MT9P006I12STCUH-GEVB

MT9P006 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 – 27 MHz crystal oscillator
  - Optional Demo 2X controlled Mclk
- Two Wire Serial Interface
  - Selectable base address
- Parallel Interface
- Serial LVDS Interface
- ROHS Compliant

Figure 1. MT9P006 Evaluation Board

Block Diagram

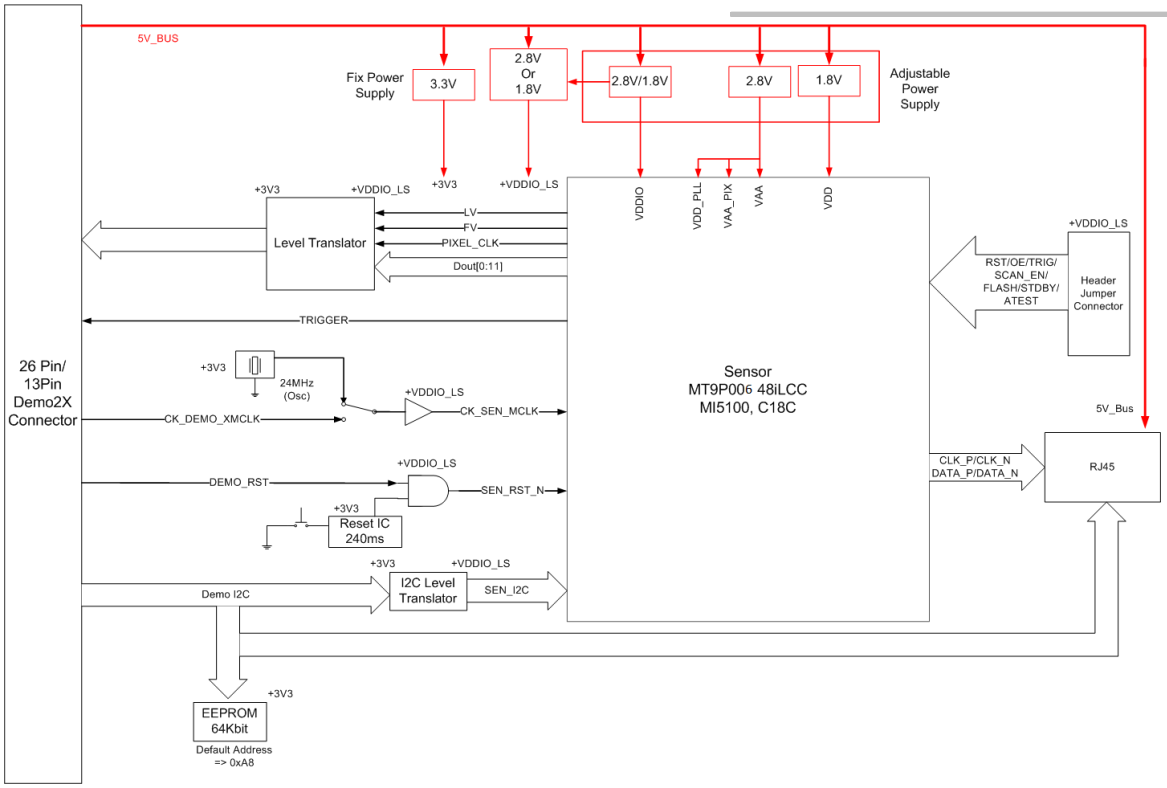

Figure 2. Block Diagram of MT9P006I12STCUH−GEVB

Top View

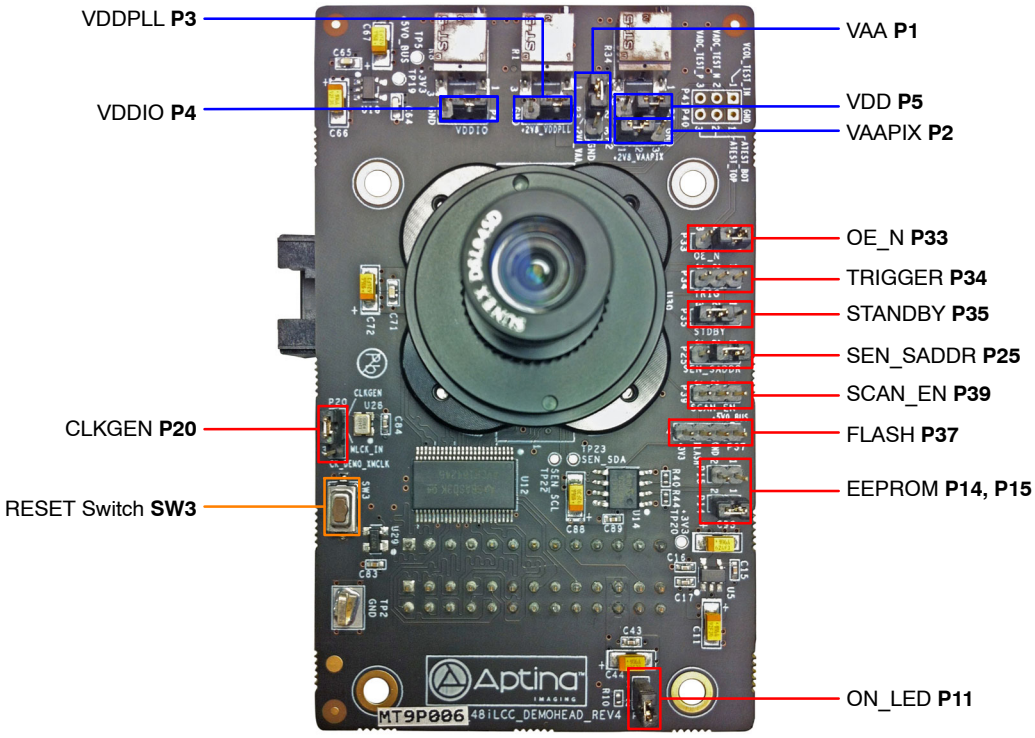

Figure 3. Top View of Evaluation Board − Default Jumpers

Bottom View

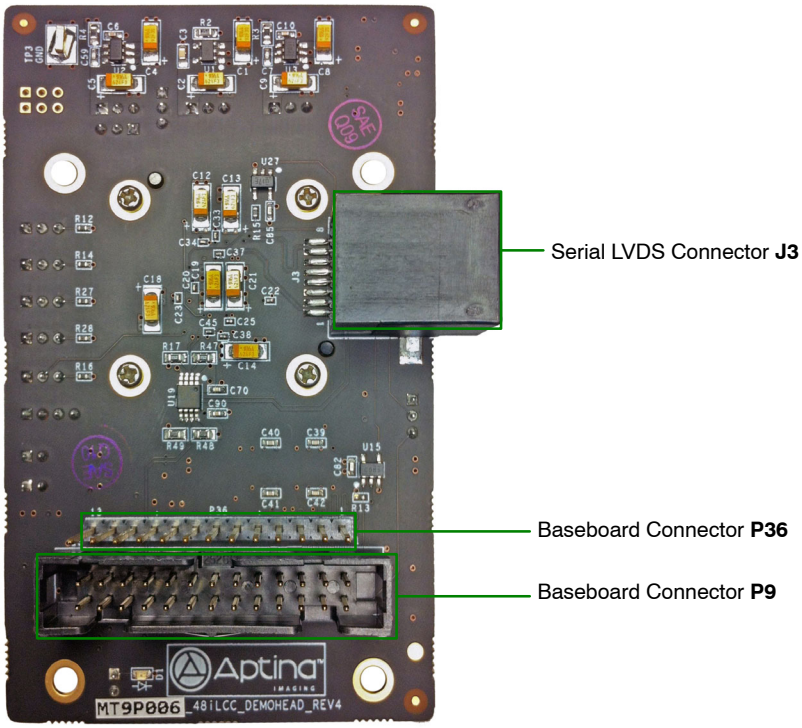

Figure 4. Bottom View of the Evaluation Board − Connector

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.

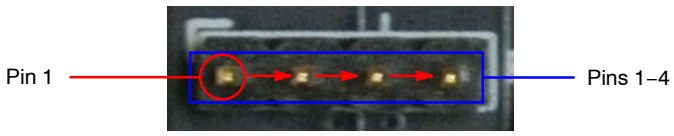

Figure 5. Pin Locations for a Single Jumper.
Pin 1 is Located at the Leftmost Side and Increases as it Moves to the Right

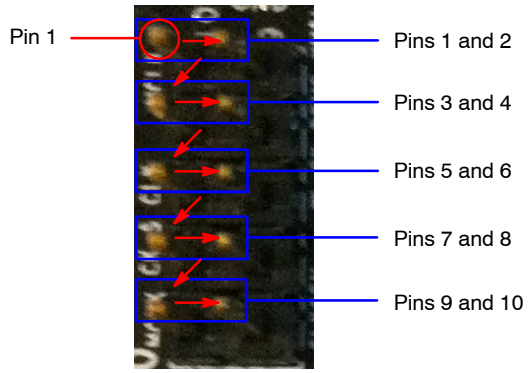

Figure 6. Pin Locations and Assignments of Grouped Jumpers.
Pin 1 is Located at the Top-Left Corner and Increases in a Zigzag Fashion Shown in the Picture

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	ON_LED	1−2 (Default)	Connects to on-board LED to indicate “power on”
