

AR0235_CSP62_Demo3Head_SER

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

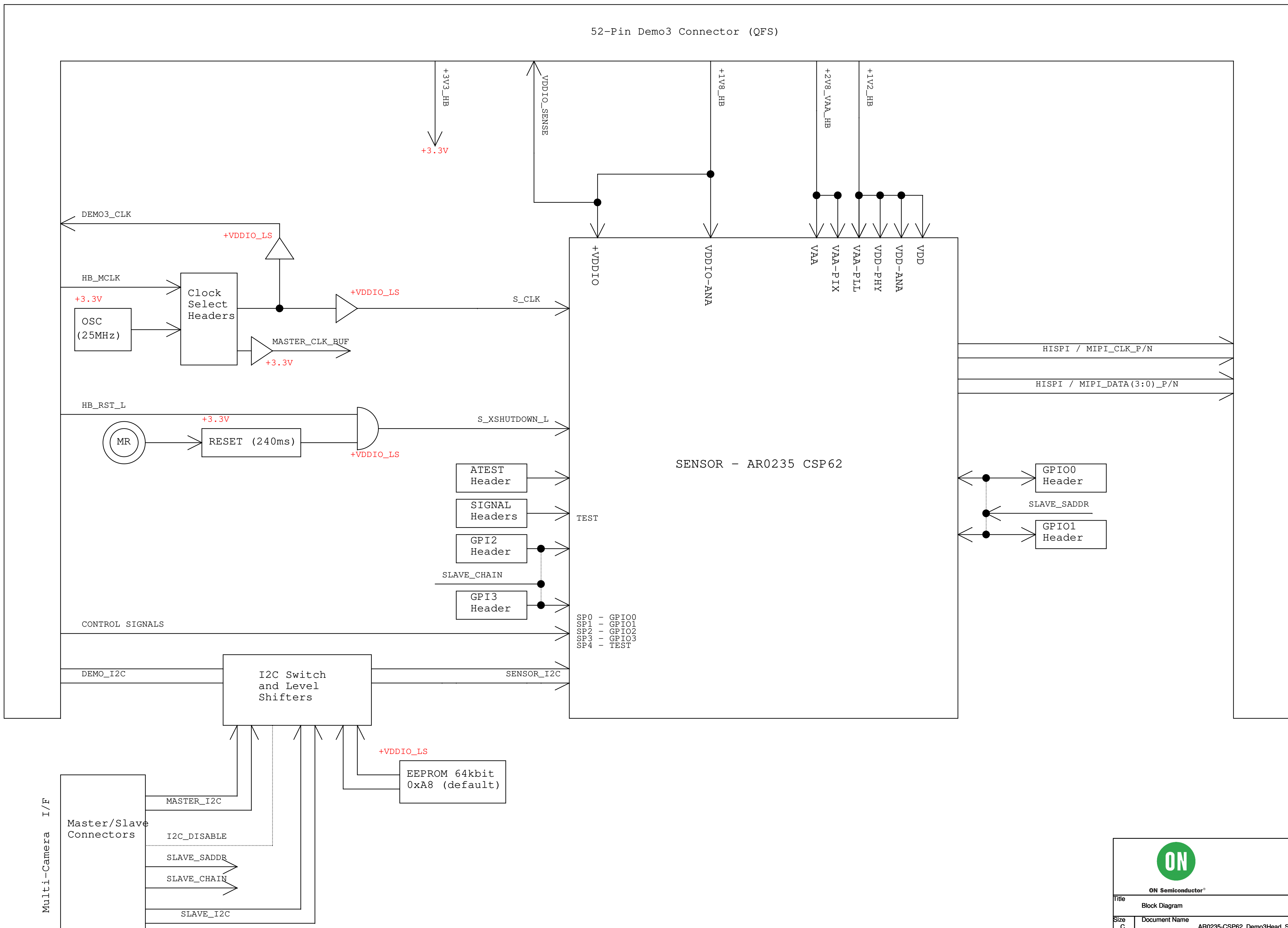
Rev	Who	Date	Description
Rev 0.0	Bharati	20JUL2020	Initial - Based on Template (Aug 13, 2019)
		03AUG2020	Updated socket part
	Bharati	24FEB2021	Updated P13 default jumper setting



