

# MT9V032C12STMH-GEVB

## MT9V032 Evaluation Board User's Manual



ON Semiconductor®

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### 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
- Serial LVDS Interface
- ROHS Compliant

## EVAL BOARD USER'S MANUAL



Figure 1. MT9V032 Evaluation Board

### Block Diagram

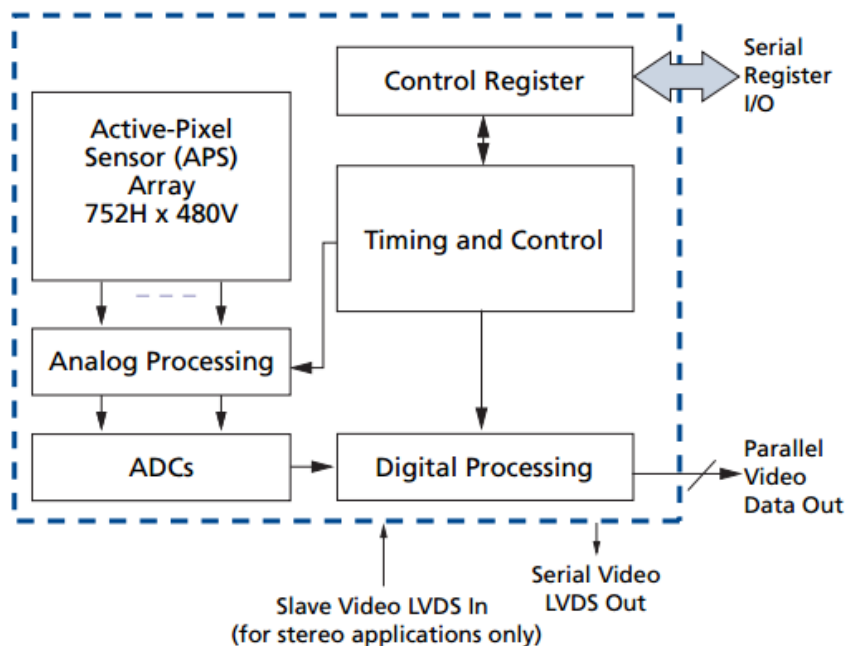


Figure 2. Block Diagram of MT9V032C12STMH-GEVB

# MT9V032C12STMH-GEVB

## Top View

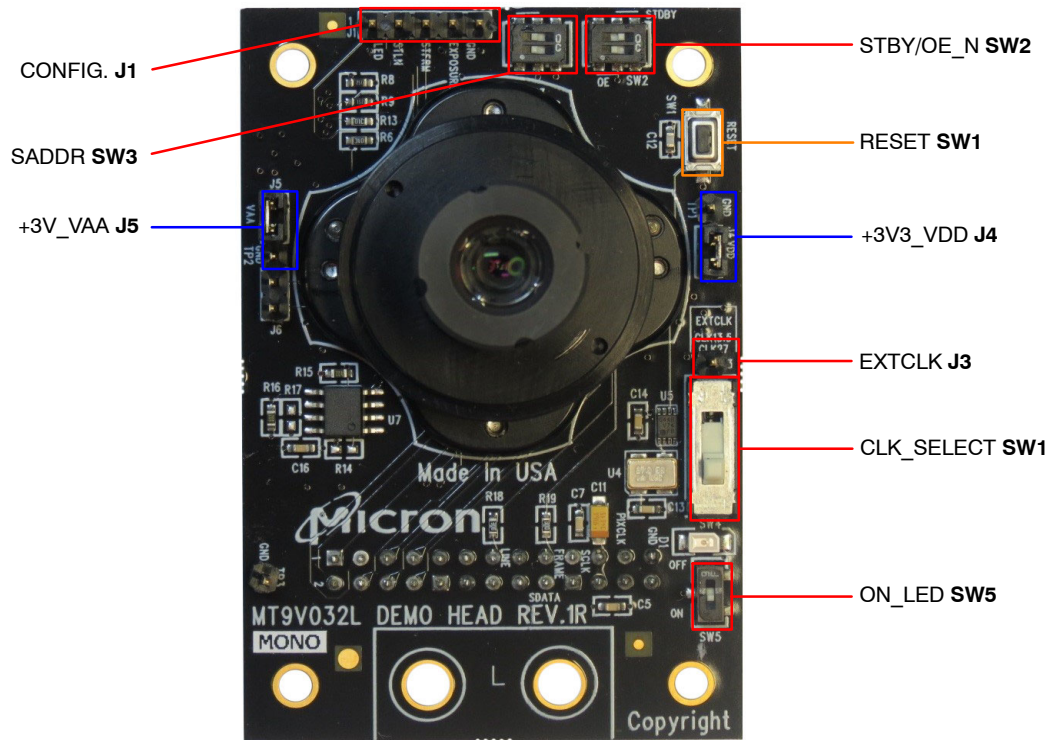


Figure 3. Top View of Evaluation Board

## Bottom View

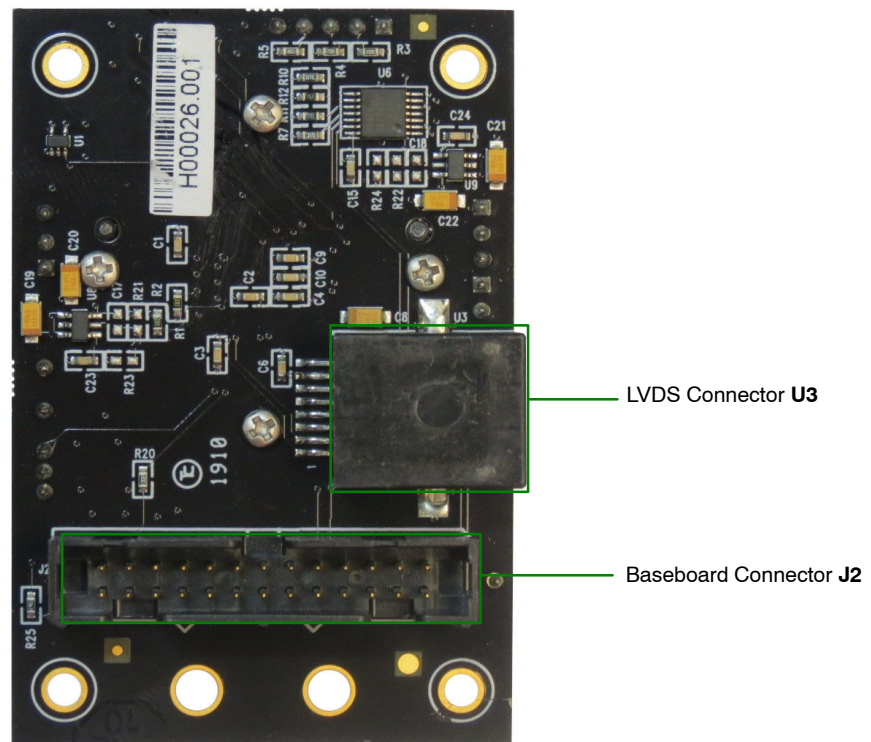
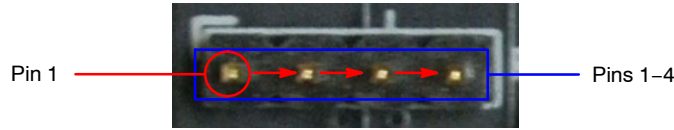


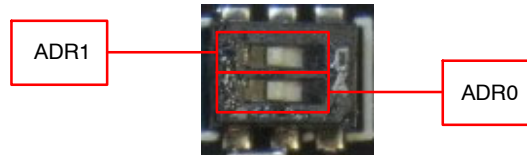
Figure 4. Bottom View of the Evaluation Board – Connector/Jumper

### Jumper Pin Locations

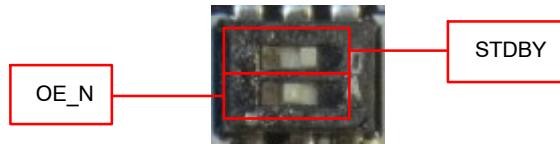
The jumpers on headboards start with Pin 1 on the leftmost side of the pin. Grouped jumpers increase in pin size with each jumper added.



**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. Address Switch Locations in their Default Positions. The first Switch(ADR0) and the second Switch (ADR1) of SW3 are set to ON**



**Figure 7. Switch Descriptions of Switch SW4 in their Default Positions. The first Switch (STDBY) is Set OFF while the Second Switch (OE\_N) is Set to ON**

### Jumper/Header Functions & Default Positions

**Table 1. JUMPERS AND HEADERS**

| Jumper/Header No. | Jumper/Header Name | Pins                | Description                                              |
|-------------------|--------------------|---------------------|----------------------------------------------------------|
| J1                | Config.            | Open (Default)      | Connects to various sensor's settings                    |
| J3                | EXTCLK             | Open (Default)      | For connection to external clock                         |
| J4                | +3V3_VDD           | 1-2 (Default)       | Connects to on-board +3V3_VDD power supply               |
|                   |                    | Open                | External power supply connection                         |
| J5                | +3V3_VAA           | 1-2 (Default)       | Connects to on-board +3V3_VAA power supply               |
