

AR0544_CSP47_Demo3Head

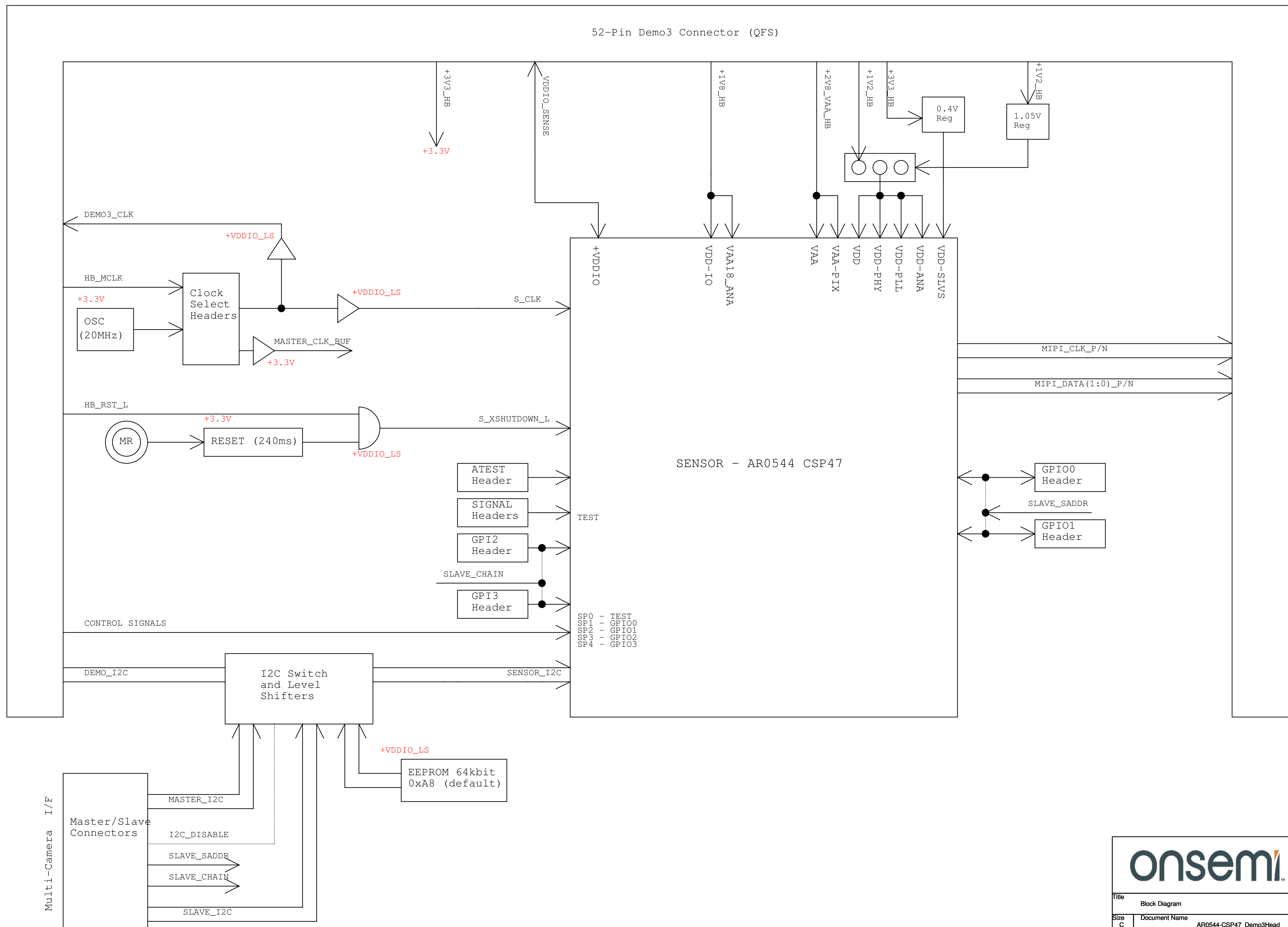
Page	Description
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3	Sensor
4	Power
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6	External Interfaces

Rev	Who	Date	Description
Rev 0.0	skumar	28OCT2022	Initial - Based on Template (Aug 13, 2019)
Rev 0.1	skumar	20DEC2022	Updated MIPI switch part number to FSA646AUCX
Rev 1.0	skumar	18JAN2023	Replaced Y1 with replaced Y1 with MC3225Z20.0000C19XSH Updated VDDIO net to VDD-IO



