

AR0132AT Evaluation Board User's Manual



ON Semiconductor®

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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
- HiSPi (High Speed Serial Pixel) Interface
- ROHS Compliant

Block Diagram

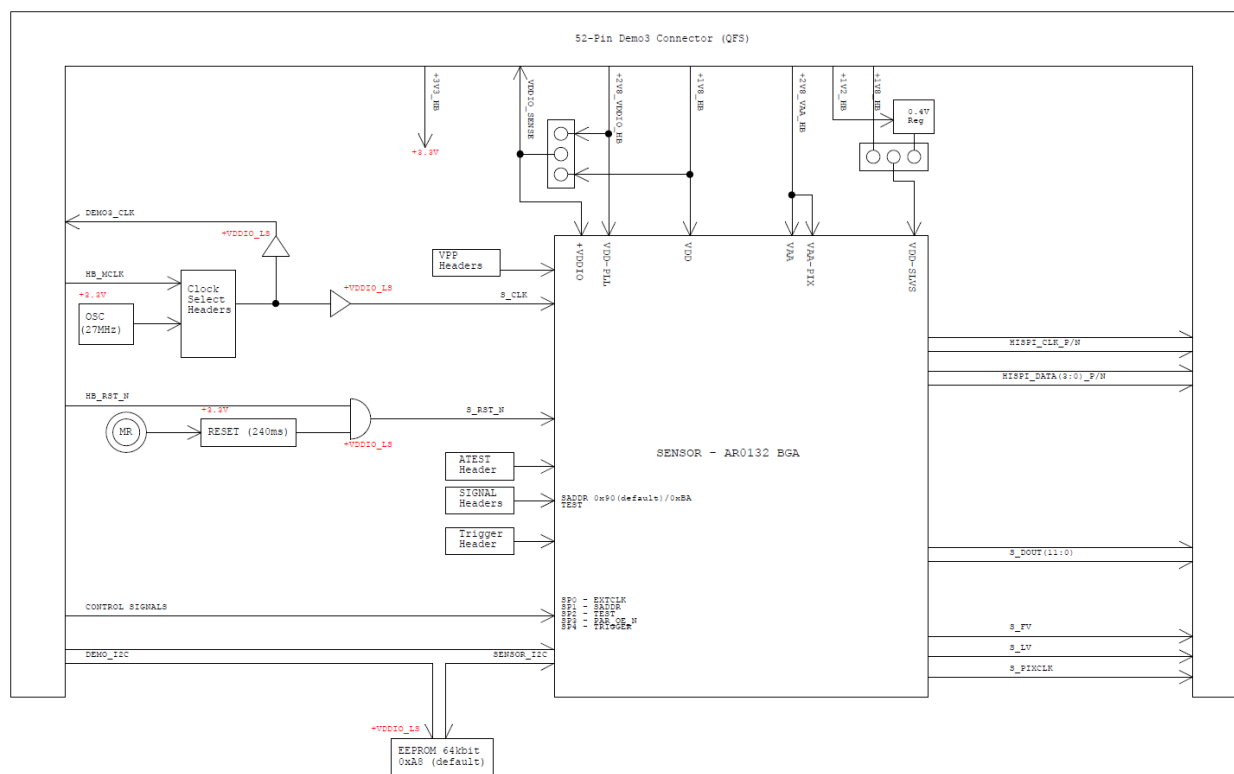


Figure 2. Block Diagram of AR0132AT6R00XPEAH3-S215-GEVB

EVAL BOARD USER'S MANUAL



Figure 1. AR0132AT Evaluation Board

AR0132AT6R00XPEAH3-S215-GEVB

Top View

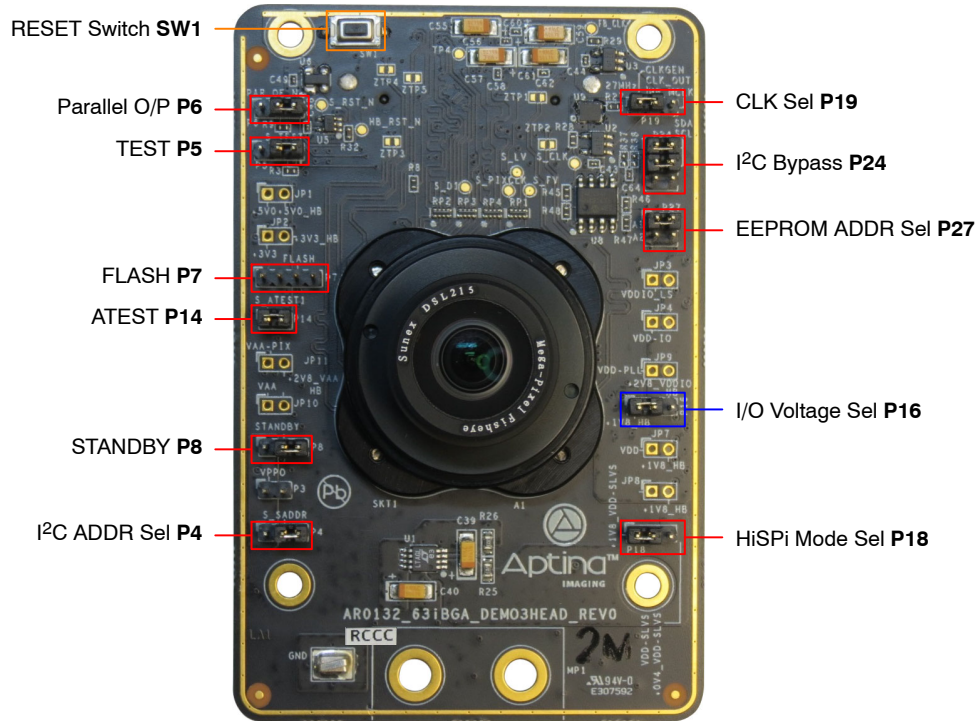


Figure 3. Top View of the Board – Default Jumpers

Bottom View

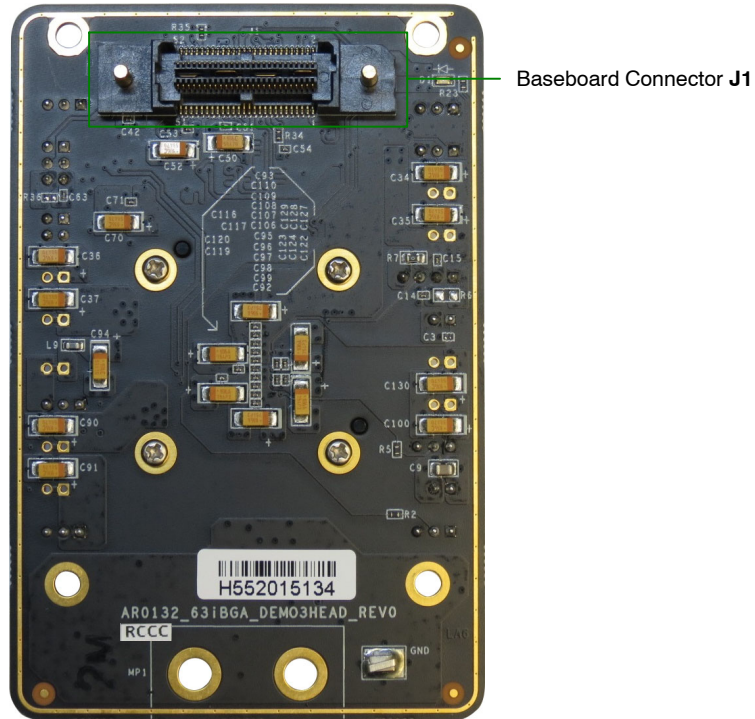


Figure 4. Bottom View of the Board – Connector

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.

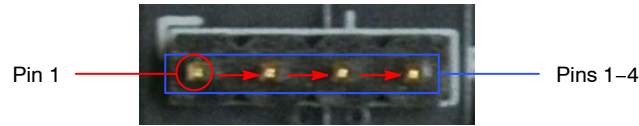


Figure 5. Pin Locations for a Single Jumper. Pin 1 is Located at the Leftmost Side and Increases as it Moves to the Right

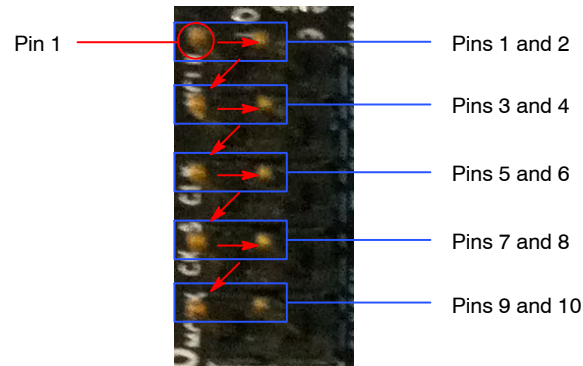


Figure 6. Pin Locations and Assignments of Grouped Jumpers. Pin 1 is Located at the Top-Left Corner and Increases in a Zigzag Fashion Shown in the Picture

Jumper/Header Functions & Default Positions

Table 1. JUMPERS AND HEADERS

Jumper/Header No.	Jumper/Header Name	Pins	Description
P3	VPP	Open	OTPM Programming Voltage Not Supplied
P4	SADDR	2-3 (Default)	I ² C Address Set to 0x20