ON Semiconductor®

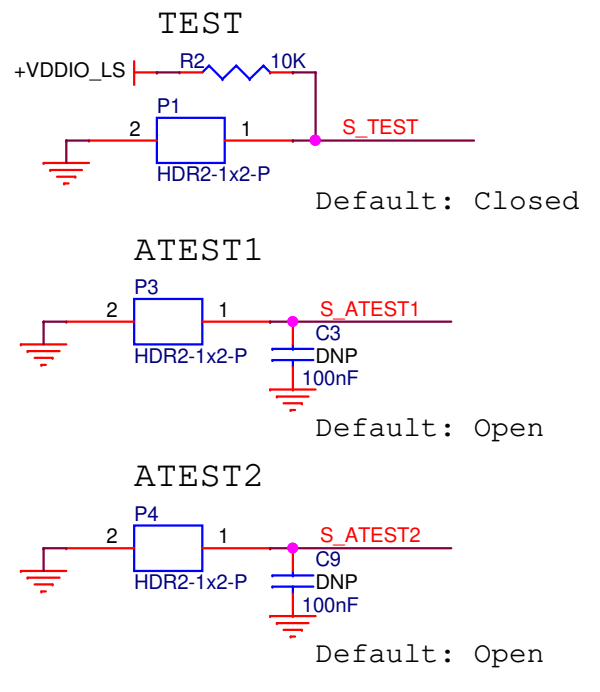
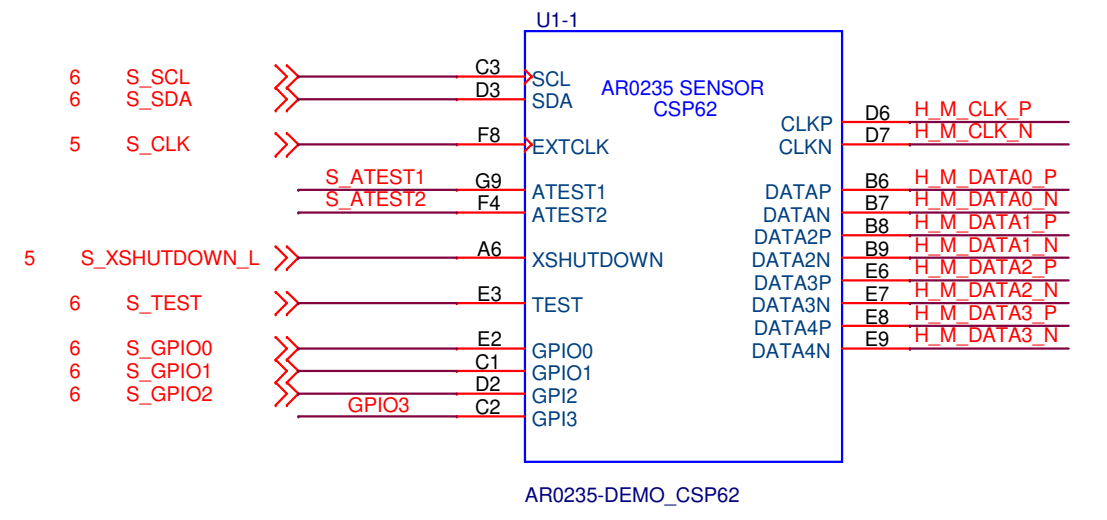
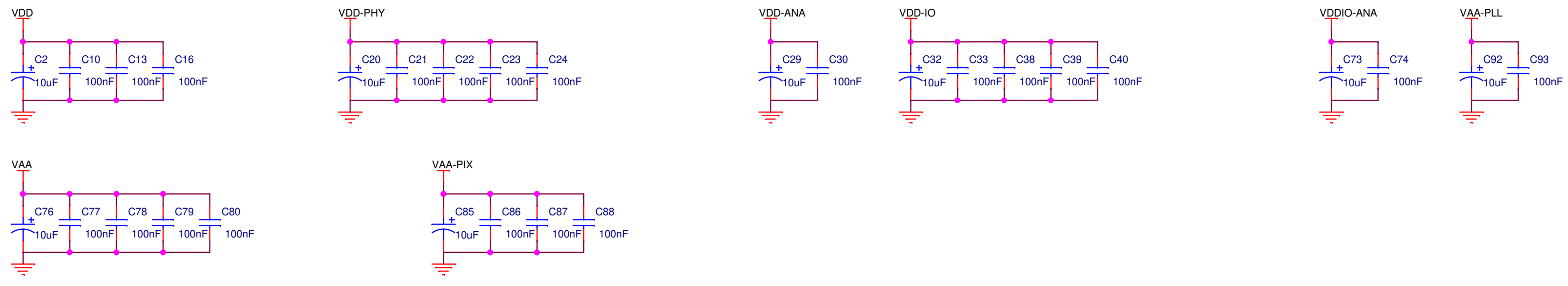
Title Page		
Document Name	AR0235-CSP62_Demo3Head_SER	Rev 0.0
Date:	Wednesday, February 24, 2021	Sheet 1 of 6

