MT9M024IA3XTRH-GEVB

MT9M024 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 – 27 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. MT9M024 Evaluation Board

Block Diagram

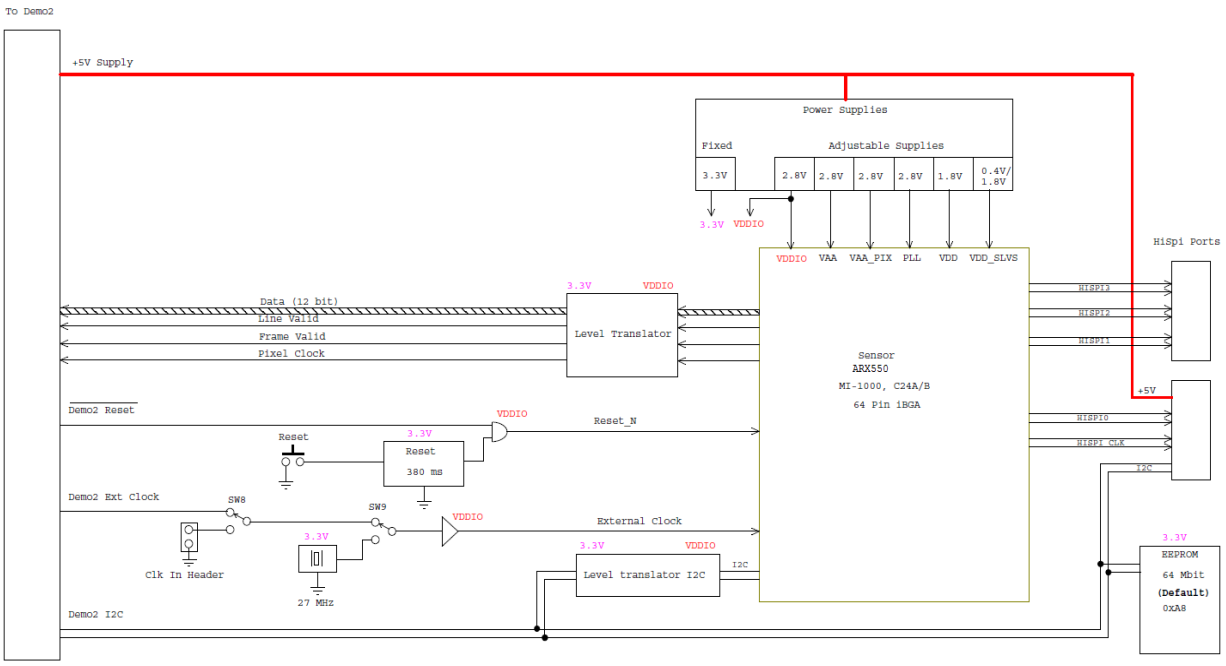

Figure 2. Block Diagram of MT9M024IA3XTRH−GEVB

