

EVAL-CN0560-FMCZ Evaluation Board

Product Overview

12/20/2023

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

Analog Devices Inc. EVAL-CN0560-FMCZ Evaluation Board is designed to provide highly accurate measurement of three current ranges using a combination of shunt resistors and on-board amplifiers. This combination of shunt resistors and on-board amplifiers drive the 18-bit, 15MSPS ADAQ23878 precision μ Module® data acquisition solution. The EVAL-CN0560-FMCZ evaluation board requires the Analysis Control Evaluation (ACE) software, EVAL-CN0560-FMCZ ACE plug-in, and SDP-H1 driver during evaluation setup.



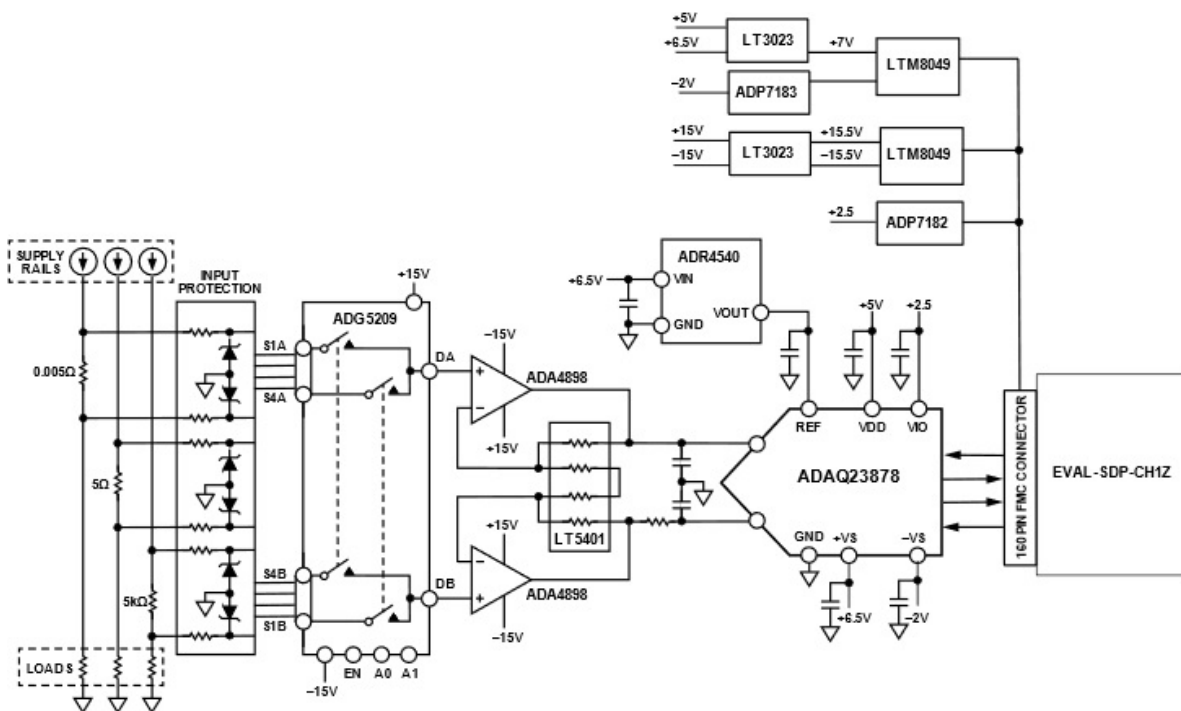
The EVAL-CN0560-FMCZ evaluation board requires various equipment for evaluation setup. These equipment include CN0560 circuit evaluation board, SDP-H1 system demonstration platform board, a current source, standard USB A to USB mini-B, and DC bench top power supply. This evaluation board interfaces with high speed system demonstration platform SDP-H1 (EVAL-SDP-CH1Z) board via a 160-pin connector.

The EVAL-CN0560-FMCZ evaluation board uses an SPI interface and is connected to the high speed controller board for the system demonstration platform (SDP-H1) controller board. Multiple link options must be set correctly for the appropriate operating setup before applying the power and signal to the EVAL-CN0560-FMCZ evaluation board.

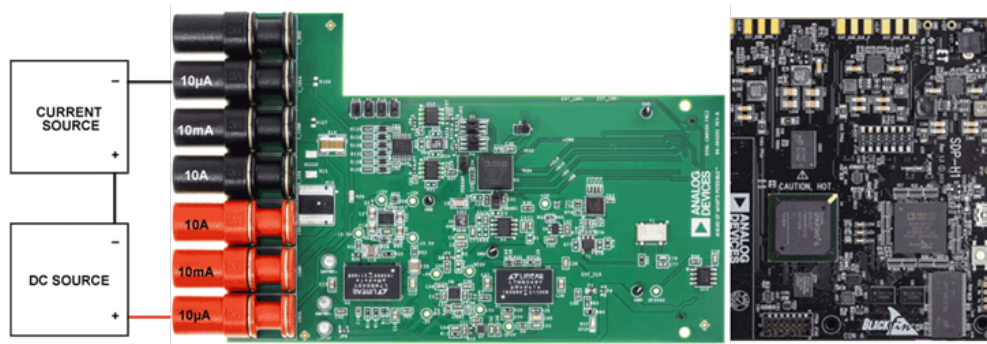
Evaluation Setup

- **Equipment required:**
 - CN0560 circuit evaluation board (EVAL-CN0560-FMCZ)
 - SDP-H1 (EVAL-SDP-CH1Z) system demonstration platform board
 - Current source
 - Standard USB A to USB mini-B
 - DC Bench top power supply
 - DC Bench top power supply
- **Software required:**
 - Analysis Control Evaluation (ACE)
 - EVAL-CN0560-FMCZ ACE plug-in
 - SDP-H1 driver

