

# AGB3N0CS-GEVK

## AGB3N0CS Evaluation Board User's Manual

### Adapter Board Overview

The AGB3N0CS Adapter Board is an adapter that helps connect the Demo 3 Headboards with the Demo 2x Baseboard. Since the Demo 2x Baseboard does not use the same connector as the Demo 3 Headboards, the AGB3N0CS provides communication between the headboard parallel and serial connectors to communicate with the Demo 3 Headboard's interface connection.

### Features

- Demo 2x Board Connectors
- Voltage Selection and Operating Mode Selector
- MIPI/HiSPi Connectors
- Demo 3 Headboard Connector

### Block Diagram

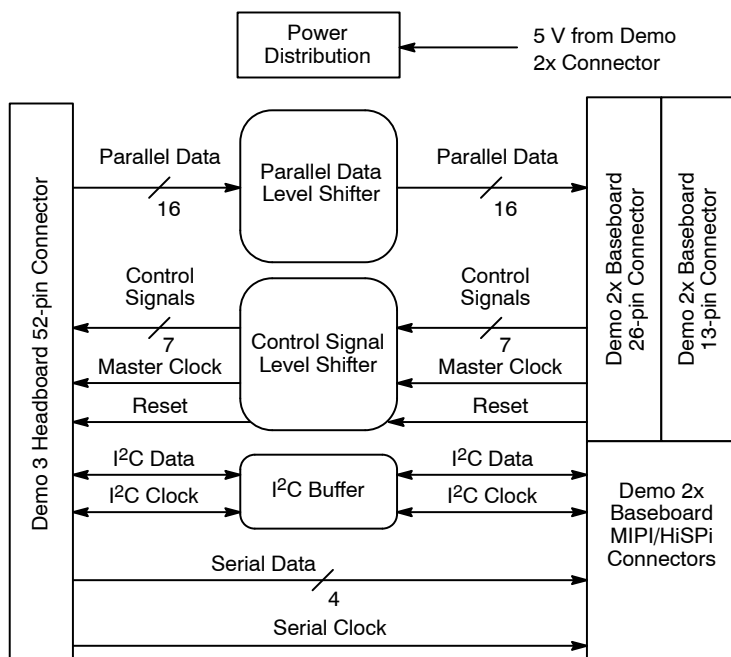


Figure 2. Block Diagram of AGB3N0CS-GEVK



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## EVAL BOARD USER'S MANUAL



Top View

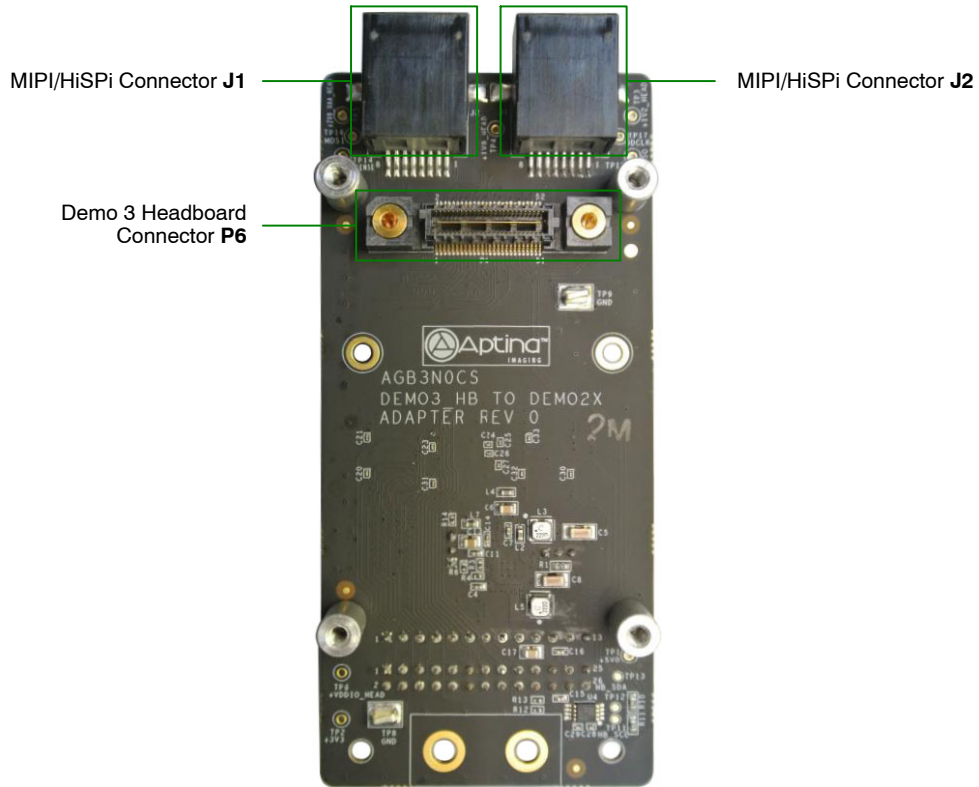


Bottom View

Figure 1. AGB3N0CS Evaluation Board

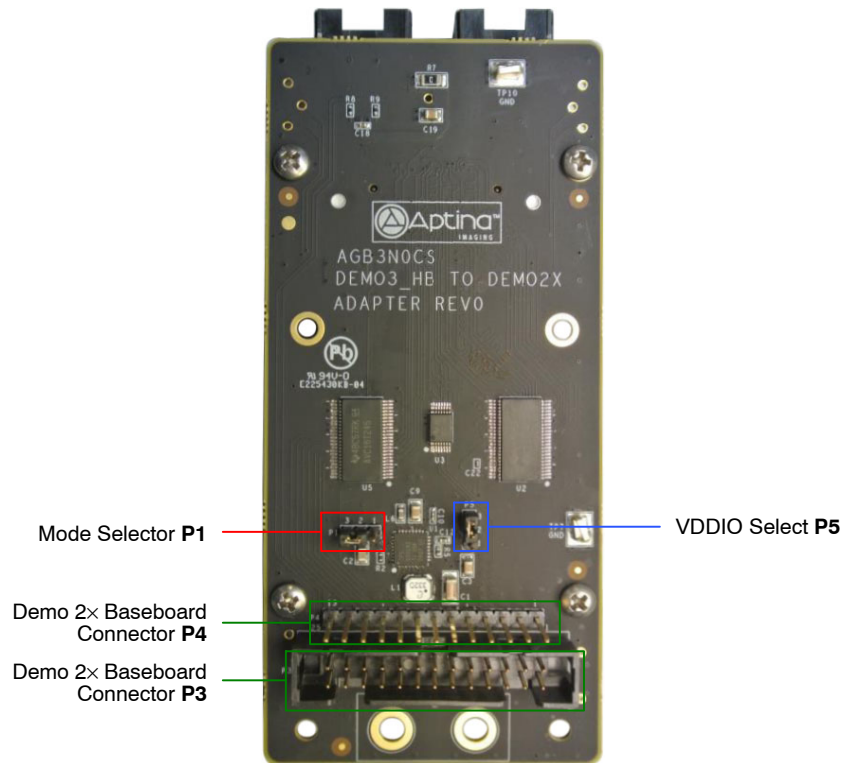
# AGB3N0CS-GEVK

*Top View*



**Figure 3. Top View of Adapter Board with Connectors**

*Bottom View*

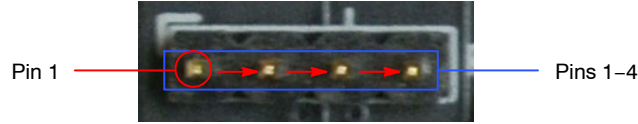


**Figure 4. Bottom View of Adapter Board with Default Jumpers and Connectors**

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## Jumper Pin Location

The jumpers on boards 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**

## Jumper/Header Functions & Default Positions

The P1 jumper/header configuration allows mode selection to the Demo 2× Board. The 2–3 default jumper position puts the Demo 2× in power safe mode, while the 1–2 jumper position puts the Demo 2× in Forced PWM mode. The P5 jumper/header configuration allows for VDDIO selection to the Demo 2× Board. The 2–3 default jumper position connects VDDIO to +1.8 V, while the 1–2 jumper position connects VDDIO to +2.8 V.

## AGB3N0CS-GEVK Connectors

The adapter board supports has various different connectors on-board, including a Demo 3 Headboard connector, two MIPI/HiSPi connectors for the Demo 2× Board, the 13-pin Demo 2× Board connector, and 26-pin Demo 2× Board connector.

## Baseboard Connectors

The Demo 2× Baseboard connectors are shown in the pinout in Tables 1 and 2. The Demo 2× connectors has a 14-pin and 26-pin connector, as well as two MIPI/HiSPi connectors.

