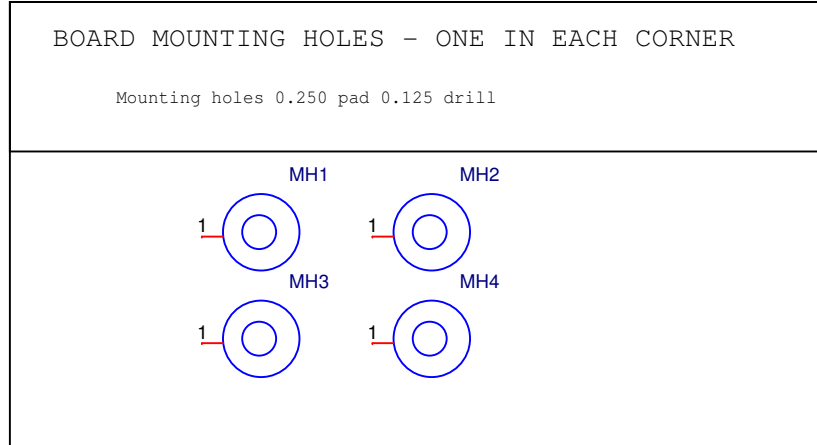
REVISION STATUS OF SHEETS

REV											DWN	DATE		
SH											R.R.P.	1/10/2013		
REV	D	D	D	D	A	A	A	B	D		CHK	T.W.K.	1/10/2013	
SH	21	22	23	24	25	26	27	28	29		ENGR	R.R.P.	1/10/2013	
REV	A	A	B	A	B	A	A	A	A	A	ENGR-MGR	R.R.P.	1/10/2013	
SH	11	12	13	14	15	16	17	18	19	20	QA	C.M.D.	1/10/2013	
REV	D	A	A	A	B	A	B	B	A	A	MFG	R.R.P.	1/10/2013	
SH	1	2	3	4	5	6	7	8	9	10	APPLICATION	RLSE	R.R.P.	1/10/2013

<b>Texas Instruments</b>			
<b>Title: VAYU VISION APPLICATION BOARD</b>			
<b>Page Contents: Title Block</b>			
<b>Size: B</b>	<b>DWG NO</b>	<b>516622-0001</b>	<b>Revision: D</b>
<b>Date: Tuesday, January 12, 2016</b>		<b>Sheet 1 of 29</b>	

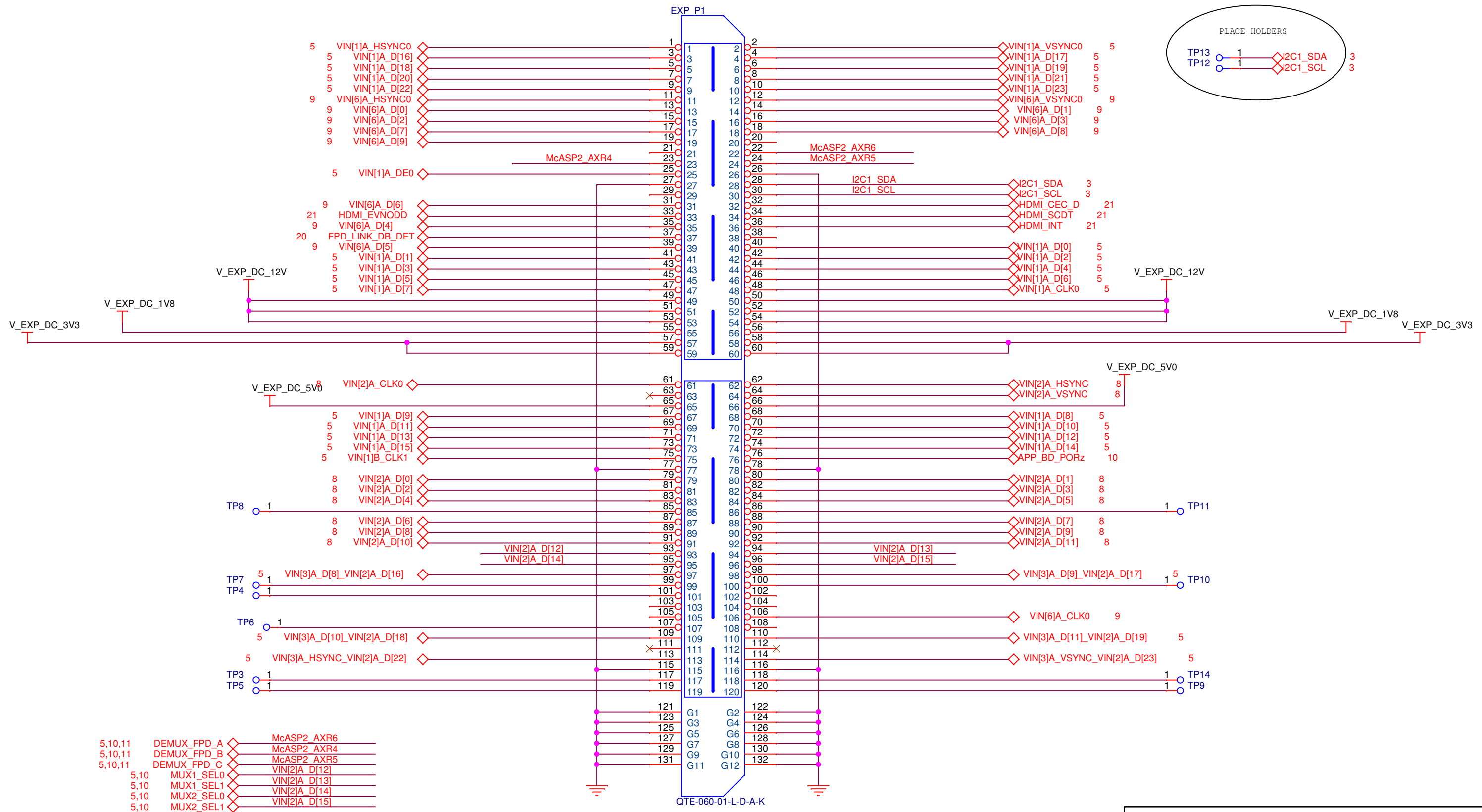


xref\_clk0 mcasep5\_ahclkx gpio6\_17



McASP5  
 mcasep5\_aclkx      vin5a\_d[11]  
 mcasep5\_fsx        vin5a\_d[10]  
 mcasep5\_axr[0]    vin5a\_d[9]  
 mcasep5\_axr[1]    vin5a\_d[8]

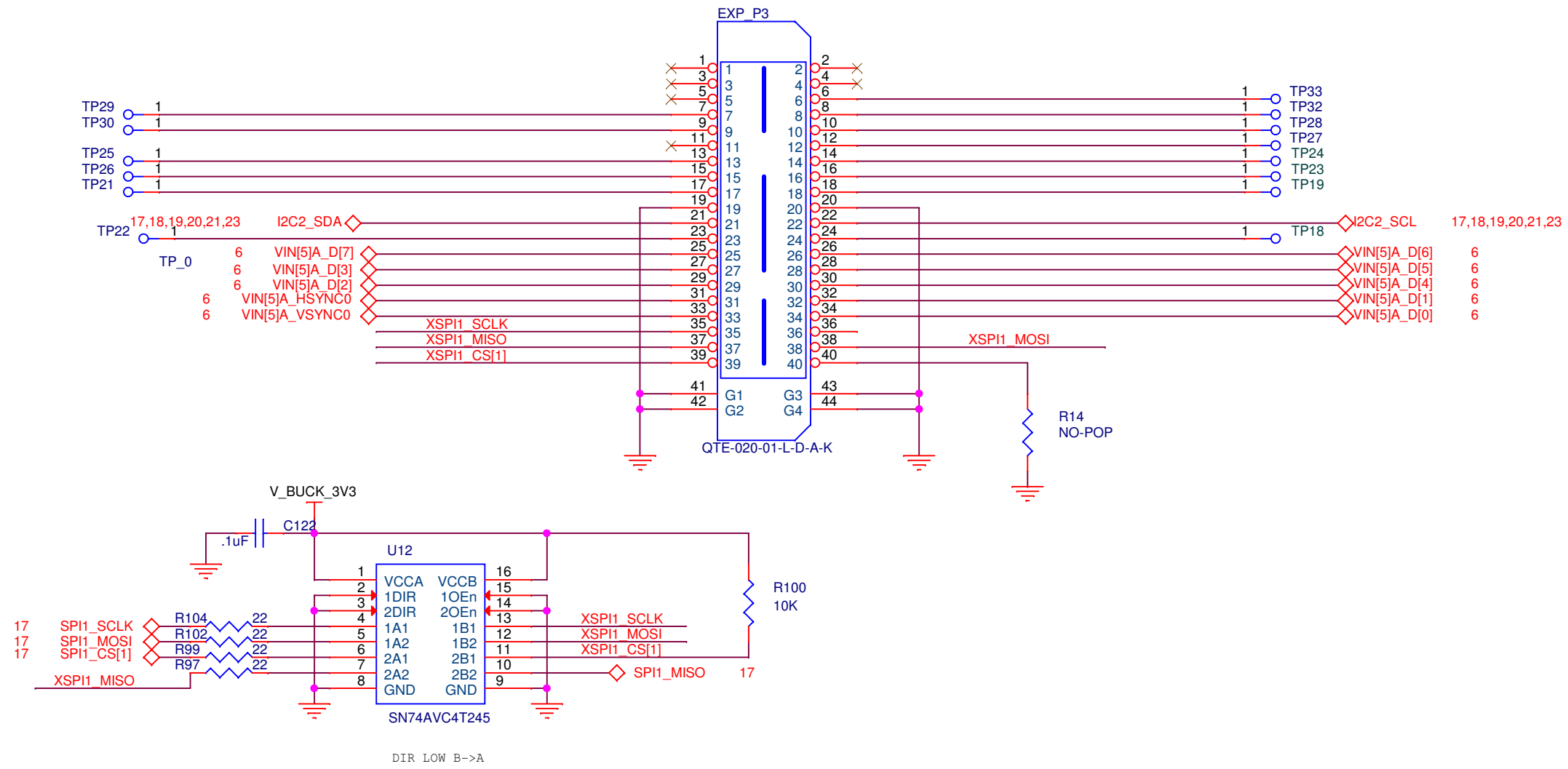
Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: INTERFACE CONN1			
Size: B	DWG NO	516622-0001	Revision: A
Date: Tuesday, January 12, 2016	Sheet 2 of 29		



