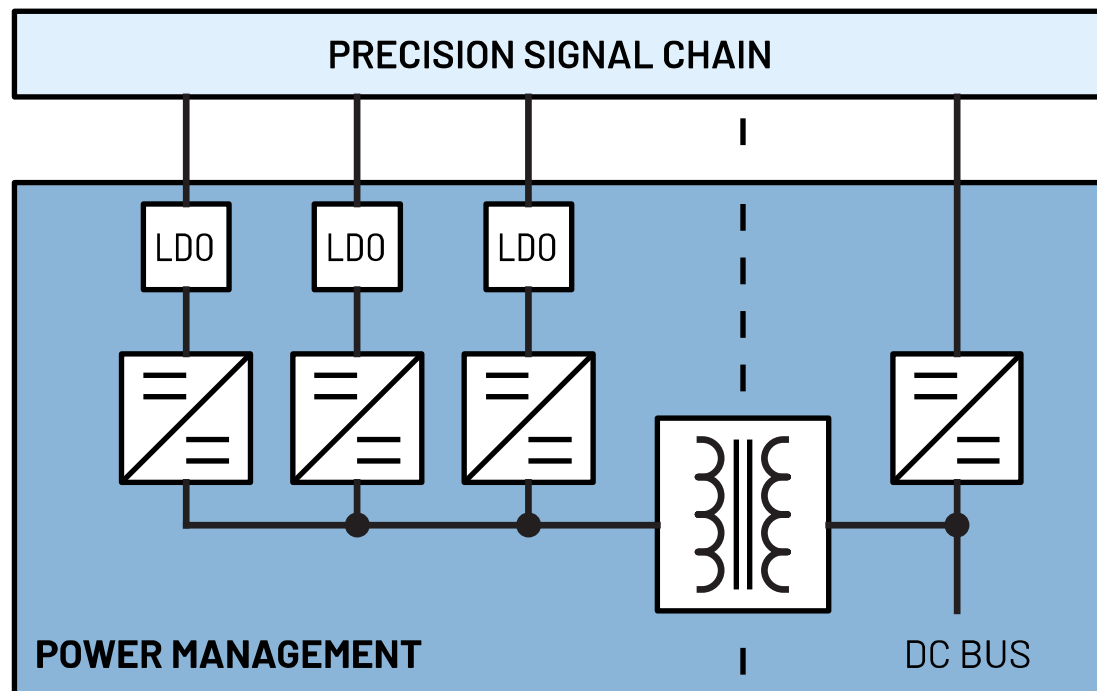


POWER SOLUTIONS FOR PRECISION TECHNOLOGY SIGNAL CHAINS

PRECISION MEDIUM BANDWIDTH
Single Channel Data Acquisition
High Density

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 × 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.

Non-isolated	POWER RE
<u>1-Channel</u>	
	PARAMETER
	Supply Voltage
	Supply Current
	PSRR

