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AR0330CS1C12SPKAH3-GEVB

AR0330CS Evaluation Board User's Manual

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EVAL BOARD USER'S MANUAL

Evaluation Board Overview

The evaluation boards are designed to demonstrate the features of image sensors products from ON Semiconductor. This headboard is intended to plug directly into the Demo 3 system. Test points and jumpers on the board provide access to the clock, I/Os, and other miscellaneous signals.

Features

- Clock Input
  - Default – 27 MHz Crystal Oscillator
  - Optional Demo 3 Controlled MClk
- Two-wire Serial Interface
  - Selectable Base Address
- Parallel Interface
- ROHS Compliant

Figure 1. AR0330CS Evaluation Board

Block Diagram

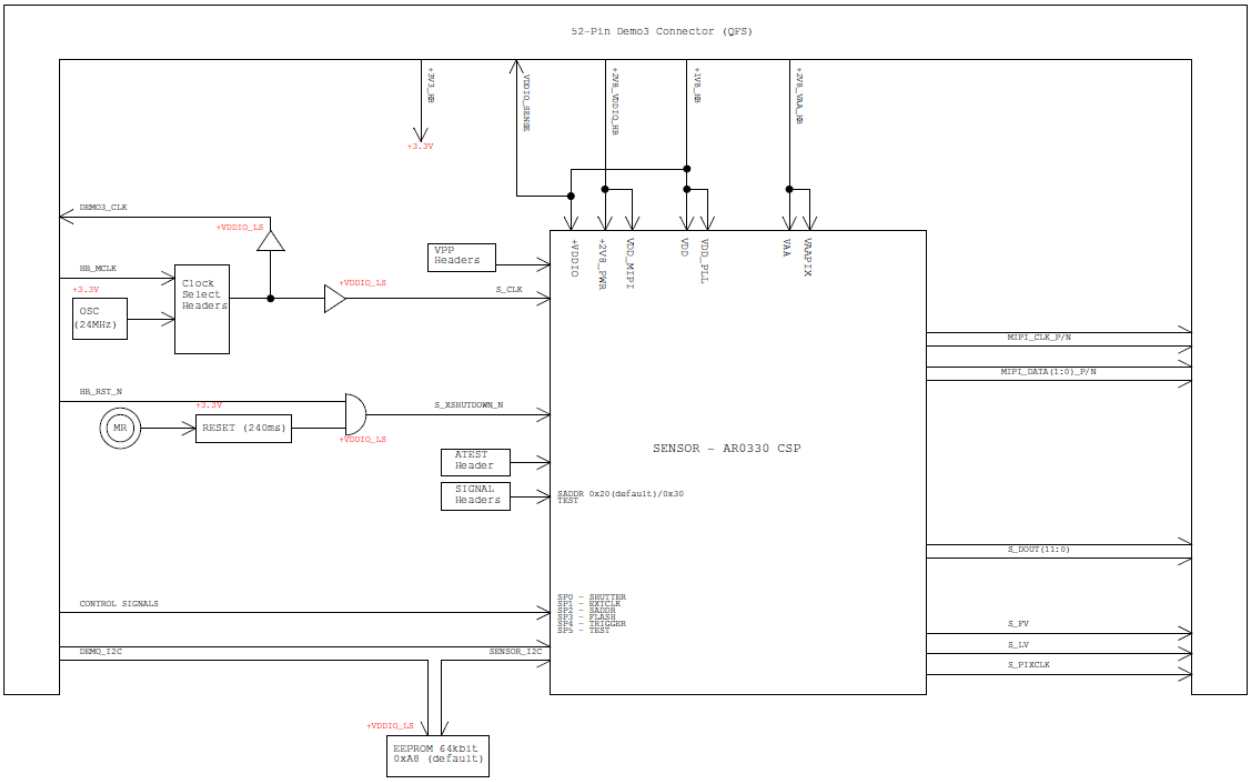

Figure 2. Block Diagram of AR0330CS1C12SPKAH3−GEVB

Top View

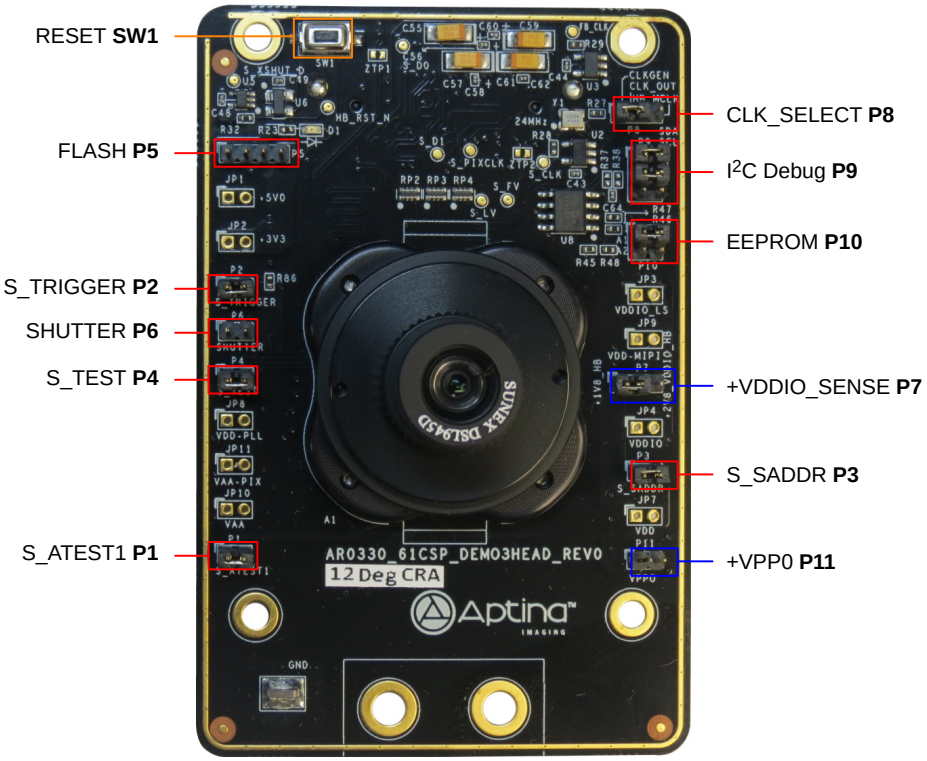

Figure 3. Top View of the Board − Default Jumpers

Bottom View

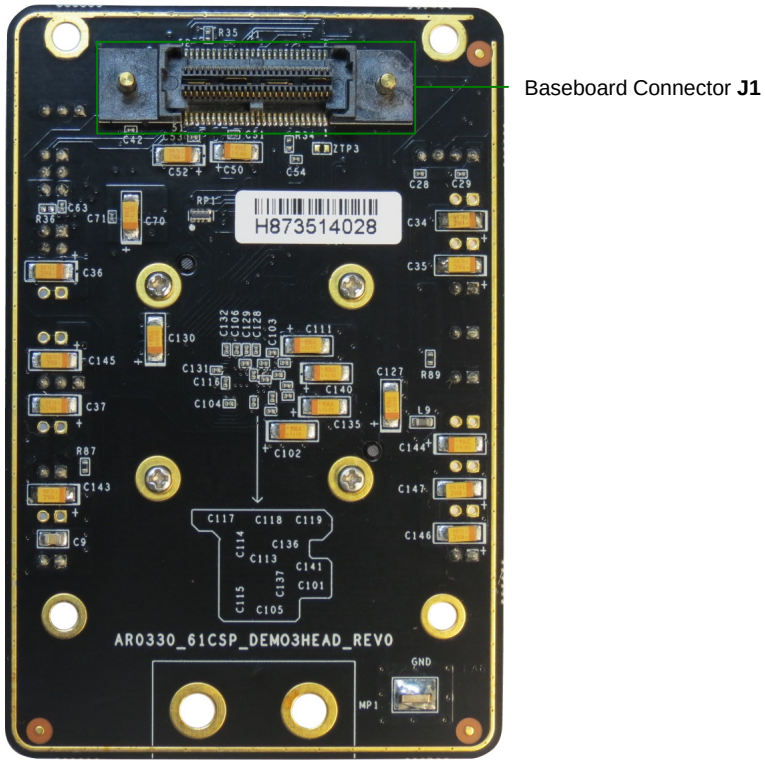

Figure 4. Bottom View of the Board − Connector

Jumper Pin Locations

The jumpers on headboards start with Pin 1 on the leftmost side of the pin. Grouped jumpers increase in pin size with each jumper added.

