


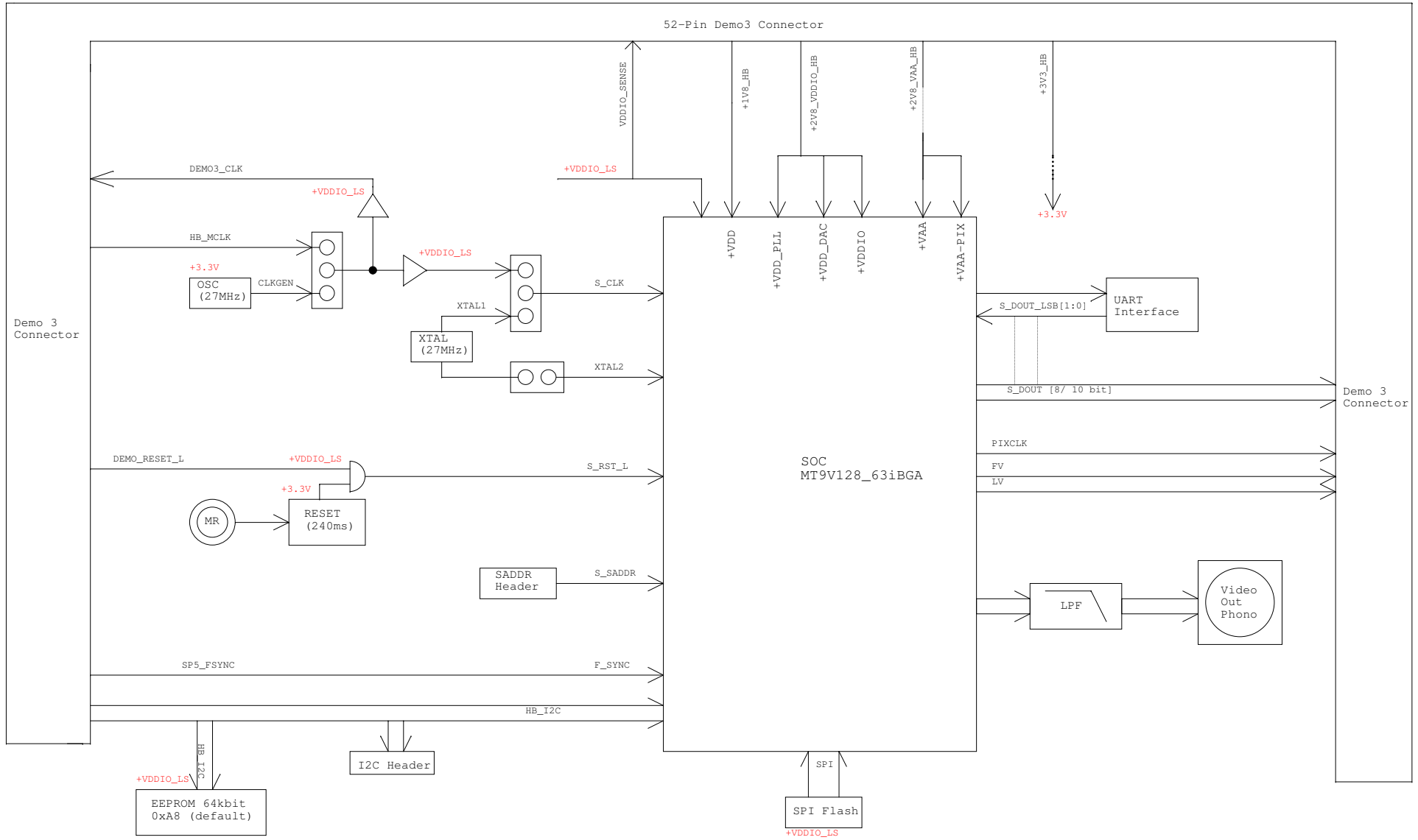
MT9V128(SOC356) 63IBGA HB DEMO3 Card

Page	Description
1	Title Page
2	Block Diagram
3	Pinout
4	Sensor
5	Power Supply
6	VideoOut_Clock_Reset
7	External Interface

