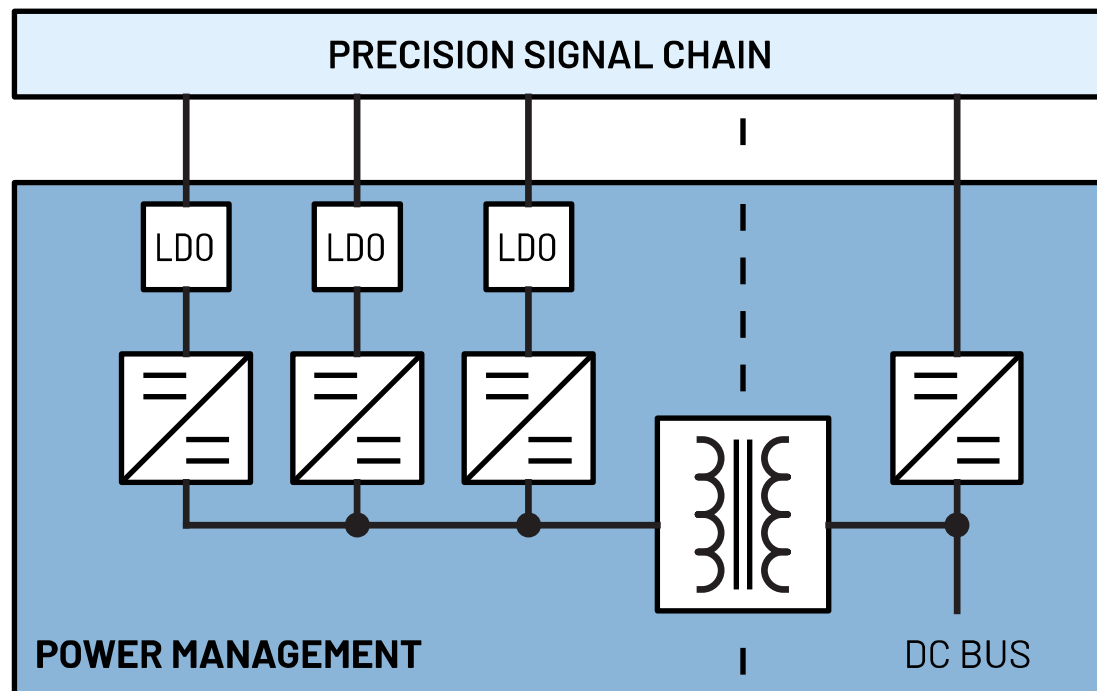


POWER SOLUTIONS FOR PRECISION TECHNOLOGY SIGNAL CHAINS

PRECISION MEDIUM BANDWIDTH
Single Channel Data Acquisition
Low Latency

Rev. 0 | Aug. 2022



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

For the resources:

APPENDIX	<u>Parts Guide</u>
	<u>Power Requirements</u>

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
<u>LT3471</u>	Dual 1.3A, 1.2MHz Boost/Inverter in 3mm x 3mm DFN
<u>LT8604</u>	High Efficiency 42V/120mA Synchronous Buck
<u>LT8570-1</u>	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.

The screenshot shows a navigation menu on the left with two items: 'Non-isolated' and '1-Channel'. The '1-Channel' item is highlighted with a blue box and a blue arrow points to it from the text above. To the right is a table titled 'POWER RE' with a header 'PARAMETER' and three rows: 'Supply Voltage', 'Supply Current', and 'PSRR'.

