

This diagram illustrates the hardware design for a custom board, featuring various components and their interconnections. The design is organized into several functional blocks, each with a detailed schematic and component list.

SDI deserializer

The SDI deserializer block (U2A, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

SDI output

The SDI output block (U3, GS2988) is connected to the SDI output (J1) and the SDI input (J2). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

SDI input

The SDI input block (J2) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

Filtering

The Filtering block (U2C, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

Place close to GS2971A

The Place close to GS2971A block (U2B, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

RESET

The RESET block (U2D, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

MIPI connector

The MIPI connector block (U2E, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

I2C to SPI bridge

The I2C to SPI bridge block (U2F, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

I2S connector

The I2S connector block (U2G, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

Pull-up resistors

The Pull-up resistors block (U2H, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

Logotypes

The Logotypes block (U2I, GS2971A) is connected to the SDI input (J2) and the SDI output (J1). It includes a clock input (PCLK) and a data input (DOUT[19..10]). The output is connected to the SDI output (J1).

[illegible]

The schematic shows three main sections:

- Left Section:** A +3V3 supply connected through resistor R26 to a node labeled C45, which is then connected to GNDREF.
- Middle Section:** Two parallel paths from GNDREF. The top path goes through resistor R69 to PWR_FLAG, which is also connected to GNDGPLL. The bottom path goes through resistor R70 to GNDPLL_DPHY, which is also connected to PWR_FLAG.
- Right Section:** A switch SW1 (SW_SPST_KMR211NGLF5) controlled by USER_SW (R82). One terminal of the switch is connected to GND, and the other terminal is connected to GND_A.

Component values are indicated: R26, R69, R70, R82 are resistors; C45 is a capacitor; SW1 is a single-pole single-throw switch.

Antmicro Ltd. www.antmicro.com	
Sheet: / File: sdi-mipi-bridge.kicad_sch	
Title: SDI-MIPI Bridge	
Size: A2	Date: 2023-10-12
KiCad E.D.A. 9.0.7	Rev: 1.3.4:6c0c8454 Id: 1/1