

AR0144_CSP_Demo3Head

Page	Description
1	Title Page
2	Block Diagram
3	Pinout
4	Sensor
5	Power
6	Clock and Reset
7	External Interfaces

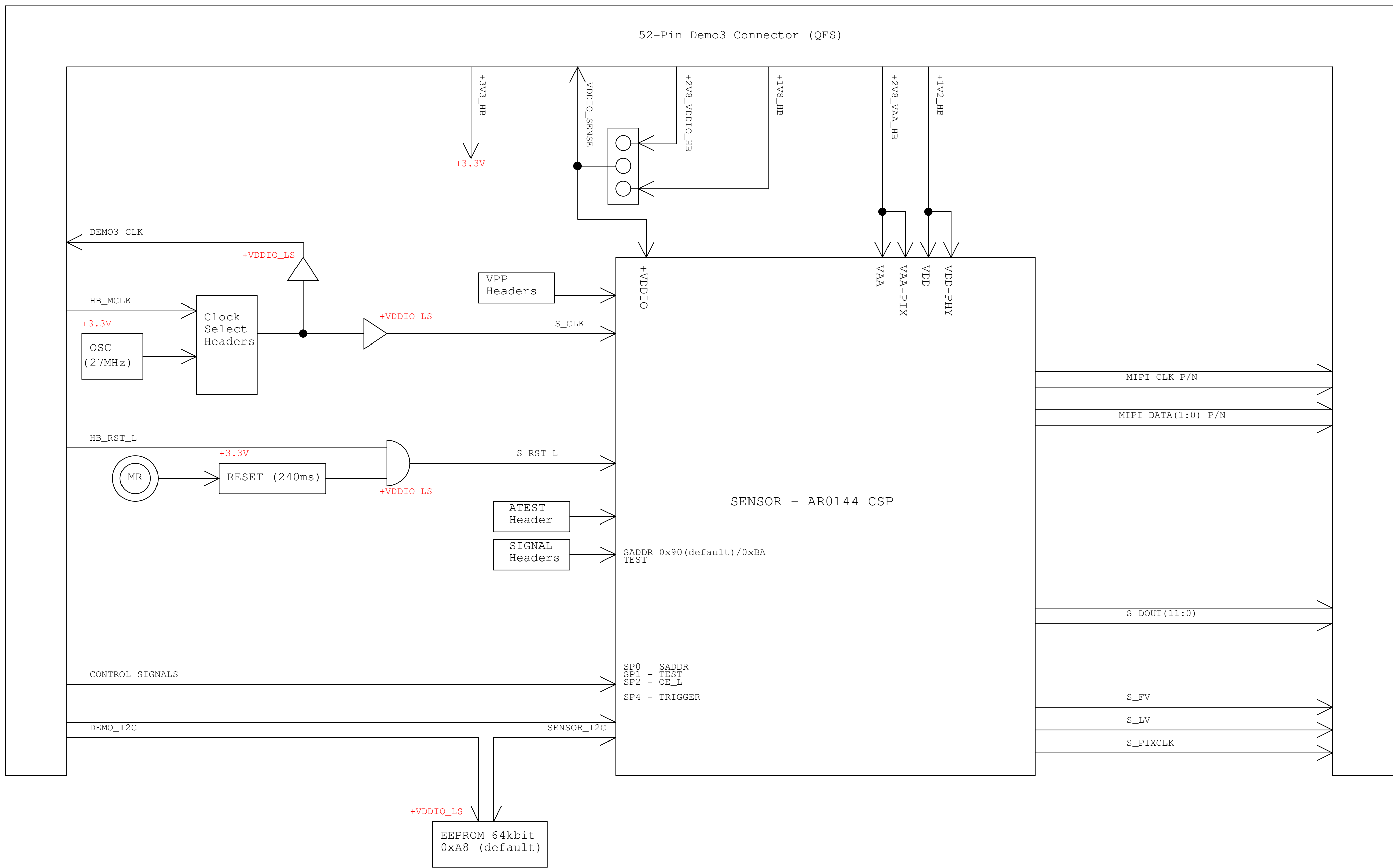
Rev	Who	Date	Description
Rev 0.0	Joe KK	05/07/12	Initial
Rev 0.1	skumar	10/26/15	Initial
Rev 0.2	skumar	11/04/15	- Replaced C&K switch (PTS635SL25SMTRLFS) with TE switch part 147873-2
		11/09/15	- Swapped parallel data signal at RP1,RP2,RP3 and RP4



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Title Page		
Size C	Document Name AR0144-CSP_Demo3Head	Rev 0.2
Date: Monday, November 09, 2015	Sheet 1	of 7

