

# AR0132AT Evaluation Board User's Manual



# EVAL BOARD USER'S MANUAL

The evaluation boards are designed to demonstrate the features of image sensors products from ON Semiconductor. This headboard is intended to plug directly into the Demo 3 system. Test points and jumpers on the board provide access to the clock, I/Os, and other miscellaneous signals.

- Clock Input
  - ◆ Default – 27 MHz Crystal Oscillator
  - ◆ Optional Demo 3 Controlled MClk
- Two-wire Serial Interface
  - ◆ Selectable Base Address
- Parallel Interface
- HiSPi (High Speed Serial Pixel) Interface
- ROHS Compliant



**Figure 2. Block Diagram of AR0132AT6R00XPEAH3-GEVB**

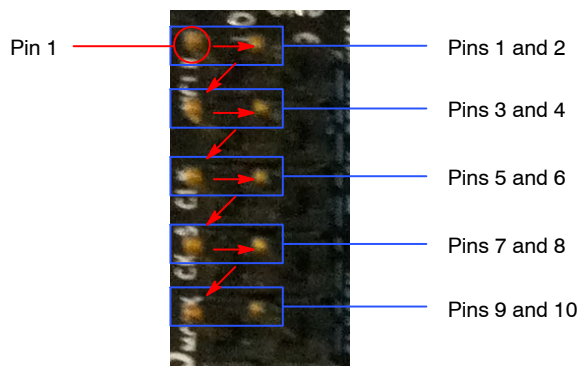


### Jumper Pin Locations

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                                    |
|-------------------|--------------------|---------------|------------------------------------------------|
| P3                | VPP                | Open          | OTPM Programming Voltage Not Supplied          |
| P4                | SADDR              | 2-3 (Default) | I <sup>2</sup> C Address Set to 0x20           |
|                   |                    | 1-2           | I <sup>2</sup> C Address Set to 0x30           |
| P5                | TEST               | 2-3 (Default) | Set to Normal Mode                             |
|                   |                    | Open          | Set to Test Mode                               |
| P6                | OE_N               | 2-3 (Default) | Parallel Output Enabled                        |
|                   |                    | Open          | Parallel Output Disabled; HiSPi Output Enabled |
| P7                | FLASH              | 1             | +5V0                                           |
|                   |                    | 2             | GND                                            |
|                   |                    | 3             | FLASH                                          |
|                   |                    | 4             | +3V3                                           |
| P8                | STANDBY            | 2-3 (Default) | Normal Mode                                    |
|                   |                    | 1-2           | Standby Mode                                   |
| P14               | ATEST              | 1-2 (Default) | ATEST → GND                                    |
| P16               | VDD_IO             | 1-2 (Default) | 1.8 V Operation of Sensor                      |
|                   |                    | 2-3           | 2.8 V Operation of Sensor                      |
| P18               | HiSPi Mode         | 1-2 (Default) | SLVS Mode                                      |
|                   |                    | 2-3           | Hi-VCM Mode                                    |

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

| Jumper/Header No. | Jumper/Header Name | Pins                            | Description                                                 |
|-------------------|--------------------|---------------------------------|-------------------------------------------------------------|
| P19               | Master Clock       | 1-2 (Default)                   | On-Board Oscillator (27 MHz)                                |
|                   |                    | 2-3                             | AR0132 Evaluation Board MCLK                                |
| P24               | I <sup>2</sup> C   | 1-2 & 3-4 (Default)             | Demo 3 SCL & SDA Connected to Sensor SCL & SDA Respectively |
| P27               | EEPROM Addr. Sel   | 3-4 Open & 1-2 Closed (Default) | EEPROM Address Set to 0xA8                                  |
|                   |                    | 3-4 Open & 1-2 Closed           | EEPROM Address Set to 0xAC                                  |
|                   |                    | 3-4 Open & 1-2 Closed           | EEPROM Address Set to 0xA4                                  |
|                   |                    | 3-4 Open & 1-2 Closed           | EEPROM Address Set to 0xA0                                  |
| P28               | TRIGGER            | 1-2                             | Trigger Input Enabled                                       |
|                   |                    | Open (Default)                  | Connect Generator Between Pin 1 and GND                     |
| SW1               | RESET              | N/A                             | When Pushed, 240 ms Reset Signal will be Sent to AR0132     |

**Interfacing to ON Semiconductor Demo 3 Baseboard**

The ON Semiconductor Demo 3 baseboard has a similar 52-pin connector which mates with J1 of the headboard.

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

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