MT9P401I12STCH-B-GEVB

MT9P401 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 clock, I/Os and other miscellaneous signals.

Features

- Clock Input
  - Default – 24 MHz crystal oscillator
  - Optional Demo 2X controlled MClk
- Two Wire Serial Interface
  - Selectable base address
- Parallel Interface
- MIPI Interface
- ROHS Compliant

Figure 1. MT9P401 Evaluation Board

Block Diagram

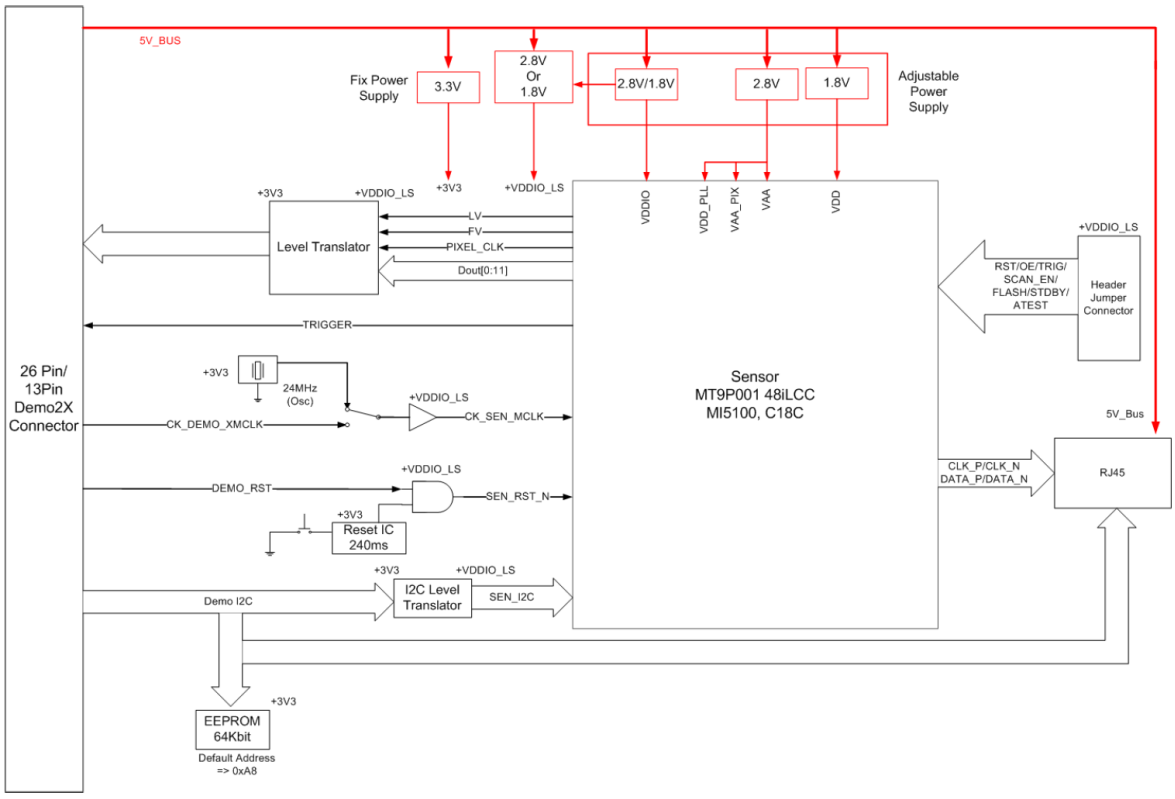

Figure 2. Block Diagram of MT9P401I12STCH−B−GEVB

Top View

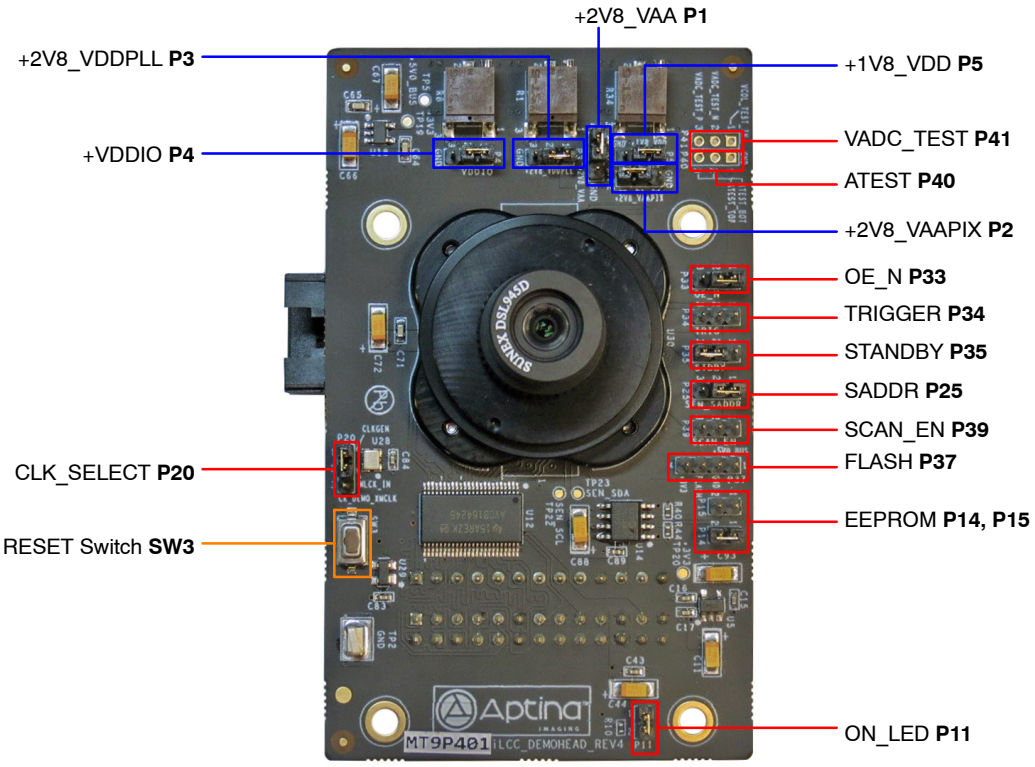

Figure 3. Top View of Evaluation Board − Default Jumpers

Bottom View

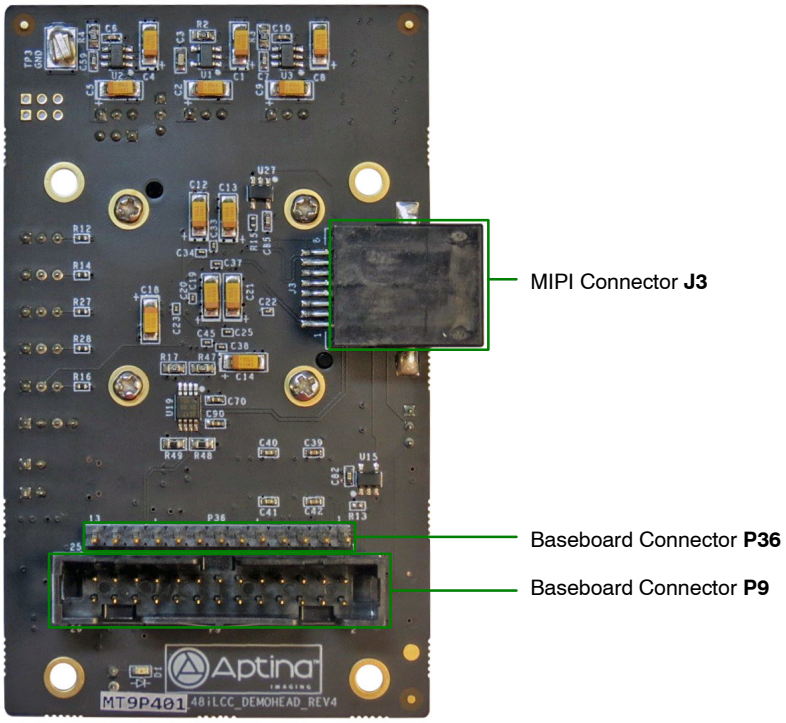

Figure 4. Bottom View of the Evaluation Board − Connector

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

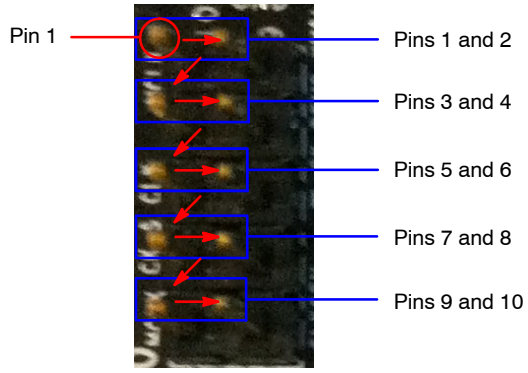

Figure 6. Pin Locations and Assignments of Grouped Jumpers.
Pin 1 is Located at the Top-Left Corner and Increases in a Zigzag Fashion Shown in the Picture

Jumper/Header Functions & Default Positions

Table 1. JUMPERS AND HEADERS

Jumper/Header No.	Jumper/Header Name	Pins	Description
P1	+2V8_VAA	1−2 (Default)	Connects to on-board +2V8_VAA power supply
		2−3	External power supply connection
P2	+2V8_VAAPIX	1−2 (Default)	Connects to on-board +2V8_VAAPIX power supply
		2−3	External power supply connection
P3	+2V8_VDDPLL	1−2 (Default)	Connects to on-board +2V8_VDDPLL power supply
		2−3	External power supply connection
P4	+VDDIO	1−2 (Default)	Connects to on-board +VDDIO power supply