Block Diagram



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Title Block Diagram

Size C Document Name AR0144-CSP_Demo3Head

Rev 0.2

Date: Tuesday, November 03, 2015 Sheet 2 of 7

Pinout

	1	2	3	4	5	6	7	8	9
A	DGND	VDDIO2V8R1V8	DVDD1V2	DATA1_P	CLK_P	DATA0_P	SHUTTER	TEST	
B	LINE_VALID	DVDD1V2	EXTCLK	DATA1_N	CLK_N	DATA0_N	SADDR	VDDIO2V8R1V8	
C	DOUT11	VDDIO2V8R1V8	PIXCLK	FRAME_VALID	DVDD1V2PHY	DVDD1V2	SCL	VDDIO2V8R1V8	
D	DOUT7	DOUT8	DOUT9	DOUT10	DGND	DGND	OUTPUT_ENABLE_N	DVDD1V2	AGND
E	DOUT5	DOUT6	VDDIO2V8R1V8	DOUT4	DOUT3	SDA	TRIGGER	DGND	VAAHV_NPIX
F	DGND	DVDD1V2	DOUT2	DOUT1	DOUT0	FLASH	DGND	DGND	VAAPIX_2V8
G	RESET_N	VAA2V8	AGND	DVDD1V2	DVDD1V2	DVDD1V2	AGND	VAA2V8	ATEST
H	VAA2V8	VAA2V8	AGND	DGND	DGND	DGND	AGND	VAA2V8	VAA2V8

TOP SIDE VIEW

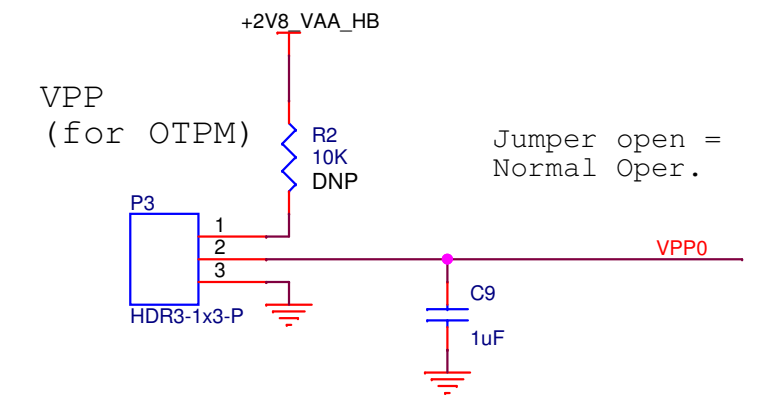
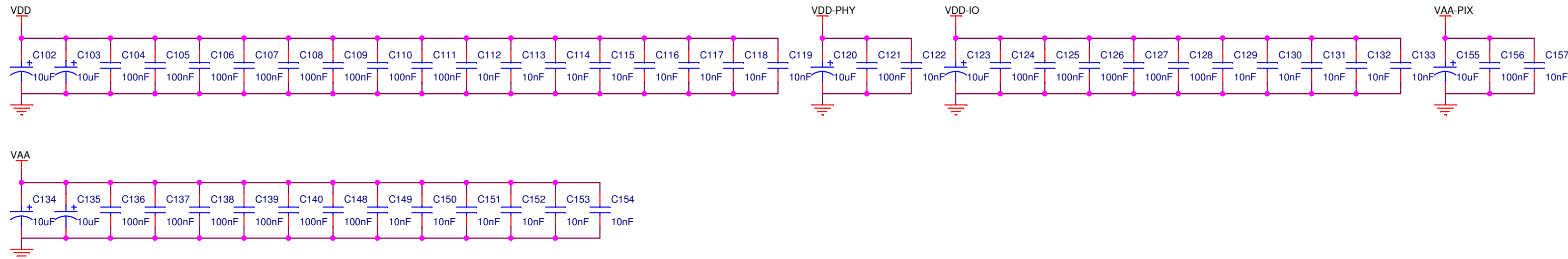


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Title			Pinout		
Size	Document Name				Rev
C	AR0144-CSP_Demo3Head				0.2
Date:			Tuesday, November 03, 2015		
			Sheet	3	of 7

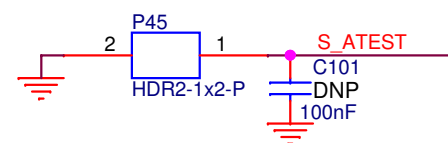
Sensor

5	+5V0		5	+5V0
5	+3V3		5	+3V3
5	+VDDIO_LS		5,6	+VDDIO_LS
5	VDD			VDD
5	VDD-PHY			VDD-PHY
5	VDD-IO			VDD-IO
5	VAA			VAA
5	VAA-PIX			VAA-PIX



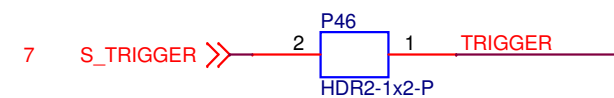
Layout Note

Place C101 near BGA Pin ATEST1



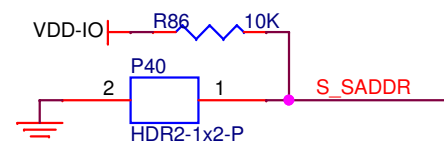
Jumper P45:
Short : (Default) (ATEST->GND)