Block Diagram

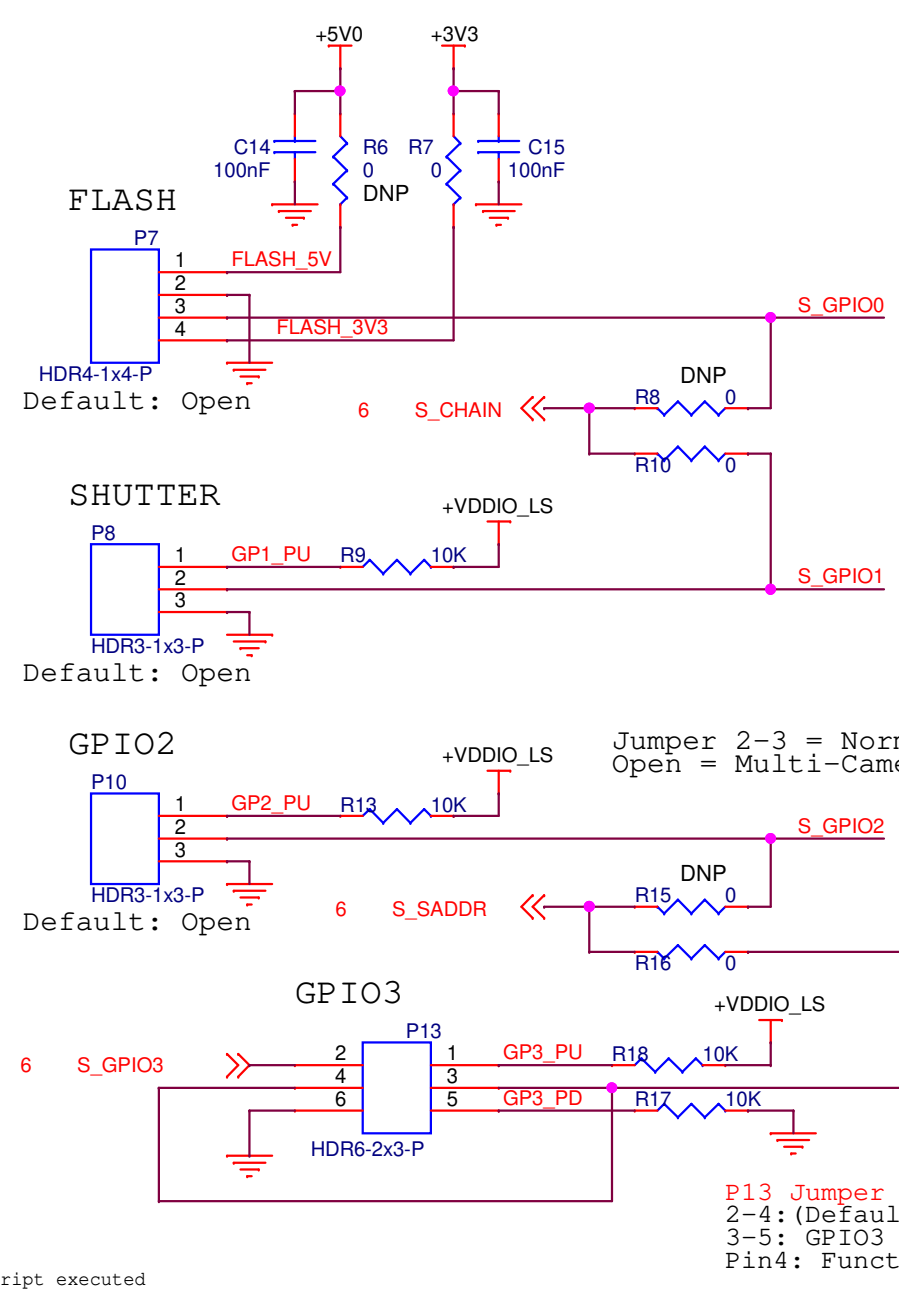
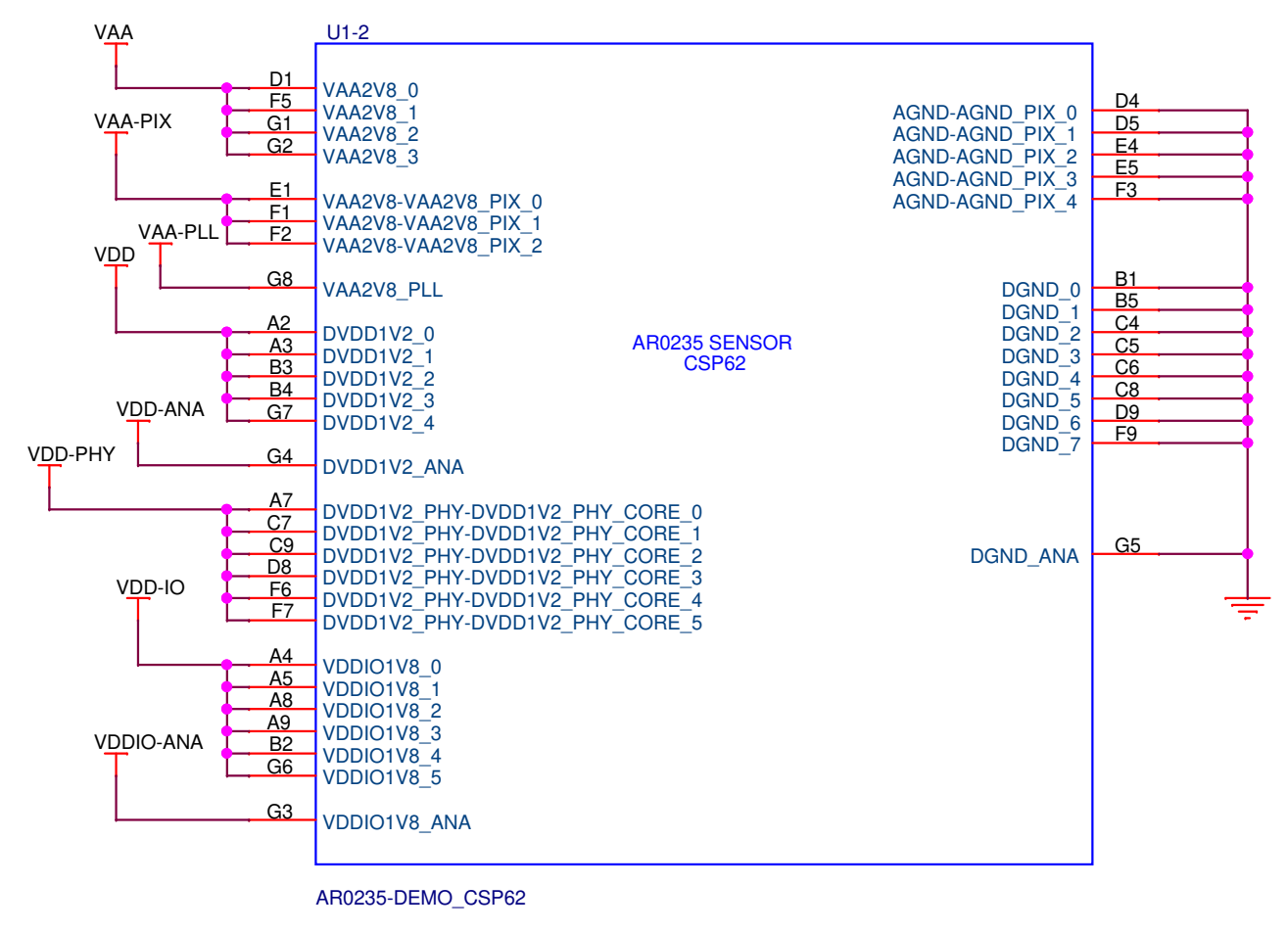
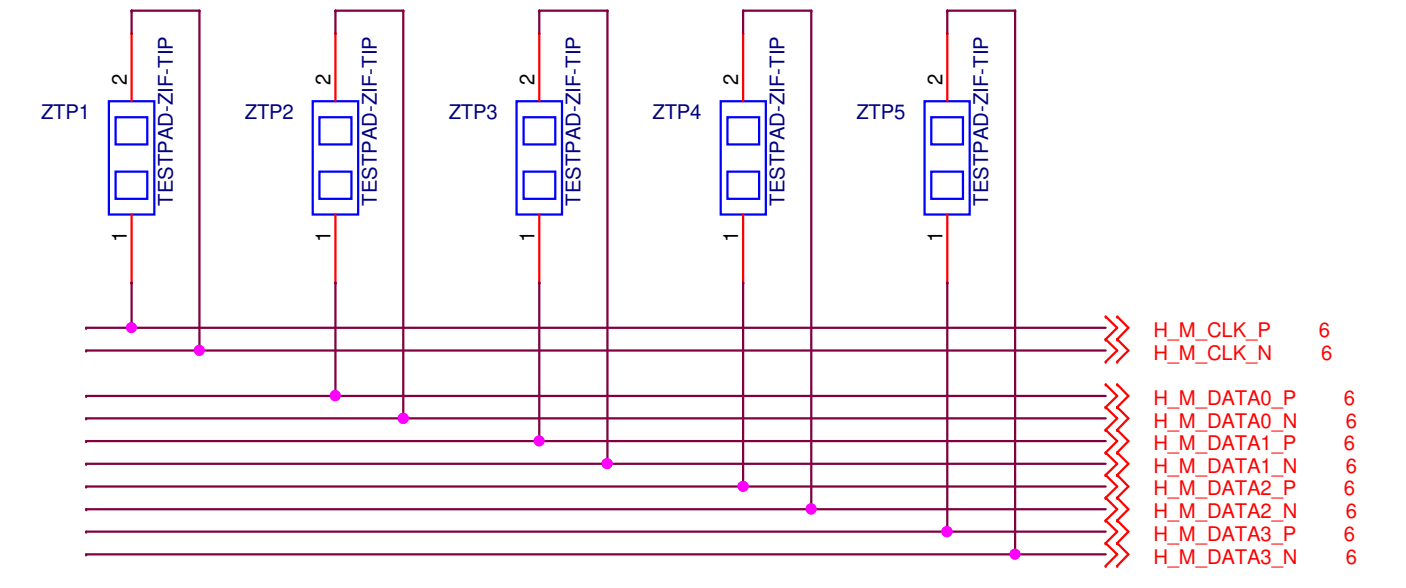


