ON Semiconductor®

Schematic for the AR0135 Evaluation Board

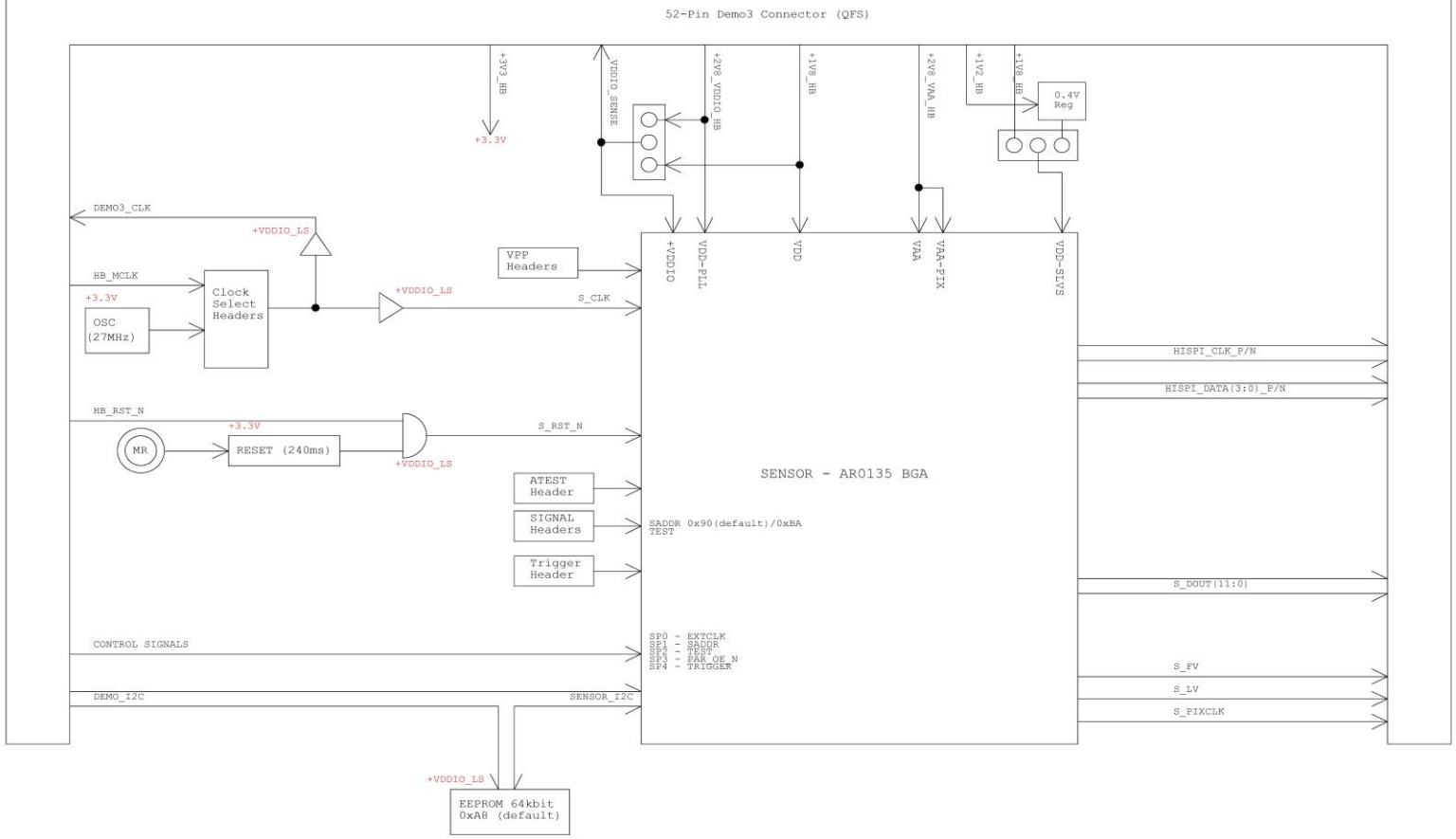
AR0135_BGA_Demo3Head

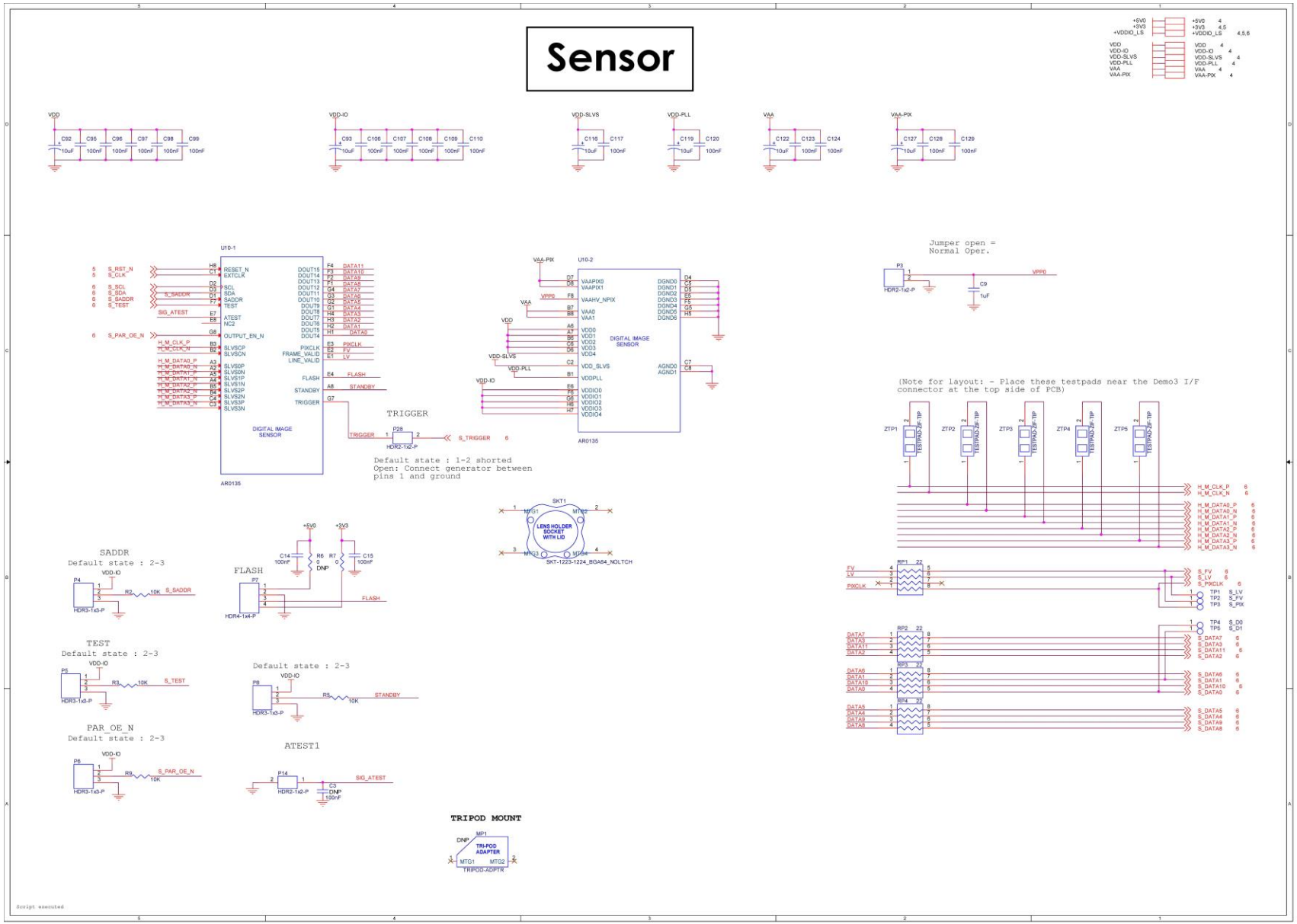
Page	Description
1	Title Page
2	Block Diagram
3	Sensor
4	Power
5	Clock and Reset
6	External Interfaces

Rev	Who	Date	Description
Rev 0.0	aralex	05/07/14	Initial
Rev 0.0	aralex	05/08/14 05/13/14 05/15/14	Removed the 10nF Decaps on VDD and VDDIO for Sensor Updated the sensor with the new non socketed part, and added C-mount lens Updated the sensor with the new non socketed part, and added the socket for demo3 board
Rev 0.1	aralex	05/16/14	Removed text near R8 for TRIGGER signal Replaced R25 with a fixed resistor of 20K
	aralex	05/20/14	Removed Skip Block Fiducials FD4 and FD8.
Rev 1.0	aralex	04/23/15	Added a 2 pin header P28 for Trigger signal, deleted R8

Script executed

Block Diagram

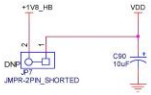



Sensor
VDD
VDD-IO
VDD-SLVS
VDD-PLL
VAA
VAA-PIX
U10-1
U10-2
AR0135
DIGITAL IMAGE SENSOR
TRIGGER
Default state : 1-2 shorted
Open: Connect generator between pins 1 and ground
Jumper open = Normal Oper.
(Note for layout: - Place these testpads near the Demo3 I/F connector at the top side of PCB)
SADDR
Default state : 2-3
FLASH
TEST
Default state : 2-3
PAR_OE_N
Default state : 2-3
ATEST1
TRIPOD MOUNT
LENS HOLDER SOCKET WITH LID
SKT-1223-1224_BGA64_NOLTCH
TRI-POD ADAPTER
TRIPOD-ADPTR

