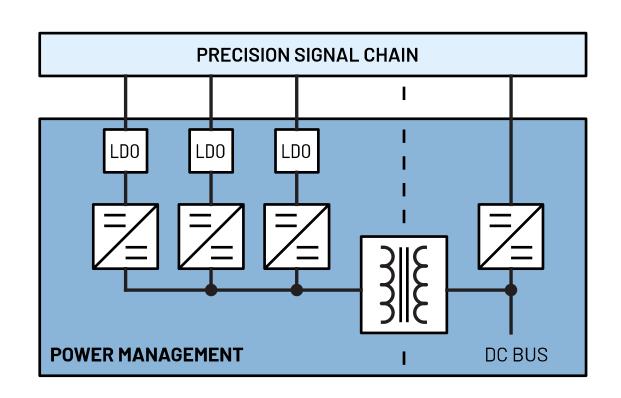# ANALOG DEVICES

AHEAD OF WHAT'S POSSIBLE™

POWER SOLUTIONS FOR PRECISION TECHNOLOGY SIGNAL CHAINS

PRECISION MEDIUM BANDWIDTH
Encoder Based Rotation Sensing
Density Optimized

PRECISION SIGNAL CHAIN

LDO LDO LDO

POWER MANAGEMENT   DC BUS

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

For the resources:

For the individual pages:

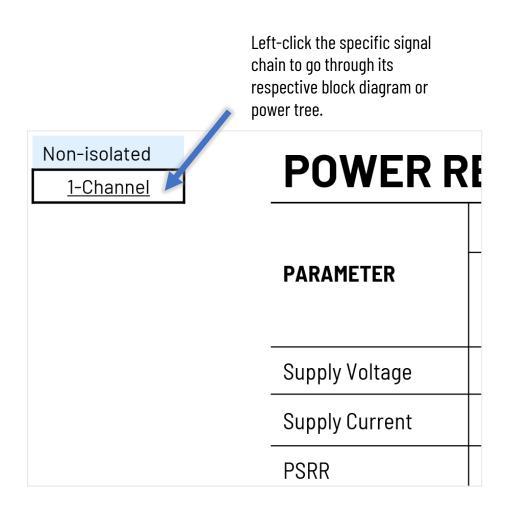| APPENDIX	Parts Guide
	Power Requirements

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.

