

ANALOG DEVICES Generic Signal Chains for Current Measurement Shunt User Guide

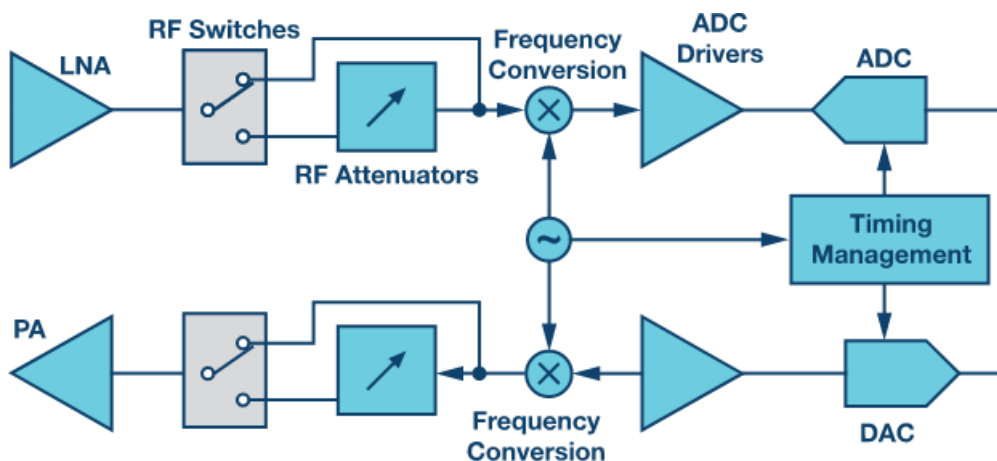
[Home](#) » [Analog Devices](#) » ANALOG DEVICES Generic Signal Chains for Current Measurement Shunt User Guide 

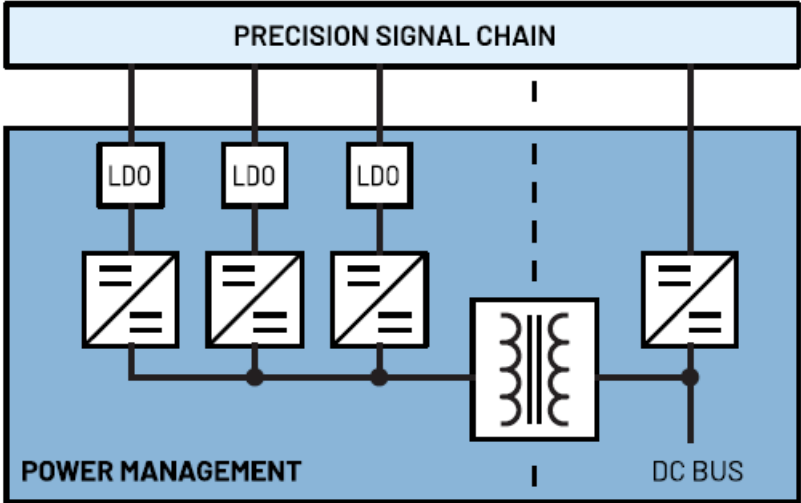
Contents

- [1 ANALOG DEVICES Generic Signal Chains for Current Measurement Shunt](#)
- [2 USER GUIDE](#)
- [3 Precision Current Sensing](#)
- [4 POWER REQUIREMENTS](#)
- [5 Documents / Resources](#)
 - [5.1 References](#)
- [6 Related Posts](#)



ANALOG DEVICES Generic Signal Chains for Current Measurement Shunt





USER GUIDE

This document is interactive. You can click on any underlined text to navigate through the document

For the resources:

APPENDIX	Parts Guide
	Power Requirements



Left-click the Parts Guide and Power Requirements to go through the list of power devices and other references.



The Power Components are listed on the Appendix, and you may click on the part to go through its product page online.