Rev	Who	Date	Description
Rev 0.0	jwrede	10/06/2014	Base Schematic for Custom Design
Rev 0.1	aralex	04/20/2016	Initial schematic - Added new symbol MT9V126 to schematic
	aralex	04/25/2016 04/27/2016	- Implemented review feedback from Sanjeev - Updated block diagram and annotated for layout reference
	aralex	04/29/2016 05/2/2016	- Added Socket Implemented Sessa review comments - deleted TP2, TP6 and TP6 test points - changed RP7 and RP8 to 4.7K
Rev 0.2	aralex	05/09/2016	changed ref des for layout reference (as per ASX351 board) - made socket ref des as MP1 - swapped U13 and U14 - R24 and R26 is made 0402 package
Rev 0.3	aralex	05/10/2016	changes as requested by layout - deleted RP4-6, RP9; Added R80-R87 - Added R98-R105 - swapped nets on RP1-3
	aralex	05/11/2016	changes as requested by layout - deleted RP3; Added R106-R108 - swapped all shorted jumpers as per convention
	aralex	05/12/2016	Added R09, R110 for UART circuitry to isolate the UART traces and aid in length matching for the signals LSB0 and LSB1
	aralex	05/19/2016	Made P31 as DNP as per Joe's feedback in sync note
Rev 0.4	aralex	05/25/2016	Updated P/N of RP7 and RP8. No electrical change
	aralex	06/07/2016	Renamed the folder and file to MT9V128 from MT9V126. Made these text changes on the schematic pages 1, 2, 3 and 4. Changed the Document name also on the title block. No electrical change
Rev 0.5	aralex	06/24/2016	- Substituted the symbol MT9V128 to schematic as part of change to MT9V128. NO electrical change
	aralex	07/13/2016	Updated header text for p25 and P26. No electrical changes


		
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Title		
Title		
Size	Document Name	Rev
C	MT9V128(SOC356)_63IBGA_HB_DEMO3_Card	0.5
Date:	Wednesday, July 13, 2016	Sheet 1 of 7

Block Diagram



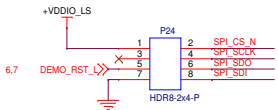
MT9V128_SENSOR(SOC356)

	1	2	3	4	5	6	7	8
A		DAC_REF	GND_DAC	DAC_NEG	VDD_DAC	Dout2	Dout1	Dout0
B	EXTCLK	XTAL	DAC_POS	GND	VDD_PLL	Dout6	Dout4	Dout3
C	RESET_BAR	FRAME_SYNC	VDD	GND	VDD_IO	TDO	Dout7	Dout5
D	DIN_CLK	DIN0	VDD	GND	VDD_IO	TDI	Dout_LSB1	Dout_LSB0
E	DIN2	DIN1	VDD	GND	VDD_IO	LINE_VALID	FRAME_VALID	PIXCLK
F	DIN5	DIN3	TMS	TCK	TRST_N	ATEST1	VAA_PIX	VAA_PIX
G	DIN6	DIN4	SCLK	SPI_CS_N	SPI_SDI	ATEST2	VAA	VAA
H	DIN7	SADDR	SData	SPI_SDO	SPI_SCLK	AGND	AGND	AGND

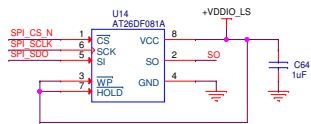
		
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Title Pinout		
Size C	Document Name MT9V128(SOC356)_631BGA_HB_DEMO3_Card	Rev 0.5
Date: Friday, June 24, 2016	Sheet 3 of 7	