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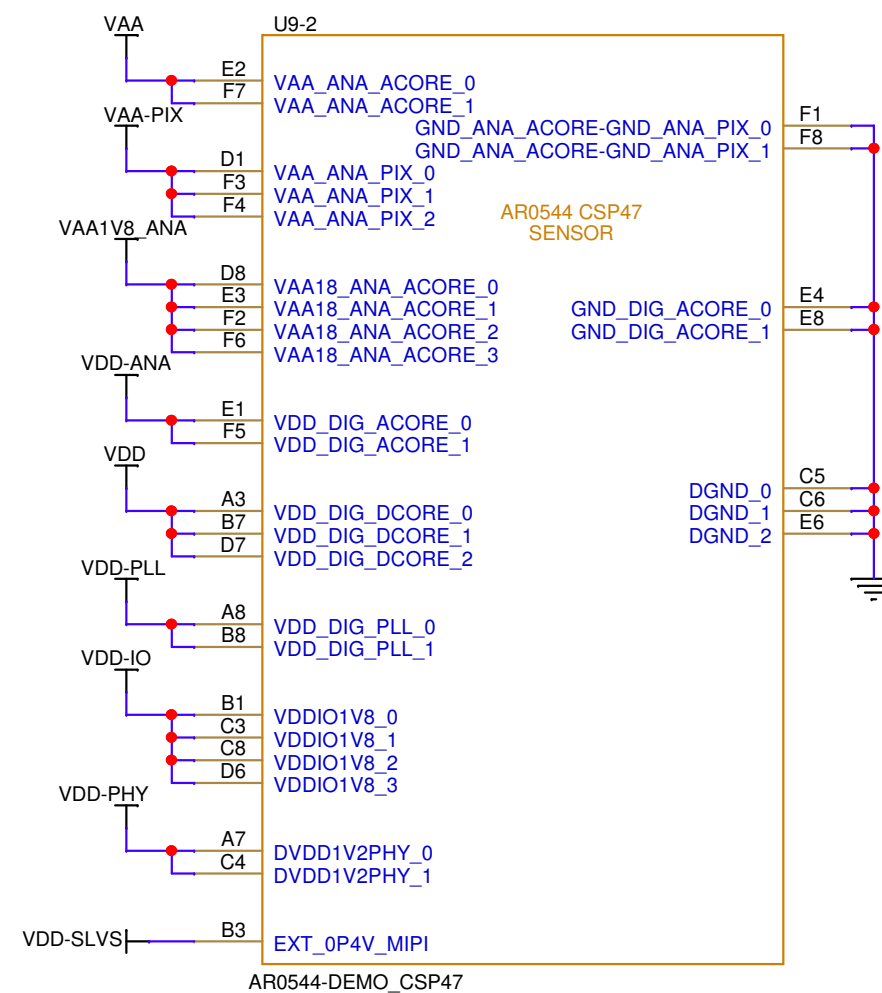
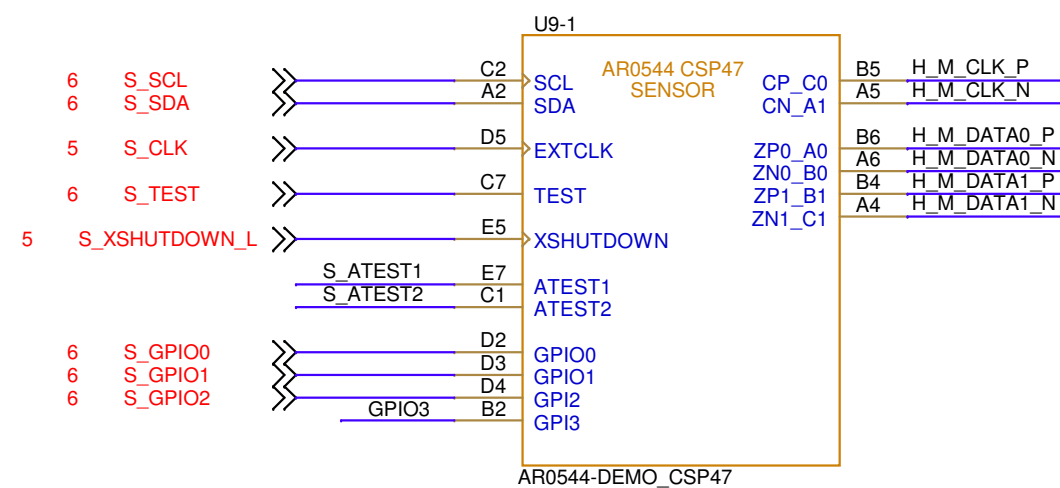
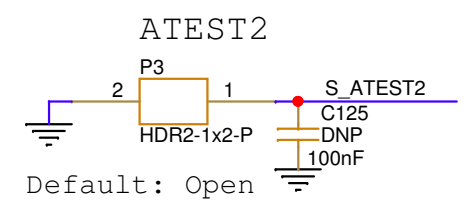
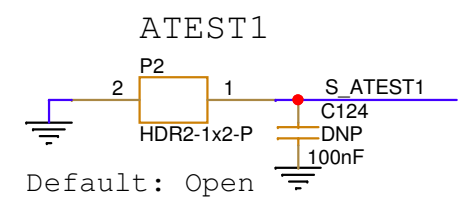
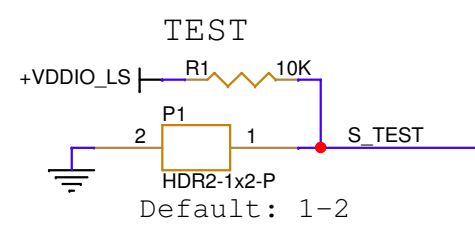
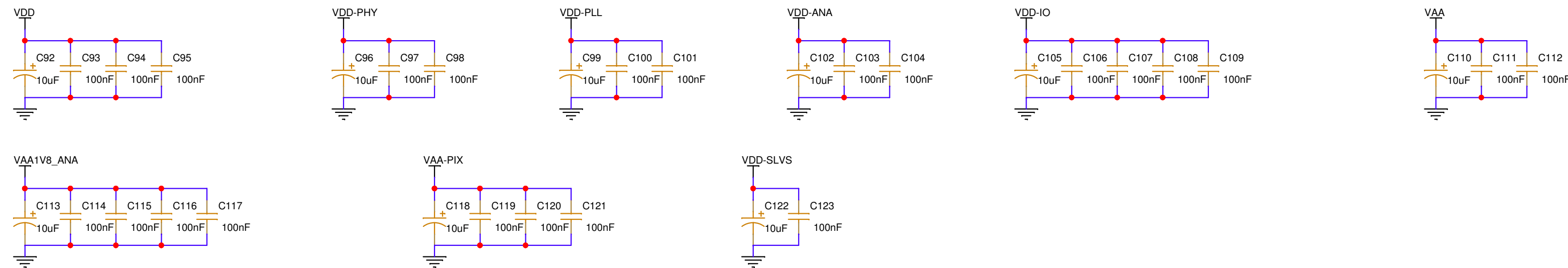
Block Diagram