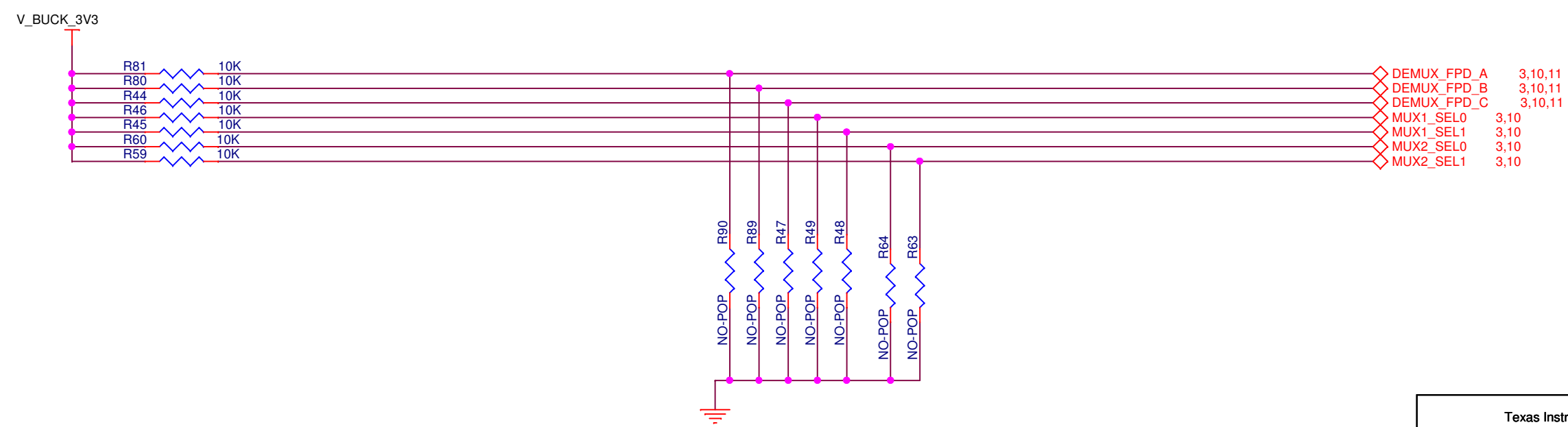
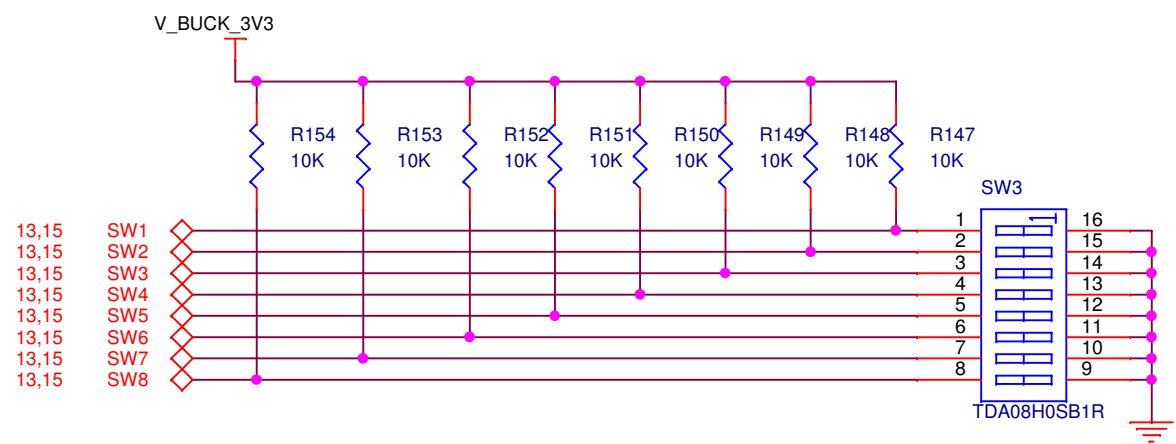
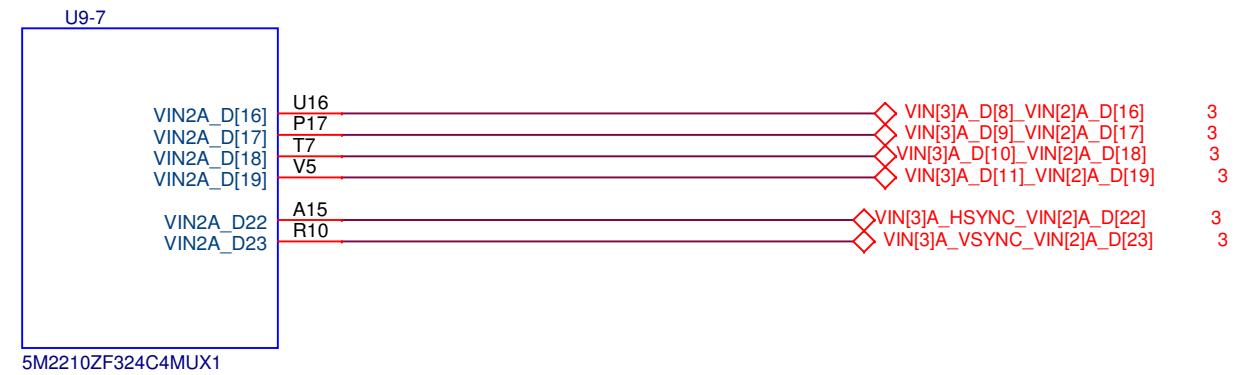
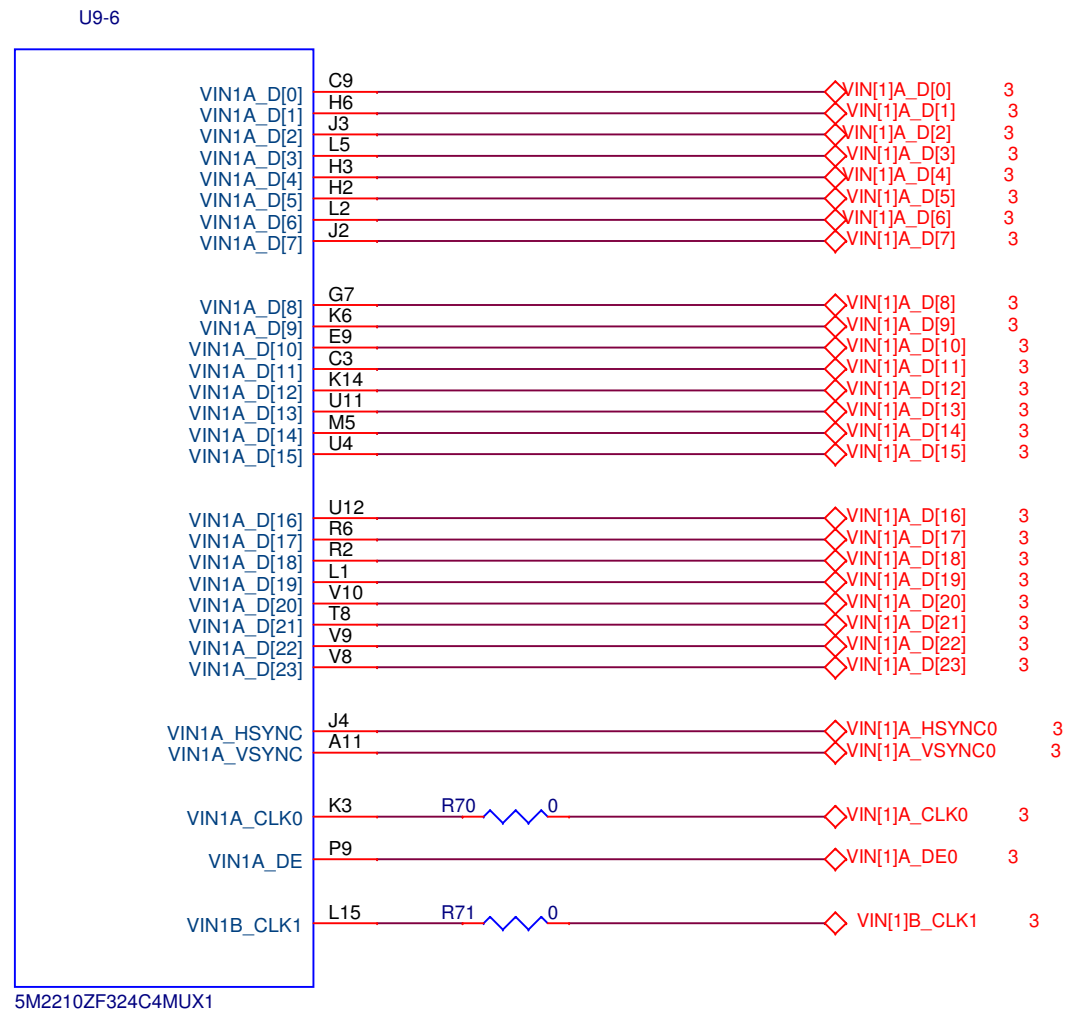
5,10,11	DEMUX_FPD_A	McASP2_AXR6
5,10,11	DEMUX_FPD_B	McASP2_AXR4
5,10,11	DEMUX_FPD_C	McASP2_AXR5
5,10	MUX1_SEL0	VIN[2]A_D[12]
5,10	MUX1_SEL1	VIN[2]A_D[13]
5,10	MUX2_SEL0	VIN[2]A_D[14]
5,10	MUX2_SEL1	VIN[2]A_D[15]

MAP GPIO FOR MUX/DEMUX

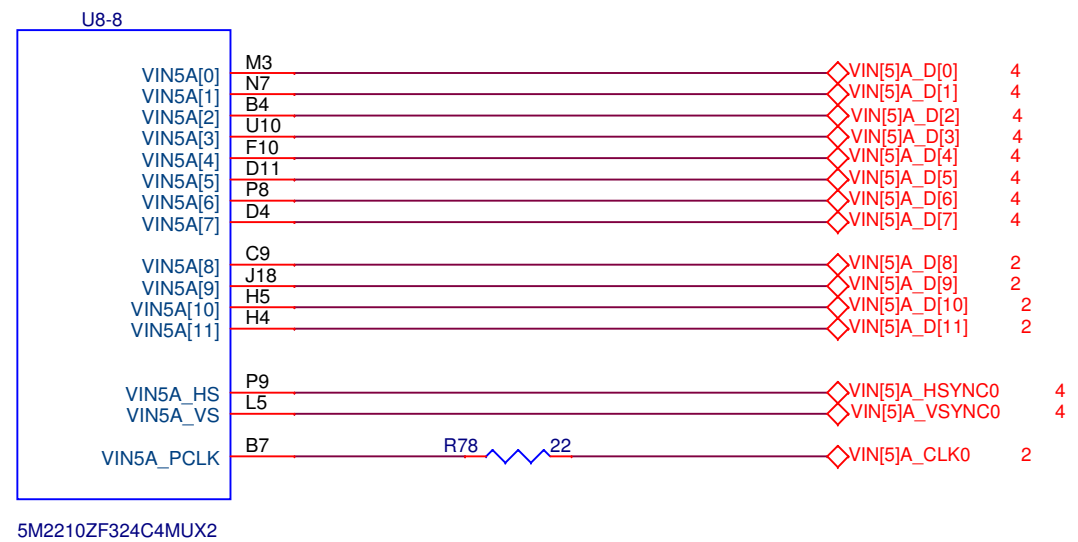
Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: INTERFACE CONN2			
Size: B	DWG NO	516622-0001	Revision: A
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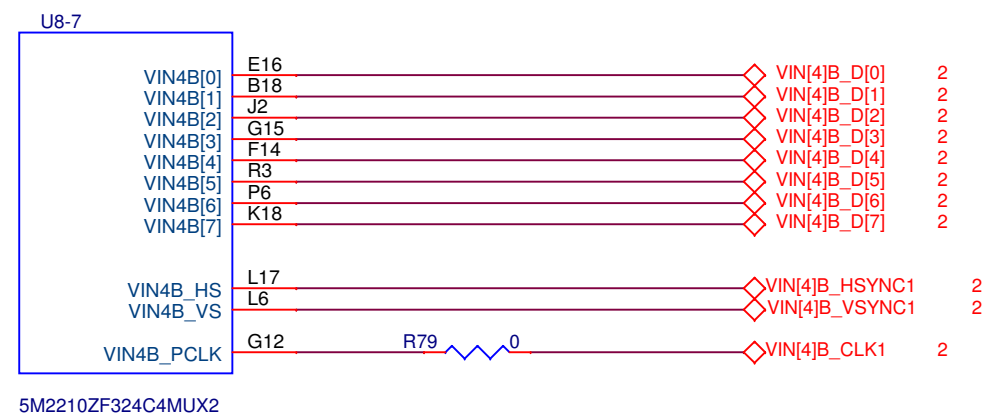
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Page Contents: INTERFACE CONN3			
Size: B	DWG NO	516622-0001	Revision: A
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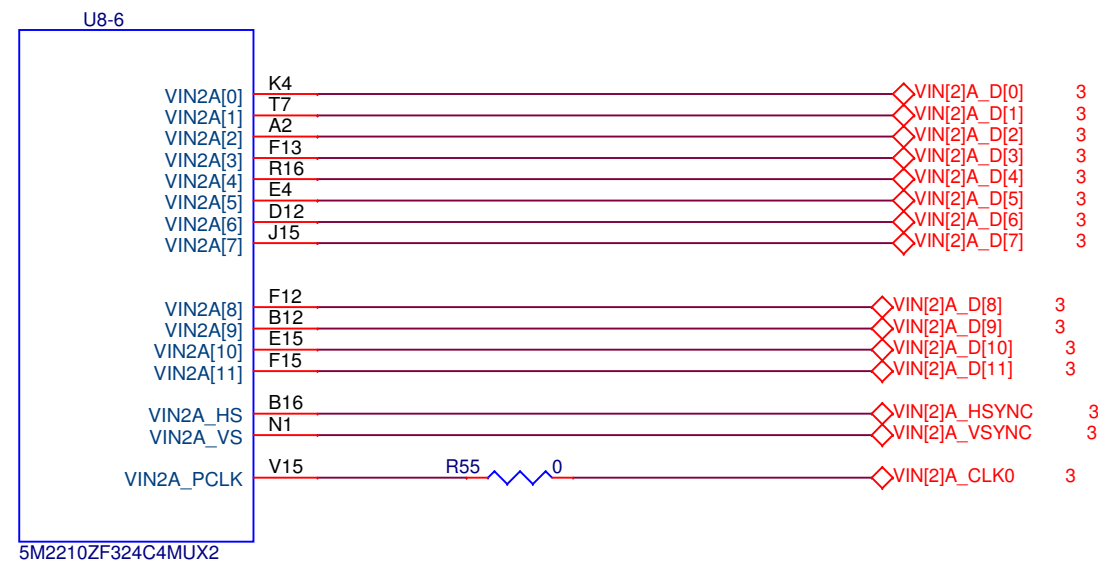
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Title: VAYU VISION APPLICATION BOARD			
Page Contents: MUX1 VIN1			
Size: B	DWG NO	516622-0001	Revision: B
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Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: MUX1 VIN5			
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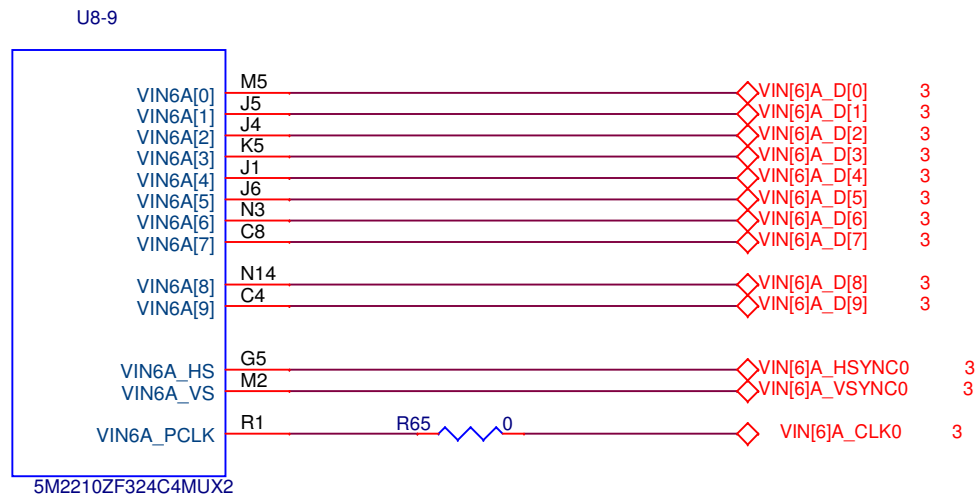