Top View

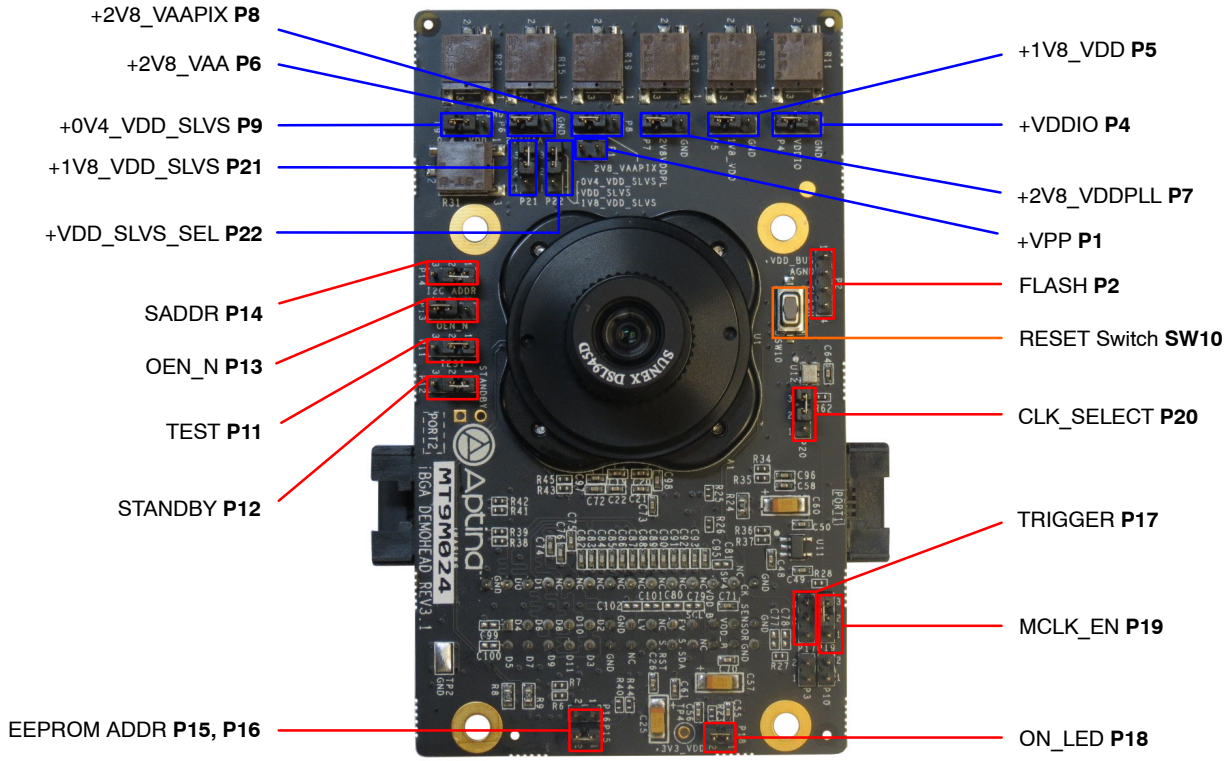

Figure 3. Top View of Evaluation Board − Default Jumpers

Bottom View

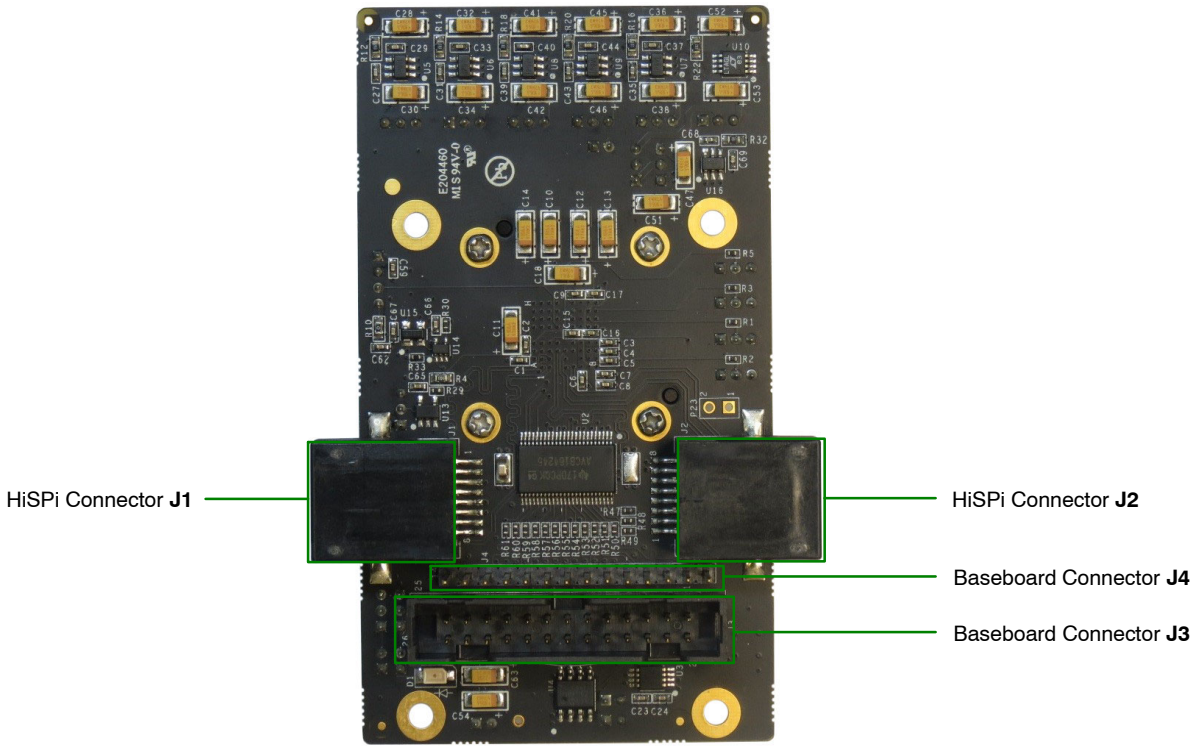

Figure 4. Bottom View of the Evaluation Board − Connectors

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.

