

# AR0134CSSC00SPCAH-GEVB

## AR0134CS Evaluation Board User's Manual



ON Semiconductor®

[www.onsemi.com](http://www.onsemi.com)

### Evaluation Board Overview

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 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
- HiSPi (High Speed Serial Pixel) Interface
- ROHS Compliant

### Block Diagram

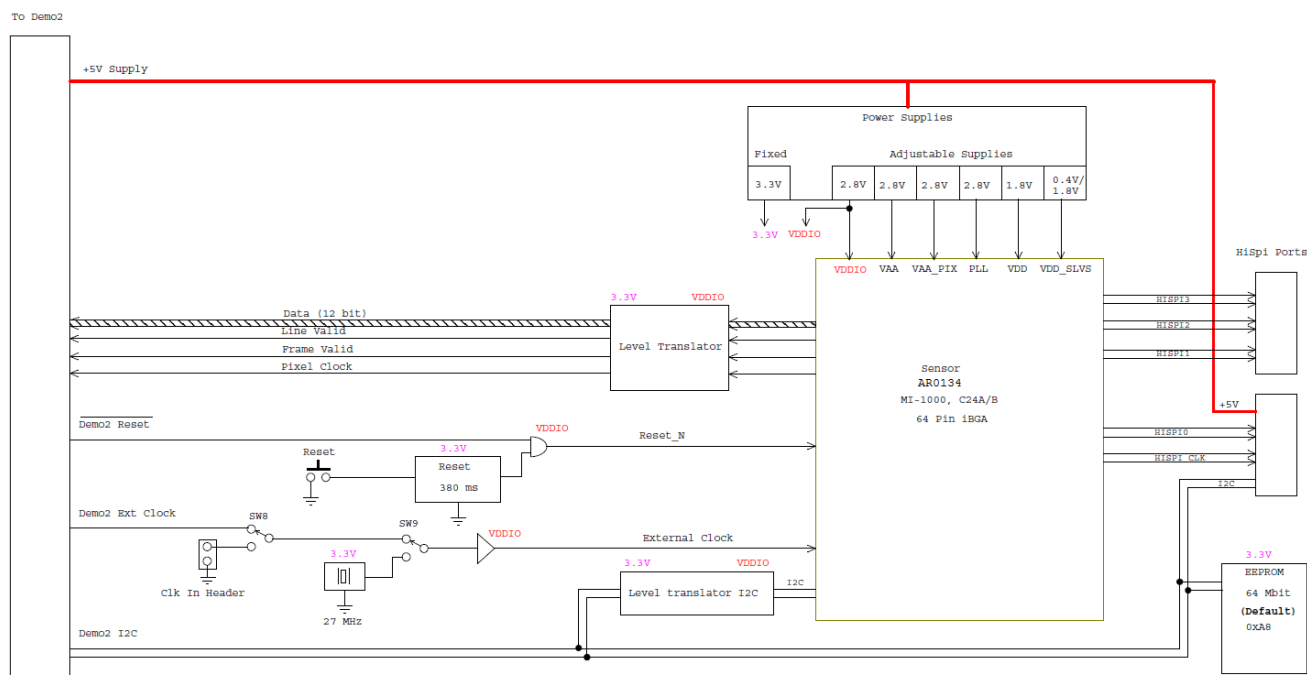