Texas Instruments			
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Page Contents: MUX1 VIN4B			
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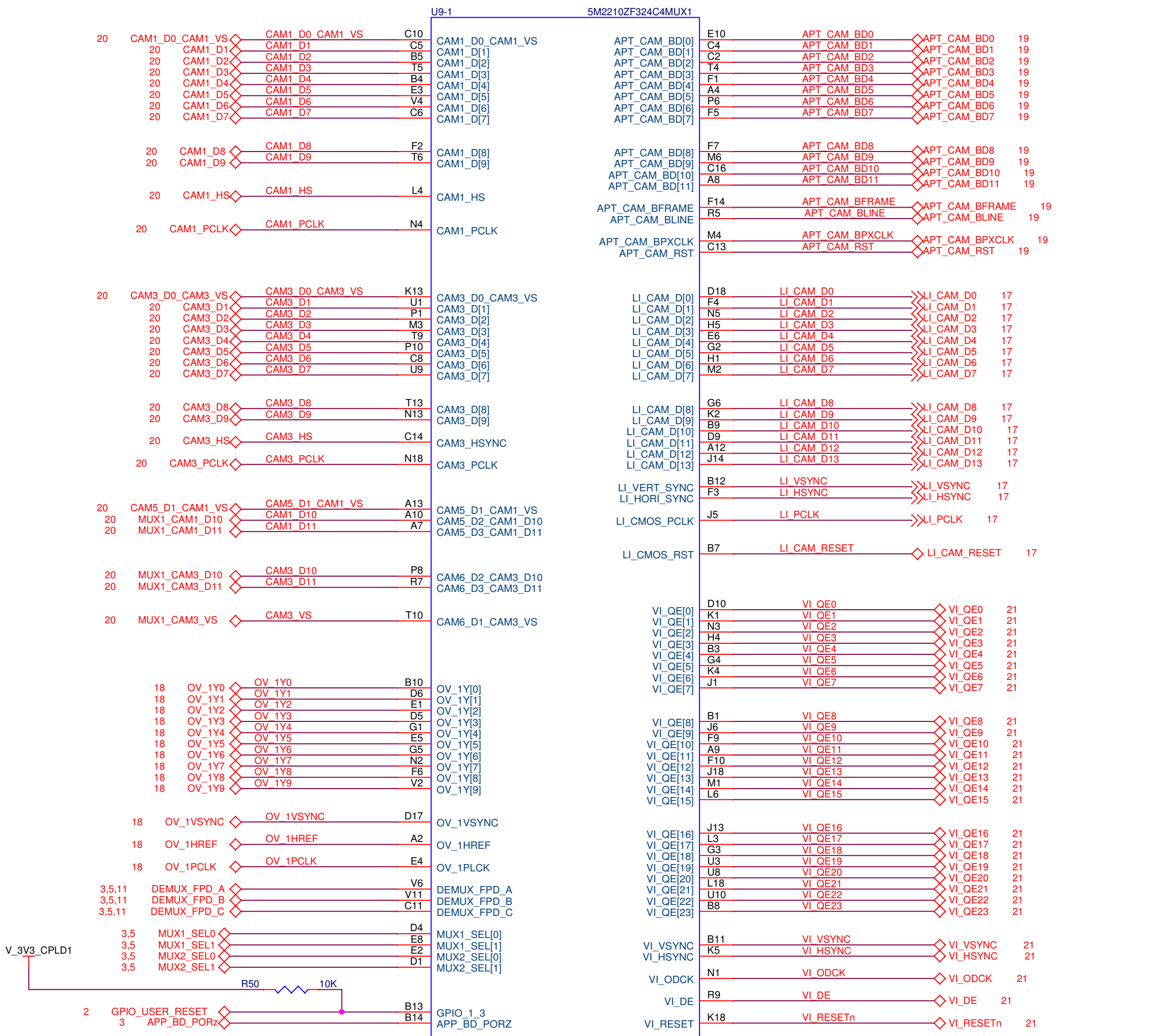


Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: MUX2 VIN2			
Size: B	DWG NO	516622-0001	Revision: A
Date: Tuesday, January 12, 2016	Sheet	8 of	29