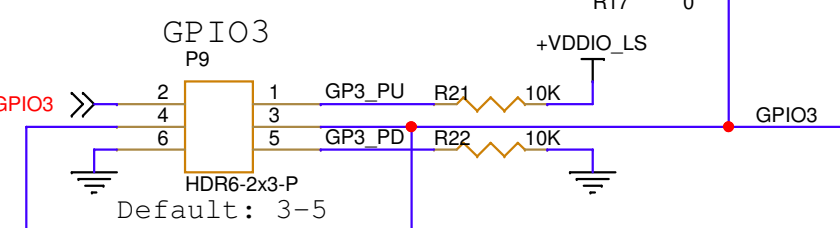
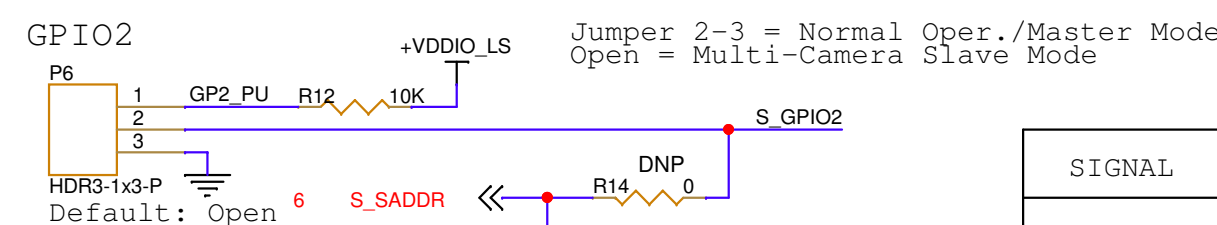
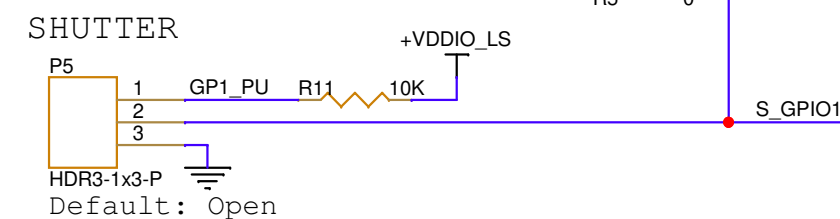
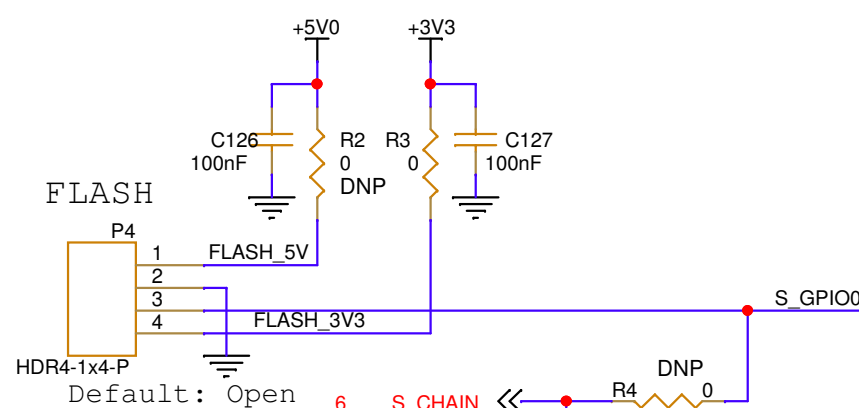
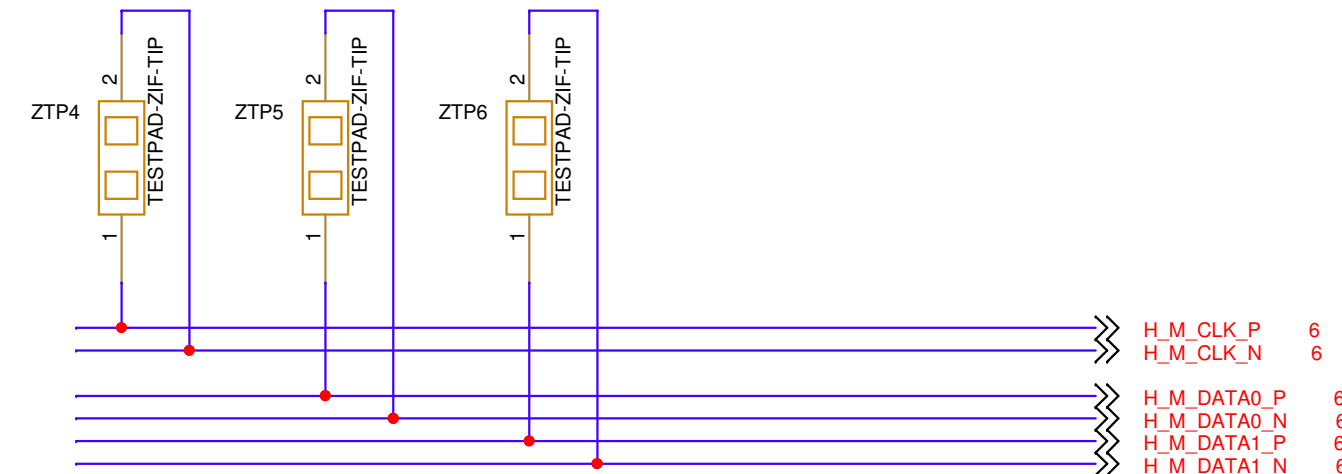
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Sensor

+5V0		+5V0	4
+3V3		+3V3	4,5,6
+VDDIO_LS		+VDDIO_LS	5,6
VDD		VDD	4
VDD-PHY		VDD-PHY	4
VDD-PLL		VDD-PLL	4
VDD-ANA		VDD-ANA	4
VDD-IO		VDD-IO	4
VDD-IO		VDD-IO	4
VAA1V8_ANA		VAA1V8_ANA	4
VAA		VAA	4
VAA-PIX		VAA-PIX	4
VDD-SLVS		VDD-SLVS	4



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



SIGNAL	GPIO FUNCTION OPTIONS
GPIO0	a. Flash output (default) b. All options in GPIO2 (if use as input)
GPIO1	a. Shutter output (default) b. 3D daisy chain communication output c. All options in GPIO2 (if use as input)
GPIO2	a. SADDR, second I2C device address b. Trigger signal for Slave Mode c. Standby
GPIO3	a. 3D daisy chain communication input b. All options in GPIO2

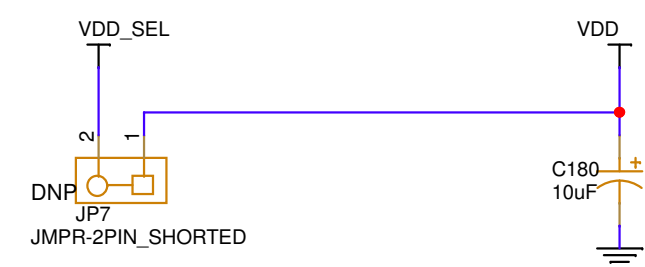
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Sensor				
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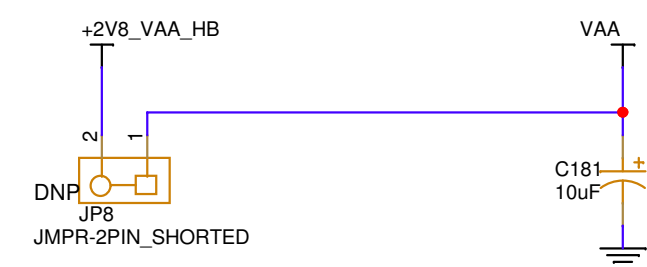
Debug Headers: Cut away the shorted trace and mount header for power debugging