**Table 1. 26-PIN DEMO 2X BASEBOARD CONNECTOR FUNCTION DESCRIPTION (P3)**

| Pin | Name          | Description                      | DIR | Comment                        |
|-----|---------------|----------------------------------|-----|--------------------------------|
| 1   | S_DATA8       | Parallel Data8                   | I/O | Parallel Data Bit              |
| 2   | S_DATA9       | Parallel Data9                   | I/O | Parallel Data Bit              |
| 3   | S_DATA10      | Parallel Data10                  | I/O | Parallel Data Bit              |
| 4   | S_DATA11      | Parallel Data11                  | I/O | Parallel Data Bit              |
| 5   | S_DATA12      | Parallel Data12                  | I/O | Parallel Data Bit              |
| 6   | S_DATA13      | Parallel Data13                  | I/O | Parallel Data Bit              |
| 7   | S_DATA14      | Parallel Data14                  | I/O | Parallel Data Bit              |
| 8   | S_DATA15      | Parallel Data15                  | I/O | Parallel Data Bit              |
| 9   | S_DATA6       | Parallel Data6                   | I/O | Parallel Data Bit              |
| 10  | S_DATA7       | Parallel Data7                   | I/O | Parallel Data Bit              |
| 11  | GND           | Ground                           | PWR |                                |
| 12  | GND           | Ground                           | PWR |                                |
| 13  | S_LINE_VALID  | Parallel Line Valid              | Out | Check Line Valid Signal        |
| 14  | S_SP5         | General Control Signal 5         | Out | Signal @ +3.3 V Level          |
| 15  | NOT USED      | Not Used                         | NA  |                                |
| 16  | HEAD_RESET_L  | Reset Signal to Sensor           | In  | Reset to Headboard Sensor      |
| 17  | S_FRAME_VALID | Parallel Frame Valid             | Out | Check Frame Valid Signal       |
| 18  | HEAD_SDA      | I <sup>2</sup> C Data to Sensor  | I/O | Signal @ +3.3 V Level          |
| 19  | HEAD_SCL      | I <sup>2</sup> C Clock to Sensor | I/O | Signal @ +3.3 V Level          |
| 20  | NOT USED      | Not Used                         | NA  |                                |
| 21  | +5V0_HEAD     | +5V0 Power Input                 | PWR | For Powering Up the Headboard  |
| 22  | +5V0_HEAD     | +5V0 Power Input                 | PWR | For Powering Up the Headboard  |
| 23  | S_PIXCLK      | Parallel Pixel Clock             | In  | Parallel Data Pixel Clock      |
| 24  | GND           | Ground                           | PWR |                                |
| 25  | GND           | Ground                           | PWR |                                |
| 26  | MCLK          | Master Clock                     | In  | Master Clock from Demo 3 Board |

## AGB3N0CS-GEVK

**Table 2. 14-PIN DEMO 2X BASEBOARD CONNECTOR FUNCTION DESCRIPTION (P4)**

| Pin | Name      | Description              | DIR | Comment                       |
|-----|-----------|--------------------------|-----|-------------------------------|
| 1   | GND       | Ground                   | PWR |                               |
| 2   | S_DATA4   | Parallel Data4           | I/O | Parallel Data Bit             |
| 3   | S_DATA5   | Parallel Data5           | I/O | Parallel Data Bit             |
| 4   | S_DATA2   | Parallel Data2           | I/O | Parallel Data Bit             |
| 5   | S_DATA3   | Parallel Data3           | I/O | Parallel Data Bit             |
| 6   | S_DATA0   | Parallel Data0           | I/O | Parallel Data Bit             |
| 7   | S_DATA1   | Parallel Data1           | I/O | Parallel Data Bit             |
| 8   | S_SP0     | General Control Signal 0 | Out | Signal @ +3.3 V Level         |
| 9   | S_SP1     | General Control Signal 1 | Out | Signal @ +3.3 V Level         |
| 10  | S_SP2     | General Control Signal 2 | Out | Signal @ +3.3 V Level         |
| 11  | S_SP3     | General Control Signal 3 | Out | Signal @ +3.3 V Level         |
| 12  | S_SP4     | General Control Signal 4 | Out | Signal @ +3.3 V Level         |
| 13  | +3V3_HEAD | +3.3 V to Headboard      | PWR | For Powering Up the Headboard |
| 14  | GND       | Ground                   | PWR |                               |

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