Figure 2. Block Diagram of AR0134CSSC00SPCAH-GEVB

### EVAL BOARD USER'S MANUAL



Figure 1. AR0134CS Evaluation Board

# AR0134CSSC00SPCAH-GEVB

## Top View

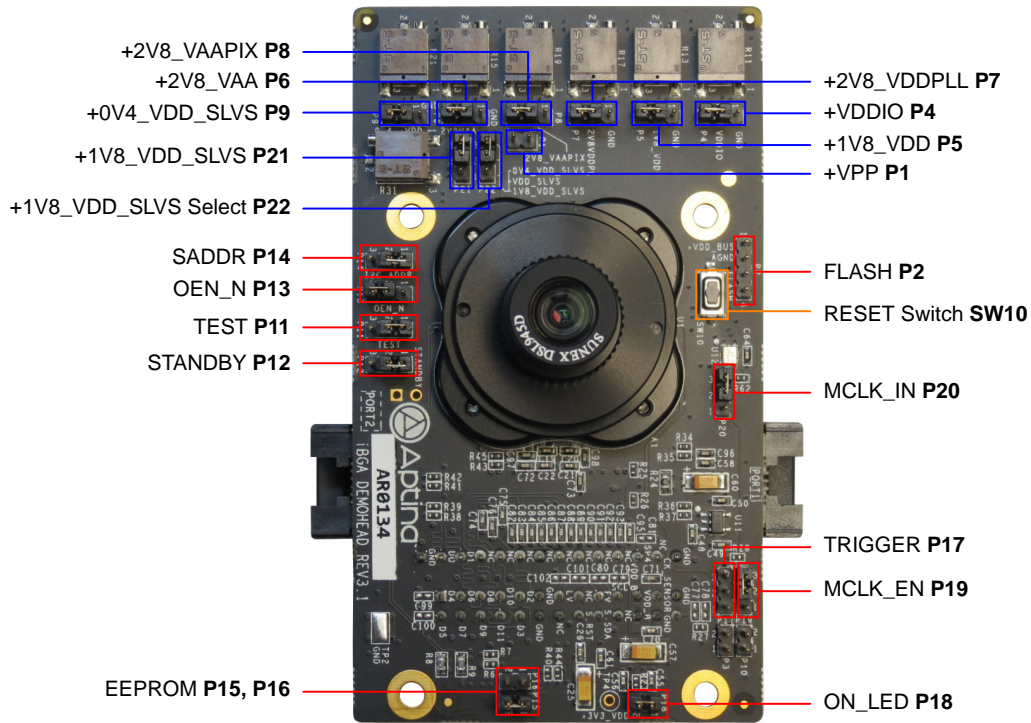


Figure 3. Top View of the Board – Default Jumpers

## Bottom View

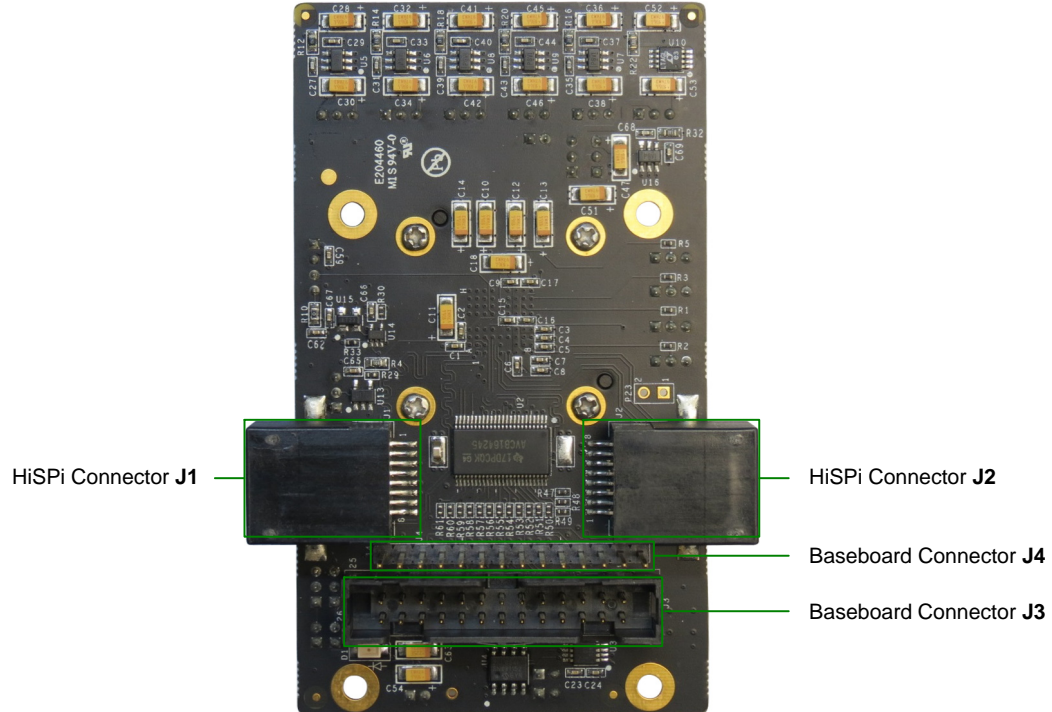


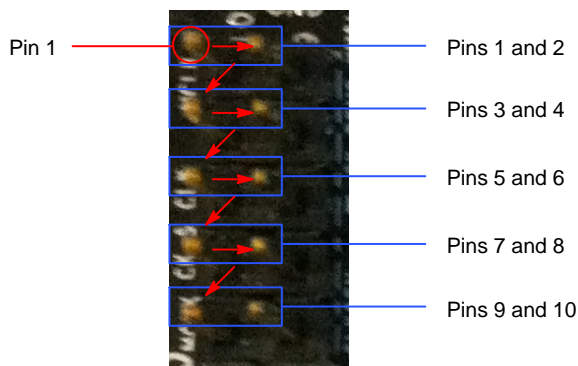
Figure 4. Bottom View of the Board – Connectors