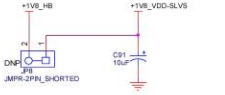
Power

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

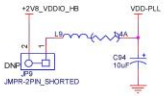
VDD 1.8V SUPPLY



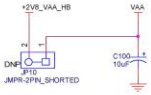
VDD-SLVS 1.8V SUPPLY



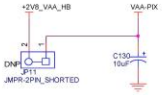
VDD-PLL 2.8V SUPPLY



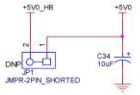
VAA 2.8V SUPPLY

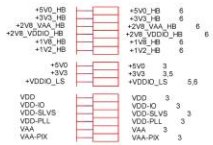


VAA-PIX 2.8V SUPPLY

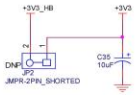


PERIPHERAL 5V SUPPLY

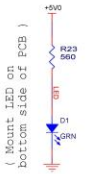




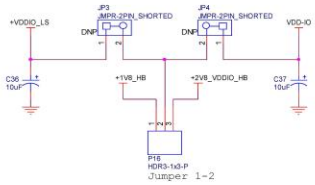
PERIPHERAL 3.3V SUPPLY



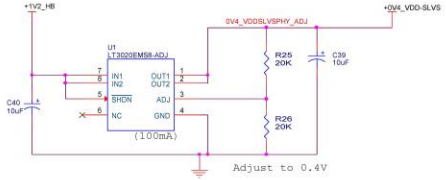
5V LED



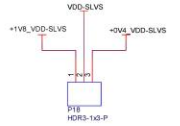
VDDIO & VDDIO_LS 1.8V/2.8V SUPPLY

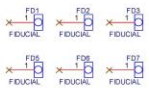


VDDSLVSPHY 0.4V SUPPLY



Selection of 0.4V or 1.2V/1V8 for VDDSLVSPHY supply





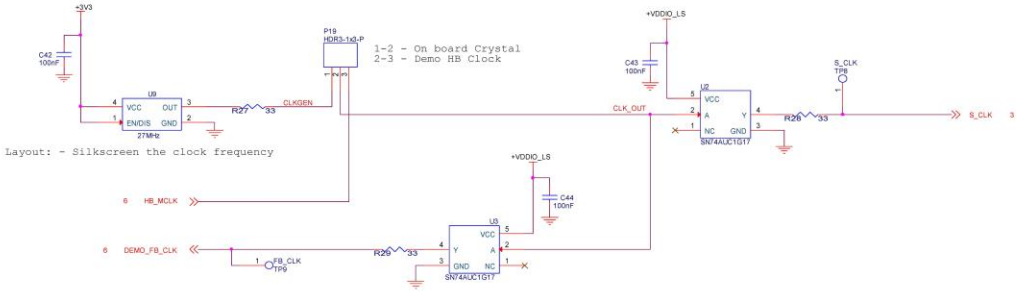
Ground Testpoints

Mounting Holes

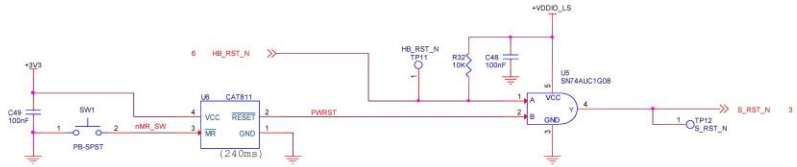
Script executed

Clock and Reset

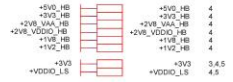
CLOCK CIRCUIT



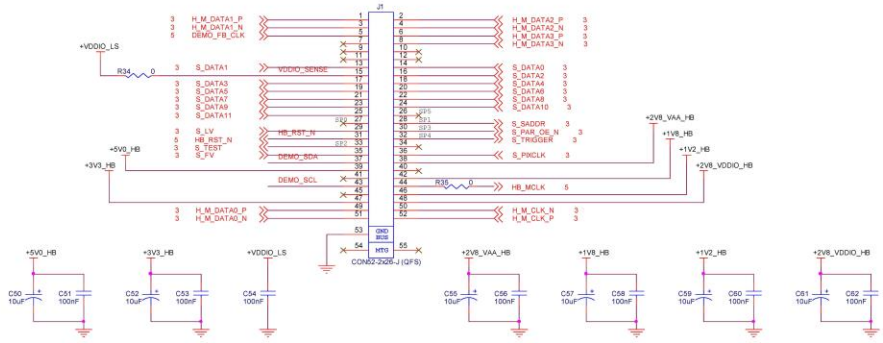
RESET CIRCUIT



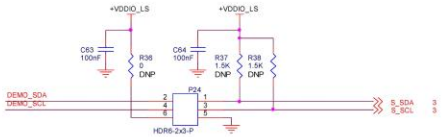
External Interface



DEMO3 BASEBOARD I/F

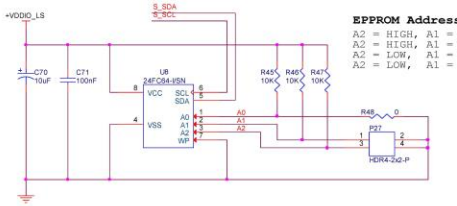


I2C DEBUG



Jumper: 1-2 & 3-4 (default status)

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