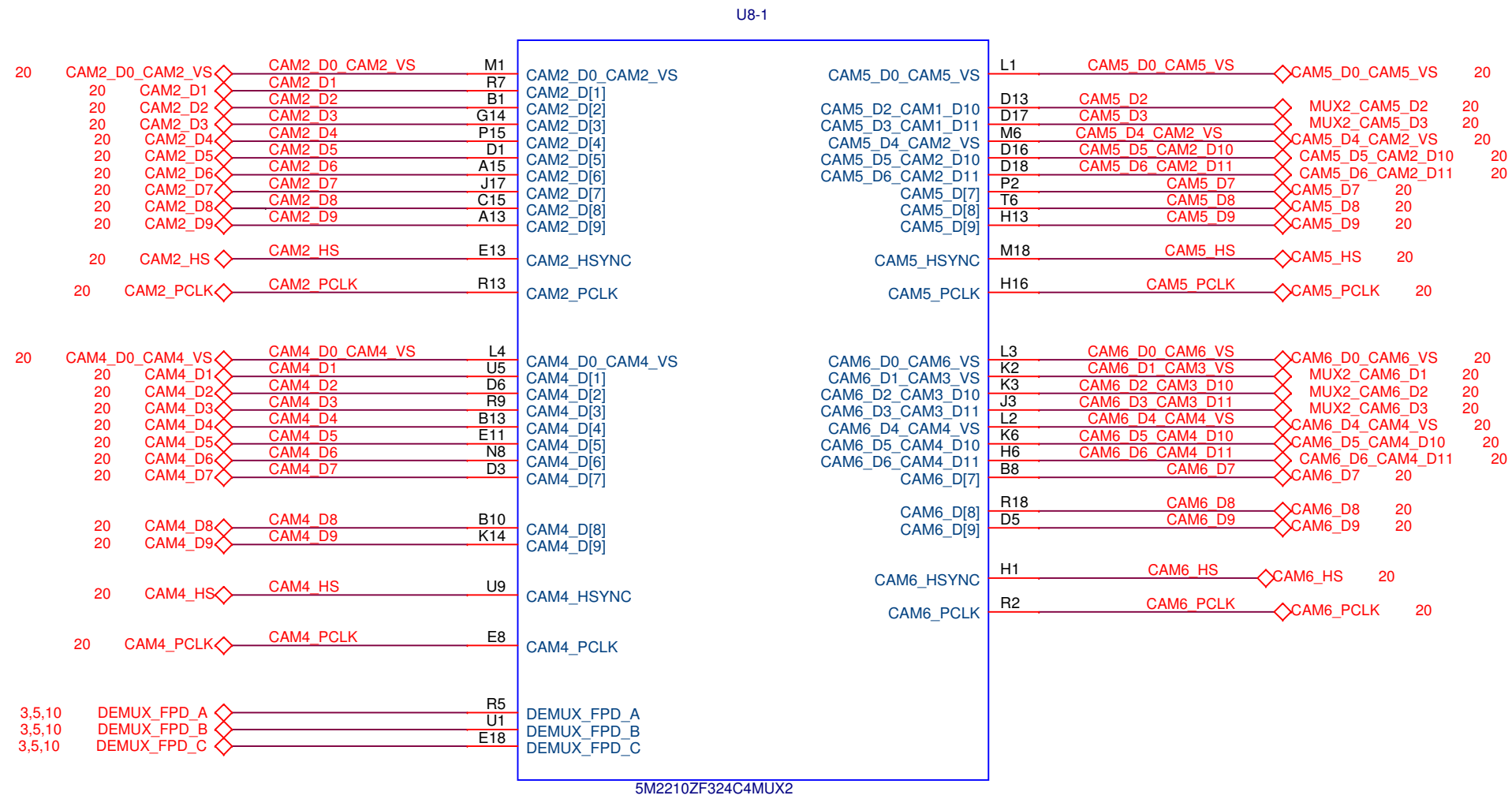




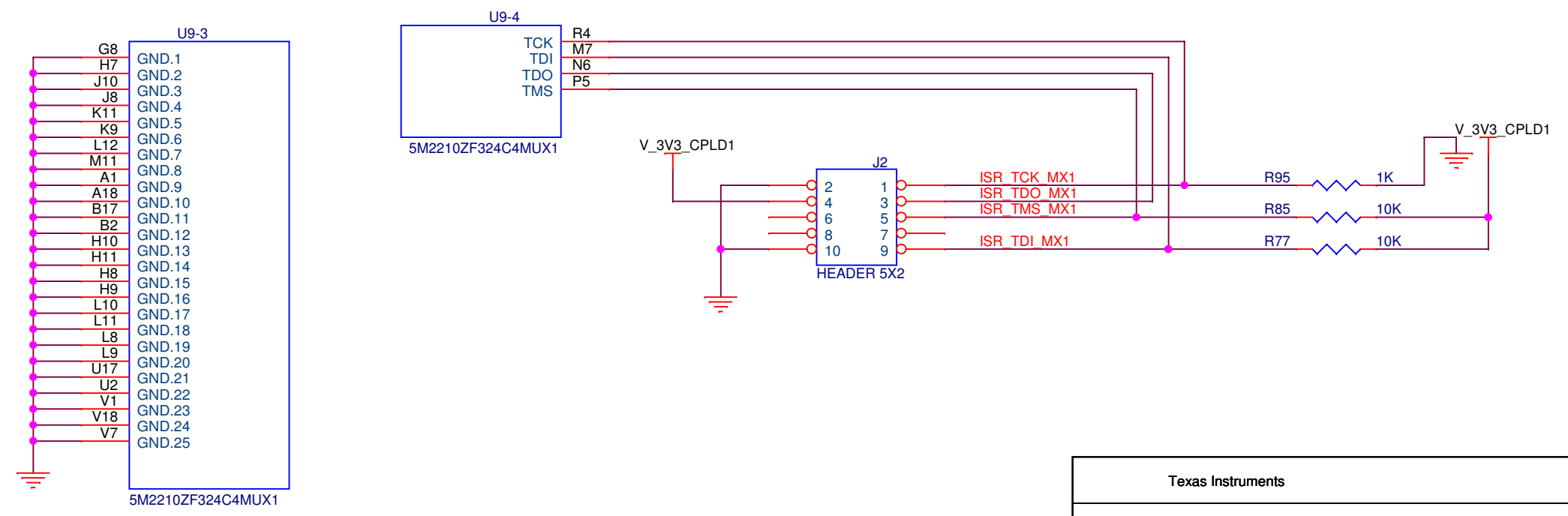
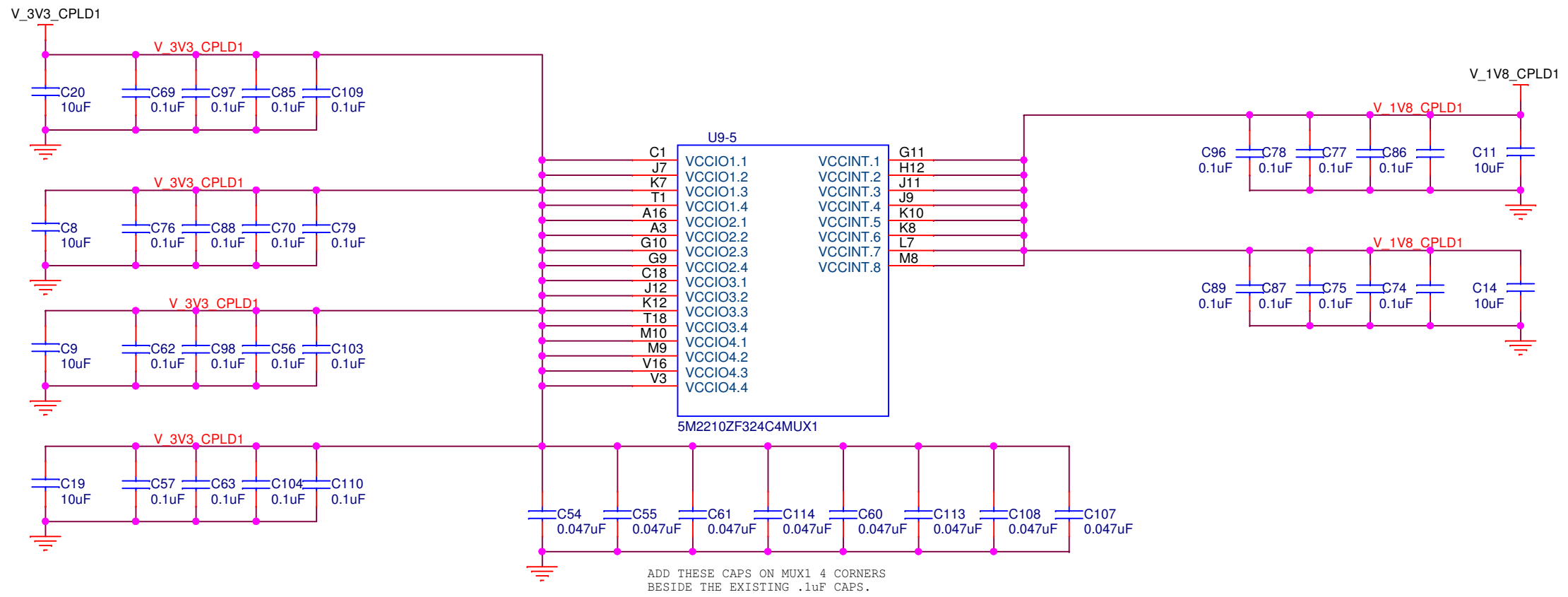
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Page Contents: MUX2 VIN6		
Size: B	DWG NO 516622-0001	Revision: A
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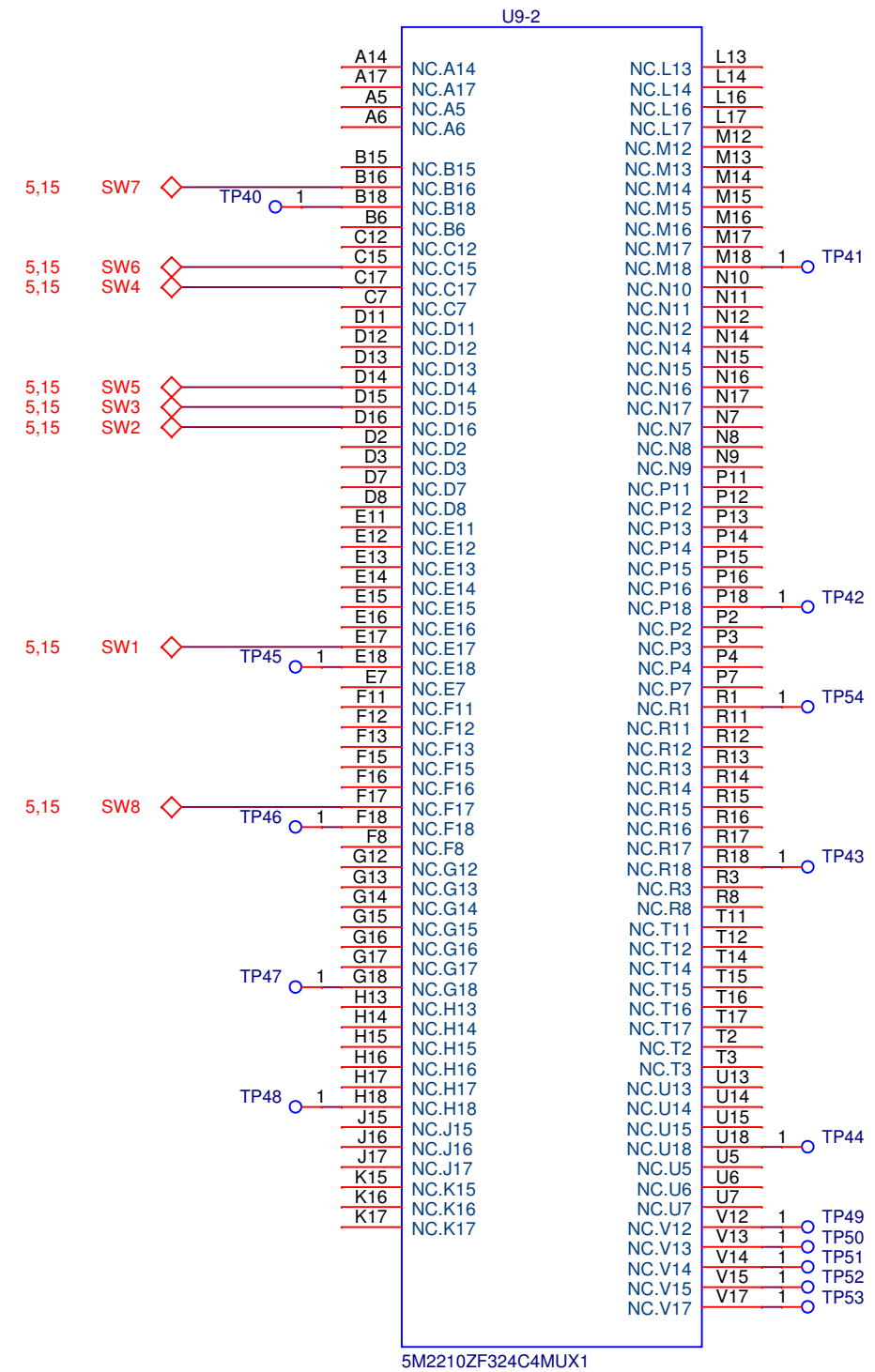
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Page Contents: MUX1 INPUTS			
Size: B	DWG NO	516622-0001	Revision: A
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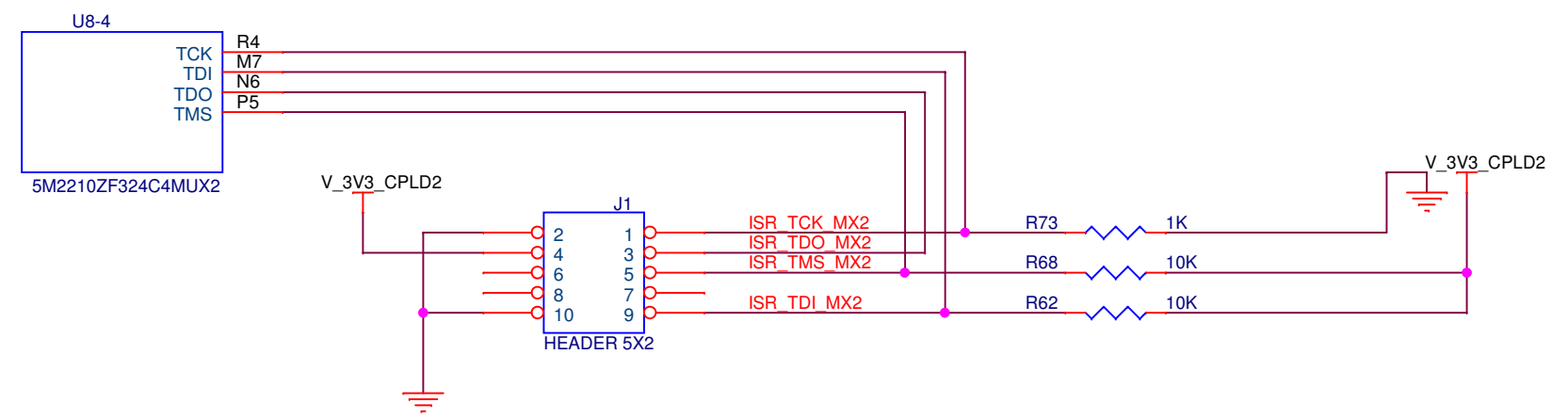
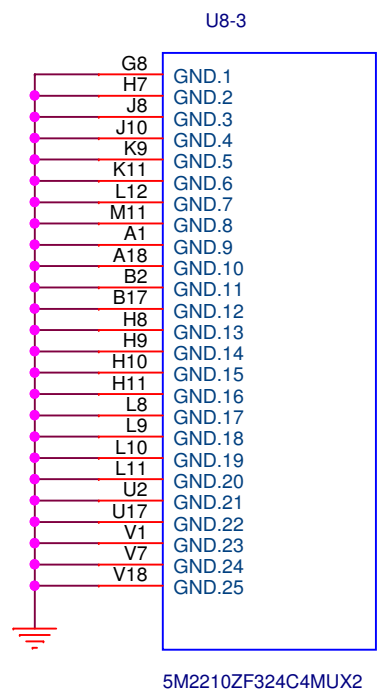
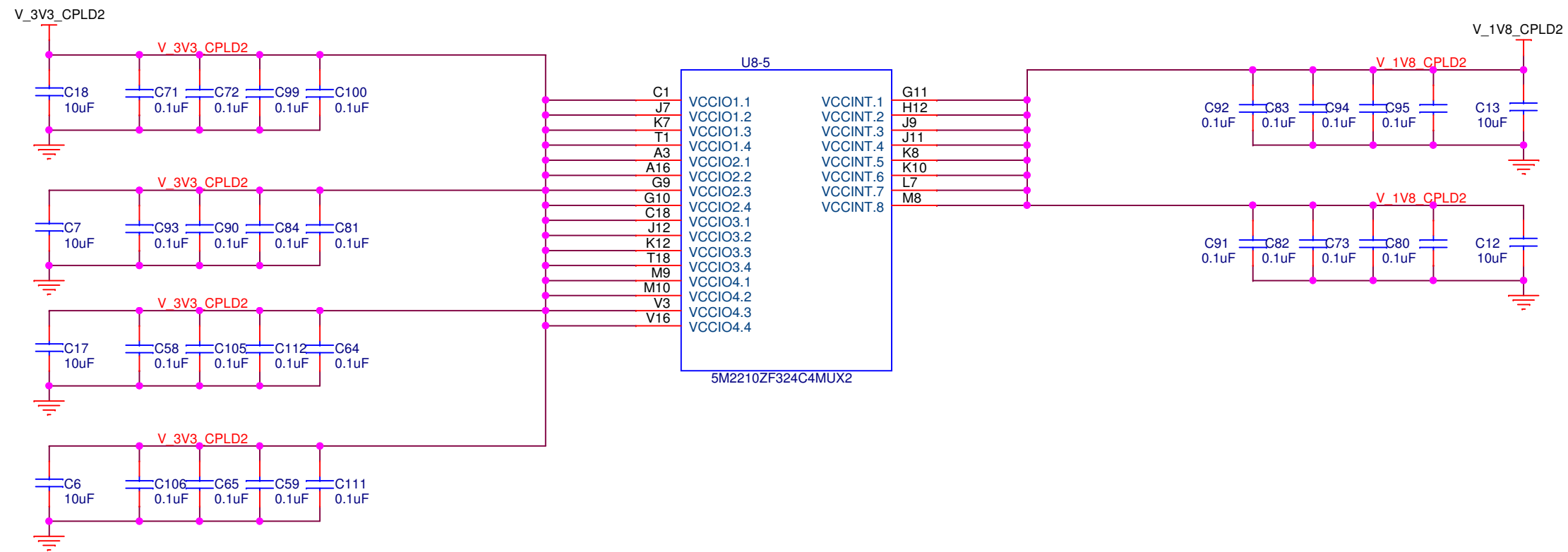
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Page Contents: MUX2 INPUTS			
Size: B	DWG NO	516622-0001	Revision: A
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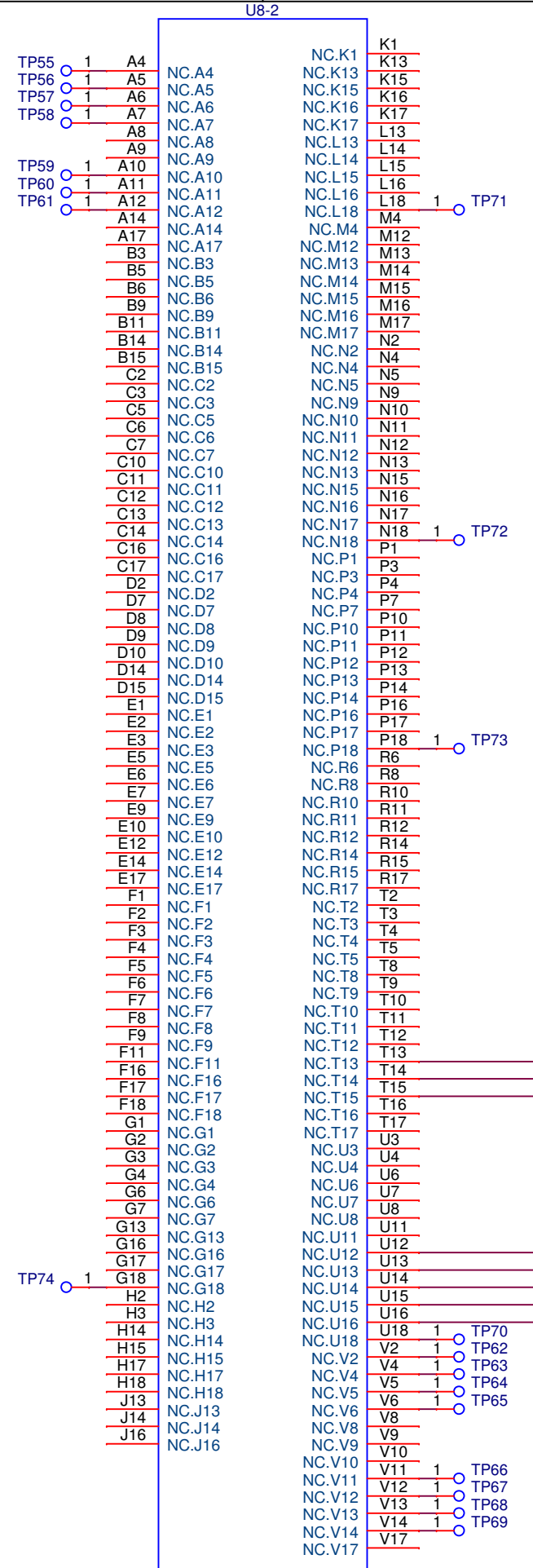
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Page Contents: MUX1 POWER/GROUND/JTAG			
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Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: MUX1 NO CONNECTS			
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Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: MUX2 POWER/GROUND/JTAG			
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SW3 5.13  
 SW5 5.13  
 SW7 5.13