TRIGGER



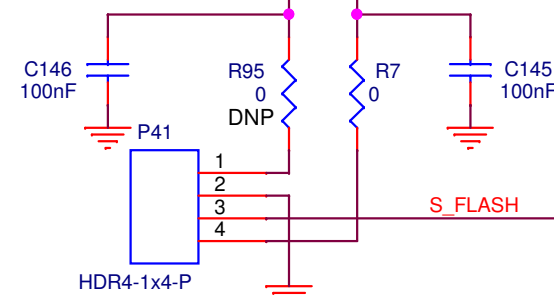
Jumper P46:
Short : (Default)
Open : Connect function generator between pin 1 and GND

SADDR

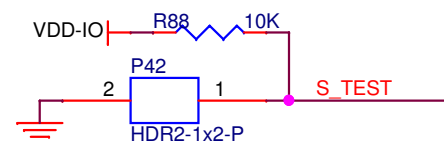


P40 : SHORT Default 0x20
: OPEN 0x30

FLASH

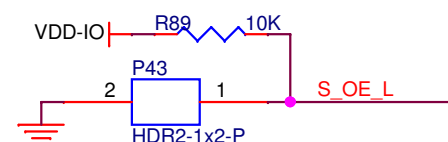


TEST



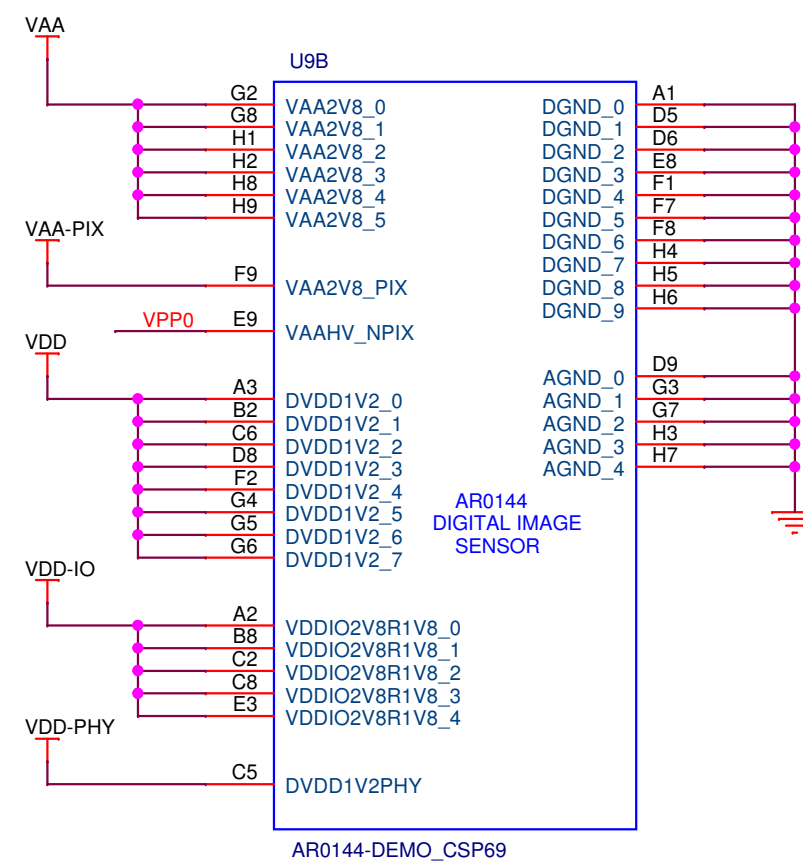
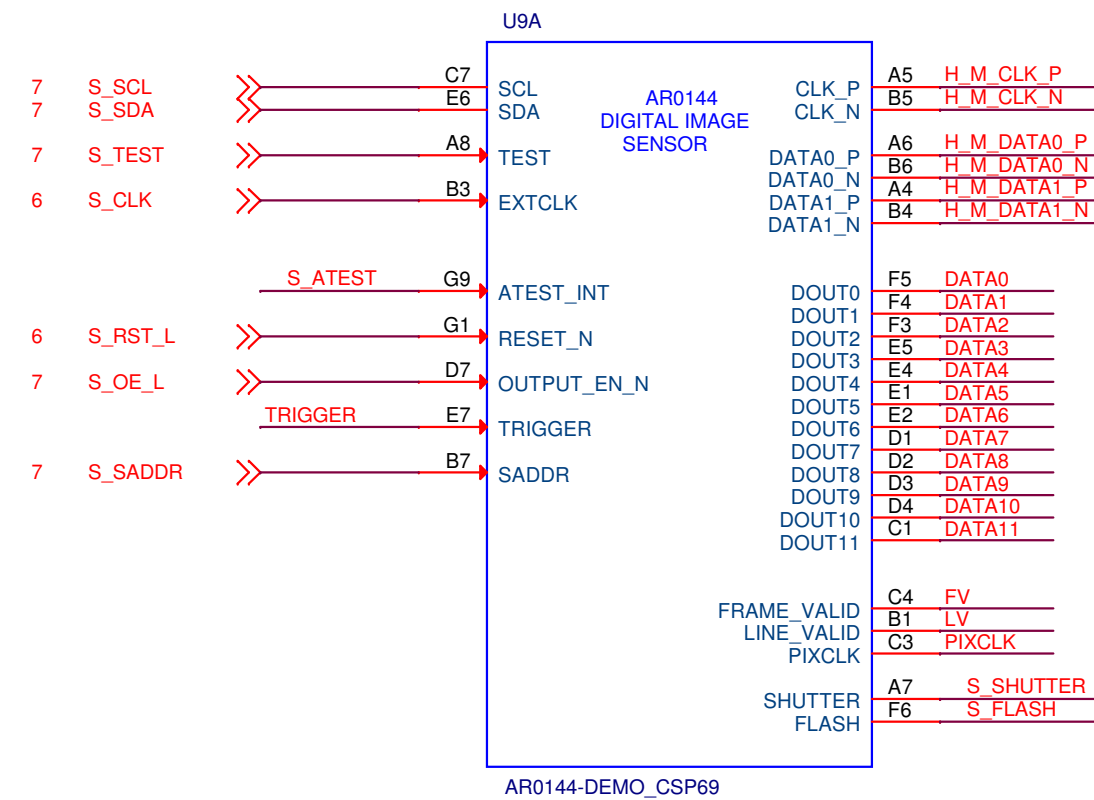
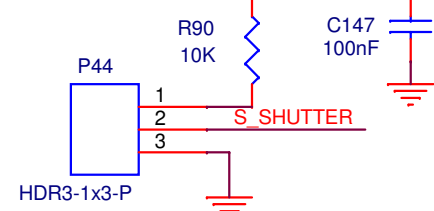
P42 : SHORT (S_TEST->GND)