MT9V128_SENSOR

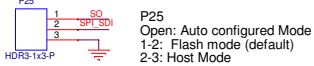
FLASH PROGRAMMING CONNECTOR



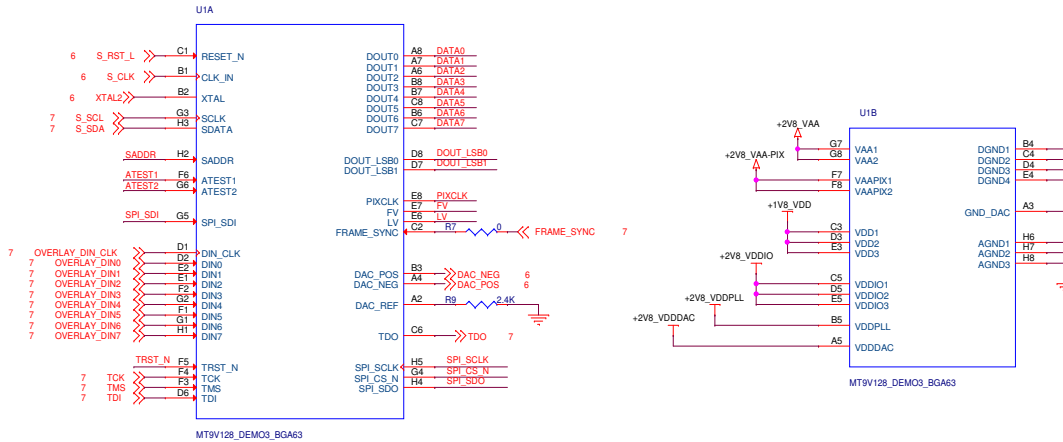
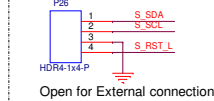
SPI FLASH



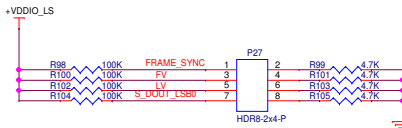
CONFIGURATION HEADER



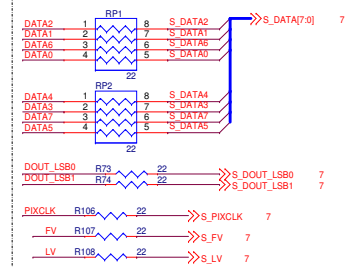
I2C HEADER



- P27
1-2: Closed (default)
3-4: Close -> Normal (default)
Open -> Horizontal Flip
5-6: Close: Normal (default)
Open -> Pedestal
7-8: Close -> NTSC (default)
Open -> PAL



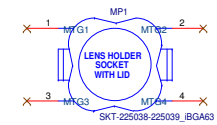
TERMINATION RESISTORS



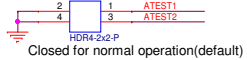
TEST POINTS

- S_PIXCLK 1 TP1 PIXCLK
- S_DATA0 1 TP3 S_DATA0
- S_DATA1 1 TP4 S_DATA1

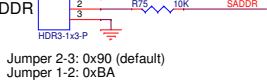
SOCKET



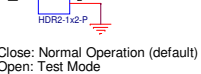
ATEST



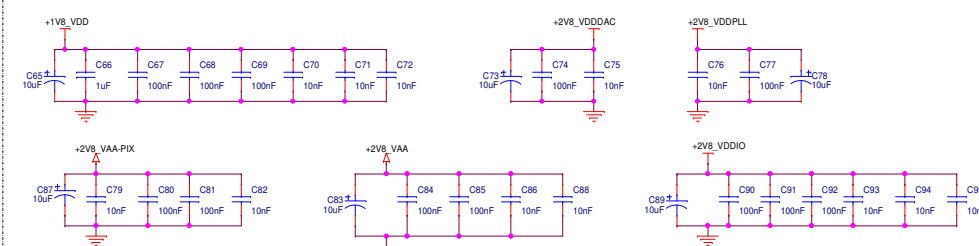
SADDR



TRST_N



DECAPS



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Title: Sensor

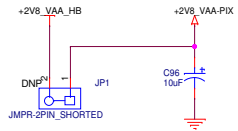
Size C Document Name: MT9V128(SOC356)_63BGA_HB_DEMO3_Card Rev: 0.5