		1-2	I ² C Address Set to 0x30
P5	TEST	2-3 (Default)	Set to Normal Mode
		Open	Set to Test Mode
P6	OE_N	2-3 (Default)	Parallel Output Enabled
		Open	Parallel Output Disabled; HiSPi Output Enabled
P7	FLASH	1	+5V0
		2	GND
		3	FLASH
		4	+3V3
P8	STANDBY	2-3 (Default)	Normal Mode
		1-2	Standby Mode
P14	ATEST	1-2 (Default)	ATEST → GND
P16	VDD_IO	1-2 (Default)	1.8 V Operation of Sensor
		2-3	2.8 V Operation of Sensor
P18	HiSPi Mode	1-2 (Default)	SLVS Mode
		2-3	Hi-VCM Mode

Table 1. JUMPERS AND HEADERS (continued)

Jumper/Header No.	Jumper/Header Name	Pins	Description
P19	Master Clock	1–2 (Default)	On-Board Oscillator (27 MHz)
		2–3	AR0132 Evaluation Board MCLK
P24	I ² C	1–2 & 3–4 (Default)	Demo 3 SCL & SDA Connected to Sensor SCL & SDA Respectively
P27	EEPROM Addr. Sel	3–4 Open & 1–2 Closed (Default)	EEPROM Address Set to 0xA8
		3–4 Open & 1–2 Closed	EEPROM Address Set to 0xAC
		3–4 Open & 1–2 Closed	EEPROM Address Set to 0xA4
		3–4 Open & 1–2 Closed	EEPROM Address Set to 0xA0
P28	TRIGGER	1–2	Trigger Input Enabled
		Open (Default)	Connect Generator Between Pin 1 and GND
SW1	RESET	N/A	When Pushed, 240 ms Reset Signal will be Sent to AR0132

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.

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