Precision Medium Bandwidth

APPENDIX

Parts Guide

USER GUIDE

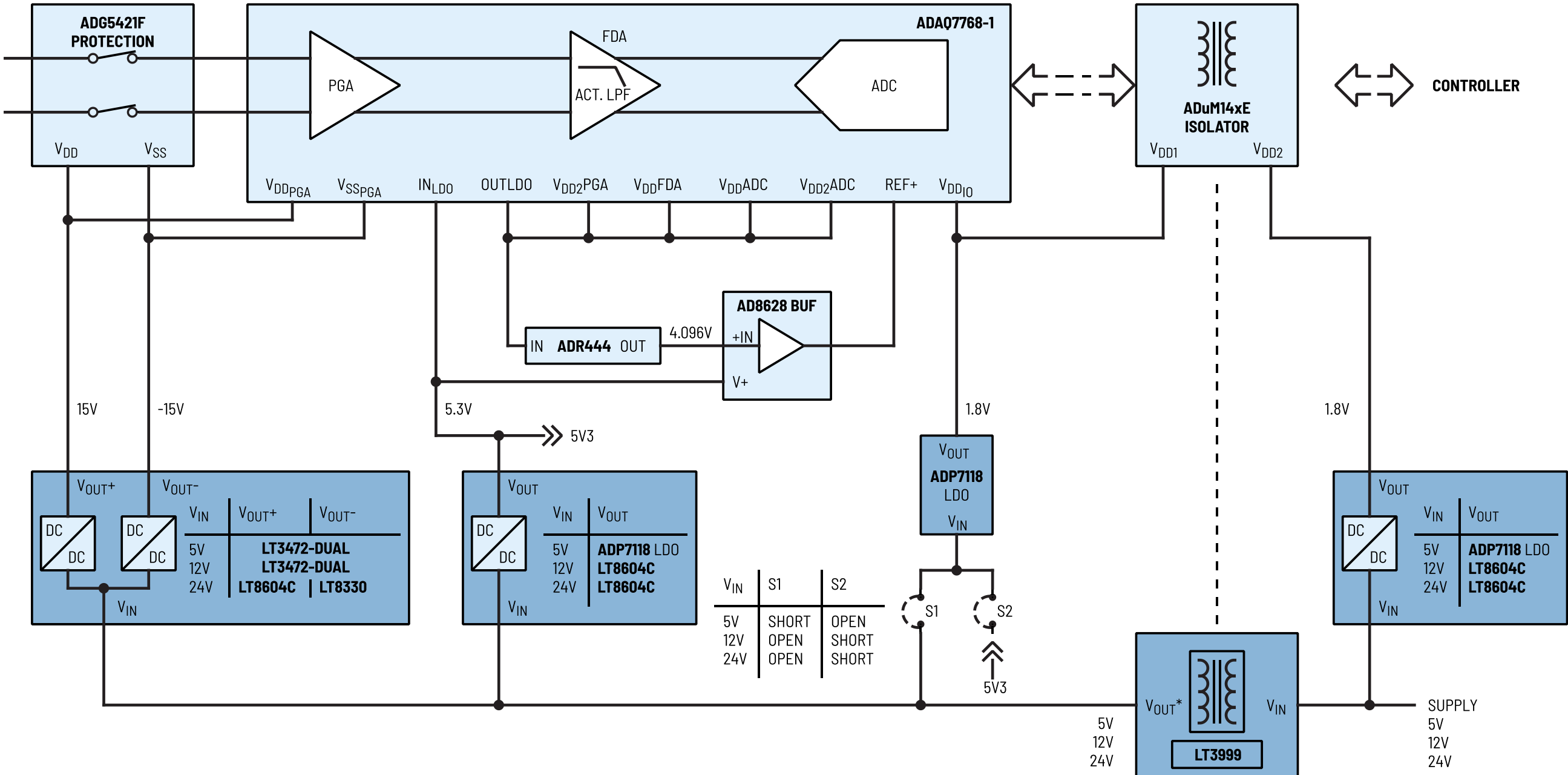
Power Requirements

Data Acquisition - Single Channel

High Density

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

High Density

Isolated
Single-channel

PART #	DESCRIPTION
LT8604	High Efficiency 42V/120mA Synchronous Buck
LT3472	Boost and Inverting DC/DC Converter for CCD Bias
LT8330	Low I _Q Boost/SEPIC/Inverting Converter with 1A, 60V Switch
LT3999	Low Noise, 1A, 1MHz Push-Pull DC/DC Driver with Duty Cycle Control
ADP7118	20V, 200mA, Low Noise, CMOS LDO Linear Regulator

Isolated

Single-channel

POWER REQUIREMENTS

PARAMETER	STAGES	Protection		Gain ADC Driver ADC				Ref Buffer	Reference	Isolation	
	Part #	ADG5421F		ADAQ7768-1				AD8628	ADR444	ADuM141E	
	Pin	V _{DD}	V _{SS}	V _{DD_PGA}	V _{SS_PGA}	I _{N_LDO}	V _{DD_IO}	V+	V _{IN}	V _{DD1}	V _{DD2}
Supply Voltage	V	15	-15	15	-15	5.3	1.8	5.3	5	1.8	1.8
Supply Current	mA	0.205	-0.205	8.5	-14.24	19.43	9.1	1.2	3.75	17	10
PSRR	dB	90 (1MHz)		121 (1MHz; G=0.65)	121 (1MHz; G=0.65)	121 (1MHz; G=0.65)	125 (1MHz)	15 (1MHz)	20 (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.