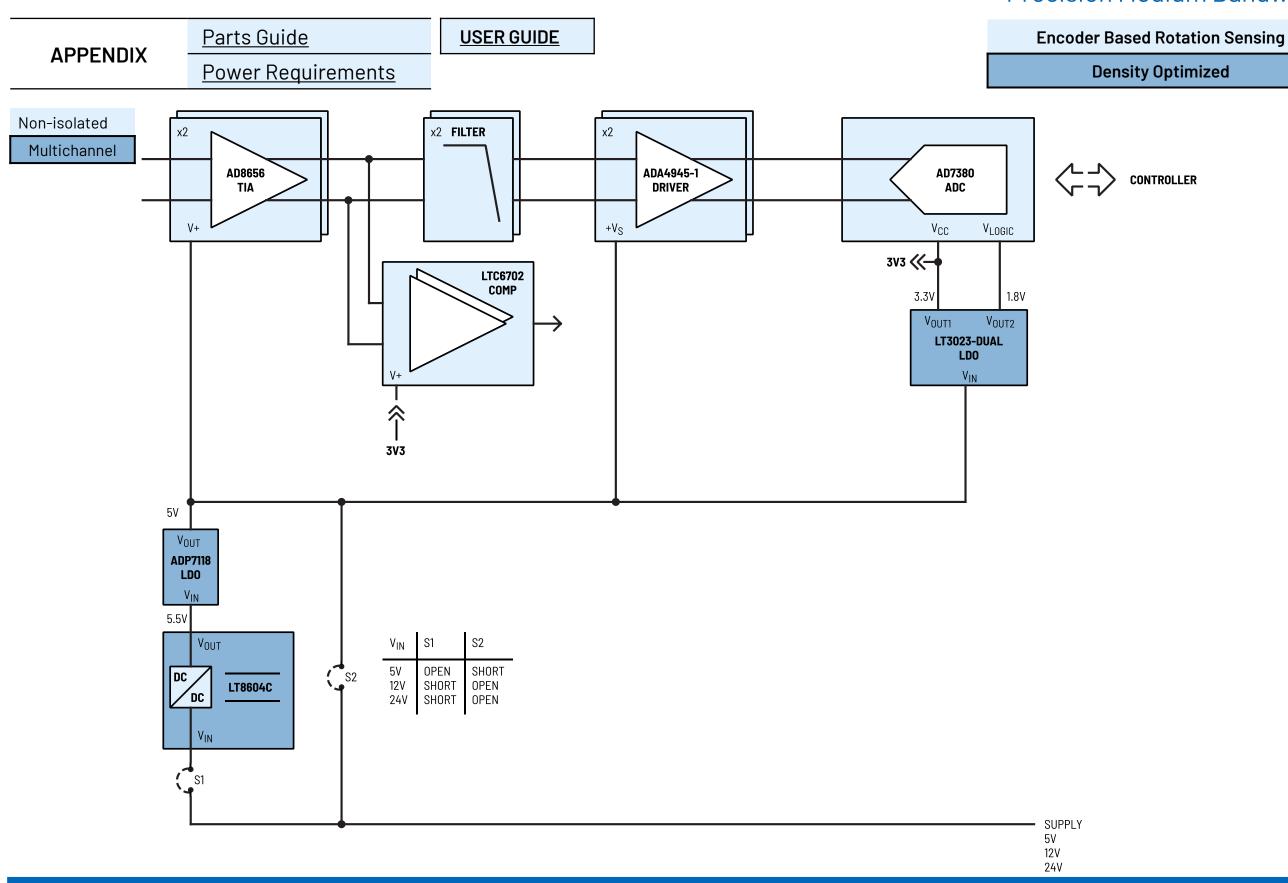| PART #	DESCRIPTION
LT3471	Dual 1.3A, 1.2MHz Boost/Inverter in 3mm × 3mm DFN
LT8604	High Efficiency 42V/120mA Synchronous Buck
LT8570-1	Boost/SEPIC/Inverting DC/DC Converter with 65V Switch, Soft-Start and Sync.

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

Non-isolated
1-Channel

POWER RE

PARAMETER

Supply Voltage

Supply Current

PSRR

ANALOG DEVICES

APPENDIX

Parts Guide

USER GUIDE

Power Requirements

Encoder Based Rotation Sensing

Density Optimized

Non-isolated

Multichannel

x2 — AD8656 TIA — V+

x2 FILTER

x2 — ADA4945-1 DRIVER — +V_S

AD7380 ADC — V_{CC} — V_{LOGIC} — CONTROLLER

LTC6702 COMP — V+

3V3

3.3V — 1.8V

V_{OUT1} — V_{OUT2}

LT3023-DUAL LDO

V_{IN}

3V3

5V

V_{OUT}

ADP7118 LDO

V_{IN}

5.5V

V_{OUT}

DC / DC — LT8604C

V_{IN}

S1

S2

V_{IN}	S1	S2
5V	OPEN	SHORT
12V	SHORT	OPEN
24V	SHORT	OPEN

SUPPLY
5V
12V
24V

Precision Medium Bandwidth

Encoder Based Rotation Sensing	
Density Optimized	

Non-isolated

Multichannel

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

Encoder Based Rotation Sensing
Density Optimized

Non-isolated
Multichannel

POWER REQUIREMENTS

PARAMETER	STAGES	TIA	Filter	ADC Driver		ADC | Ref Buffer | Ref			Comparator	
	Part #	AD8656	-	ADA4945-1		AD7380			LTC6702	
	Pin	V+	-	$+V_S$	$-V_S$	V_{CC}	V_{LOGIC}	-	V+	-
Supply Voltage	V	5	-	5	-	3.3	1.8	-	3.3	-
Supply Current	mA	5.3	-	4.2	-	26	3.7	-	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.