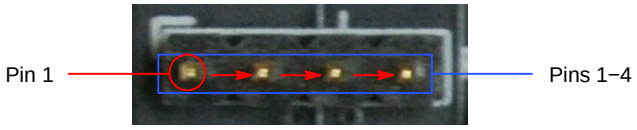

Figure 5. Pin Locations for a Single Jumper. Pin 1 is Located at the Leftmost Side and Increases as it Moves to the Right

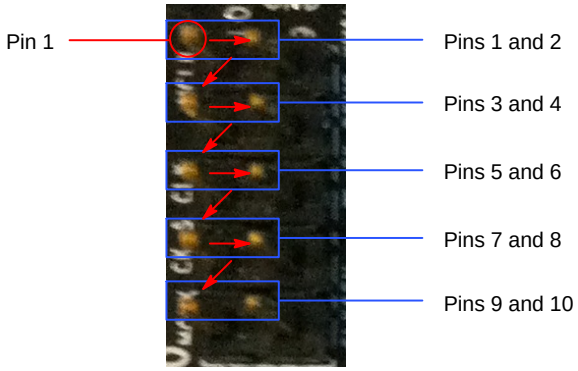

Figure 6. Pin Locations and Assignments of Grouped Jumpers. Pin 1 is Located at the Top-Left Corner and Increases in a Zigzag Fashion Shown in the Picture

Jumper/Header Functions & Default Positions

Table 1. JUMPERS AND HEADERS

Jumper/Header No.	Jumper/Header Name	Pins	Description
P1	S_ATEST1	Closed (Default)	ATEST1 Pin is Connected to GND
		Open	External Test Signal can be Provided for Analog Test
P2	S_TRIGGER	Closed (Default)	TRIGGER Pin is Connected to GND
		Open	For Connection to External Trigger for Frame Rate Sync.
P3	S_SADDR	1−2 (Default)	I^2C Address Set to 0x20
		Open	I^2C Address Set to 0x30
P4	S_TEST	1−2 (Default)	Normal Mode Operation
		Open	Test Mode Operation
P5	FLASH	1	+5V0
		2	GND
		3	FLASH
		4	+3V3
P6	SHUTTER	Open (Default)	For Connection to External Shutter
P7	+VDDIO_SENSE	1−2 (Default)	1.8 V Operation of Sensor
		2−3	2.8 V Operation of Sensor
P8	CLK_SELECT	1−2 (Default)	On-board Oscillator (24MHz)
		2−3	Demo 3 Headboard MCLK

Table 1. JUMPERS AND HEADERS (continued)

Jumper/Header No.	Jumper/Header Name	Pins	Description
P9	I^2C Debug	1−2, 3−4 (Default)	Demo SCL & SDA Connected to Sensor SCL & SDA Respectively
P10	LSC EEPROM	1−2 Open, 3−4 Open (Default)	EEPROM Address Set to 0xAC
		1−2 Open, 3−4 Closed	EEPROM Address Set to 0xA4
		1−2 Closed, 3−4 Open	EEPROM Address Set to 0xA8
		1−2 Closed, 3−4 Closed	EEPROM Address Set to 0xA0
P11	+VPP0	Open (Default)	OTPM Programming Voltage Not Supplied
SW1	RESET	N/A	When Pushed, 240 ms Reset Signal will be Sent to AR0330CS

Interfacing to ON Semiconductor Demo 3 Baseboard

The ON Semiconductor Demo 3 baseboard has a similar 52-pin connector which mates with J1 of the headboard. The four mounting holes secure the baseboard and the headboard with spacers and screws.

Shorted Jumpers for Power Measurement

Different supplies to the evaluation board are provided by trace shorted jumper, for any voltage and power measurements. To conduct current for current measurement on a given power rail, cut the trace between the two pins of their respective JP, and insert an ammeter prior to powering up the system. The figure below shows where the trace to cut is located.

Table 2. SHORTED JUMPERS FOR POWER MEASUREMENT

Jumper	Voltage (V)
JP1 (from Demo 3)	5.0
JP2 (Peripheral 3.3 V)	3.3
JP3 (VDDIO_LS)	1.8
JP4 (VDDIO)	1.8
JP7 (VDD)	1.8
JP8 (VDD_SLVS)	1.8
JP9 (VDD_PLL)	2.8
JP10 (VAA)	2.8
JP11 (VAA_PIX)	2.8

Figure 7. Top and Bottom View of Shorted Jumper.
The Bottom View Shows the Trace Location to Cut for Current Measurement

PUBLICATION ORDERING INFORMATION

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