Sensor

+5V0	4
+3V3	4,5
+VDDIO_LS	4,5,6
VDD	4
VDD-PHY	4
VDD-ANA	4
VDD-IO	4
VDDIO-ANA	4
VAA	4
VAA-PIX	4
VAA-PLL	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 GPI2 (if use as input)
GPIO1	a. Shutter output (default) b. 3D daisy chain communication output c. All options in GPI2 (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 GPI2

ON Semiconductor®

Title: Sensor

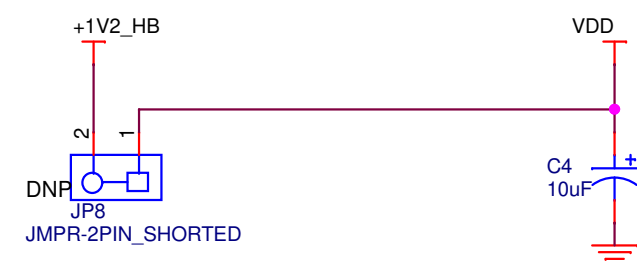
Size C Document Name: AR0235-CSP62_Demo3Head_SER Rev: 0.0

Date: Wednesday, February 24, 2021 Sheet: 3 of 6

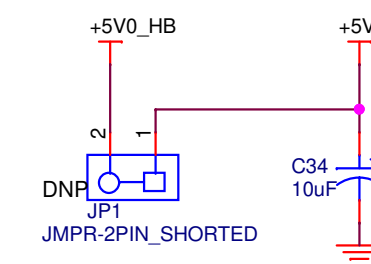
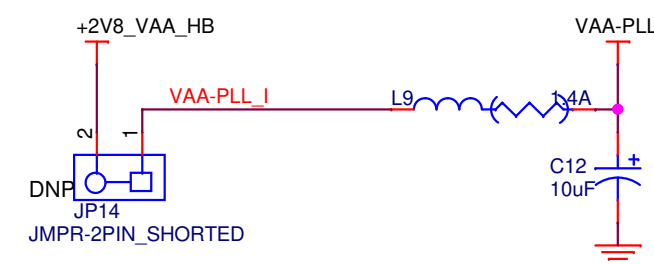
Debug Headers: Cut away the shorted trace and mount header for power debugging

Power

VDD 1.2V SUPPLY

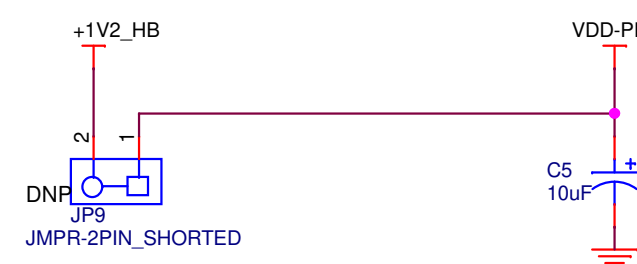


VAA-PLL 2.8V SUPPLY

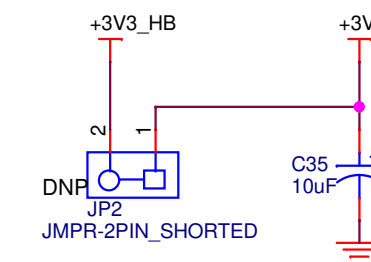


+5V0_HB	+5V0_HB	6
+3V3_HB	+3V3_HB	6
+2V8_VAA_HB	+2V8_VAA_HB	6
+1V8_HB	+1V8_HB	6
+1V2_HB	+1V2_HB	6
+5V0	+5V0	3
+3V3	+3V3	3,5
+VDDIO_LS	+VDDIO_LS	3,5,6
VDD	VDD	3
VDD-PHY	VDD-PHY	3
VDD-ANA	VDD-ANA	3
VDD-IO	VDD-IO	3
VDDIO-ANA	VDDIO-ANA	3
VAA	VAA	3
VAA-PIX	VAA-PIX	3
VAA-PLL	VAA-PLL	3