OE_L

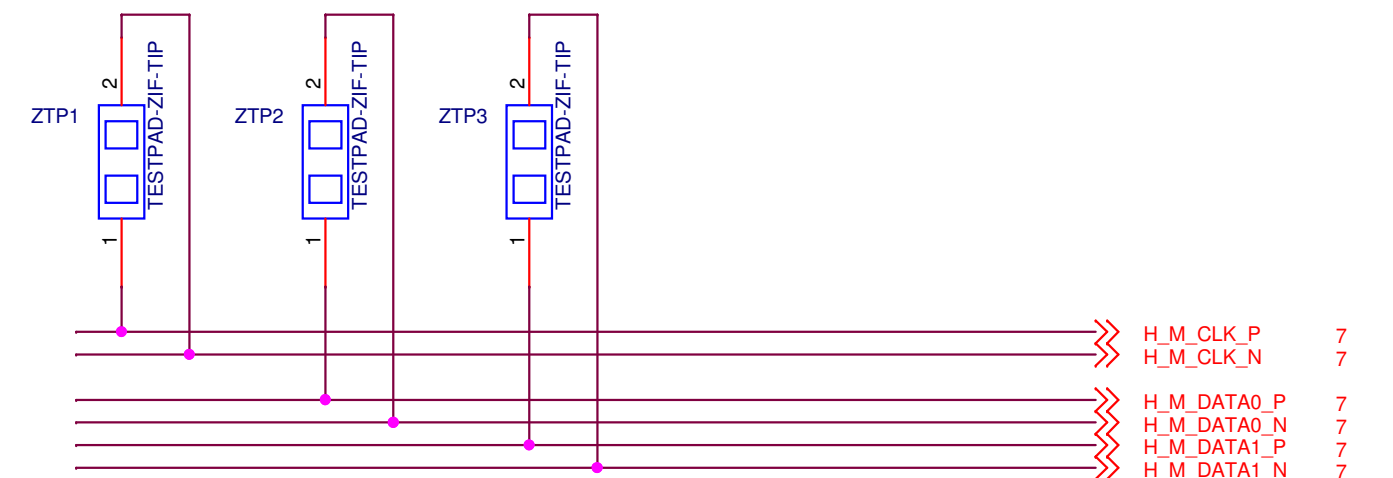


P43 : SHORT (Parallel mode Default)

