

MT9M113PACSTCH-GEVB

MT9M113 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 – 10 MHz crystal oscillator
 - ◆ Optional Demo 2X controlled MClk
- Two Wire Serial Interface
 - ◆ Selectable base address
- Parallel Interface
- MIPI Interface
- ROHS Compliant

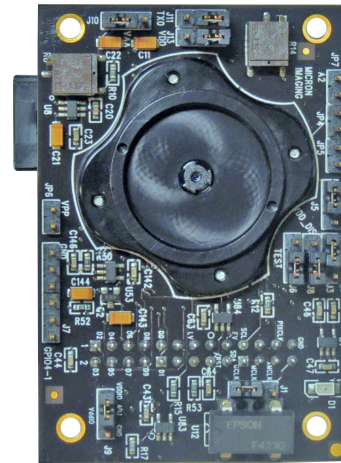


Figure 1. MT9M113 Evaluation Board

Block Diagram

To Demo2

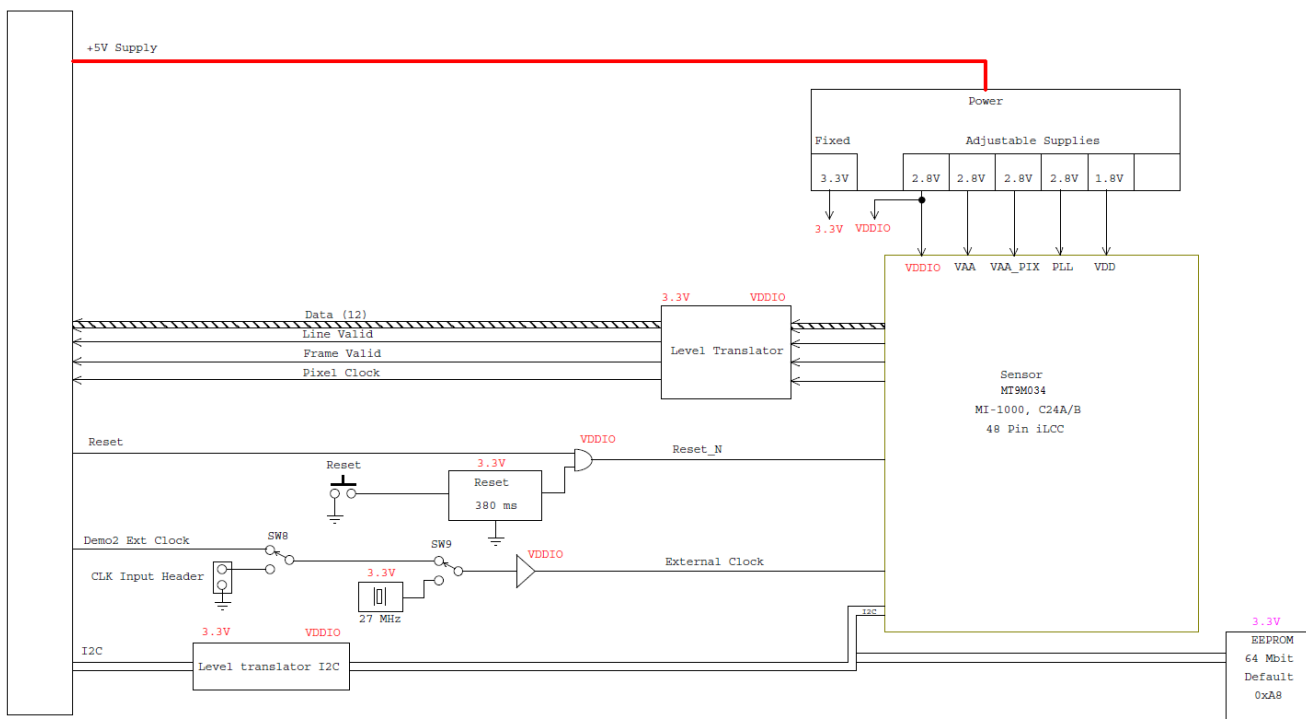