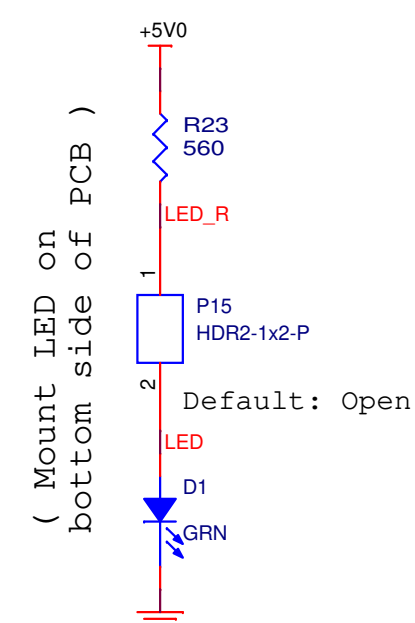
VDD-PHY 1.2V SUPPLY



PERIPHERAL 3.3V SUPPLY



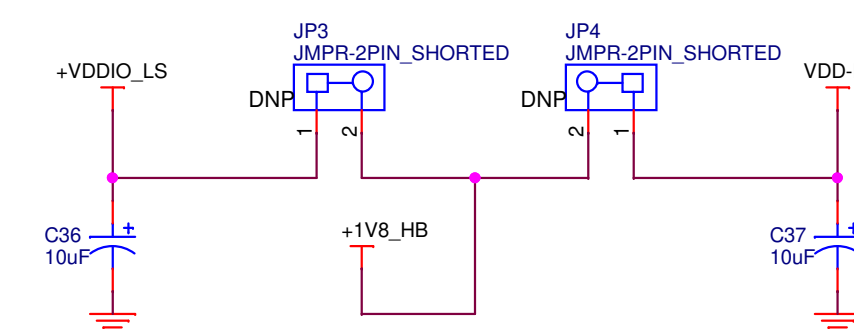
5V LED



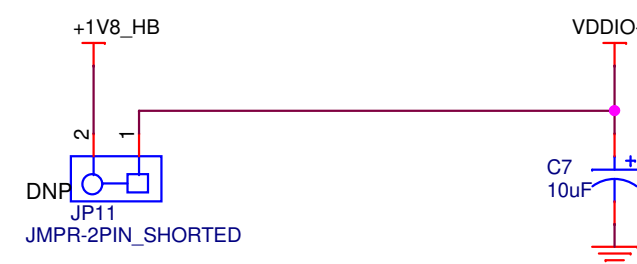
VDD-ANA 1.2V SUPPLY



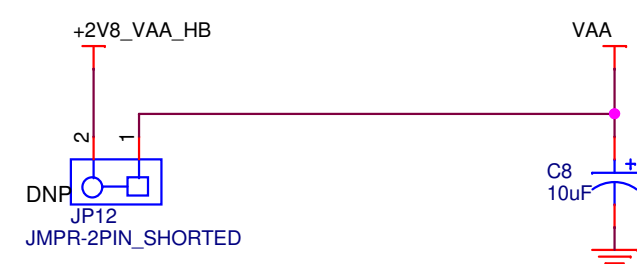
VDDIO & VDDIO_LS 1.8V SUPPLY



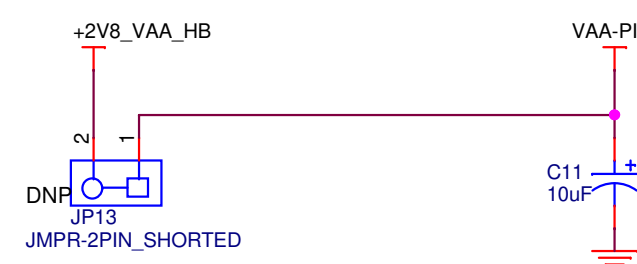
VDDIO-ANA 1.8V SUPPLY



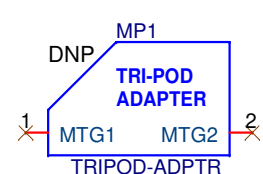
VAA 2.8V SUPPLY



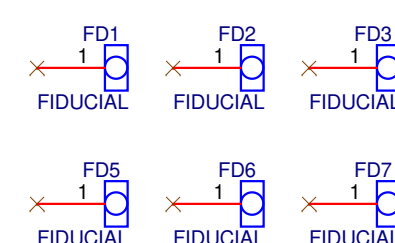
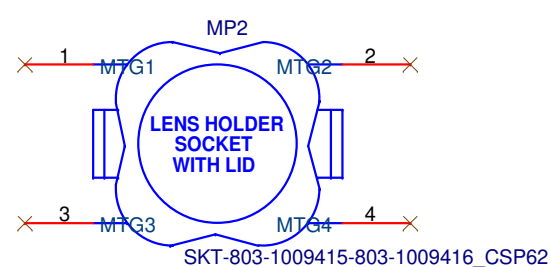
VAA-PIX 2.8V SUPPLY



