

# AR0237\_iBGA80\_Demo3Head

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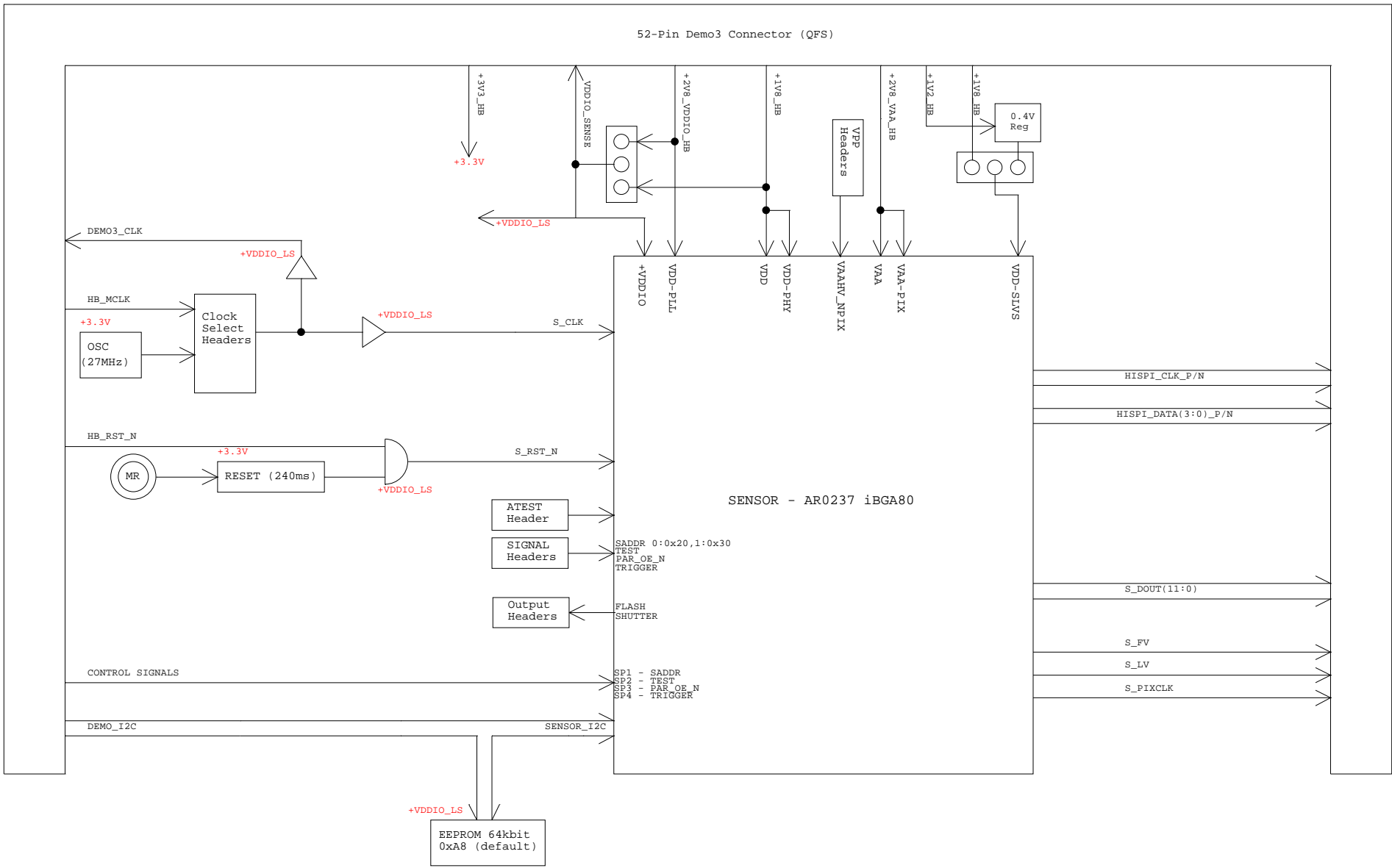
Rev	Who	Date	Description
Rev 0.0	aralex	06/10/15	Initial schematic taken from AR0230 IBGA 80 demo3 HB design because the pinout is the same. Changed P3 from 2 pin header to 3 pin header Added R50, P30; Deleted R8
		06/12/15	Updated with the new Sensor part for AR0237



