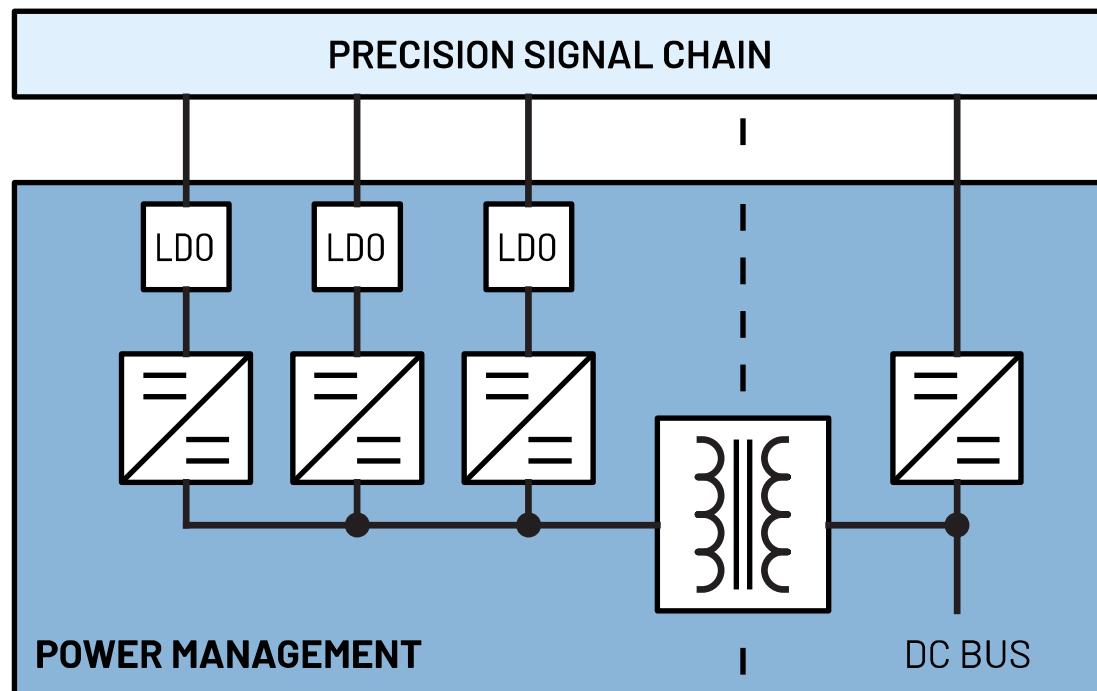


# POWER SOLUTIONS FOR PRECISION TECHNOLOGY SIGNAL CHAINS

PRECISION MEDIUM BANDWIDTH  
Encoder Based Rotation Sensing  
Cost Optimized

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.

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](#)