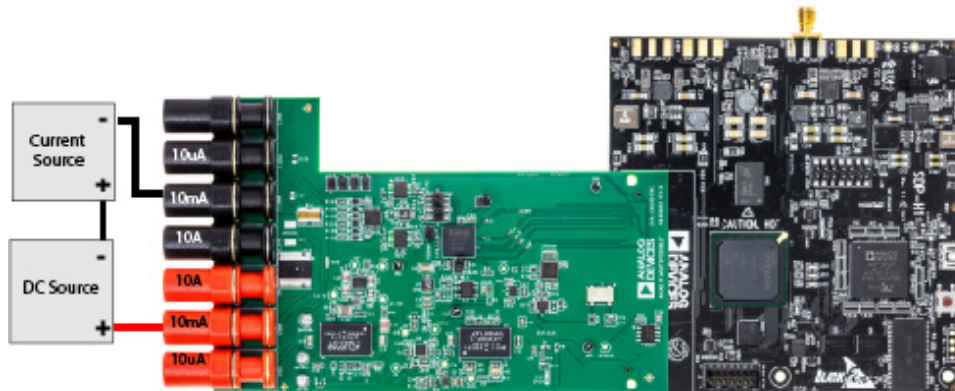
Block Diagram



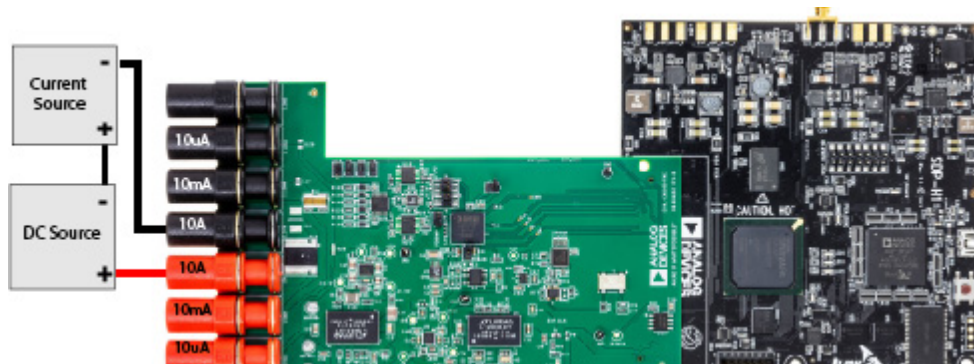
Hardware Connections



10uA Setup Connection



10mA Setup Connection



10A Setup Connection

Link Configuration Options

Link	Default	Function	Comment
JP1	Center to B	INAMP VOUT	Change center to A if using if using A2 instead of U9 and U10
JP2	Center to B	INAMP REF	Change center to A if using if using A2 instead of U9 and U10
JP5	Center to A	AMPWR+	Change center to B when using external supply.
JP6	Center to A	AMPWR-	Change center to B when using external supply. If configured to single supply VS- to GND. Remove both jumper of JP6 and install R49(0Ω).
JP7	Center to B	Amplifier Input	Change center to A if connecting to A2 instead of U9
JP8	Center to B	Amplifier Input	Change center to A if connecting to A2 instead of U10
JP9	Center to A	+3.3V	Change center to B when using an external +3.3V supply.
P1	Tie Pin2 and Pin3 (connected to GND)	Two-lanes Digital Output Modes	Digital input that enables two-lane output mode. Use this jumper to select either single lane or two-lane data output mode. The default setting is Pin2 and Pin3. Pin2 and Pin3 setting clocks out all data on pin DA+-. The Pin1 and Pin2 setting clocks out data alternately on pins DA+- and DB+-.
P4	Tie Pin1 and Pin2	ADAQ23878 (U1) IN-	Gain Selection. Refer to Figure 3 to Figure 4.
P6	Tie Pin1 and Pin2	ADAQ23878 (U1) IN+	Gain Selection. Refer to Figure 5 to Figure 6.
P5	Not Applicable	SDP-H1 FMC connector	The EVAL-ADAQ23875FMCz board interfaces to the SDP-H1 board via a 160-pin connector
P7, P8, P13, P14	Tie Pin2 and Pin3	Multiplexer Configuration	Refer to Figure 7 to Figure 8.
PDBAMP	Tie Pin1 and Pin2	Power Down of U1 Internal FDA	Connect Pin2 to Pin3(GND) to power down the FDA
PDBADC	Tie Pin1 and Pin2	Power Down of Internal ADC	Connect Pin2 to Pin3(GND) to enter ADC power-down mode. Logic levels are determined by VIO.

Link Option for the EVAL-CN0560-FMCZ

Mouser Part Number

[View Part](#)

To learn more, visit <http://www.mouser.com/adi-eval-cn0560-fmcz-board/>