### 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                | +VPP               | 2             | VPP OTPM  |
| P2                | FLASH              | 1             | +VDD_BUS  |
|                   |                    | 2             | GND   |
|                   |                    | 3             | FLASH   |
|                   |                    | 4             | +3V3_VDD  |
| P4                | +VDDIO             | 2-3 (Default) | Connects to On-board +VDDIO Power Supply        |
|                   |                    | 1-2           | External Power Supply Connection                |
| P5                | +1V8_VDD           | 2-3 (Default) | Connects to On-board +1V8_VDD Power Supply      |
|                   |                    | 1-2           | External Power Supply Connection                |
| P6                | +2V8_VAA           | 2-3 (Default) | Connects to On-board +2V8_VAA Power Supply      |
|                   |                    | 1-2           | External Power Supply Connection                |
| P7                | +2V8_VDDPLL        | 2-3 (Default) | Connects to On-board +2V8_VDDPLL Power Supply   |
|                   |                    | 1-2           | External Power Supply Connection                |
| P8                | +2V8_VAAPIX        | 2-3 (Default) | Connects to On-board +2V8_VAAPIX Power Supply   |
|                   |                    | 1-2           | External Power Supply Connection                |
| P9                | +0V4_VDD_SLVS      | 2-3 (Default) | Connects to On-board +0V4_VDD_SLVS Power Supply |
|                   |                    | 1-2           | External Power Supply Connection                |

# AR0134CSSC00SPCAH-GEVB


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

| Jumper/Header No. | Jumper/Header Name | Pins          | Description   |
|-------------------|--------------------|---------------|---|
| P11               | TEST               | 1–2 (Default) | Set to Normal Mode  |
|                   |                    | 2–3           | Set to Test Mode  |
| P12               | STANDBY            | 1–2 (Default) | Normal Mode   |
|                   |                    | 2–3           | Standby Mode  |
| P13               | OEN_N              | 2–3 (Default) | Output Enable   |
|                   |                    | 1–2           | Output Disable  |
| P14               | SADDR              | 1–2 (Default) | I <sup>2</sup> C Address Set to 0x20                      |
|                   |                    | 2–3           | I <sup>2</sup> C Address Set to 0x30                      |
| P13               | FLASH              | 1             | +5V0  |
|                   |                    | 2             | GND   |
|                   |                    | 3             | FLASH   |
|                   |                    | 4             | +3V3  |
| P8                | STANDBY            | 2–3 (Default) | Normal Mode   |
|                   |                    | 1–2           | Standby Mode  |
| P14               | Analog Test        | 1–2 (Default) | ATEST → GND   |
| P17               | TRIGGER            | 2             | TRIGGER   |
| P18               | ON_LED             | 1–2 (Default) | Connects to On-board LED to Indicate Power On             |
| P19               | MCLK_EN            | 2–3 (Default) | Demo2X Clock Input Enable                                 |
|                   |                    | 1–2           | Demo2X Clock Input Disable                                |
| P20               | MCLK_IN            | 2–3 (Default) | On-board Oscillator                                       |
|                   |                    | 1–2           | Demo2X Clock Input  |
| P21               | +1V8_VDD_SLVS      | 2–3 (Default) | Connects to On-board +1V8_VDD_SLVS Power Supply           |
|                   |                    | 1–2           | External Power Supply Connection                          |
| P21               | +1V8_VDD_SLVS      | 2–3 (Default) | +VDD_SLVS Connects to +0V4_VDD_SLVS (SLVS Mode)           |
|                   |                    | 1–2           | +VDD_SLVS Connects to +1V8_VDD_SLVS (Hi-VCM Mode)         |
| SW1               | RESET              | N/A           | When Pushed, 240 ms Reset Signal will be Sent to AR0134CS |

## 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 J3

and J4 of the headboard. The four mounting holes secure the baseboard and the headboard with spacers and screws.

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