		2−3	External power supply connection
P5	+1V8_VDD	1−2 (Default)	Connects to on-board +1V8_VDD power supply
		2−3	External power supply connection
P11	LED_ON	1−2 (Default)	Connects to on-board LED to indicate power on

Table 1. JUMPERS AND HEADERS (continued)

Jumper/Header No.	Jumper/Header Name	Pins	Description
P14, P15	EEPROM ADDR	P14 Closed, P15 Open (Default)	EEPROM Address set to 0xA8
		P14 Open, P15 Open	EEPROM Address set to 0xAC
		P14 Open, P15 Closed	EEPROM Address set to 0xA4
		P14 Closed, P15 Closed	EEPROM Address set to 0xA0
P20	CLK_SELECT	1−2 (Default)	Master Mode on-board oscillator
		2−3	Master Mode Demo 2X clock
P25	SADDR	1−2 (Default)	I^2C Address set to 0x90
		2−3	I^2C Address set to 0xBA
P33	OE_N	1−2 (Default)	Parallel interface output
		2−3	Non-parallel interface output
P34	TRIGGER	Open (Default)	External connection to snapshot trigger at Pin 2
P35	STANDBY	2−3 (Default)	Set to Normal Mode
		1−2	Set to Standby Mode
P37	FLASH	Open (Default)	External connection to snapshot flash at Pin 3
P40	ATEST	2	ATEST_BOT
		3	ATEST_TOP
P41	VADCTEST	1	VADC_TEST_IN
		2	VADC_TEST_N
		3	VADC_TEST_P
SW3	RESET	N/A	When pushed, 240 ms reset signal will be sent to MT9P401

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 P9 and P36 of the headboard. The four mounting holes secure the baseboard and the headboard with spacers and screws.

PUBLICATION ORDERING INFORMATION

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