SW1 5.13  
 SW2 5.13  
 SW4 5.13  
 SW6 5.13  
 SW8 5.13

Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: MUX2 NO CONNECTS			
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5

4

3

2

1

D

D

C

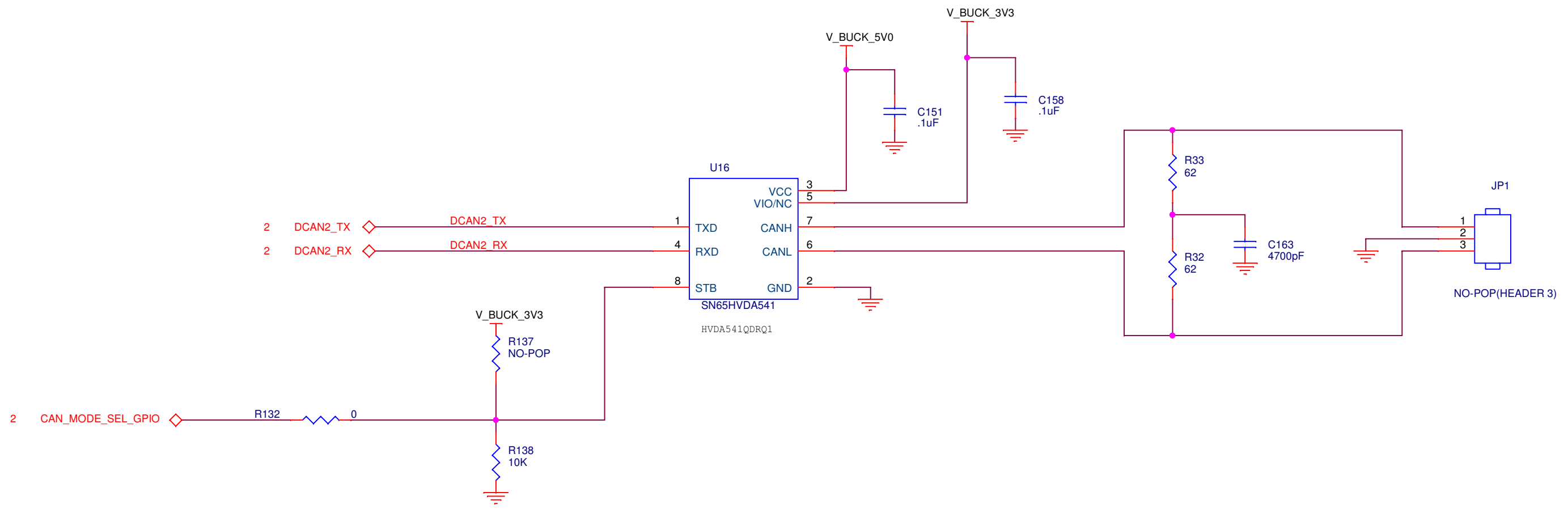
C

B

B

A

A



Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: CAN INTERFACE			
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5

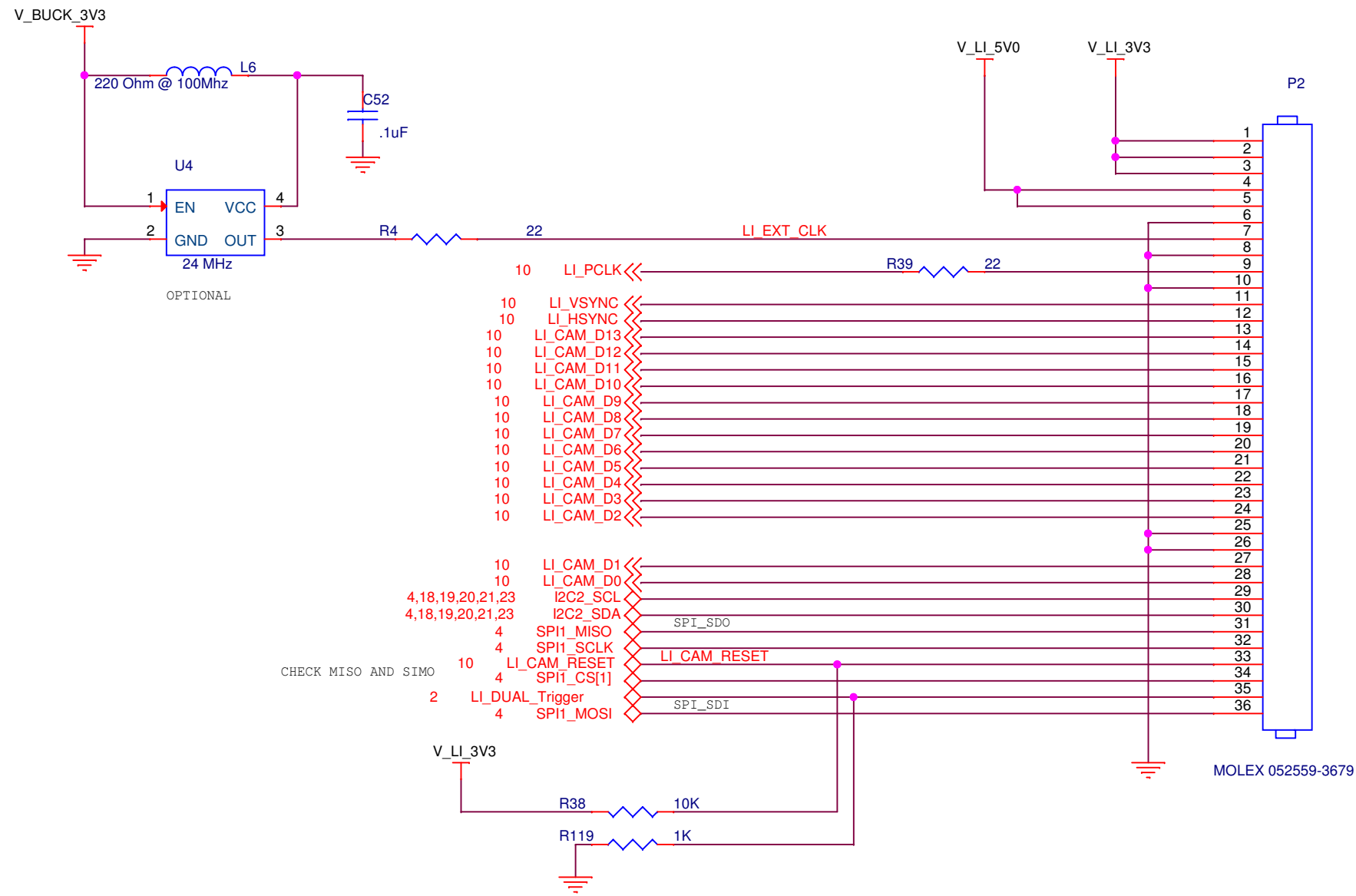
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3