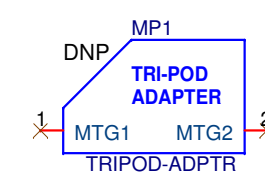
SHUTTER



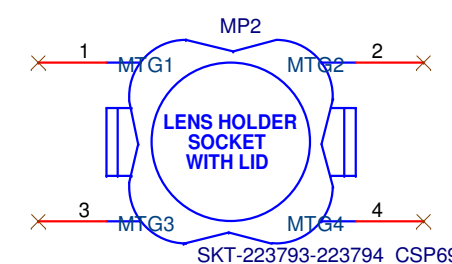
(Note for layout: - Place these testpads near the Demo3 I/F connector at the top side of PCB)



Tripod Mount



Socket/Lens Mount

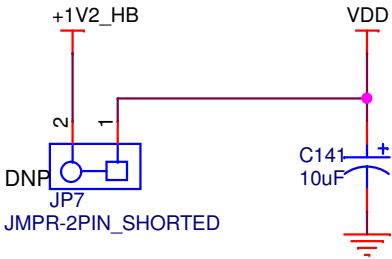


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Title Sensor		
Size C	Document Name AR0144-CSP_Demo3Head	Rev 0.2
Date: Monday, November 09, 2015	Sheet 4 of 7	

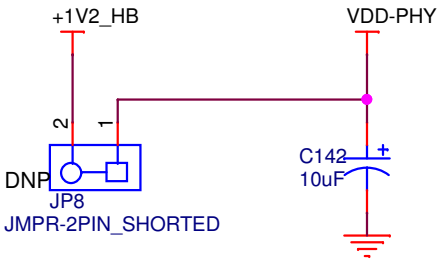
Debug Headers: Cut away the shorted trace and mount header for power debugging

Power

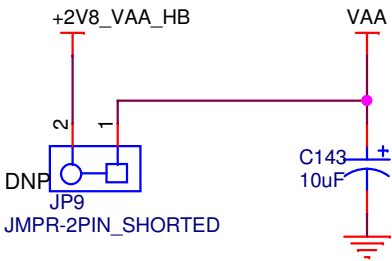
VDD 1.2V SUPPLY



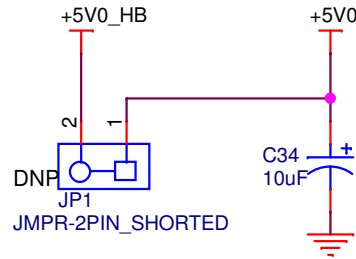
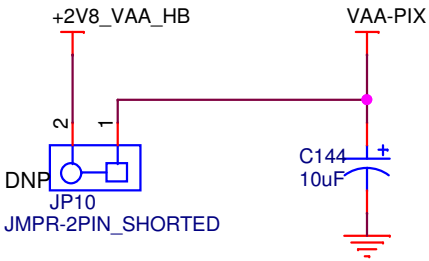
VDD-PHY 1.2V SUPPLY