Precision Medium Bandwidth

APPENDIX

Parts Guide

USER GUIDE

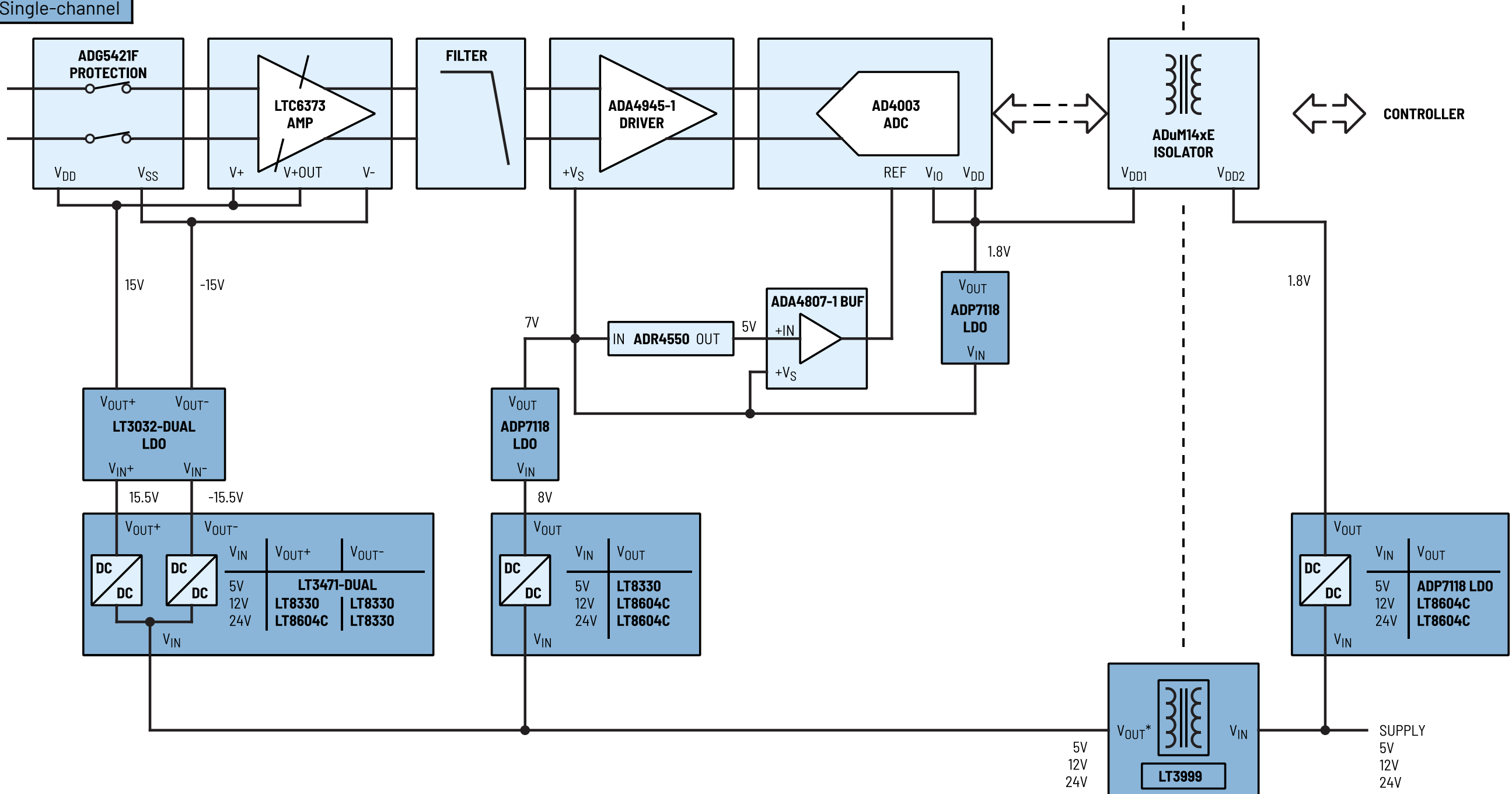
Power Requirements

Data Acquisition - Single Channel

Low Latency

Isolated

Single-channel



*The actual output voltage of LT3999 isolated converter depends primarily on the turns ratio of the transformer used. See LT3999 datasheet for details.

Precision Medium Bandwidth

Data Acquisition - Single Channel

Low Latency

Isolated

Single-channel

PART #	DESCRIPTION
<u>LT8604</u>	High Efficiency 42V/120mA Synchronous Buck
<u>LT3471</u>	Dual 1.3A, 1.2MHz Boost/Inverter in 3mm x3mm DFN
<u>LT8330</u>	Low I _Q Boost/SEPIC/Inverting Converter with 1A, 60V Switch
<u>LT3999</u>	Low Noise, 1A, 1MHz Push-Pull DC/DC Driver with Duty Cycle Control
<u>ADP7118</u>	20V, 200mA, Low Noise, CMOS LDO Linear Regulator
<u>LT3032</u>	Dual 150mA Positive/Negative Low Noise Low Dropout Linear Regulator

Isolated

Single-channel

POWER REQUIREMENTS

PARAMETER	STAGES	Protection		Gain			Filter	ADC Driver		ADC			Reference	Ref. Buffer		Isolation	
	Part #	ADG5421F		LTC6373			-	ADA4945-1		AD4003			ADR4550	ADA4807-1		ADuM14xE	
	Pin	V _{DD}	V _{SS}	V+	V-	V _{+OUT}		+V _S	-V _S	V _{DD}	V _{IO}	-	IN	+V _S	-V _S	V _{DD1}	V _{DD2}
Supply Voltage	V	15	-15	15	-15	15	-	7	-	1.8	1.8	-	7	7	-	1.8	1.8
Supply Current	mA	0.205	-0.115	20	-20	-	-	4.2	-	7.8	0.2	-	1	3.75	-	17	10
PSRR	dB	90 (1MHz)		67 (1MHz; G=1)	57 (1MHz; G=1)	-	-	106 (1MHz)		52 (1MHz)			62 (1MHz)	73 (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.