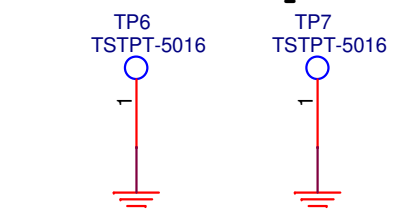
Tripod Mount



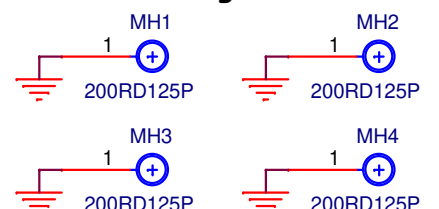
Socket/Lens Mount



Ground Testpoints



Mounting Holes

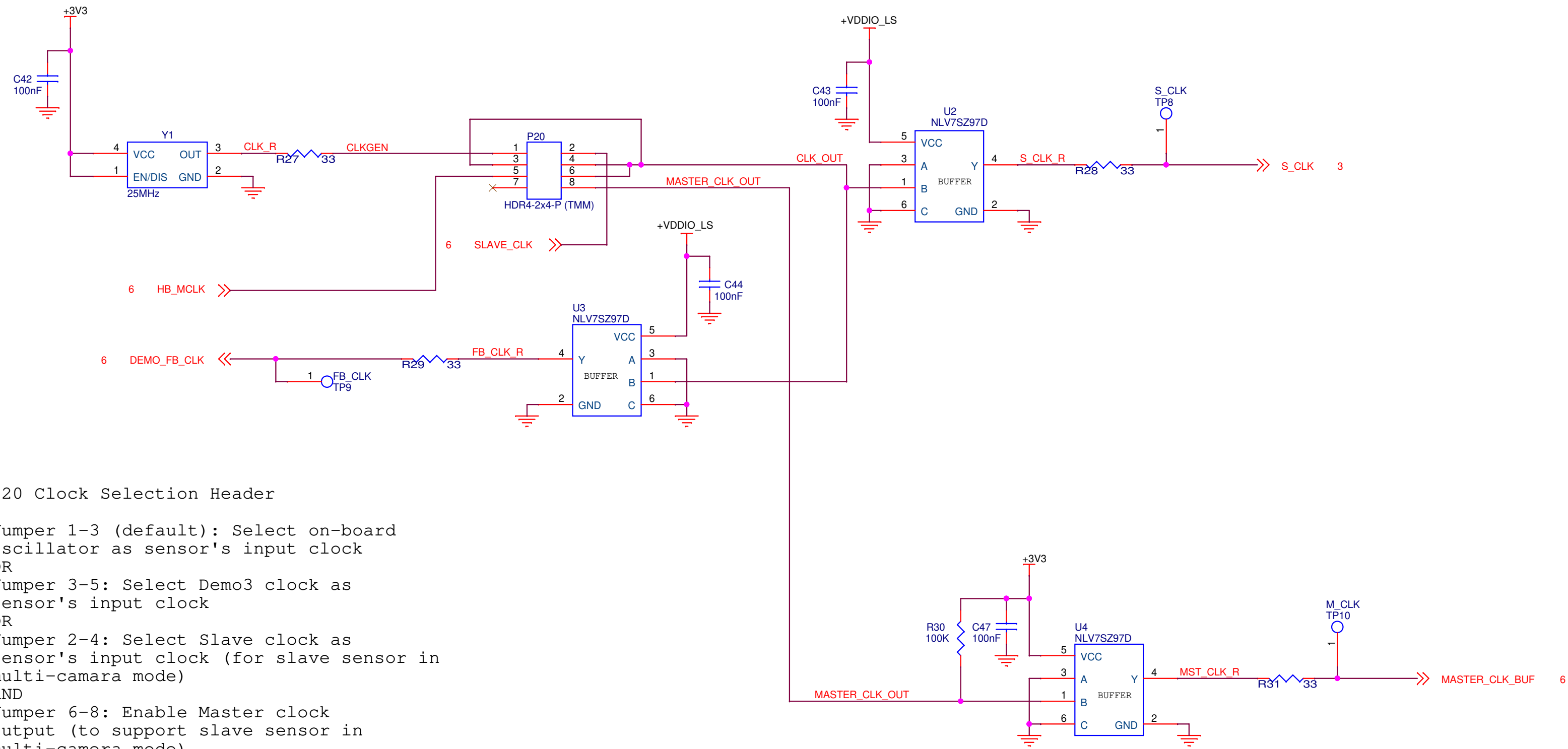


ON Semiconductor®

Title		Power
Size	Document Name	Rev
C	AR0235-CSP62_Demo3Head_SER	0.0
Date:	Monday, August 03, 2020	Sheet 4 of 6

Clock and Reset

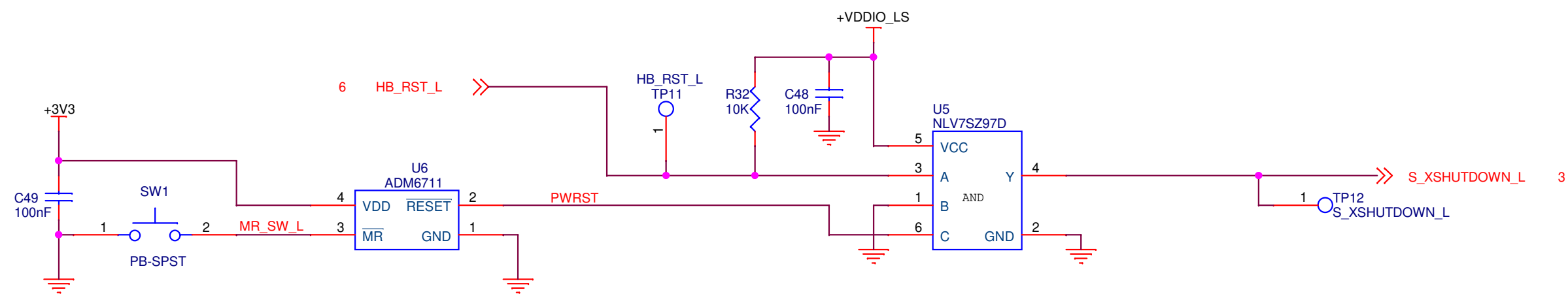
CLOCK CIRCUIT



P20 Clock Selection Header

- 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)