Power

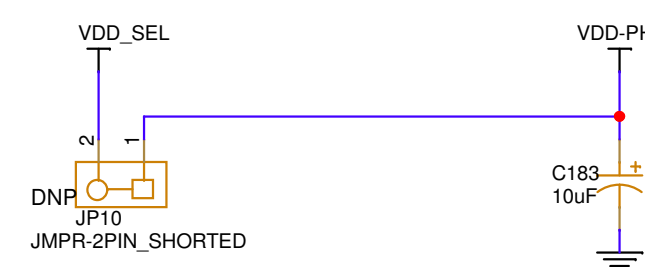
VDD 1.05V SUPPLY



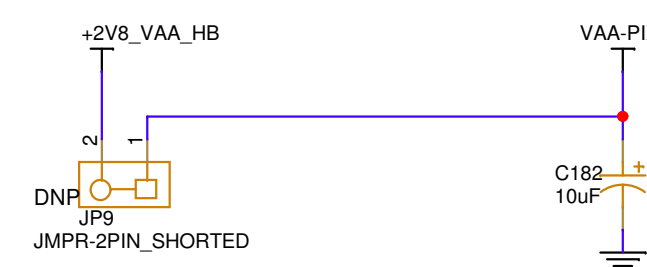
VAA 2.8V SUPPLY



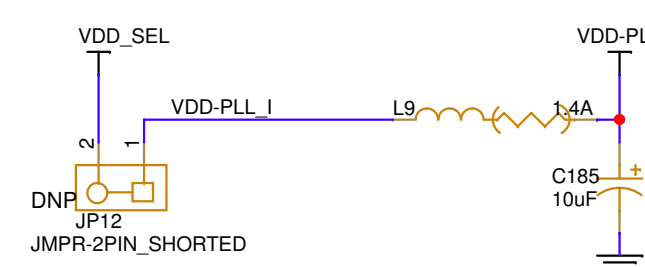
VDD-PHY 1.05V SUPPLY



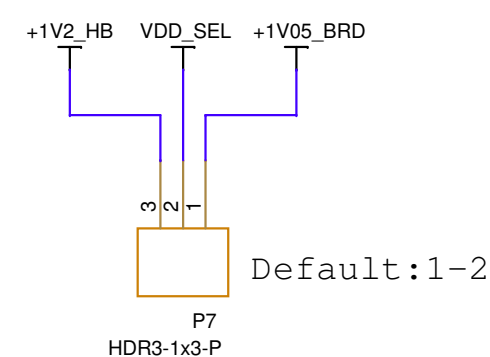
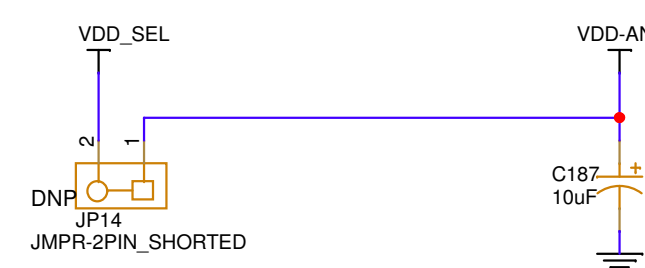
VAA-PIX 2.8V SUPPLY