2

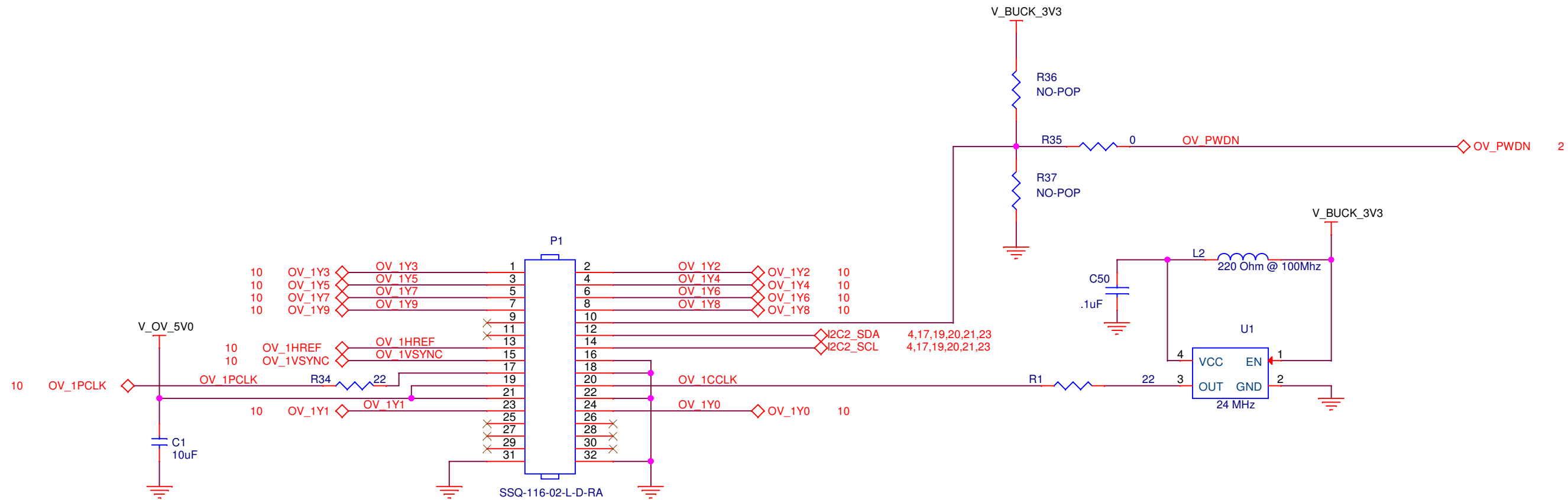
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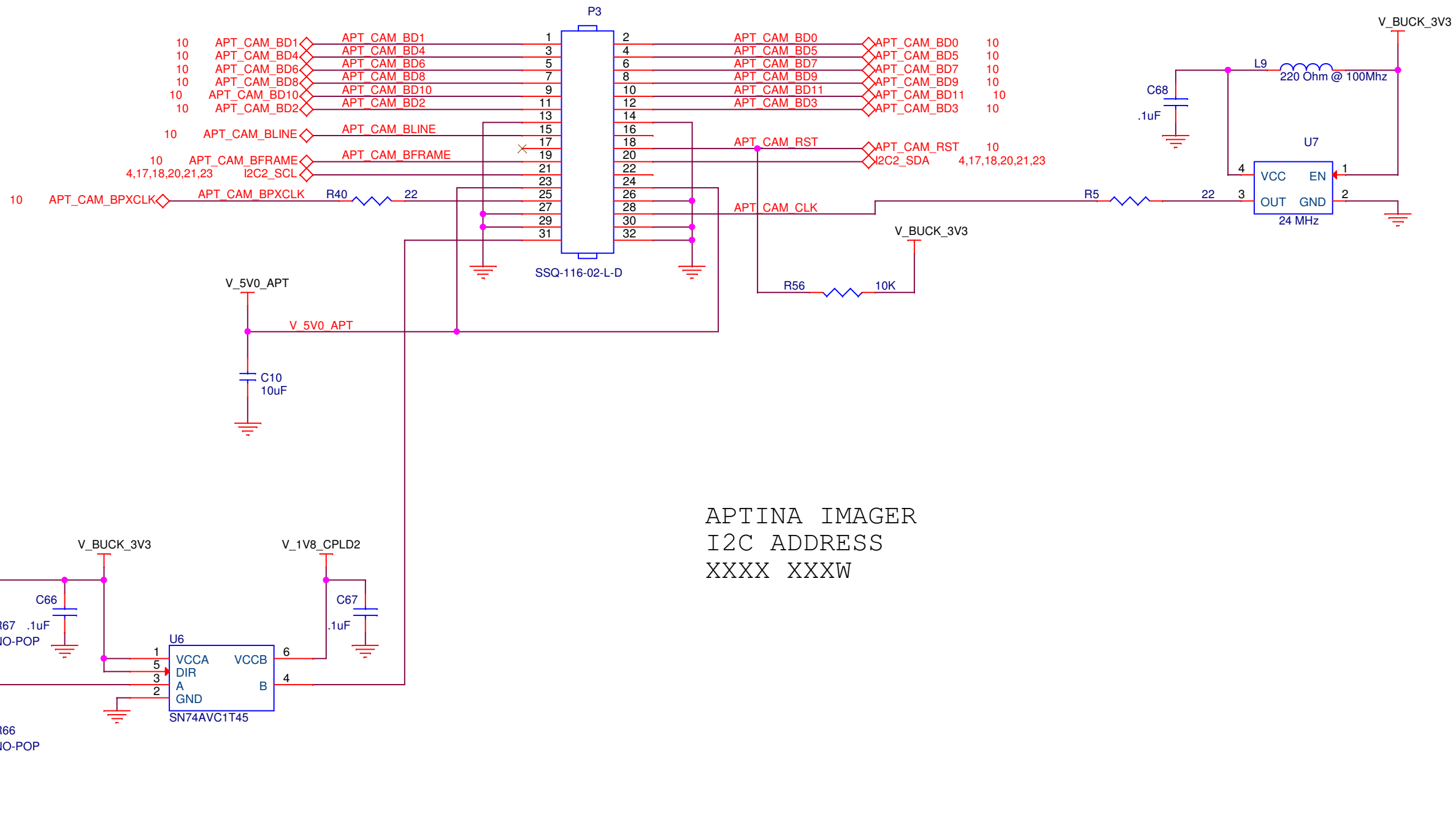
- MHC2
- MHC1
- MHC1
- MHC2

Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: LEOPARD IMAGING CONNECTOR			
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OMNI VISION  
 I2C ADDRESS  
 0110 000W

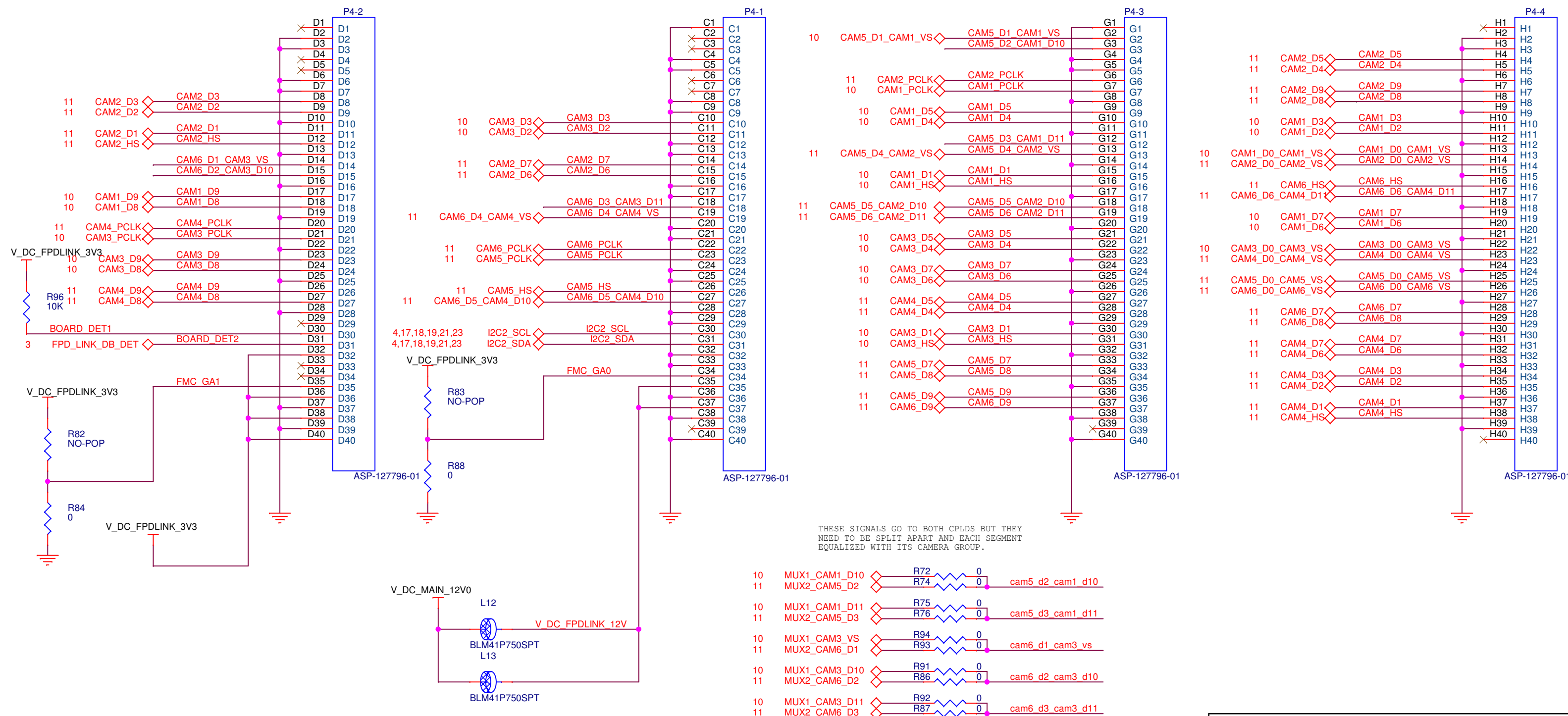
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Title: VAYU VISION APPLICATION BOARD			
Page Contents: OMNI VISION INTERFACE			
Size: B	DWG NO	516622-0001	Revision: A
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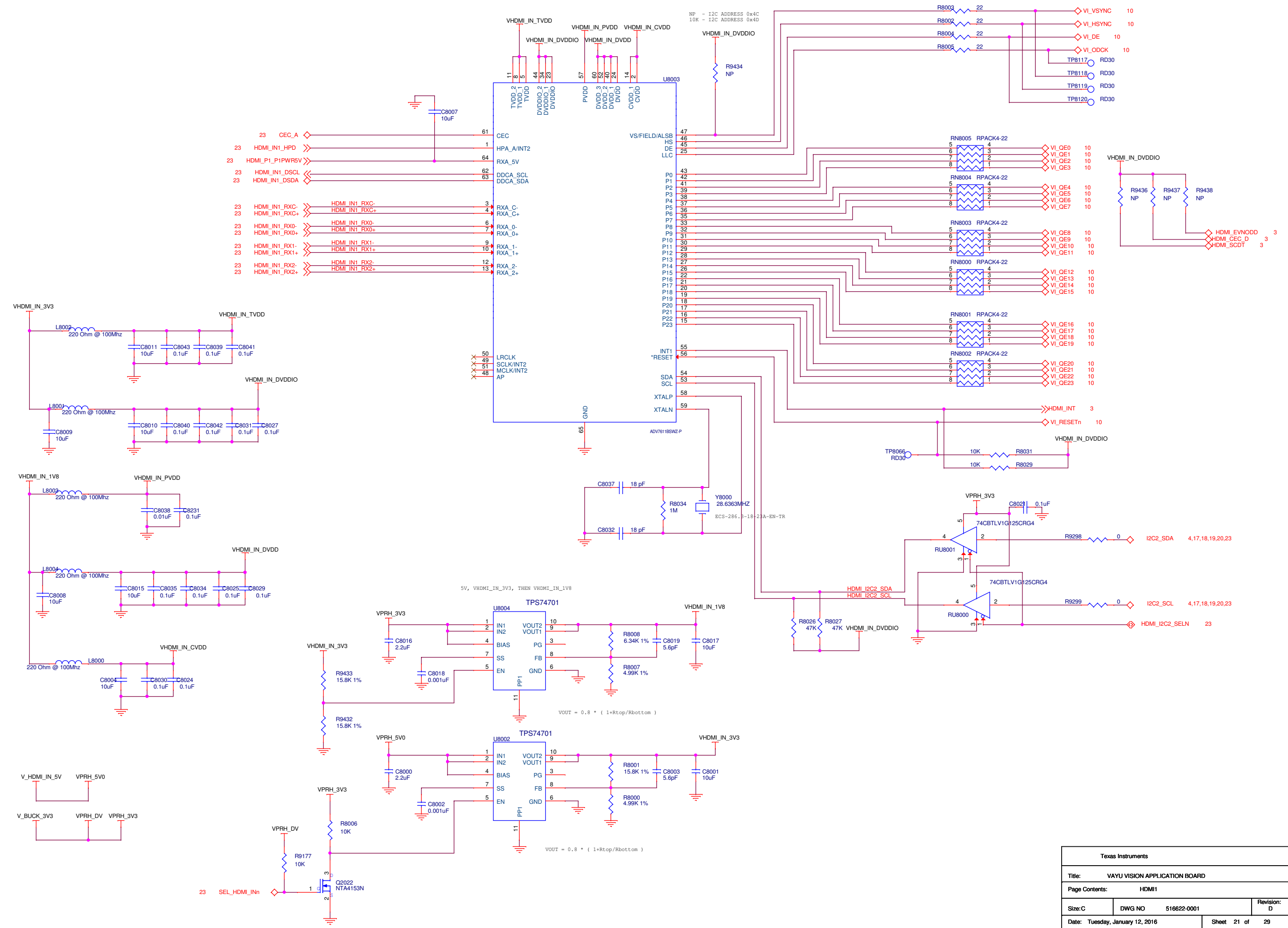
APTINA IMAGER  
 I2C ADDRESS  
 XXXX XXXW

Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: APTINA IMAGER INTERFACE			
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THE SAMTEC CONNECTOR PINNING IS H-G-D-C BOTTOM VIEW. THE FOLLOWING ARRANGEMENT IS PER THE TI SPECIFICATION. THE PINNING DOES MATCH THE FMC TABLE 2.2 AND 2.3.