Figure 2. Block Diagram of MT9M113PACSTCH-GEVB

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Top View

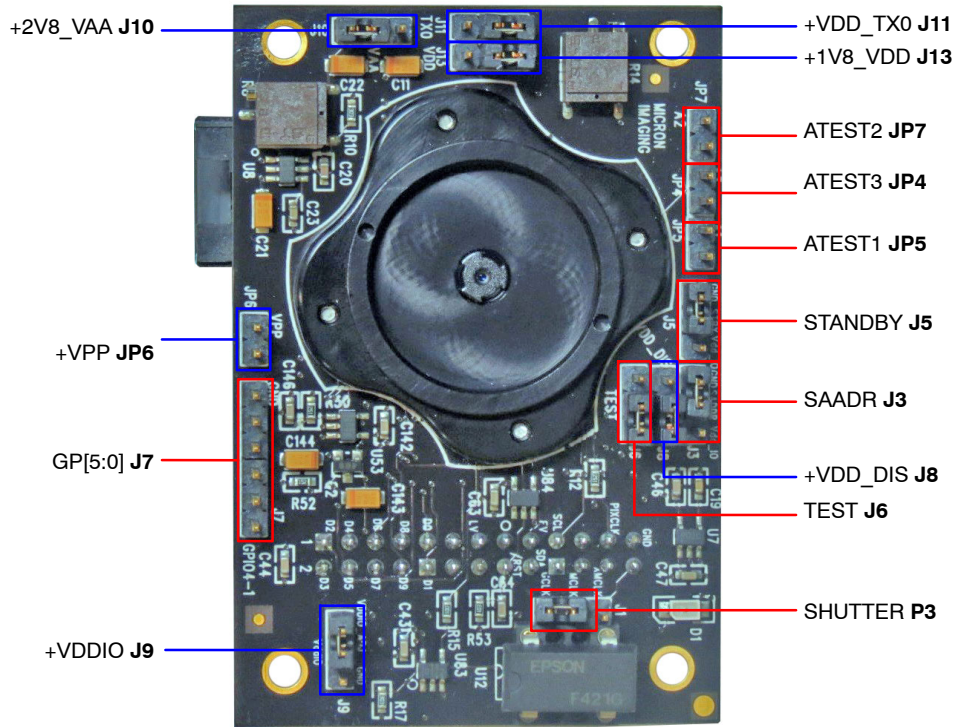


Figure 3. Top View of Evaluation Board – Default Jumpers

Bottom View

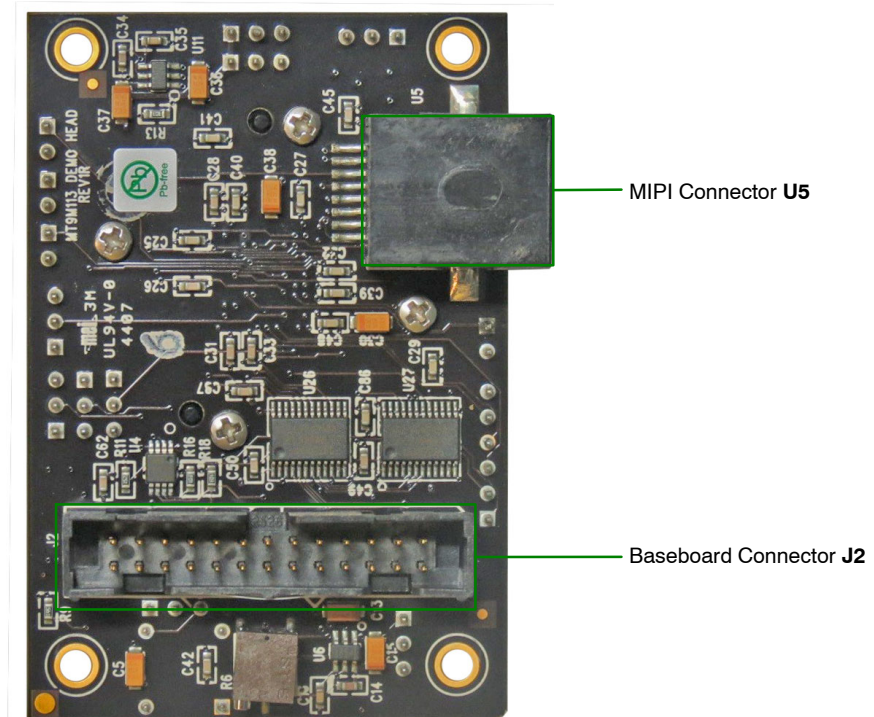


Figure 4. Bottom View of the Evaluation Board – Connector

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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.