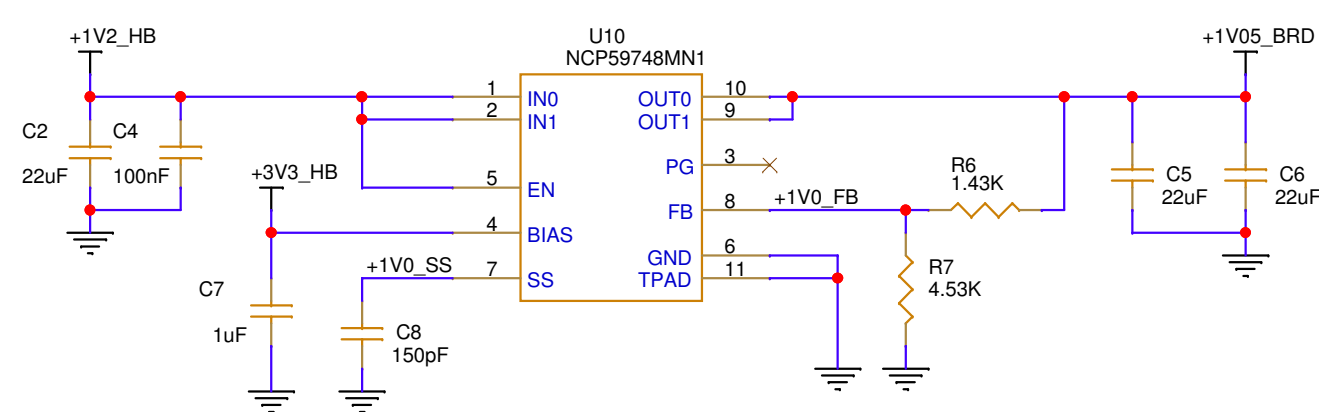
VDD-PLL 1.05V SUPPLY



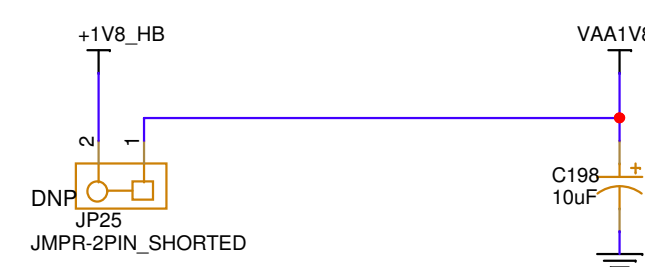
VDD-ANA 1.05V SUPPLY



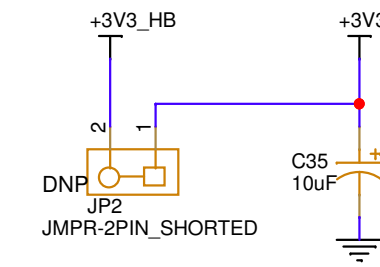
ONBOARD 1.05V SUPPLY



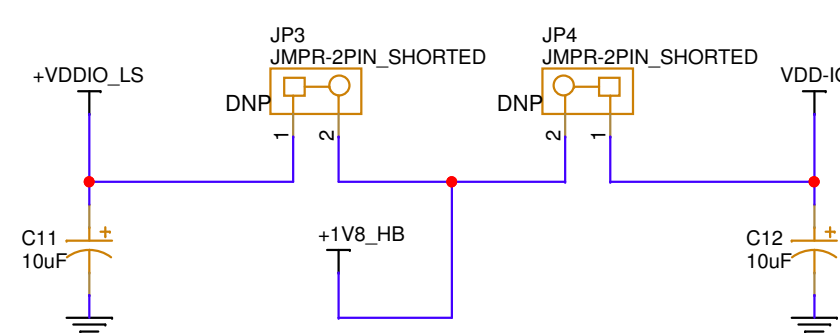
VAA1V8_ANA 1.8V SUPPLY



PERIPHERAL 3.3V SUPPLY

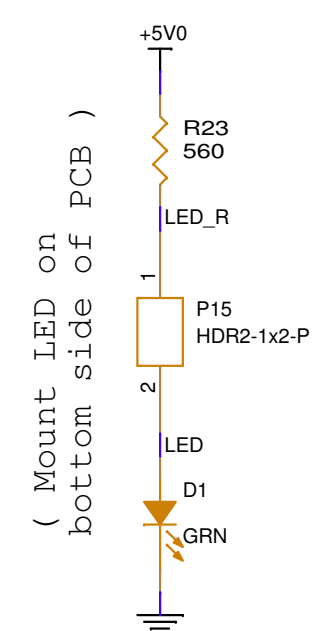


VDDIO & VDDIO_LS 1.8V SUPPLY

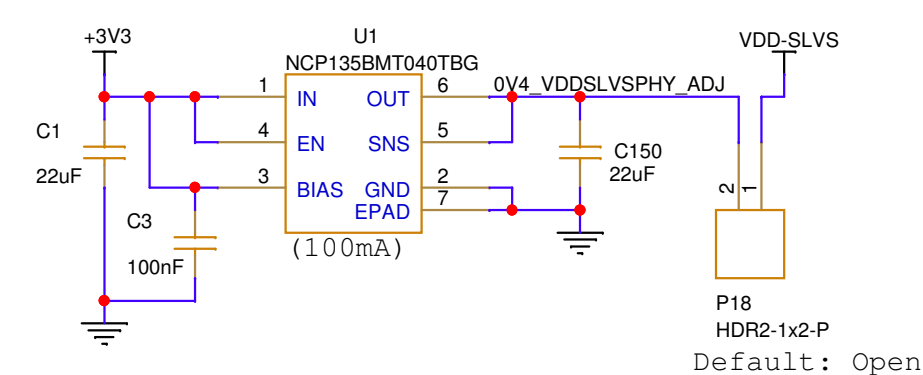


+5V0_HB		+5V0_HB	6
+3V3_HB		+3V3_HB	6
+2V8_VAA_HB		+2V8_VAA_HB	6
+2V8_VDDIO_HB		+2V8_VDDIO_HB	6
+1V8_HB		+1V8_HB	6
+1V2_HB		+1V2_HB	6
+5V0		+5V0	3
+3V3		+3V3	3,5,6
+VDDIO_LS		+VDDIO_LS	3,5,6
VDD		VDD	3
VDD-PHY		VDD-PHY	3
VDD-PLL		VDD-PLL	3
VDD-ANA		VDD-ANA	3
VDD-IO		VDD-IO	3
VAA1V8_ANA		VAA1V8_ANA	3
VAA		VAA	3
VAA-PIX		VAA-PIX	3
VDD-SLVS		VDD-SLVS	3

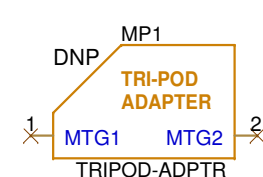
5V LED



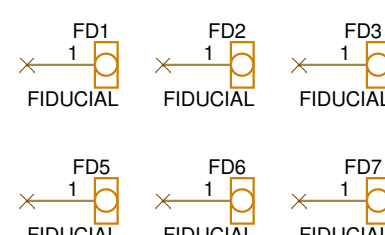
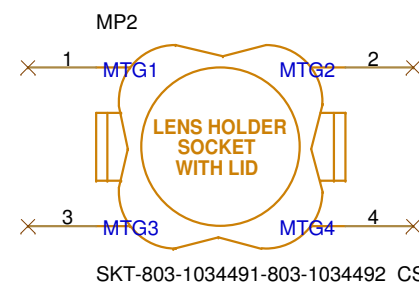
VDDSLVSPHY 0.4V SUPPLY



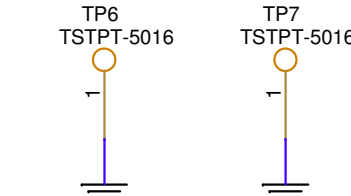
Tripod Mount



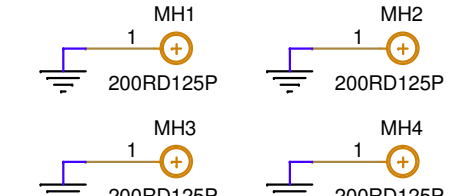
Socket/Lens Mount



Ground Testpoints



Mounting Holes



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+5V0		+5V0	3,4
+3V3		+3V3	3,4,6
+VDDIO_LS		+VDDIO_LS	3,6