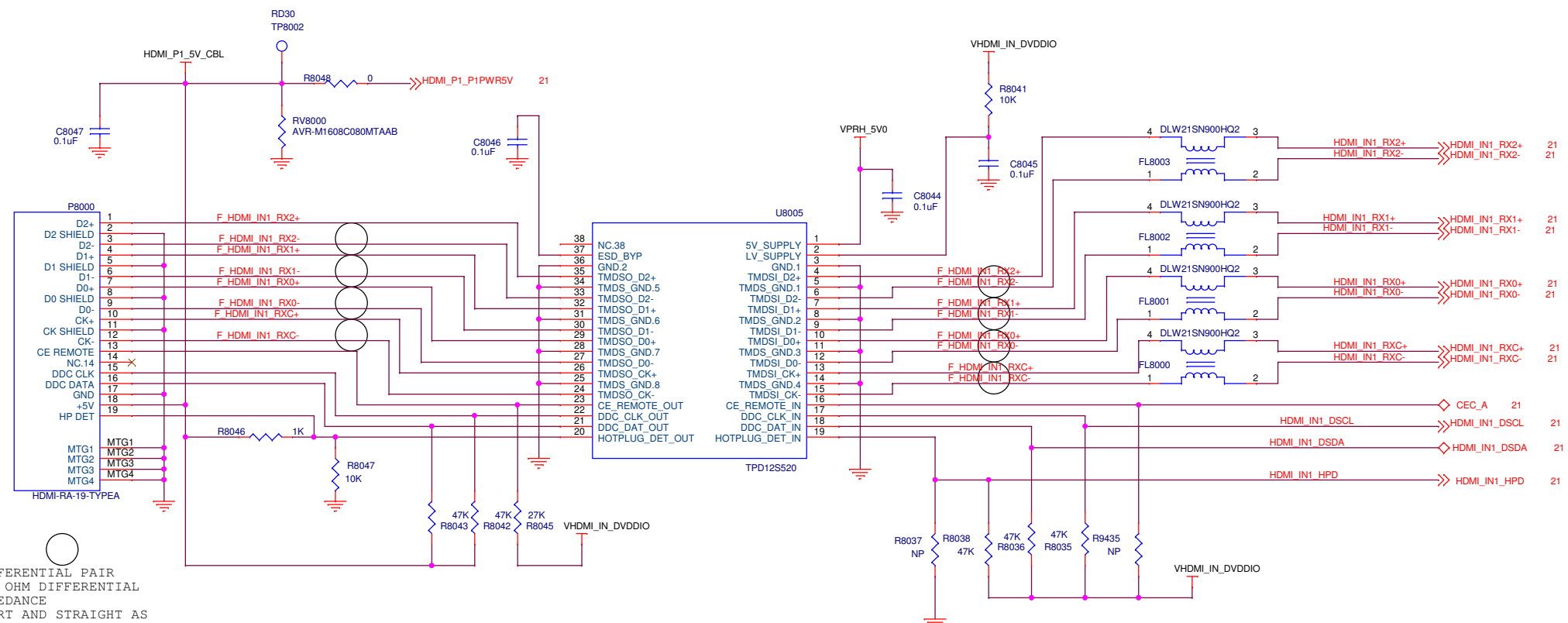
Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: SERIALIZER INTERFACES			
Size: B	DWG NO	516622-0001	Revision: A
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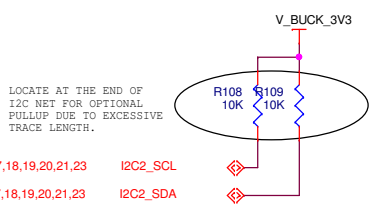
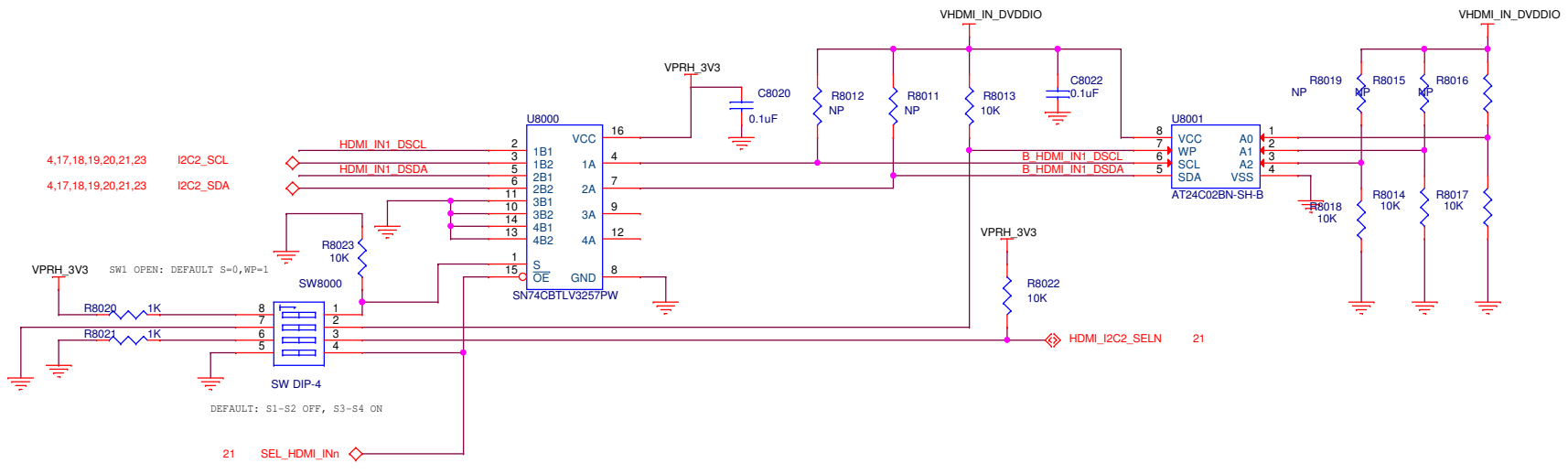
Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: HDMI1			
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Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: HDMI2			
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DIFFERENTIAL PAIR  
100 OHM DIFFERENTIAL  
IMPEDANCE  
SHORT AND STRAIGHT AS  
POSSIBLE,  
MINIMUM NUMBER OF VIAS



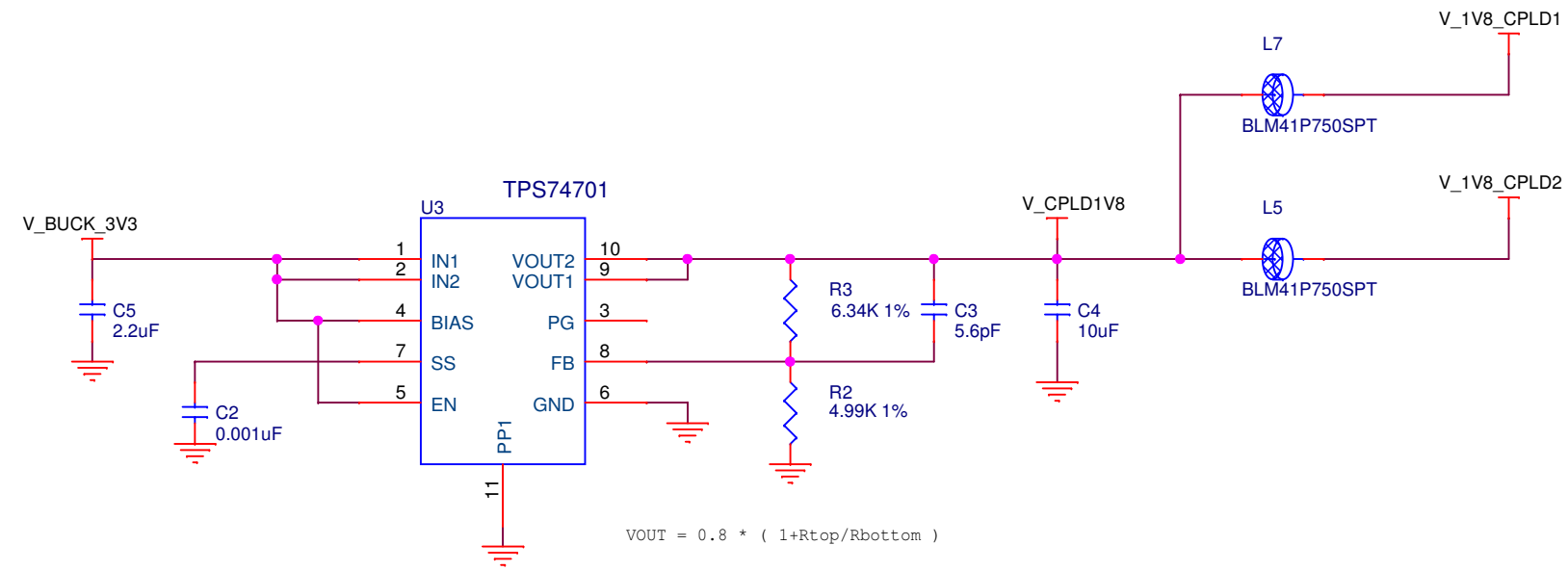
LOCATE AT THE END OF  
I2C NET FOR OPTIONAL  
PULLUP DUE TO EXCESSIVE  
TRACE LENGTH.

Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: HDMI3			
Size: C	DWG NO	516822-0001	Revision: D
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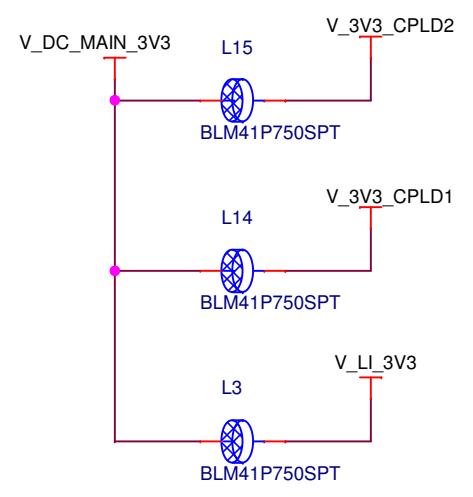
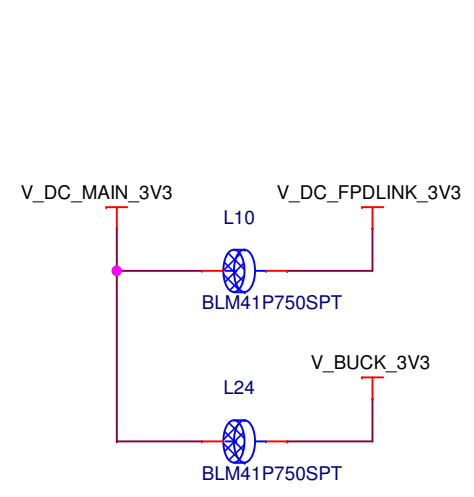
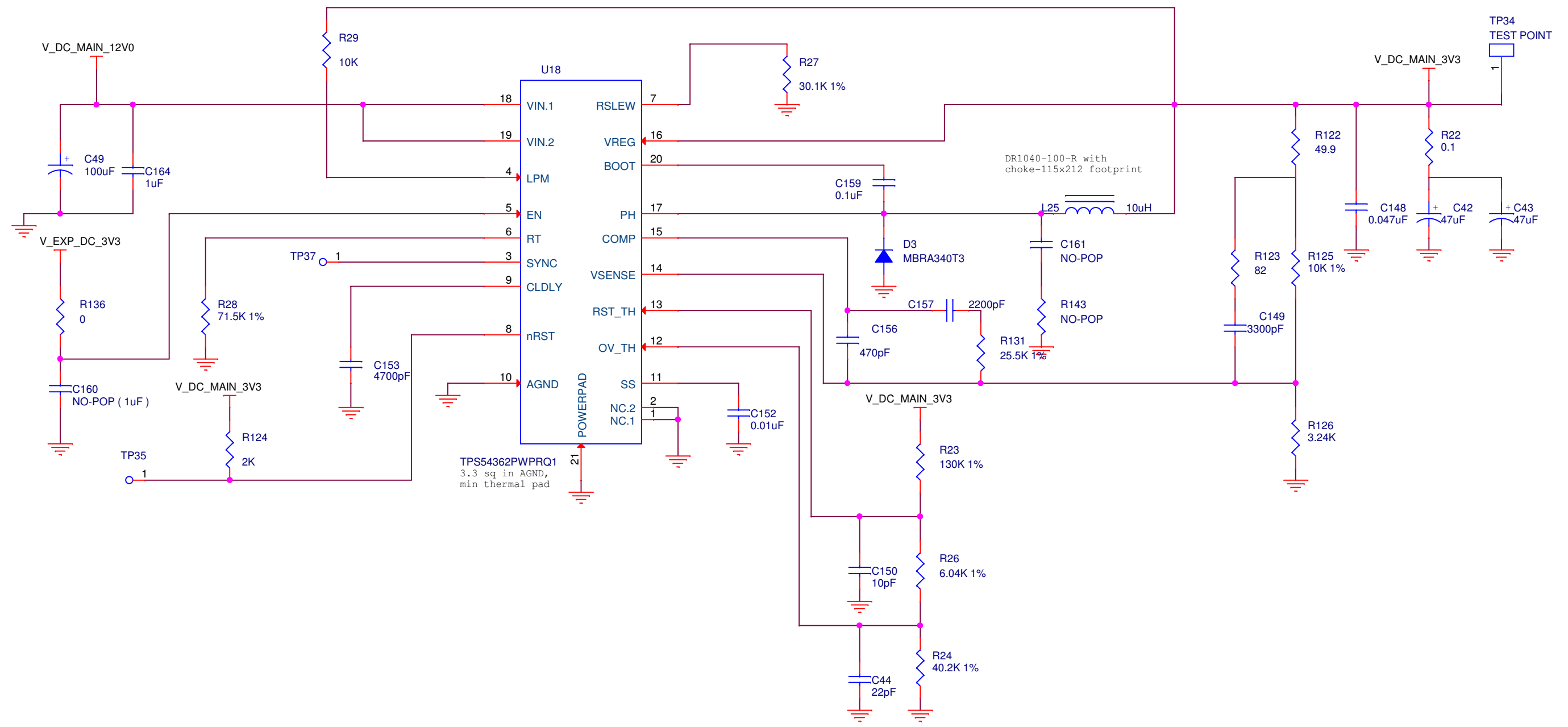
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Page Contents: VIN BLANK		
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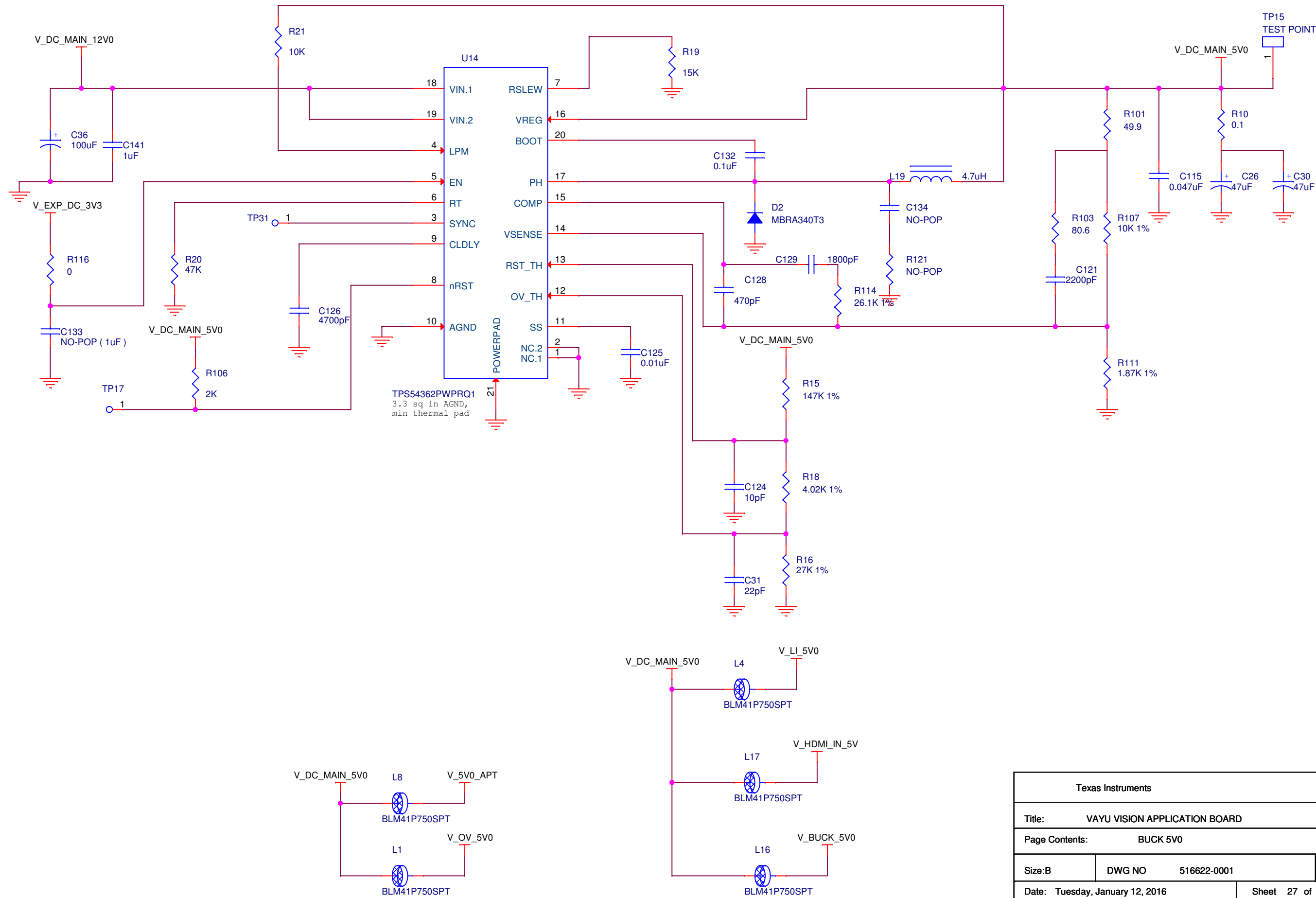
Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: CPLD POWER			
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3.3 Volts at 2AMPS  
FSW-1300KHZ