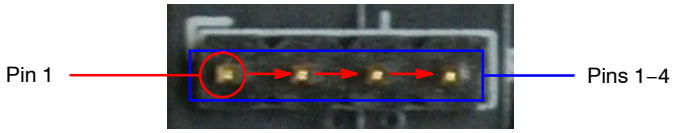

Figure 5. Pin Locations for a Single Jumper. Pin 1 is Located at the Leftmost Side and Increases as it Moves to the Right

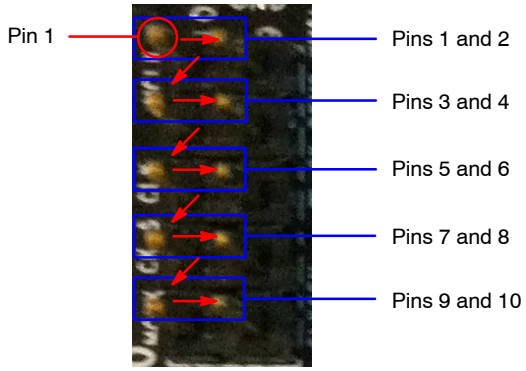

Figure 6. Pin Locations and Assignments of Grouped Jumpers. Pin 1 is Located at the Top-Left Corner and Increases in a Zigzag Fashion Shown in the Picture

Jumper/Header Functions & Default Positions

Table 1. JUMPERS AND HEADERS

Jumper/Header No.	Jumper/Header Name	Pins	Description
P1	VPP	Open	OTPM programming voltage not supplied
P2	FLASH	1	+VDD_BUS
		2	GND
		3	FLASH
		4	+3V3_VDD
P4	+VDDIO	2−3 (Default)	Connects to on-board +VDDIO power supply
		1−2	External power supply connection
P5	+1V8_VDD	2−3 (Default)	Connects to on-board +1V8_VDD power supply
		1−2	External power supply connection
P6	+2V8_VAA	2−3 (Default)	Connects to on-board +2V8_VAA power supply
		1−2	External power supply connection
P7	+2V8_VDDPLL	2−3 (Default)	Connects to on-board +2V8_VDDPLL power supply
		1−2	External power supply connection
P8	+2V8_VAAPIX	2−3 (Default)	Connects to on-board +2V8_VAAPIX power supply
		1−2	External power supply connection

Table 1. JUMPERS AND HEADERS (continued)

Jumper/Header No.	Jumper/Header Name	Pins	Description
P9	+0V4_VDD_SLVS	2−3 (Default)	Connects to on-board +0V4_VDD_SLVS power supply
		1−2	External power supply connection
P11	TEST	1−2 (Default)	Set to Normal Mode
		2−3	Set to Test Mode
P12	STANDBY	1−2 (Default)	Set to Normal Mode
		2−3	Set to Standby Mode
P14	SADDR	1−2 (Default)	I^2C address set to 0x20
		2−3	I^2C address set to 0x30
P15, P16	EEPROM ADDR	P15 Closed, P16 Open (Default)	EEPROM Address set to 0xA8
		P15 Open, P16 Open	EEPROM Address set to 0xAC
		P15 Open, P16 Closed	EEPROM Address set to 0xA4
		P15 Closed, P16 Closed	EEPROM Address set to 0xA0
P17	TRIGGER	2	Trigger Input
P18	ON_LED	1−2 (Default)	Connects to on-board LED to indicate “power on”
P19	MCLK	2−3 (Default)	Demo 2X Clock Input Enable
		1−2	Demo 2X Clock Input Disable
P20	CLK_SELECT	2−3 (Default)	Select on-board oscillator
		1−2	Select Demo 2X clock
P21	+1V8_VDD_SLVS	2−3 (Default)	Connects to on-board +1V8_VDD_SLVS power supply
		1−2	External power supply connection
P22	+VDD_SLVS_SEL	2−3 (Default)	Connects to on-board +VDD_SLVS_SEL power supply
		1−2	External power supply connection
SW10	RESET	N/A	When pushed, 380 ms reset signal will be sent to MT9M024

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 J3 and J4 of the headboard. The four mounting holes secure the baseboard and the headboard with spacers and screws.

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:
Technical Library: www.onsemi.com/design/resources/technical−documentation
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