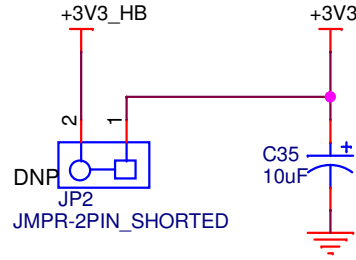
VAA 2.8V SUPPLY



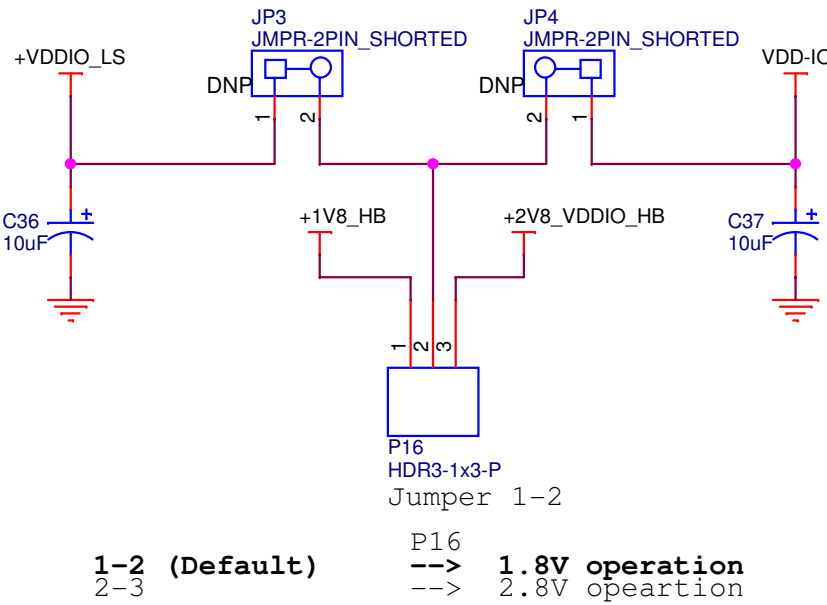
VAA-PIX 2.8V SUPPLY



PERIPHERAL 3.3V SUPPLY



VDDIO & VDDIO_LS 1.8V/2.8V SUPPLY

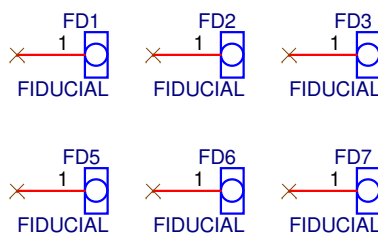


+5V0_HB		+5V0_HB	7
+3V3_HB		+3V3_HB	7
+2V8_VAA_HB		+2V8_VAA_HB	4,7
+2V8_VDDIO_HB		+2V8_VDDIO_HB	7
+1V8_HB		+1V8_HB	7
+1V2_HB		+1V2_HB	7
+5V0		+5V0	4
+3V3		+3V3	4,6
+VDDIO_LS		+VDDIO_LS	6,7
4 VDD		VDD	
4 VDD-PHY		VDD-PHY	
4 VDD-IO		VDD-IO	
4 VAA		VAA	
4 VAA-PIX		VAA-PIX	

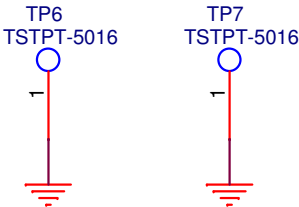
5V LED



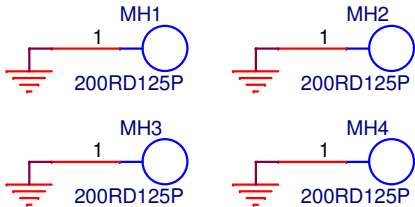
Layout Note
(Mount LED on
bottom side of PCB)



Ground Testpoints



Mounting Holes



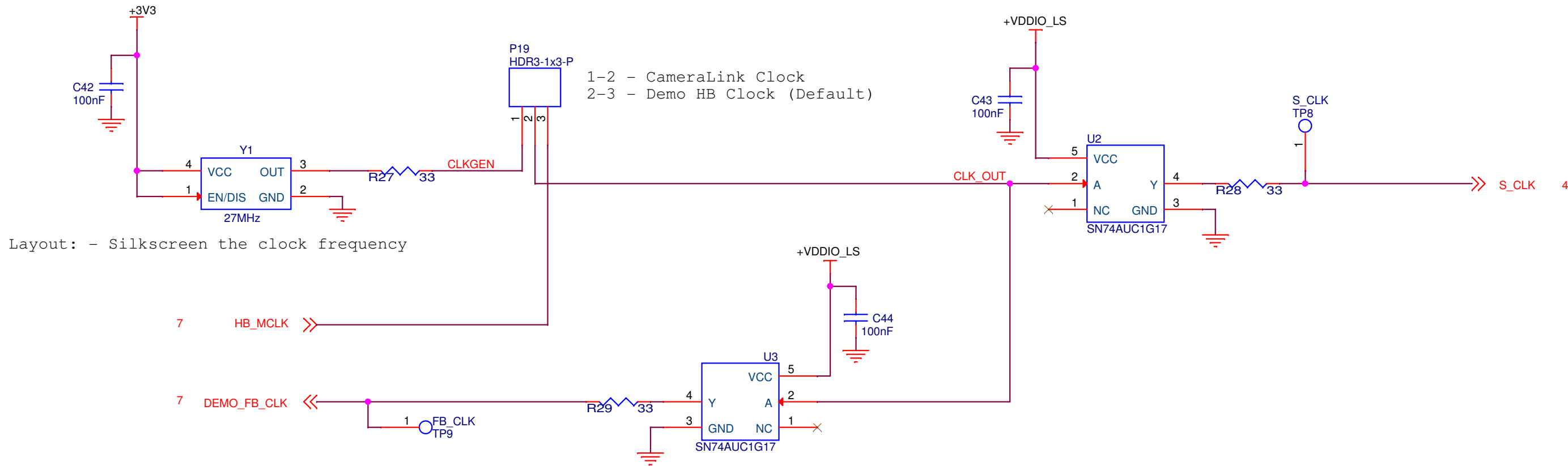
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Title Power		
Size C	Document Name AR0144-CSP_Demo3Head	Rev 0.2
Date: Wednesday, November 04, 2015	Sheet 5 of 7	