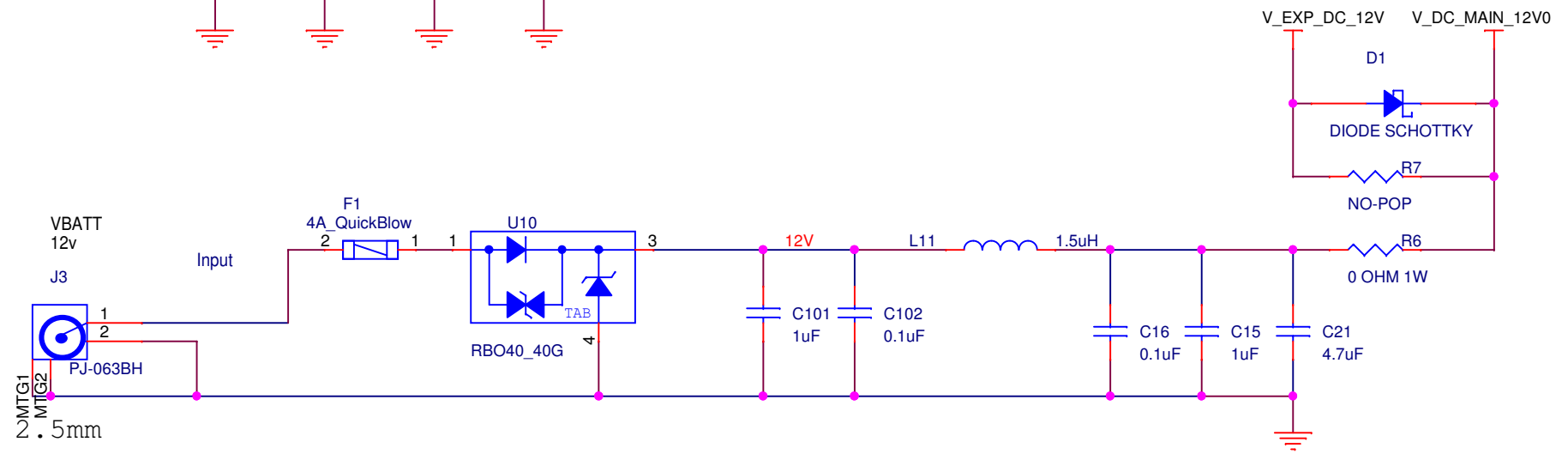
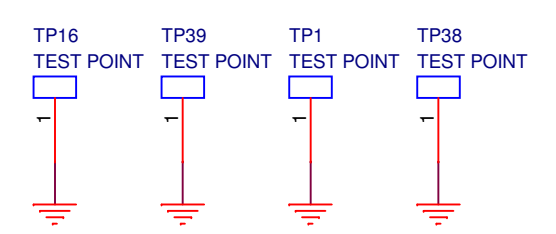
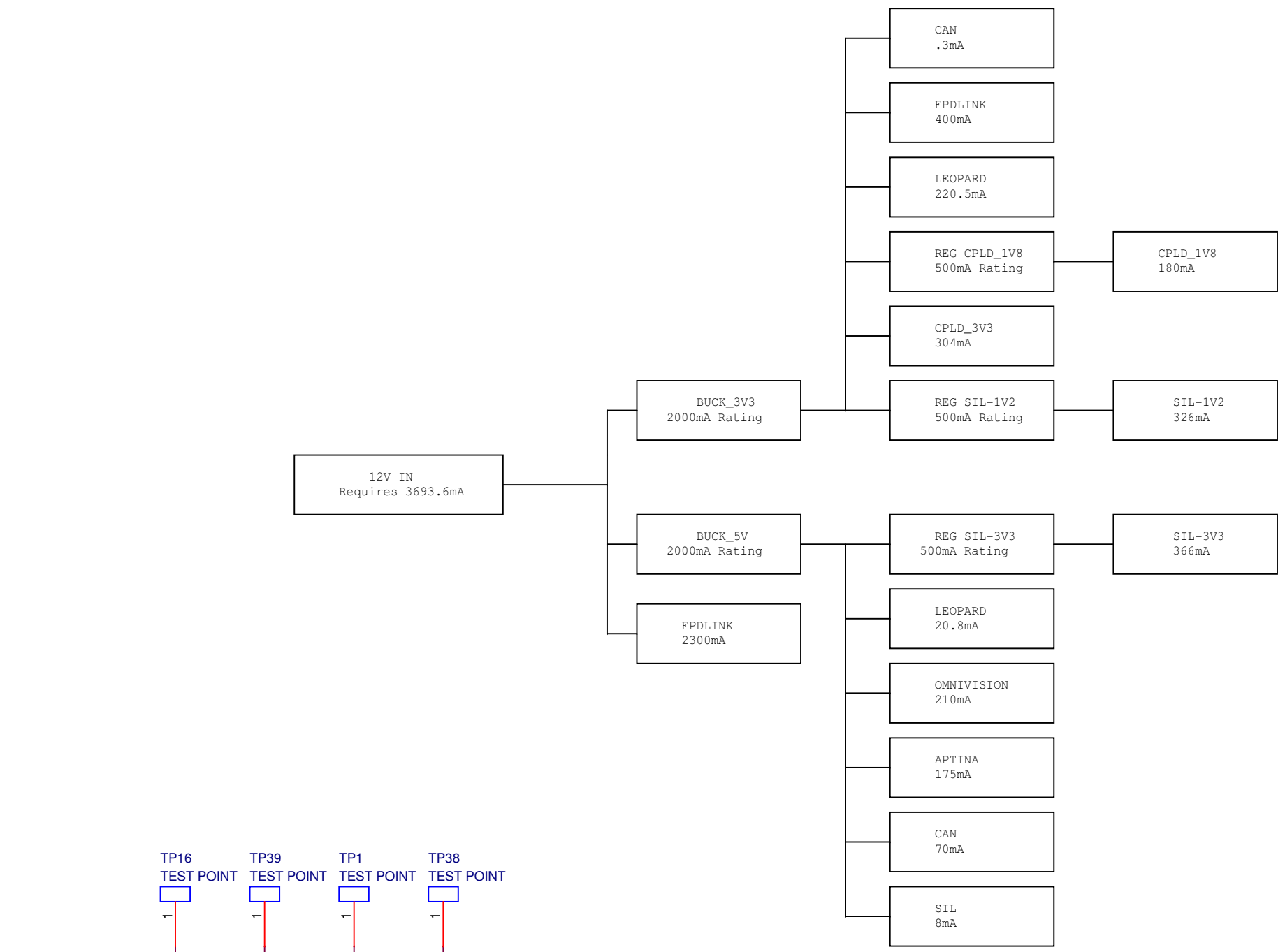


Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: BUCK 3V3			
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5.0Volts at 2AMPS  
FSW-1910KHZ



Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: BUCK 5V0			
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Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
Page Contents: 12V POWER ROUTER			
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<b>ECN Number</b>	516620-E002			
<b>Date Requested</b>	5/15/2013			
<b>Requester</b>	Tony C			
<b>Approvals</b>	Tony C			
<b>Assembly Number</b>	516620-0001			
<b>Current Assembly Rev</b>	B			
<b>New Assembly Rev</b>	C			
<b>Date Implemented</b>	5/15/2013			
<b>Implementation notes</b>				
<b>Item#</b>	<b>Init Date</b>	<b>Priority</b>	<b>Status</b>	<b>Description</b>
1	5/15/2013			Bump revisions From: PWB Rev B to PWB Rev C From : Logic Rev B to Logic Rev C
2	5/15/2013			Sheet 23: Change SW1 to a 4 position switch, add pullup/down and signal HDMI_I2C_SEL SW1 From 101184-0002R to 101184-0004R Add R155 101370-1002R, pullup Add R156 101370-1003R, pulldown  Sheet 21: Add RU1 and RU2 101689-0125R, 74CBTLV1G125CRG4 single gate isolation Add C166 101587-1100R Add pullups R157 and R158 47K, 101370-4703R
3	5/17/2013			Sheet 23: Dangling net V_DC_3V3 should have been connected to V_BUCK_3V3.
4	5/17/2013			Remove off sheet connections for power nets as it makes it difficult to find isolated power nets. Power symbols will connect all the powers together.

Rev D: 12-Sept-2014: Replace the SI9127 with ADV7611 for HDMI in. The ADV7611 is taken from the TDA3xx EVM.

Texas Instruments			
Title: VAYU VISION APPLICATION BOARD			
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