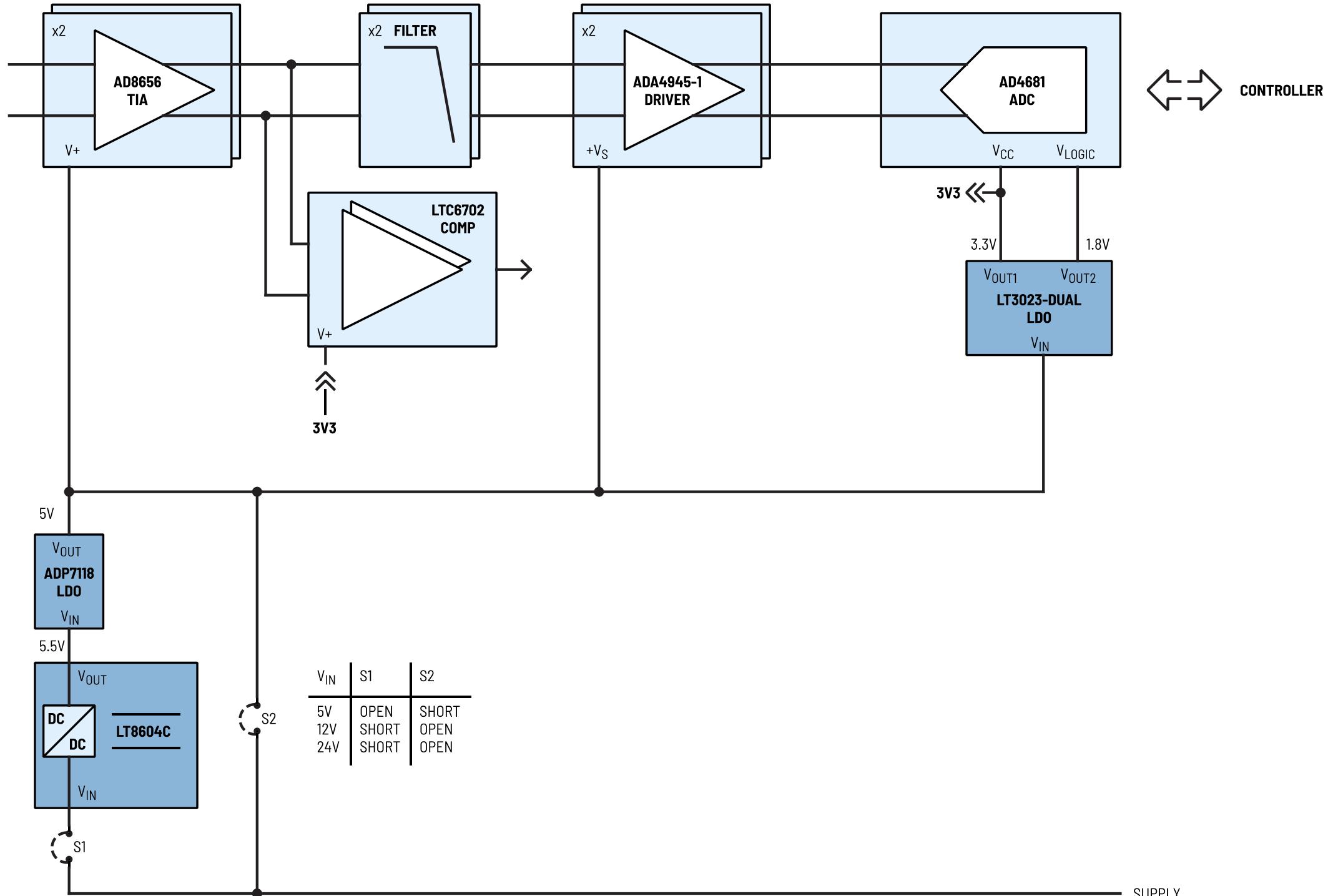
[USER GUIDE](#)

[Power Requirements](#)

Encoder Based Rotation Sensing

Cost Optimized

Non-isolated  
Multichannel



SUPPLY  
5V  
12V  
24V

Precision Medium Bandwidth

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PART #	DESCRIPTION
<b>LT8604C</b>	High Efficiency 42V/120mA Synchronous Buck
<b>LT3023</b>	Dual 100mA, Low Dropout, Low Noise, Micropower Regulator
<b>ADP7118</b>	20V, 200mA, Low Noise, CMOS LDO Linear Regulator

Non-isolated

Multichannel

# POWER REQUIREMENTS

PARAMETER	STAGES	TIA	Filter	ADC Driver		ADC			Comparator	
	Part #	<u>AD8656</u>	-	<u>ADA4945-1</u>		<u>AD4681</u>			<u>LTC6702</u>	
	Pin	V+	-	+V <sub>S</sub>	-V <sub>S</sub>	V <sub>CC</sub>	V <sub>LOGIC</sub>		V+	-
Supply Voltage	V	5	-	5	-	3.3	1.8	-	3.3	-
Supply Current	mA	5.3	-	4.2	-	5.6	0.47	-	0.08	-
PSRR	dB	32 (1MHz)	-	106 (1MHz)		75 (1MHz)			54	

**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.