RESET CIRCUIT



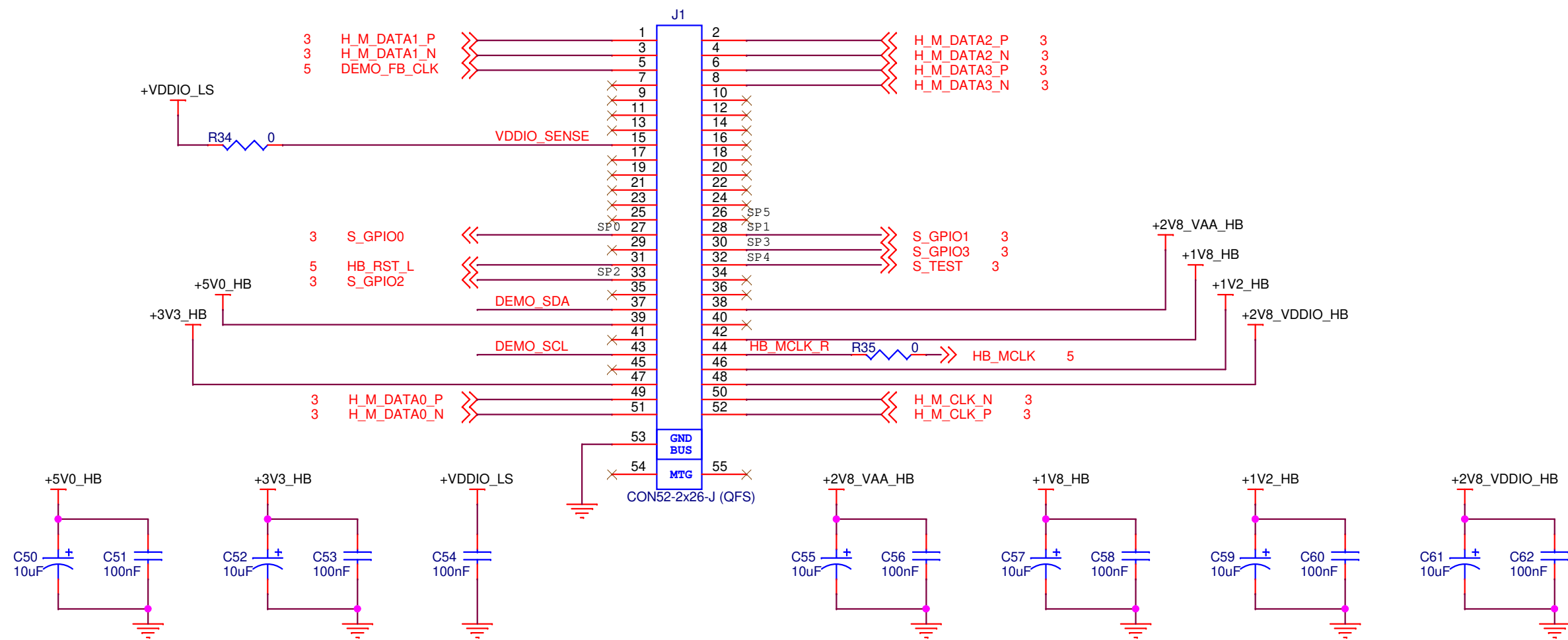
ON Semiconductor®

Title Clock and Reset		
Size C	Document Name AR0235-CSP62_Demo3Head_SER	Rev 0.0
Date: Monday, August 03, 2020	Sheet 5	of 6