Date: Wednesday, July 13, 2016 Sheet: 4 of 7

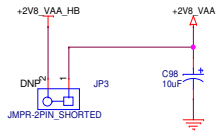
POWER SUPPLY

SENSOR

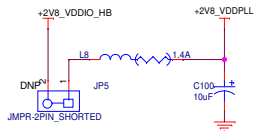
2.8V VAA-PIX Power supply



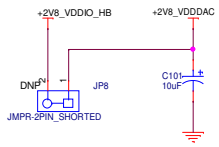
2.8V VAA Power supply



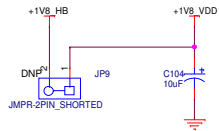
VDD_PLL Power Supply



VDD-DAC Power Supply

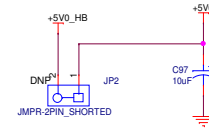


VDD Power Supply

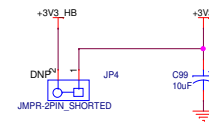


PERIPHERAL

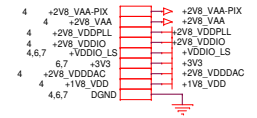
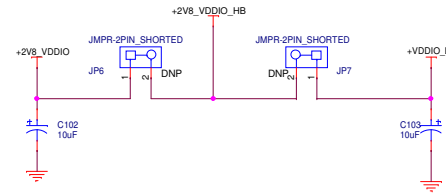
Peripheral 5V Power Supply



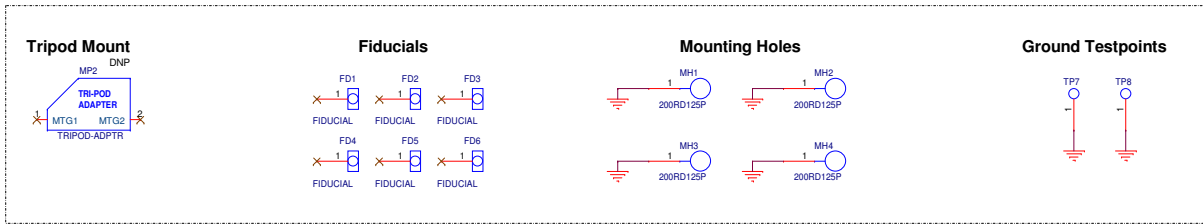
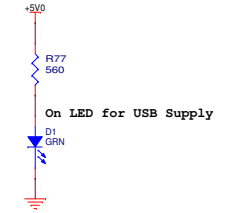
Peripheral 3.3V Supply