|                   |                    | Open                | External power supply connection                         |
| SW1               | RESET              | N/A                 | When pushed, 400 ms reset signal will be sent to MT9V032 |
| SW2               | STDBY/OE_N         | STDBY Off (Default) | EEPROM Address set to 0xA8                               |
|                   |                    | STDBY On            | EEPROM Address set to 0xAC                               |
|                   |                    | OE_N On (Default)   | EEPROM Address set to 0xA4                               |
|                   |                    | OE_N Off            | EEPROM Address set to 0xA0                               |

**Table 1. JUMPERS AND HEADERS** (continued)

| Jumper/Header No. | Jumper/Header Name | Pins                          | Description                            |
|-------------------|--------------------|-------------------------------|----------------------------------------|
| SW3               | SADDR              | ADR1 On,<br>ADR0 On (Default) | Address set to 0xB8                    |
|                   |                    | ADR1 On,<br>ADR0 Off          | Address set to 0xB0                    |
|                   |                    | ADR1 Off,<br>ADR0 On          | Address set to 0x98                    |
|                   |                    | ADR1 Off,<br>ADR0 Off         | Address set to 0x90                    |
| SW4               | CLK_SELECT         | Position 1 (Default)          | Connects to on-board 27 MHz oscillator |
|                   |                    | Position 2                    | Connects to on-board 27 MHz oscillator |
|                   |                    | Position 3                    | Connects to EXTCLK from J3             |
| SW5               | ON_LED             | On (Default)                  | Connects LED indicator to +Vdd_BUS     |
|                   |                    | Off                           | Turn off LED indicator                 |

#### 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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