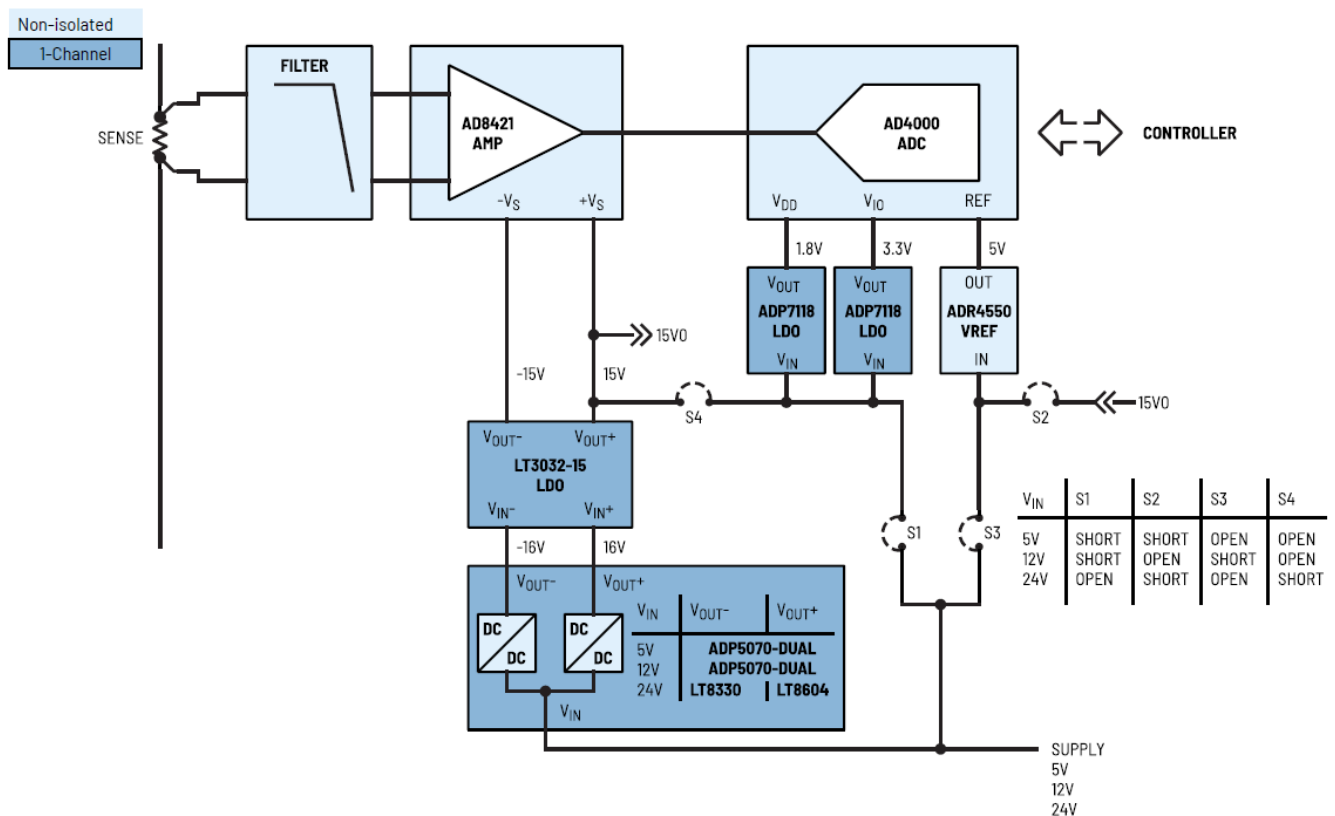
PART #	DESCRIPTION
LT3471	Dual 1.3A, 1.2MHz Boost/Inverter in 3mm × 3mm DFN
LT8604	High Efficiency 42V/120mA Synchronous Buck
LT8570-1	Boost/SEPIC/Inverting DC/DC Converter with 65V Switch, Soft-Start and Sync.

For the individual pages:

Left-click the specific signal chain to go through its respective block diagram or power tree.

Non-isolated	POWER RE
1-Channel	
	PARAMETER
	Supply Voltage
	Supply Current
	PSRR

Precision Current Sensing



Generic Signal Chain for Current Measurement

Shunt: Common Mode Voltage Up to 18V

Non-isolated

- 1-Channel

PART #	DESCRIPTION
ADP7118	20 V, 200 mA, Low Noise, CMOS LDO Linear Regulator
LT3032-15	Dual 150mA Positive/Negative Low Noise Low Dropout Linear Regulator
ADP5070	1 A/0.6 A, DC-to-DC Switching Regulator with Independent Positive and Negative Outputs
LT8330	Low IQ Boost/SEPIC/Inverting Converter with 1A, 60V Switch
LT8604	High Efficiency 42V/120mA Synchronous Buck

POWER REQUIREMENTS

PARAMETER	STAGES	Instrumentation Amp		Filter	ADC		Reference
	Part #	AD8421		–	AD4000		ADR4550
	Pin	+V _S	-V _S		VDD	VIO	IN
Supply Voltage	V	15	-15	–	1.8	3.3	5.1 to 15
Supply Current	mA	2.6	2.6	–	5.4	0.15	0.95
PSRR	dB	20 (500kHz, G=1)	50 (500kHz, G=1)	–	65 (700kHz)		60 (1MHz)

• Note 1:

The supply currents indicated are the maximum quiescent current of the supply rails. For overall full load or short circuit current specifications, refer to the datasheets of the signal chain components.

• Note 2:

The supply voltages indicated are the values for typical applications.

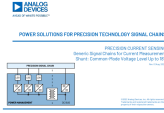
• Note 3:

Consult the corresponding datasheets for details on: (1) power supply rejection ratio (PSRR) and (2) power dissipation.

• Note 4:

The actual supply current requirement shall be multiplied depending on the number of channels on the signal chain.

Documents / Resources

	<p>ANALOG DEVICES Generic Signal Chains for Current Measurement Shunt [pdf] User Guide</p> <p>Generic Signal Chains for Current Measurement Shunt, Generic Signal Chains, Current Measurement Shunt, Measurement Shunt, Shunt</p>
---	---

References

- ▶ [Mixed-signal and digital signal processing ICs | Analog Devices](#)
- ▶ [AD4000 Datasheet and Product Info | Analog Devices](#)

- [!\[\]\(83eb2aa26b610eb6a9dca7cf4702d681_img.jpg\) **AD8421 Datasheet and Product Info | Analog Devices**](#)
- [!\[\]\(94dfacbf937cdd7da4837a6fcd8fc785_img.jpg\) **ADP5070 Datasheet and Product Info | Analog Devices**](#)
- [!\[\]\(dae8c3c5fa7c80febd6526a5e8a853bf_img.jpg\) **ADP7118 Datasheet and Product Info | Analog Devices**](#)
- [!\[\]\(8f38ab9775d1331a4e1fd6648d0a83f1_img.jpg\) **ADR4550 Datasheet and Product Info | Analog Devices**](#)
- [!\[\]\(5e48b3241d711ef916255d822ab3415f_img.jpg\) **LT3032 Series Datasheet and Product Info | Analog Devices**](#)
- [!\[\]\(c4c3604751fde0df44855086d7798e30_img.jpg\) **LT8330 Datasheet and Product Info | Analog Devices**](#)
- [!\[\]\(a16ee0329f478adb49fd7876490e96fe_img.jpg\) **LT8604/LT8604C Datasheet and Product Info | Analog Devices**](#)

Manuals+.