MT9J003I12STMVH-GEVB

MT9J003 Evaluation Board User's Manual

ON Semiconductor®

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EVAL BOARD USER'S MANUAL

Evaluation Board Overview

The evaluation boards are designed to demonstrate the features of ON Semiconductor's image sensors products. This headboard is intended to plug directly into the Demo 2X system. Test points and jumpers on the board provide access to the clock, I/Os, and other miscellaneous signals.

Features

- Clock Input
  - Default – 10 MHz Crystal Oscillator
  - Optional Demo 2X Controlled MClk
- Two Wire Serial Interface
  - Selectable Base Address
- Parallel Interface
- HiSPi (High Speed Serial Pixel) Interface
- ROHS Compliant

Figure 1. MT9J003 Evaluation Board

Block Diagram

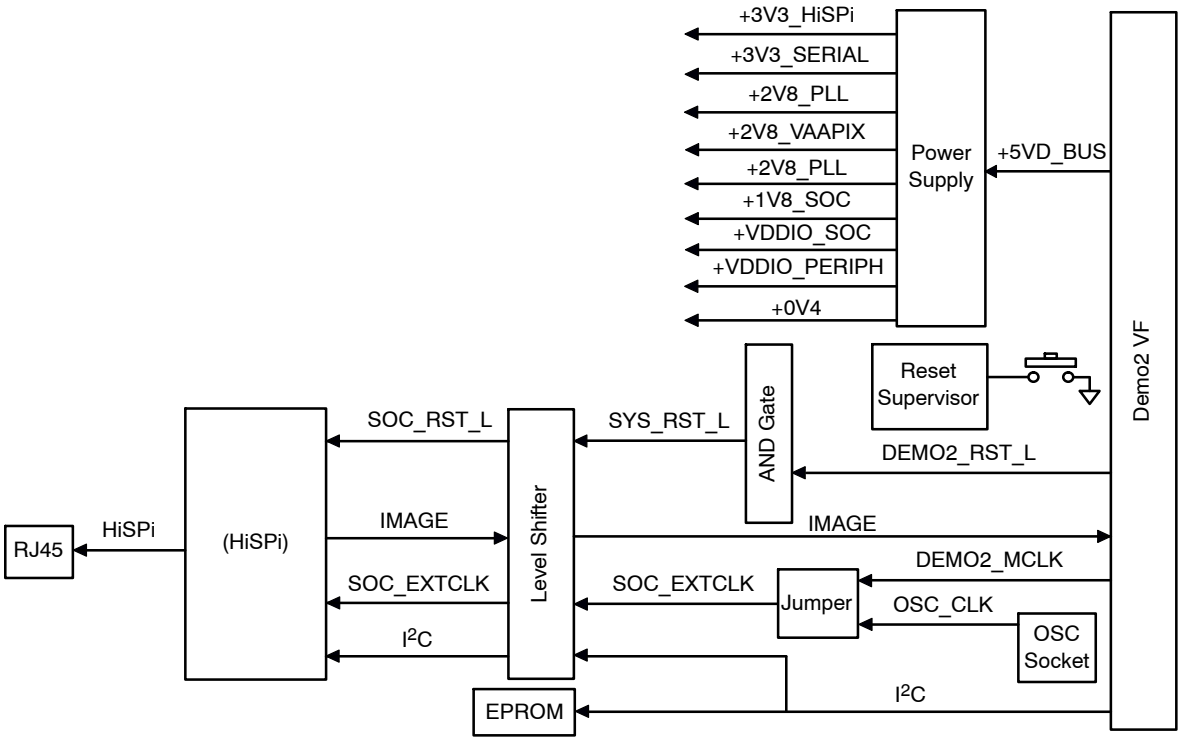

Figure 2. Block Diagram of MT9J003I12STMVH−GEVB

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Top View

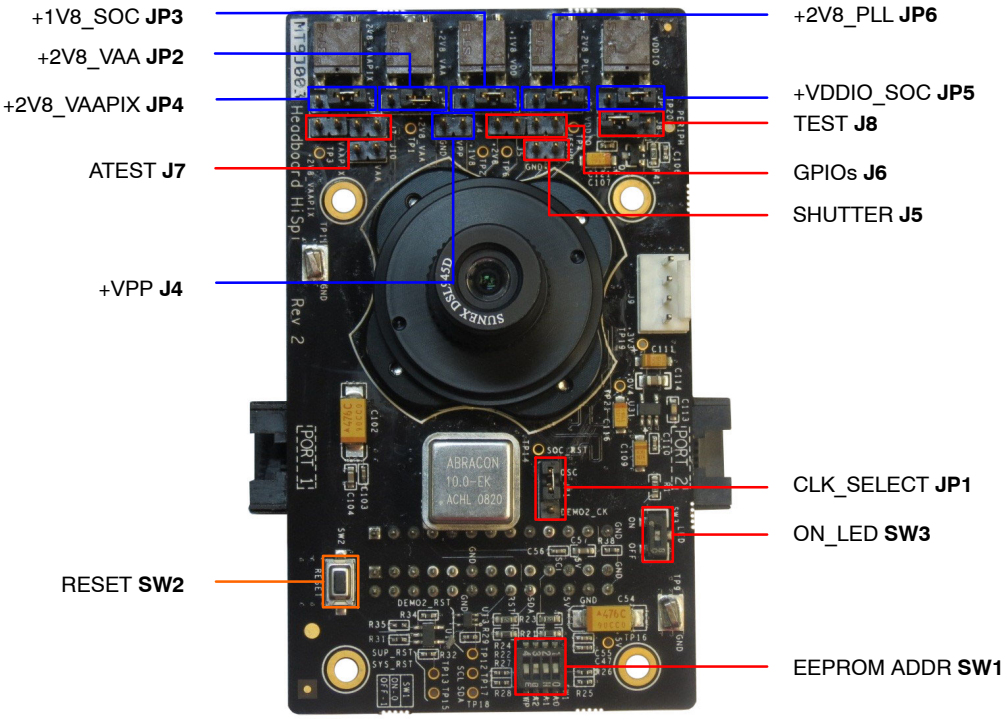

Figure 3. Top View of Evaluation Board − Default Jumpers

Bottom View

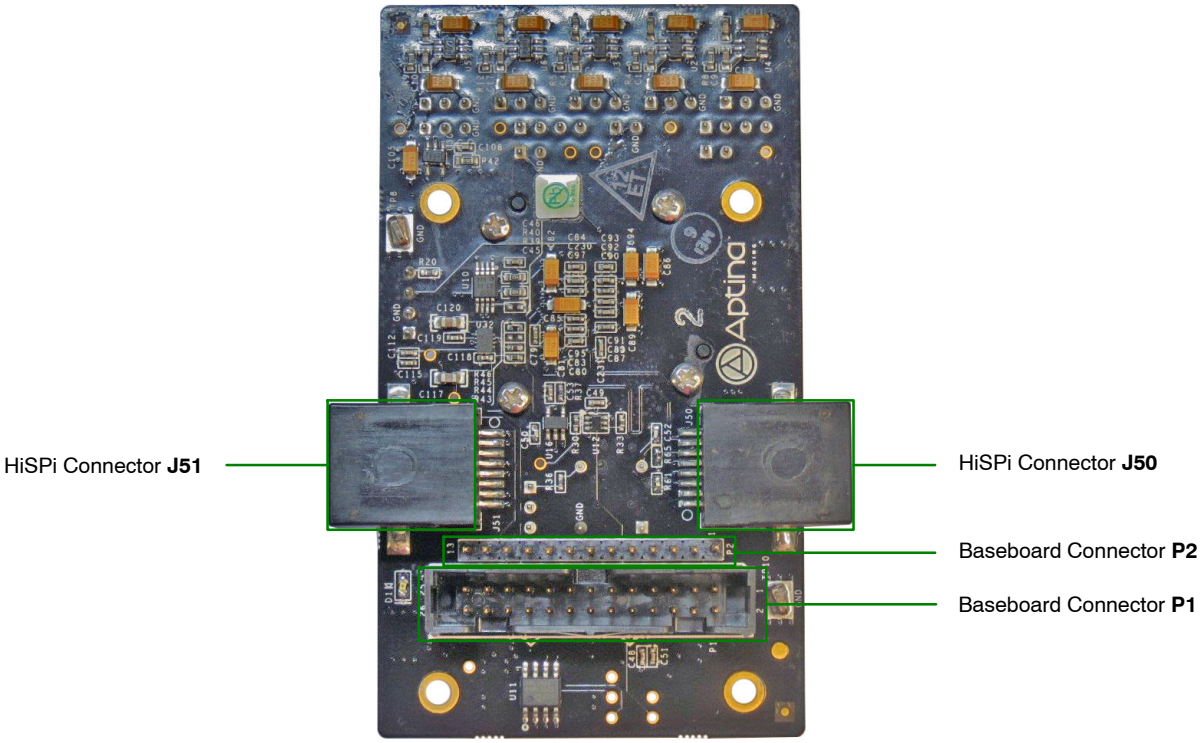

Figure 4. Bottom View of the Evaluation Board − Connectors

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.