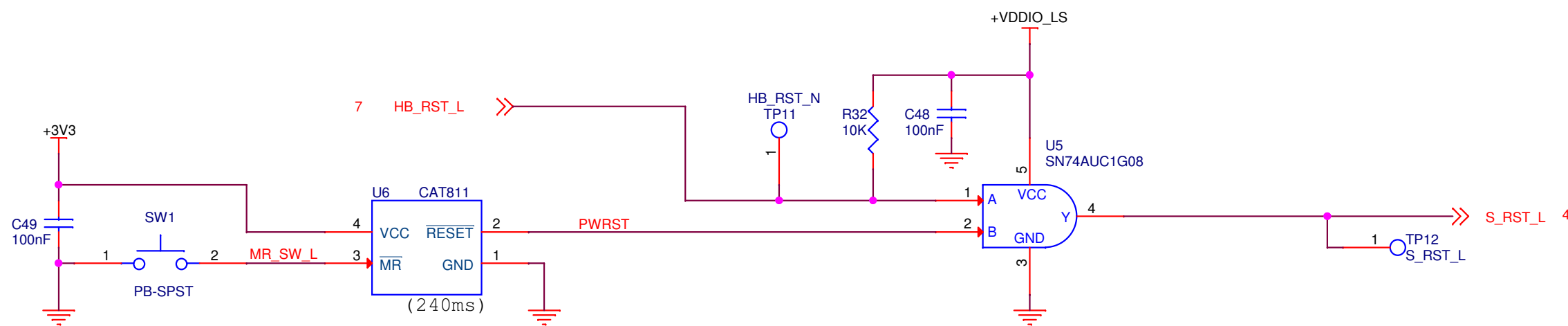
Clock and Reset

+5V0		+5V0	4,5
+3V3		+3V3	4,5
+VDDIO_LS		+VDDIO_LS	5,7

CLOCK CIRCUIT



RESET CIRCUIT



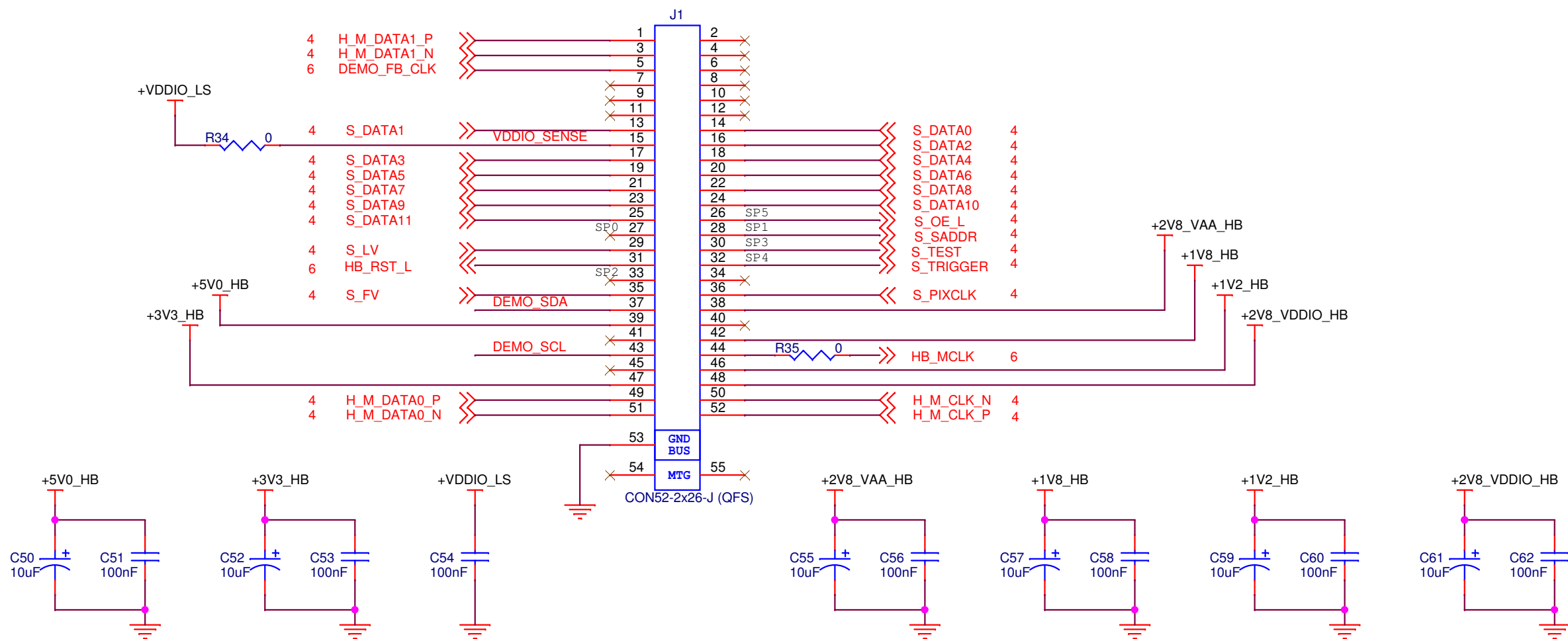
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Title			Clock and Reset		
Size	Document Name	AR0144-CSP_Demo3Head			Rev
C					0.2
Date:	Monday, November 09, 2015	Sheet	6	of	7