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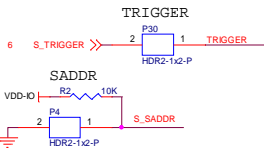
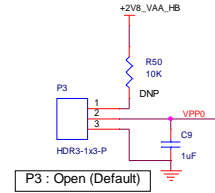
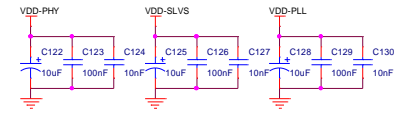
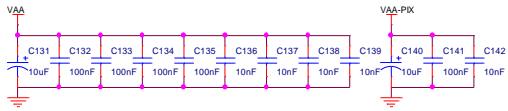
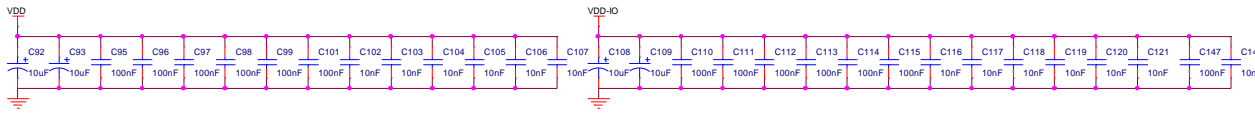
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TITLE PAGE		
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# Block Diagram

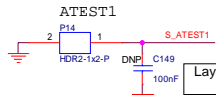
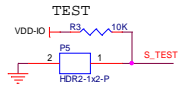


# Sensor

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

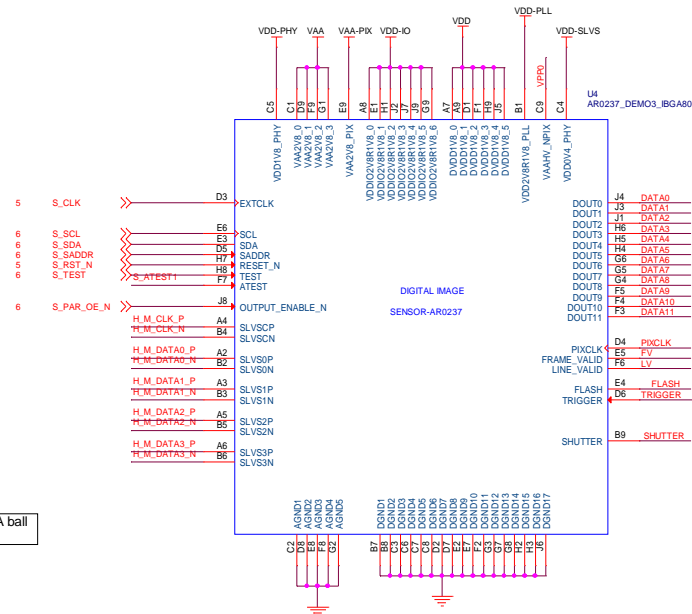
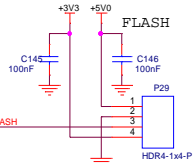


**Jumper P4:**  
 SHORT : SADDR= 0x20  
 OPEN : SADDR= 0x30

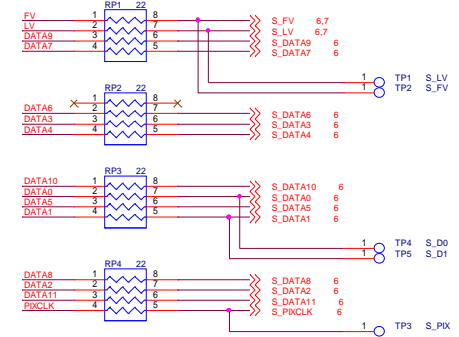
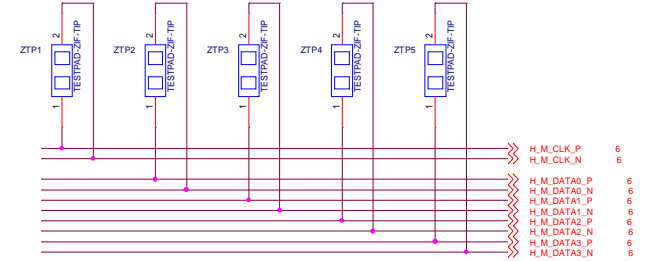


Layout Note: Place capacitor close to BGA ball of ATEST1 pin

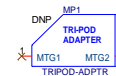
**Default Jumper Settings**  
 P5 : SHORT (S\_TEST->GND)  
 P6 : SHORT (Parallel mode Default)  
 P14: SHORT (ATEST1->GND)