External Interface

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

DEMO3 BASEBOARD I/F

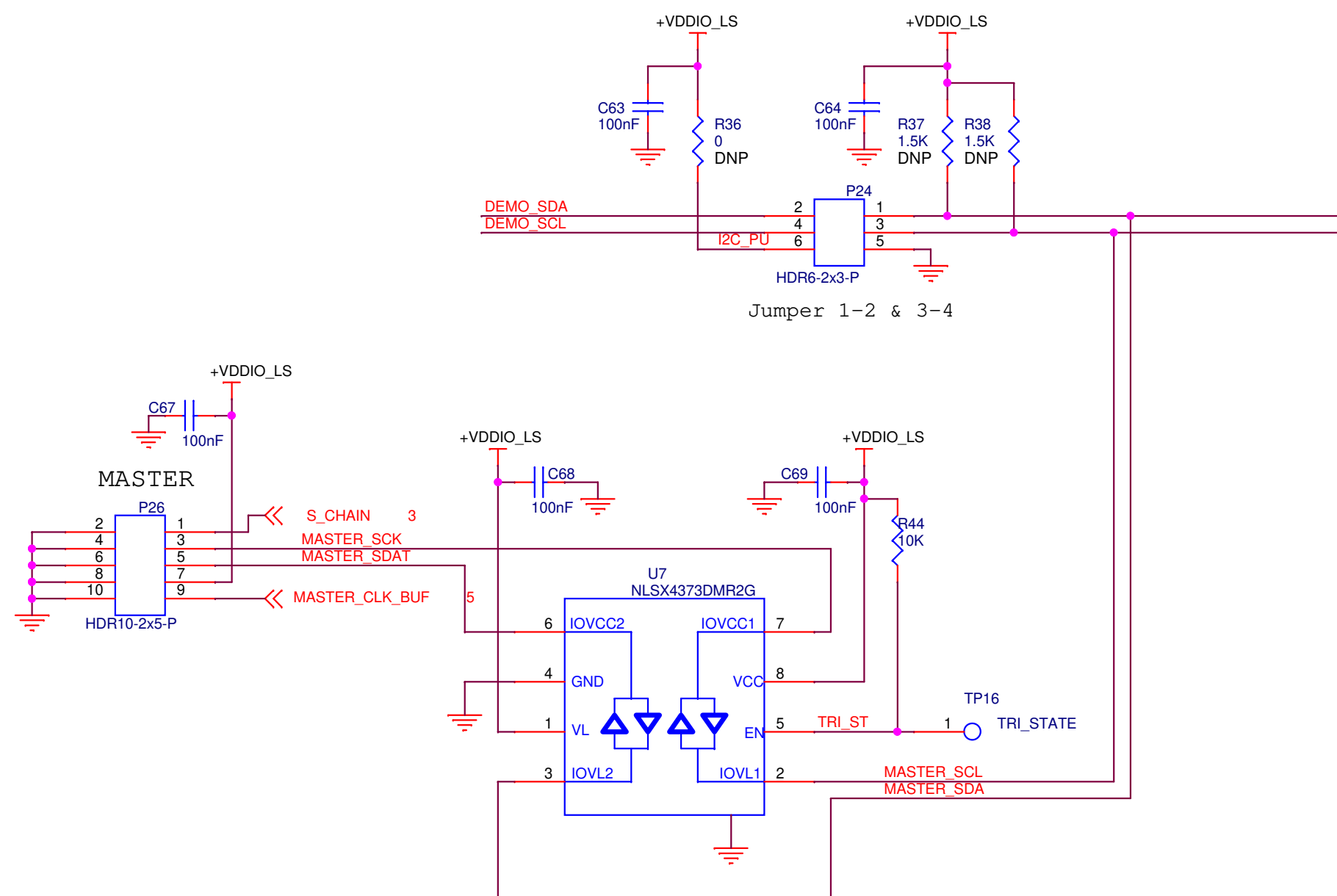


MULTI-CAMERA INTERFACE

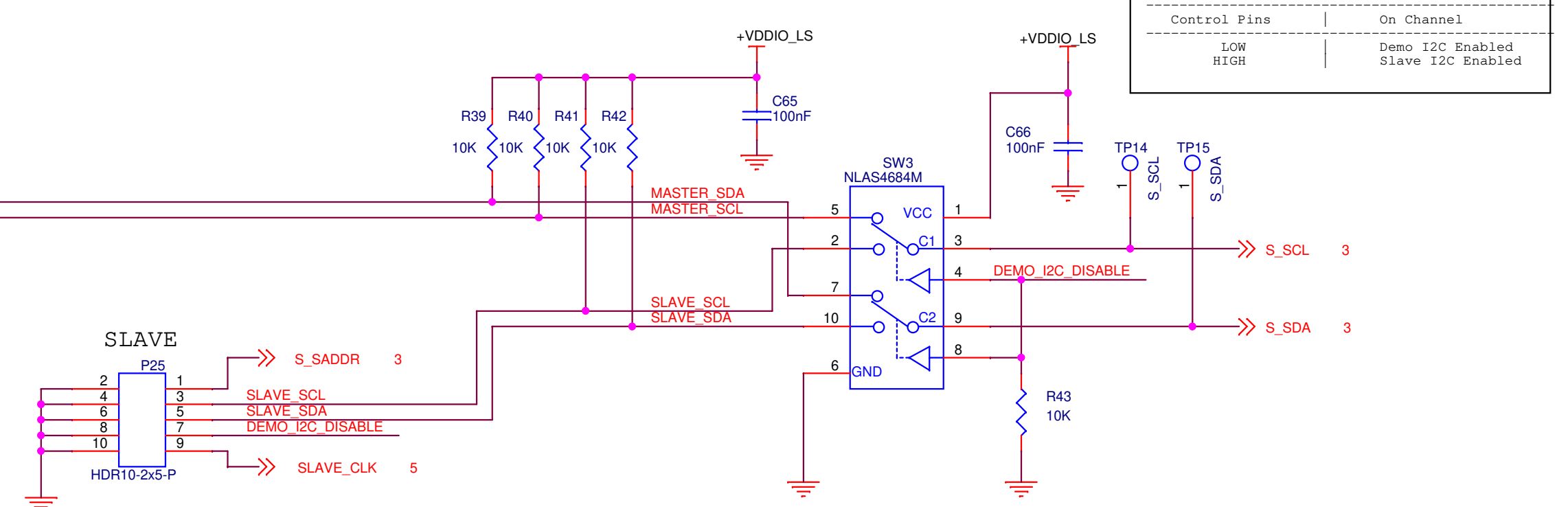
MASTER / SLAVE Connection in Multi-Camera Mode:

- 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

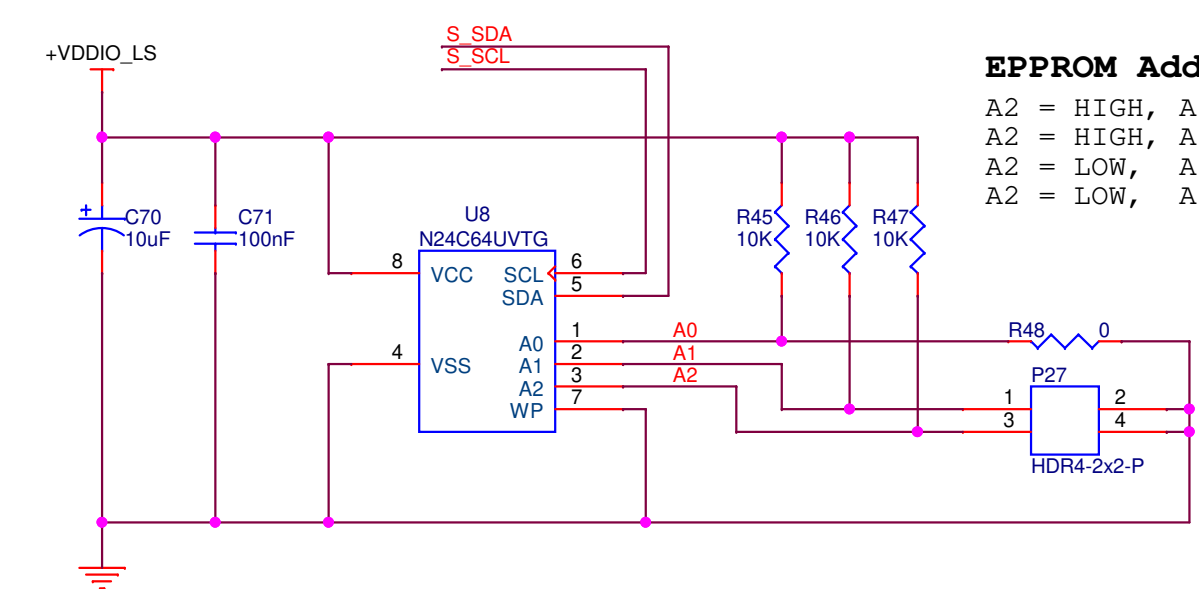


I2C SWITCH



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



ON Semiconductor®

Title: External Interface		
Size C	Document Name: AR0235-CSP62_Demo3Head_SER	Rev: 0.0
Date: Monday, August 03, 2020	Sheet: 6	of 6