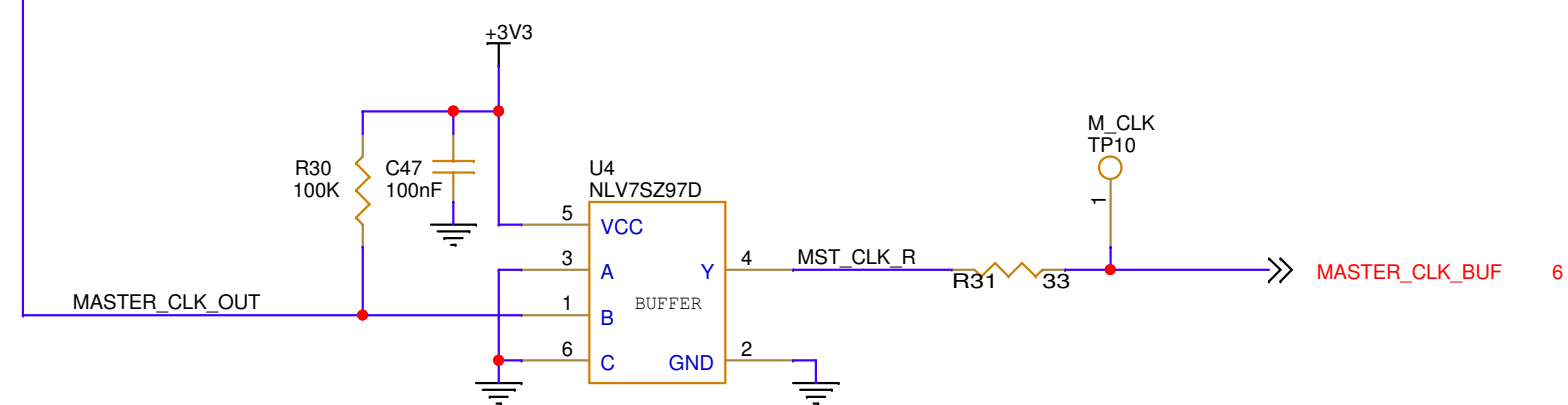
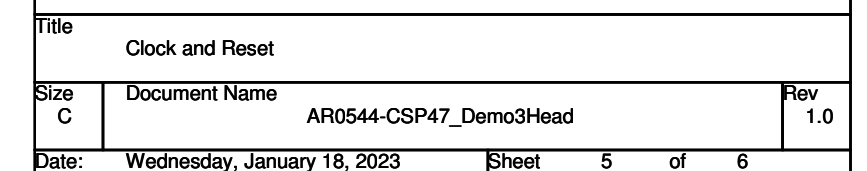
[illegible]

P20 Clock Selection Header

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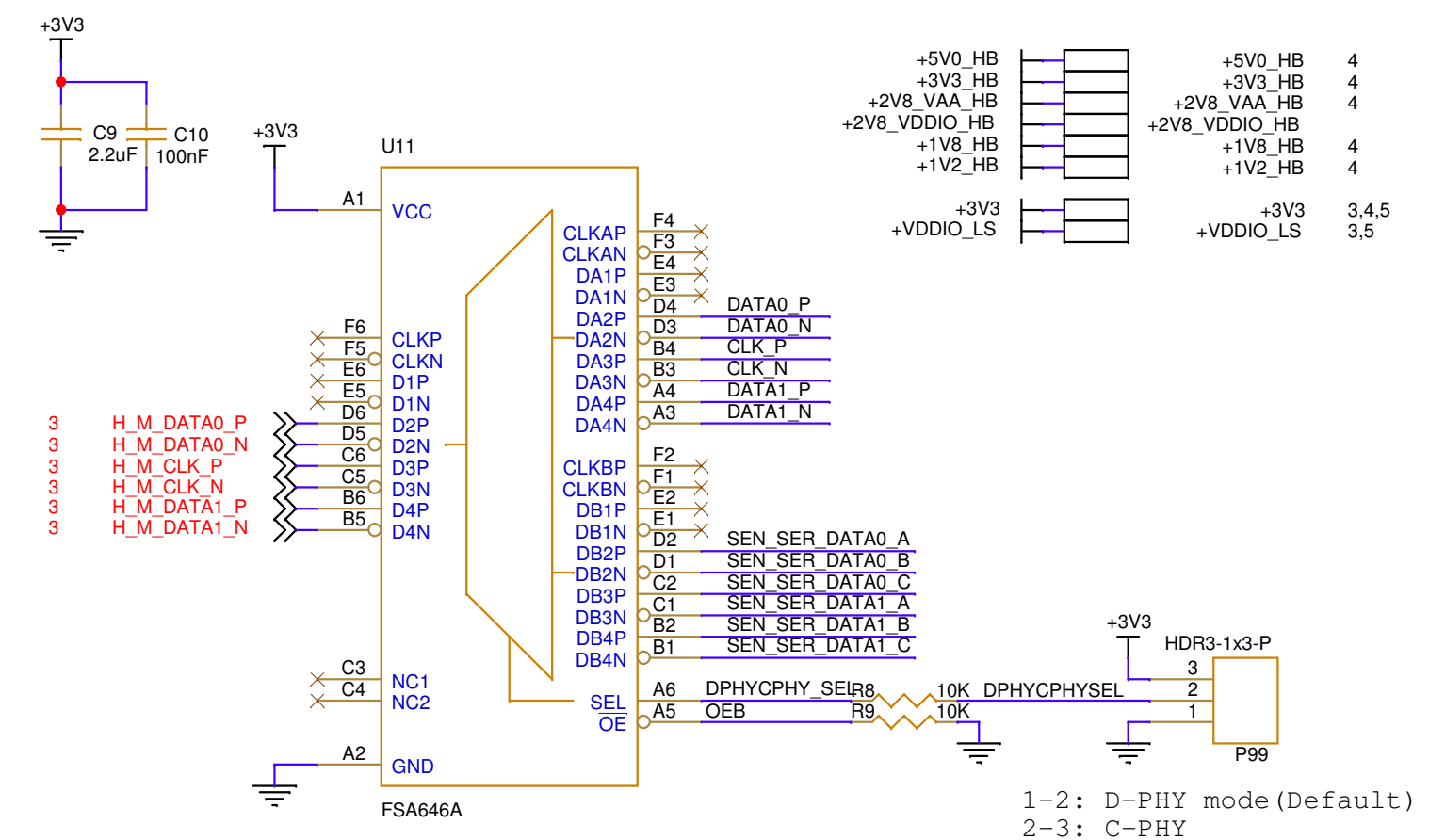
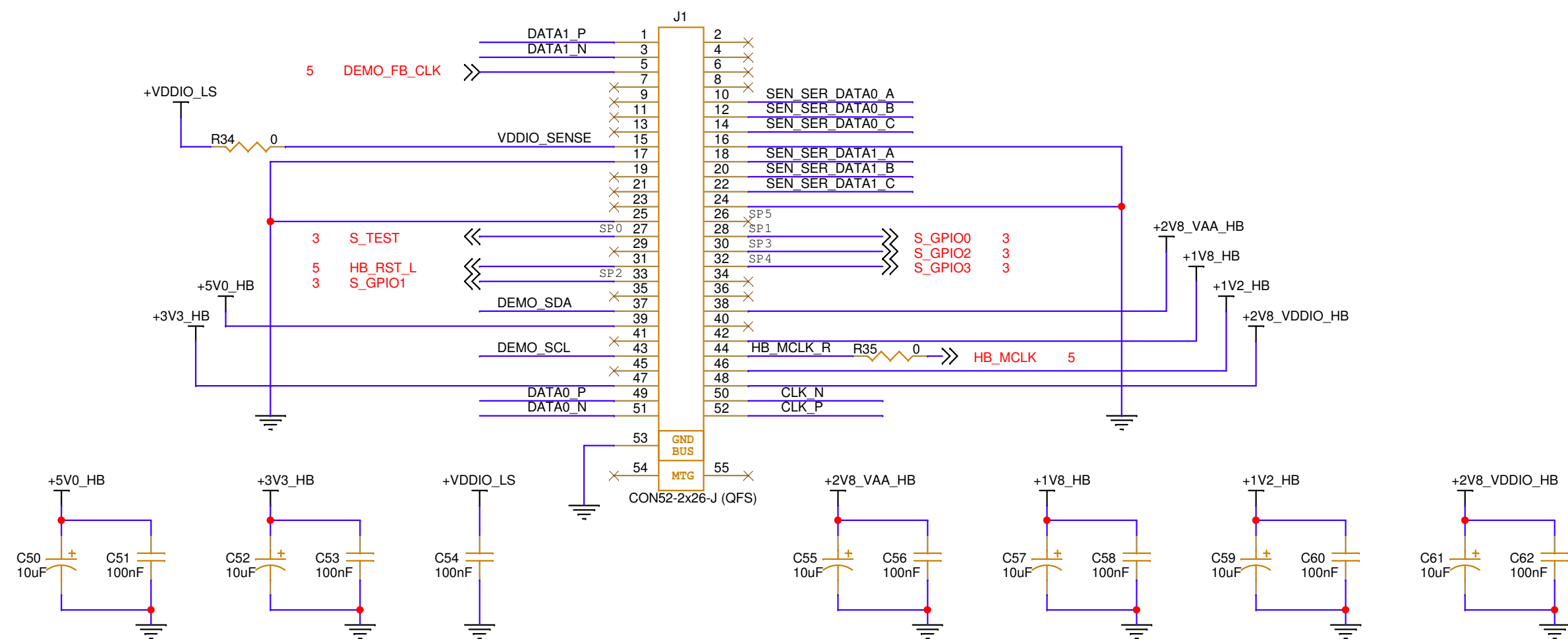
Jumper 1-3 (default): Select on-board
oscillator as sensor's input clock
OR
Jumper 3-5: Select Demo3 clock as
sensor's input clock
OR
Jumper 2-4: Select Slave clock as
sensor's input clock (for slave sensor in
multi-camera mode)
AND
Jumper 6-8: Enable Master clock
output (to support slave sensor in
multi-camera mode)