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



## TRIPOD MOUNT



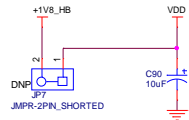
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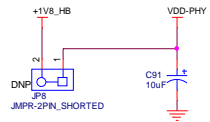
Debug Headers: Cut away the shorted trace and mount header for power debugging

# Power

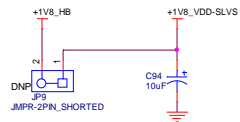
## VDD 1.8V SUPPLY



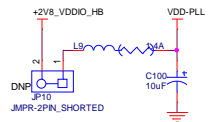
## VDD-PHY 1.8V SUPPLY



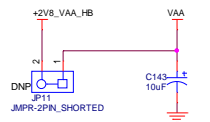
## VDD-SLVS 1.8V SUPPLY



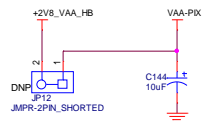
## VDD-PLL 2.8V SUPPLY



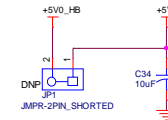
## VAA 2.8V SUPPLY



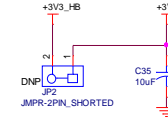
## VAA-PIX 2.8V SUPPLY



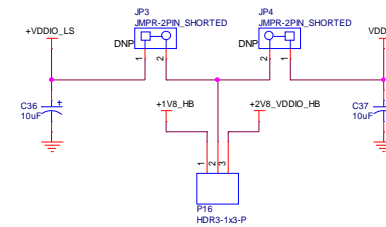
## PERIPHERAL 5V SUPPLY



## PERIPHERAL 3.3V SUPPLY

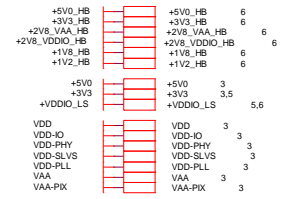
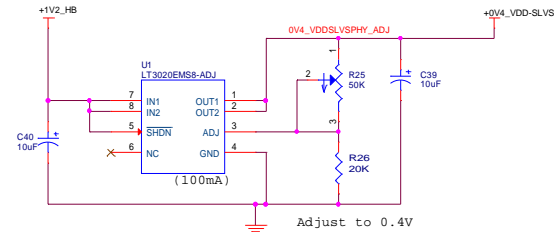


## VDDIO & VDDIO\_LS 1.8V/2.8V SUPPLY

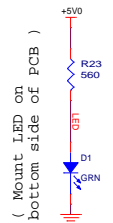


P16 Default Setting: 1-2 Short (1V8 operation)

## VDD\_SLVS 0.4V SUPPLY



## 5V LED



P18 Default Setting: 1-2 Short (SLVS mode)

