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Updated

PSI46 Buffer Board – ASIC Interface Board connections and changes:

- PSI46 has only three positive regulator outputs CAP_VD, CAP_DAC and CAP_dig. They all are positive voltages suitable for ASIC ADCs without inverting amplifier
- Analog ground will be connected to the digital ground plane near the ADC buffer on the ASIC Interface Board
- All LVDS levels are positive levels with Vcm = 1.25V and Vd = 350 mV
- +/- 5V supply voltages are for LVDS and analog output level translators on the Buffer Board
- Voltage regulators for PSI43 and +/- 5V supply have common shutdown control
- Former Viref line is used for switching SCL clock source

Table 1 PSI46 Buffer Board connector

Pin	Signal	Description	Pin	Signal	Description
1	NC	Do Not connect	2	NC	Do Not connect
3	SDA_R+	I2C data output (LVDS)	4	SDA_R-	I2C data output (LVDS)
5	+VA	Analog power	6	+VA	Analog power
7	VDO	VD regulator output	8	VDIG	Vdig regulator output
9	GNDD	Digital ground	10	GNDD	Digital ground
11	TIN+	Token input (LVDS)	12	TIN-	Token input (LVDS)
13	CLK+	Clock input (LVDS)	14	CLK-	Clock input (LVDS)
15	CTRL+	Control input (LVDS)	16	CTRL-	Control input (LVDS)
17	GNDD	Digital ground	18	GNDD	Digital ground
19	RST	Reset input (CMOS)	20	GNDA	Analog ground
21	DATA+	Analog output (diff.)	22	DATA-	Analog output (diff.)
23	GNDA	Analog ground	24	SCL_S	Clock select (CMOS)
25	A3	I2C address (CMOS)	26	A2	I2C address (CMOS)
27	A1	I2C address (CMOS)	28	A0	I2C address (CMOS)
29	NC	Do Not connect	30	GNDD	Digital ground
31	SCL+	I2C clock input (LVDS)	32	SCL-	I2C clock input (LVDS)
33	SDA+	I2C data input (LVDS)	34	SDA-	I2C data input (LVDS)
35	TRGO+	Trigger output (diff.)	36	TRGO-	Trigger output (diff.)
37	VDAC	DAC regulator output	38	GNDD	Digital ground
39	TOUT+	Token output (LVDS)	40	TOUT-	Token output (LVDS)
41	GNDD	Digital ground	42	NC	Do Not connect
43	NC	Do Not connect	44	GNDA	Analog ground
45	+VD	Digital power	46	+VD	Digital power
47	+5V	Buffer board power	48	+5V	Buffer board power
49	-5V	Buffer board power	50	-5V	Buffer board power

Note: All input/output signals are referenced to the Buffer Board.