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[illegible]

External Interface

DEMO3 BASEBOARD I/F

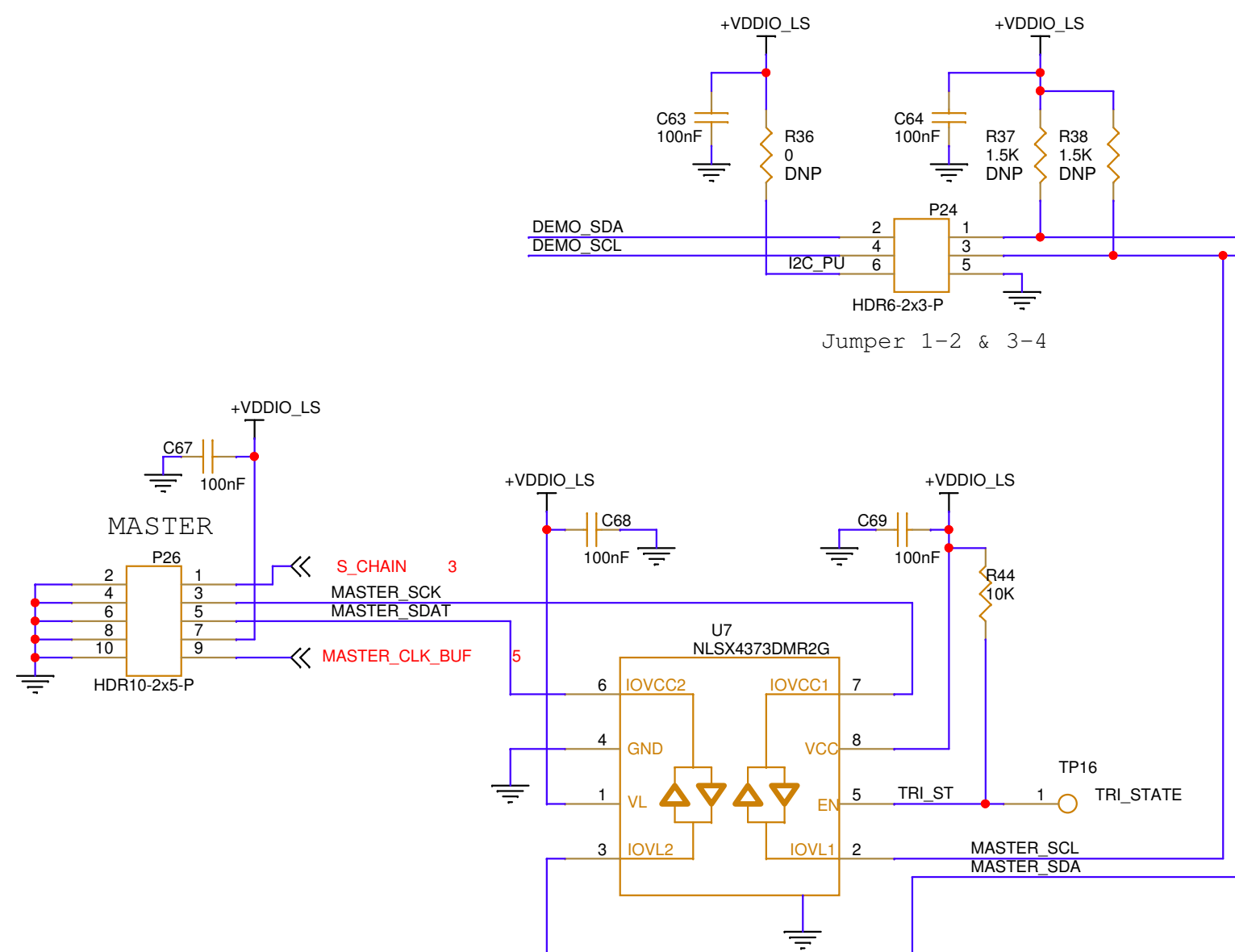


MULTI-CAMERA INTERFACE

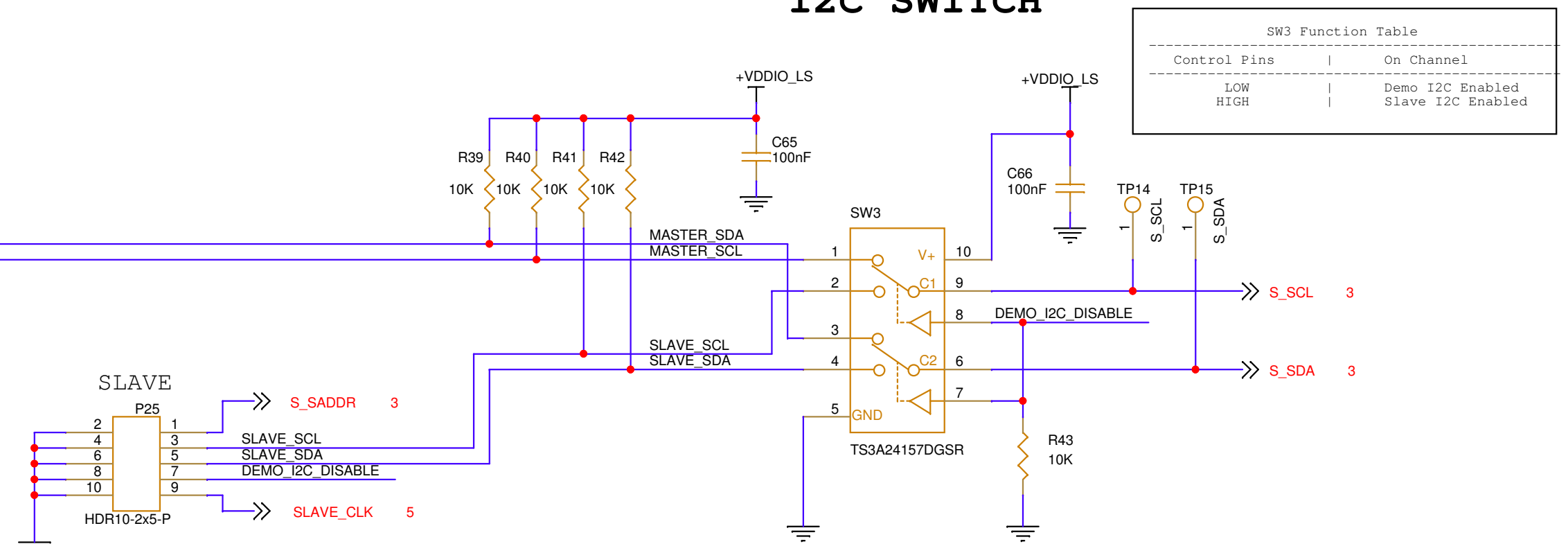
MASTER / SLAVE Connection in Multi-Camera Mode:

- Connect a multi-camera interface cable from the MASTER connector on the Master headboard to the SLAVE connector on the Slave headboard
- If there is a further Slave headboard down the chain, connect another multi-camera interface cable from the MASTER connector on the 1st Slave headboard to the SLAVE connector on the 2nd Slave headboard

I2C DEBUG

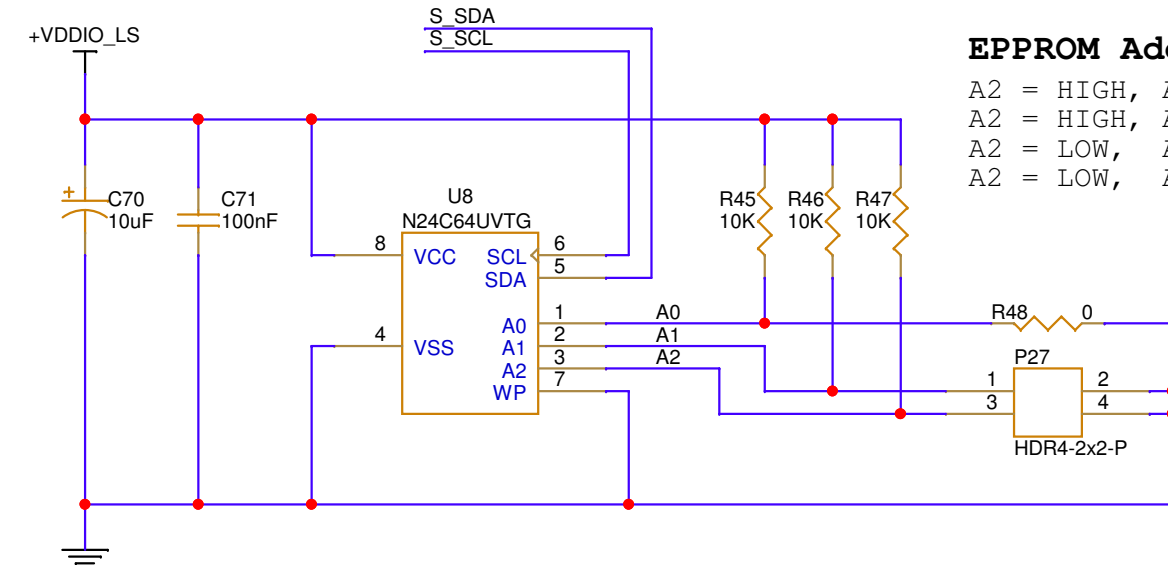


I2C SWITCH



SW3 Function Table	
Control Pins	On Channel
LOW	Demo I2C Enabled
HIGH	Slave I2C Enabled

LENS CORRECTION EEPROM



EEPROM 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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