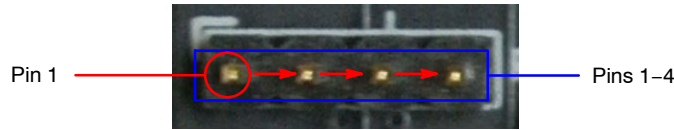


Figure 5. Pin Locations for a Single Jumper.
Pin 1 is Located at the Leftmost Side and Increases as it Moves to the Right

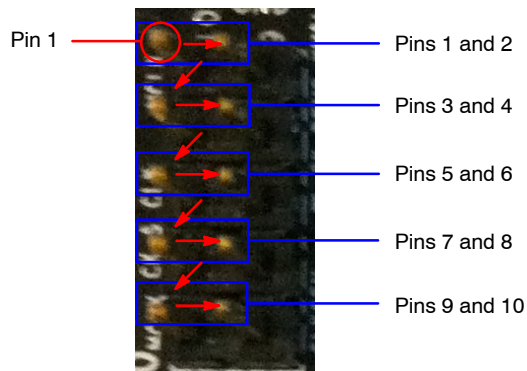


Figure 6. Pin Locations and Assignments of Grouped Jumpers.
Pin 1 is Located at the Top-Left Corner and Increases in a Zigzag Fashion Shown in the Picture

Jumper/Header Functions & Default Positions

Table 1. JUMPERS AND HEADERS

| Jumper/Header No. | Jumper/Header Name | Pins | Description |
|-------------------|--------------------|----------------|---------------------------------------------|
| J1 | CLK_SELECT | 2-3 (Default) | Connects to on-board oscillator |
| | | 1-2 | Connects to XMCLK from Demo 2X Board |
| J3 | SADDR | 1-2 (Default) | I ² C Address set to 0x78 |
| | | 2-3 | I ² C Address set to 0x7A |
| J5 | STANDBY | 1-2 (Default) | Normal operation |
| | | 2-3 | Sensor standby mode |
| J6 | TEST | 2-3 (Default) | Normal operation |
| | | 1-2 | Test mode |
| J7 | GP[5:0] | Open (Default) | For connection to various sensor's settings |
| J8 | +VDD_DIS | 2-3 (Default) | Normal operation |
| | | 1-2 | Connects to on-board +VDDIO power supply |
| J9 | +VDDIO | 1-2 (Default) | Connects to on-board +VDDIO power supply |
| | | 2-3 | External power supply connection |
| J10 | +2V8_VAA | 1-2 (Default) | Connects to on-board +2V8_VAA power supply |
| | | 2-3 | External power supply connection |
| J11 | +VDD_TX0 | 1-2 (Default) | Connects to on-board +VDD_TX0 power supply |
| | | 2-3 | External power supply connection |

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Table 1. JUMPERS AND HEADERS (continued)

| Jumper/Header No. | Jumper/Header Name | Pins | Description |
|-------------------|--------------------|----------------|-------------------------------------------------------|
| J13 | +1V8_VDD | 1-2 (Default) | Connects to on-board +1V8_VDD power supply |
| | | 2-3 | External power supply connection |
| JP4 | ATEST3 | Open (Default) | For Debug/Test |
| JP5 | ATEST1 | Open (Default) | For Debug/Test |
| JP6 | +VPP | Open (Default) | For connection to external +VPP power supply for OTPM |
| JP7 | ATEST2 | Open (Default) | For Debug/Test |

Interfacing to ON Semiconductor Demo 2X Baseboard

The ON Semiconductor Demo 2X baseboard has a similar 26-pin connector which mates with J2 of the

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

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