VDDIO & VDDIO_LS 2.8V Supply



Layout: Mount LED on bottom side of PCB



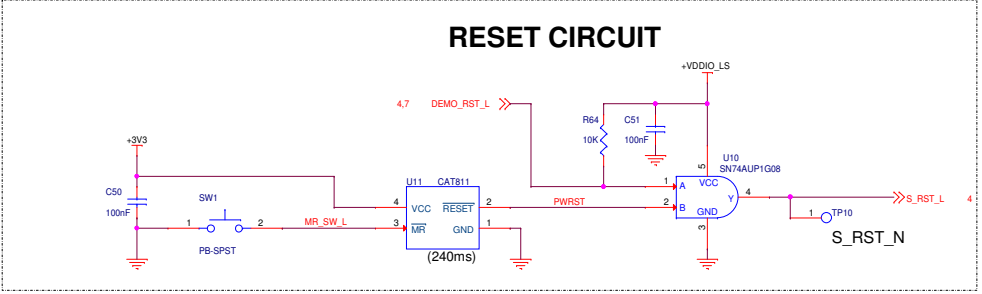
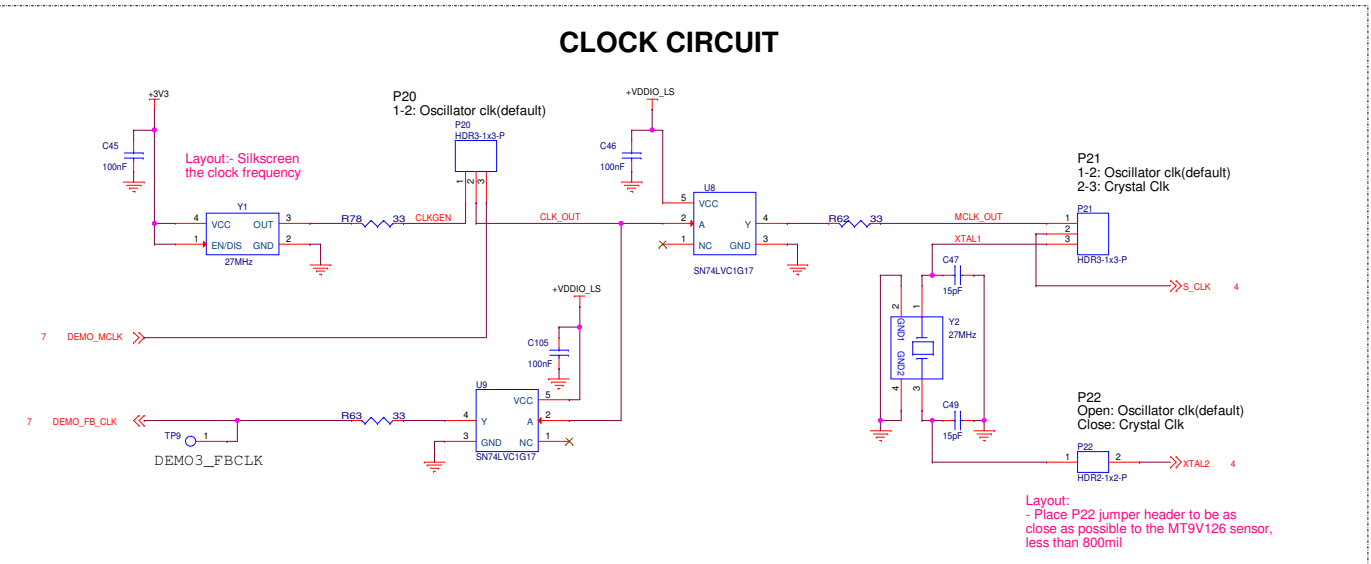
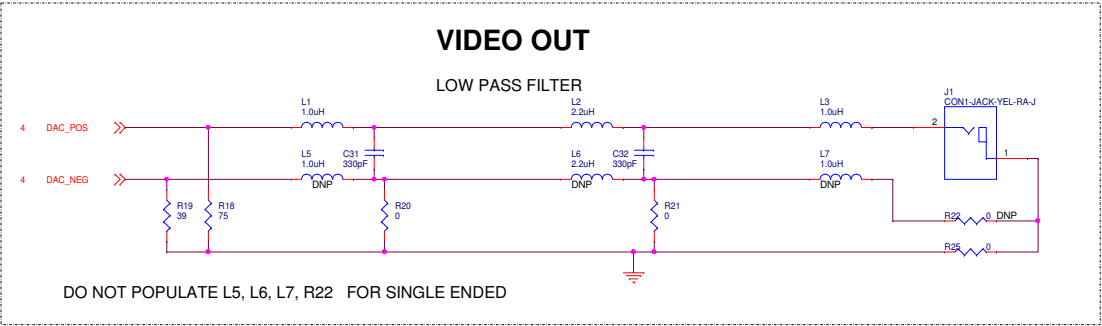
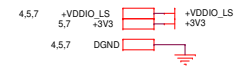
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Title: Power Supply

Size C Document Name: MT9V128(SOC356)_6318GA_HB_DEMO3_Card Rev: 0.5

Date: Friday, June 24, 2016 Sheet: 5 of 7

VideoOut_Clock_Reset



External Interface