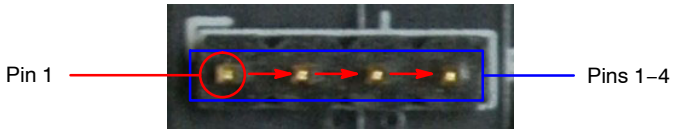

Figure 5. Pin Locations for a Single Jumper.
Pin 1 is Located at the Leftmost Side and Increases as it Moves to the Right

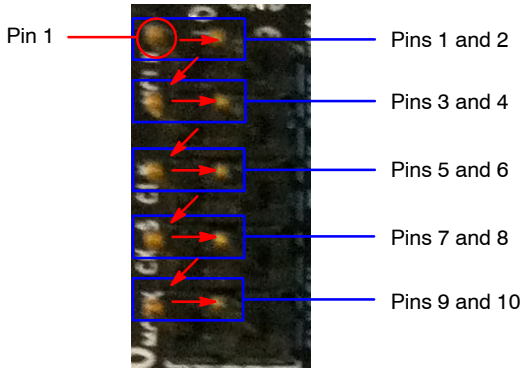

Figure 6. Pin Locations and Assignments of Grouped Jumpers.
Pin 1 is Located at the Top-Left Corner and Increases in a Zigzag Fashion Shown in the Picture

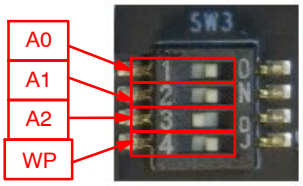

Figure 7. EEPROM Switches in their Defaults Positions. The First Switch (A0) of SW1 is ON, the Second Switch(A1) is ON, the Third switch (A2) is OFF, and the Fourth Switch (WP) is ON

Jumper/Header Functions & Default Positions

Table 1. JUMPERS AND HEADERS

Jumper/Header No.	Jumper/Header Name	Pins	Description
JP1	CLK_SELECT	1−2 (Default)	Connects to on-board oscillator
		2−3	Connects to external clock from Demo 2X board
JP2	+2V8_VAA	1−2 (Default)	Connects to on-board +2V8_VAA power supply
		2−3	Connection to external power supply
JP3	+1V8_SOC	1−2 (Default)	Connects to on-board +1V8_SOC power supply
		2−3	Connection to external power supply

Table 1. JUMPERS AND HEADERS (continued)

Jumper/Header No.	Jumper/Header Name	Pins	Description
JP4	+2V8_VAAPIX	1−2 (Default)	Connects to on-board +2V8_VAAPIX power supply
		2−3	Connection to external power supply
JP5	+VDDIO_SOC	1−2 (Default)	Connects to on-board +VDDIO_SOC power supply
		2−3	Connection to external power supply
JP6	+2V8_PLL	1−2 (Default)	Connects to on-board +2V8_PLL power supply
		2−3	Connection to external power supply
J4	+VPP	Open (Default)	Connects to external +VPP power supply for OTPM
J5	SHUTTER	Open (Default)	Connects to external shutter
J6	GPIOs	Open (Default)	Connects to various sensor's settings
J7	ATEST	Open (Default)	For debug/test
J8	TEST	2−3 (Default)	Normal operation
		1−2	Test mode
SW1	EEPROM ADDR	P24 Open, P23 Closed, P27 Closed (Default)	EEPROM Address set to 0xA8
		P24 Open, P23 Open, P27 Closed	EEPROM Address set to 0xAC
		P24 Closed, P23 Open, P27 Closed	EEPROM Address set to 0xA4
		P24 Closed, P23 Closed, P27 Closed	EEPROM Address set to 0xA0
SW2	RESET	N/A	When pushed, 200 ms reset signal will be sent to MT9J003
SW3	ON_LED	On (Default)	Turns on +5V LED indicator
		Off	Turns off +5V LED indicator

Interfacing to ON Semiconductor Demo 2X Baseboard

The ON Semiconductor Demo 2X baseboard has a similar 26-pin connector and 13-pin connector which mate with P1 and P2 of the headboard. The four mounting holes secure the baseboard and the headboard with spacers and screws.

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