

# 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

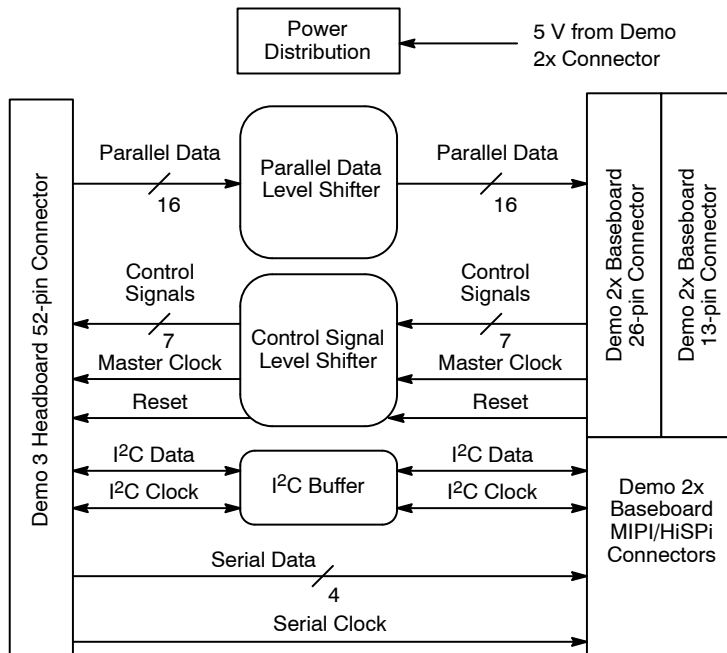


Figure 2. Block Diagram of AGB3N0CS-GEVK



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## EVAL BOARD USER'S MANUAL



Top View



Bottom View

Figure 1. AGB3N0CS Evaluation Board

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Top View

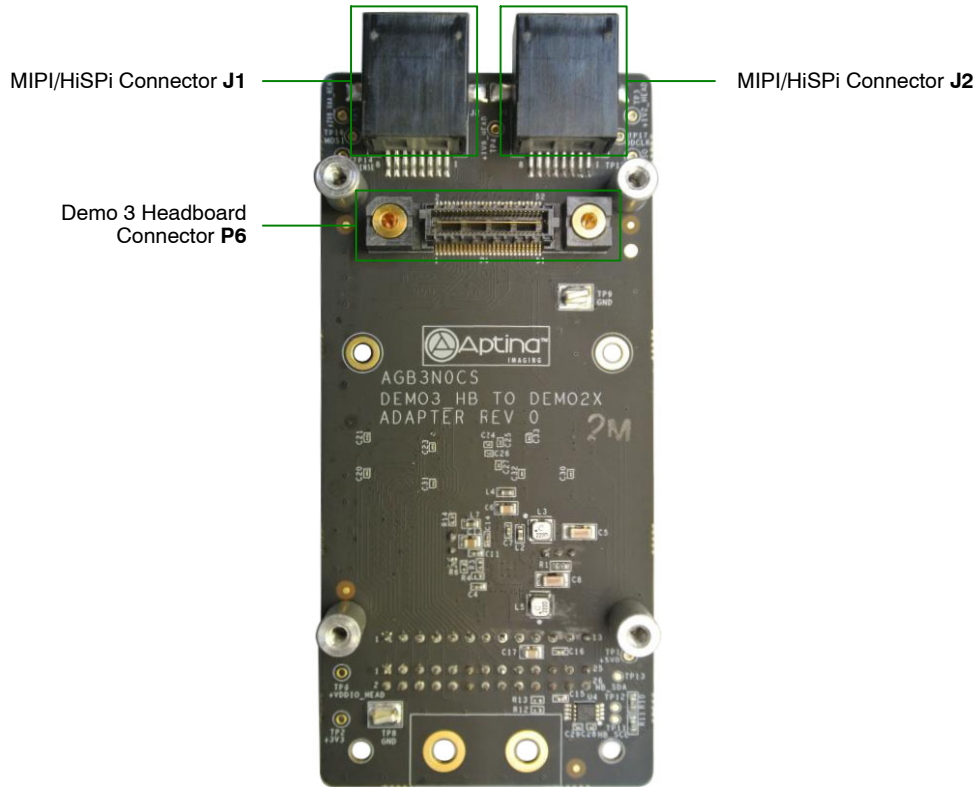


Figure 3. Top View of Adapter Board with Connectors

Bottom View

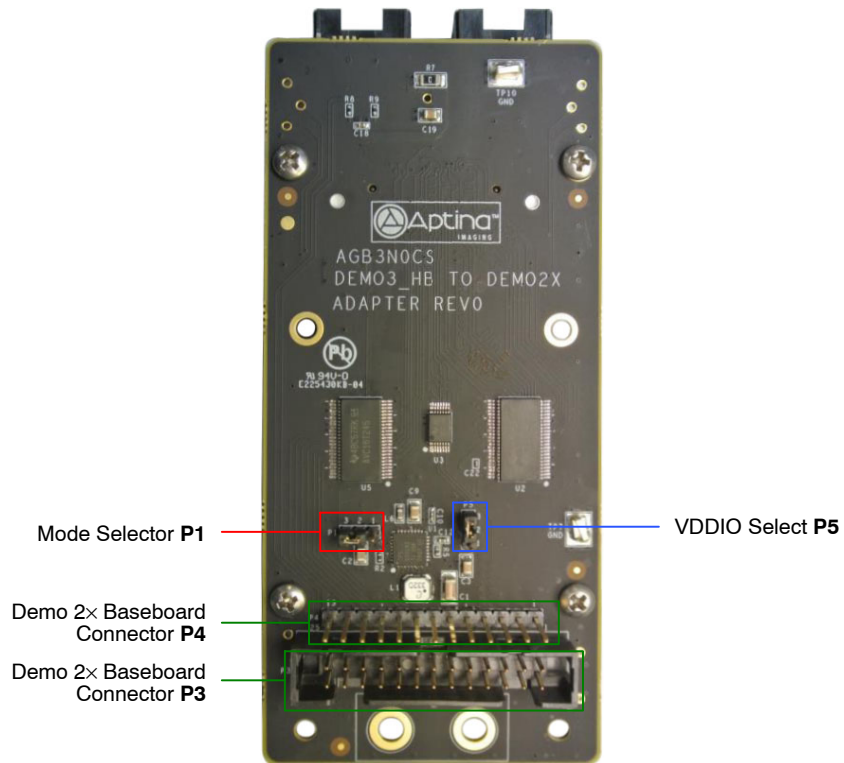
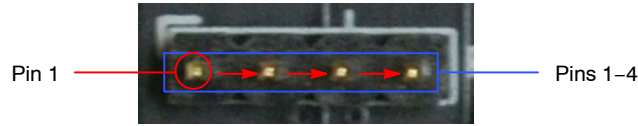


Figure 4. Bottom View of Adapter Board with Default Jumpers and Connectors

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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

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**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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