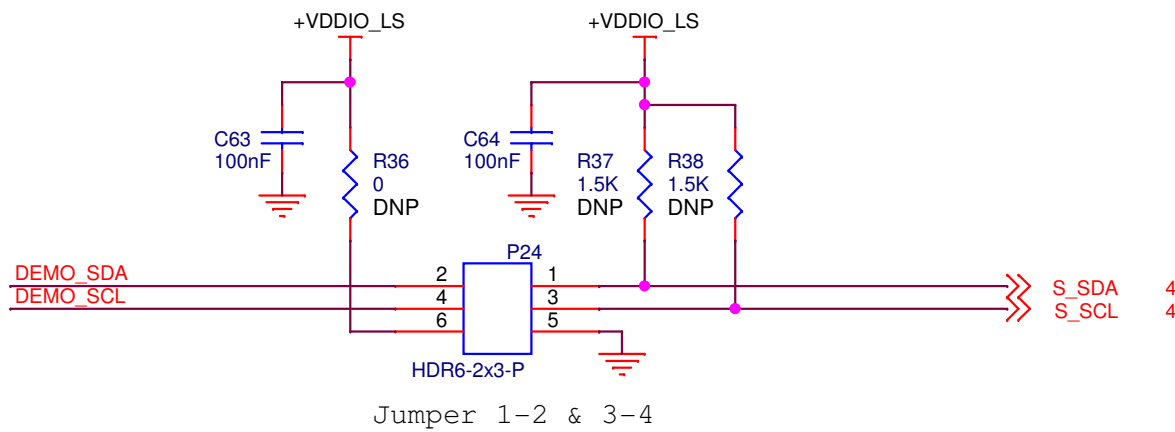
External Interface

+5V0_HB		+5V0_HB	5
+3V3_HB		+3V3_HB	5
+2V8_VAA_HB		+2V8_VAA_HB	4,5
+2V8_VDDIO_HB		+2V8_VDDIO_HB	5
+1V8_HB		+1V8_HB	5
+1V2_HB		+1V2_HB	5
+3V3_VDDIO_LS		+3V3_VDDIO_LS	4,5,6
+VDDIO_LS		+VDDIO_LS	5,6

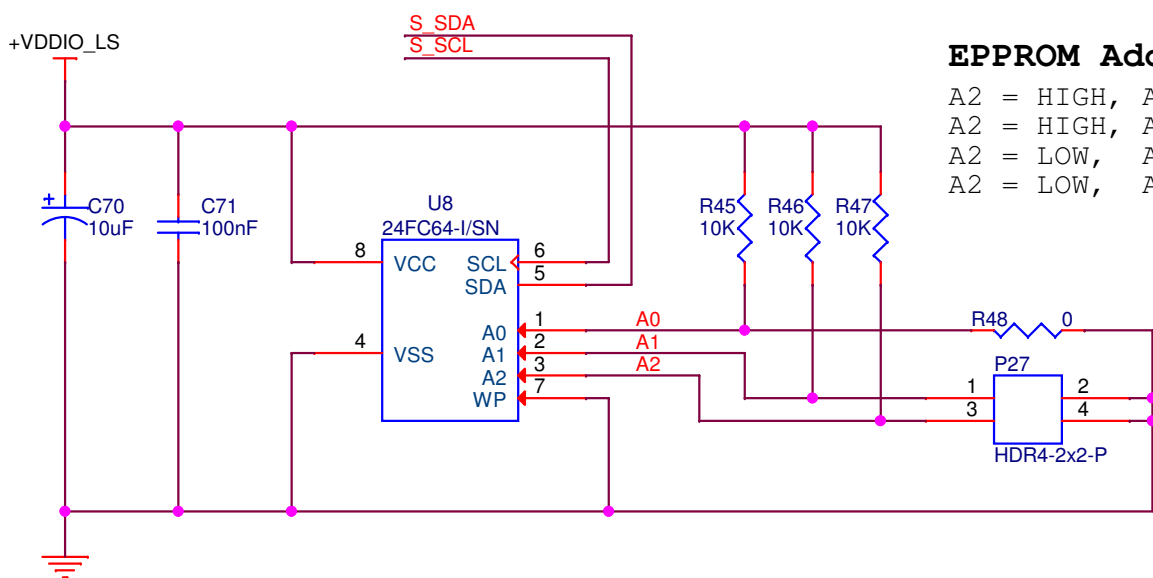
DEMO3 BASEBOARD I/F



I2C DEBUG



LENS CORRECTION EEPROM



EPPROM Address Switch Settings:

A2 = HIGH, A1 = LOW, A0 = LOW; Address => 0xA8 (default)
A2 = HIGH, A1 = HIGH, A0 = LOW; Address => 0xAC
A2 = LOW, A1 = HIGH, A0 = LOW; Address => 0xA4
A2 = LOW, A1 = LOW, A0 = LOW; Address => 0xA0



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Title			External Interface
Size	Document Name	Rev	
C	AR0144-CSP_Demo3Head	0.2	
Date:	Wednesday, November 04, 2015	Sheet	7 of 7

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