P14, P15	EEPROM ADDR, Sel	A1 Closed & A2 Open (Default)	EEPROM Address set to 0xA8
		A1 Open & A2 Open	EEPROM Address set to 0xAC
		A1 Open & A2 Closed	EEPROM Address set to 0xA4
		A1 Closed & A2 Closed	EEPROM Address set to 0xA0
P20	MCLK	1−2 (Default)	Master Mode on-board oscillator
		2−3	Master Mode Demo 2X clock

Table 1. JUMPERS AND HEADERS (continued)

Jumper/Header No.	Jumper/Header Name	Pins	Description
P25	SEN_SAADR	1−2 (Default)	I^2C Address: 0x90
		2−3	I^2C Address: 0xBA
P33	OE_N	1−2 (Default)	Parallel Interface
		2−3	Non-Parallel Interface
P34	TRIGGER	2	Snapshot Trigger
P35	STANDBY	2−3 (Default)	Normal Mode
		1−2	Standby Mode
P37	FLASH	3	Snapshot Flash
P39	SCAN_EN	2	Snapshot scan enable
SW3	RESET	N/A	When pushed, 240 ms reset signal will be sent to MT9P006

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.

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 MEASUREMENTS

Jumper	Voltage (V)
P1 (+2V8_VAA)	2.8
P2 (+2V8_VAAPIX)	2.8
P3 (+2V8_VAAPLL)	2.8
P4 (VDDIO)	2.8
P5 (+1V8_VDD)	1.8

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

ADDITIONAL INFORMATION

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