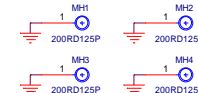
### Fiducials




### Ground Testpoints



### Mounting Holes



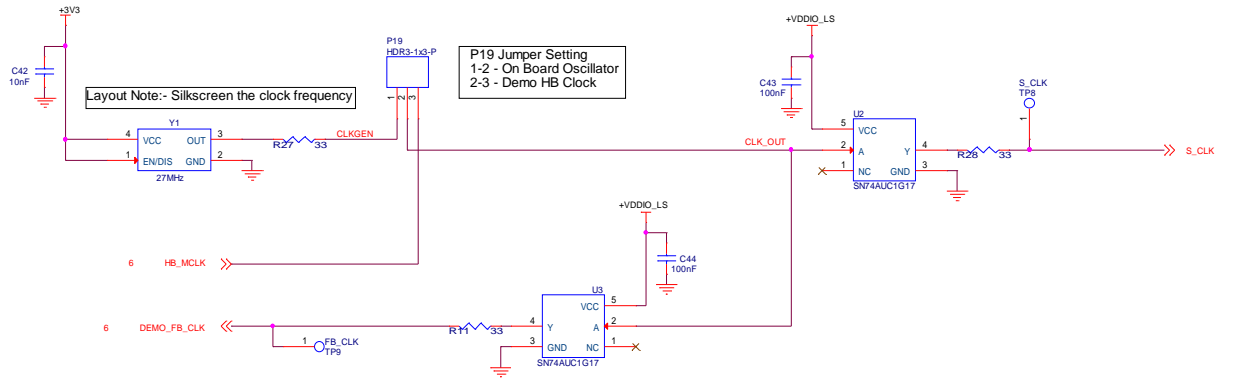


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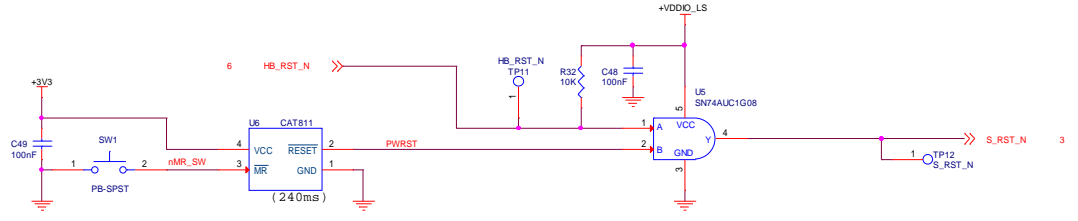
<b>POWER</b>	
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# Clock and Reset

## CLOCK CIRCUIT



## RESET CIRCUIT

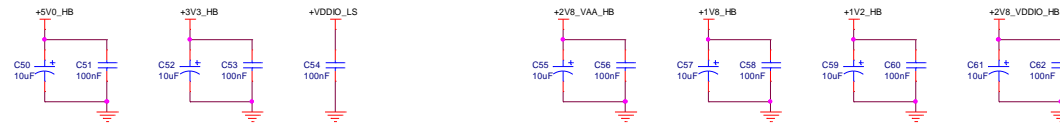
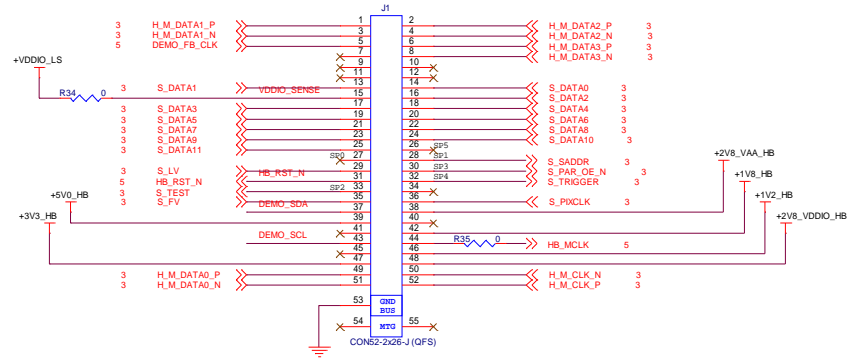


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Title <b>CLOCK AND RESET</b>		
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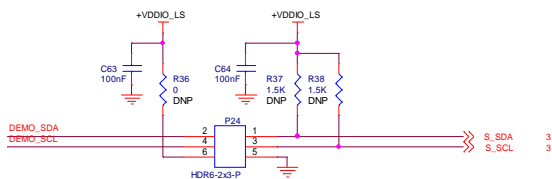
# External Interface

+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	3,4,5	+3V3	3,4,5
+VDDIO_LS	4,5	+VDDIO_LS	4,5

## DEMO3 BASEBOARD I/F

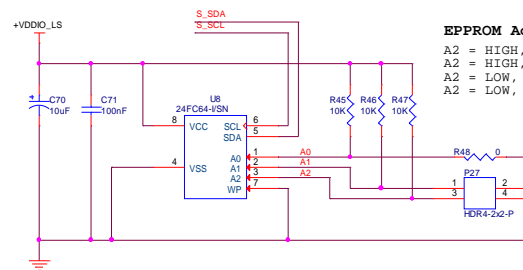


## I2C DEBUG



P24 Default Setting:  
 1-2 : Short : Demo and Sensor SDA connected  
 3-4 : Short : Demo and Sensor SCL connected

## LENS CORRECTION EEPROM



### EEPROM Address Switch Settings:

A2 = HIGH, A1 = LOW, A0 = LOW; Address => 0xA8 (default)  
 A2 = HIGH, A1 = HIGH, A0 = LOW; Address => 0xA9  
 A2 = LOW, A1 = HIGH, A0 = LOW; Address => 0xA4  
 A2 = LOW, A1 = LOW, A0 = LOW; Address => 0xA0

P27 Default Jumper Setting:  
 1-2 : Short => Ground/Low  
 3-4 : Open => Pull-up/High



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EXTERNAL INTERFACE	
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