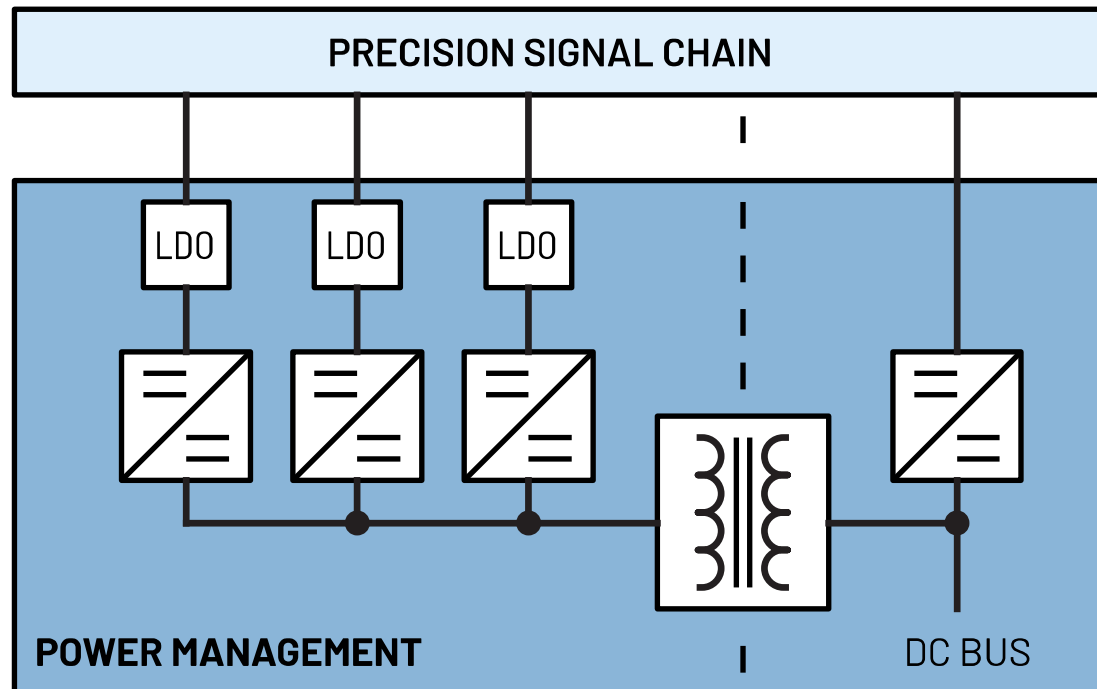# POWER SOLUTIONS FOR PRECISION TECHNOLOGY SIGNAL CHAINS

PRECISION WIDE BANDWIDTH
Current and Voltage Drive
Optimized for Flexibility

Rev. 0 | Jan. 2022

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

Precision Wide Bandwidth

APPENDIX

Parts Guide

Power Requirements

USER GUIDE

Current and Voltage Drive

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Non-isolated

1-Channel

| IN | LTC6655 | OUT | 2.5V |

AD3552R DAC — VREF, AV$_{DD}$, V$_{LOGIC}$, DV$_{DD}$

AD8066 DRIVER — +V$_S$, -V$_S$

FILTER

ADG5401F PROTECTION — V$_{SS}$, V$_{DD}$

CONTROLLER

5V — **ADP7118 LDO** — V$_{OUT}$ / V$_{IN}$ — 6.5V / 5.5V / 5.5V

1.8V — **ADP7118 LDO** — V$_{OUT}$ / V$_{IN}$

12V — **ADP7118 LDO** — V$_{OUT}$ / V$_{IN}$ — 12.5V / 13V / 12.5V

-12V — **ADP7182 LDO** — V$_{OUT}$ / V$_{IN}$ — -12.5V / -13V / -12.5V

V$_{IN}$	S1	S2
5V	SHORT	OPEN
12V	OPEN	SHORT
24V	OPEN	SHORT

DC/DC

V$_{IN}$	V$_{OUT}$
5V	LTC3459
12V	LT8604
24V	LT8604

DC/DC — V$_{OUT+}$ / V$_{OUT-}$

V$_{IN}$	V$_{OUT+}$	V$_{OUT-}$
5V	ADP5070-DUAL	
12V	ADP5070-DUAL	
24V	LT8604	LT8570-1

SUPPLY
5V
12V
24V
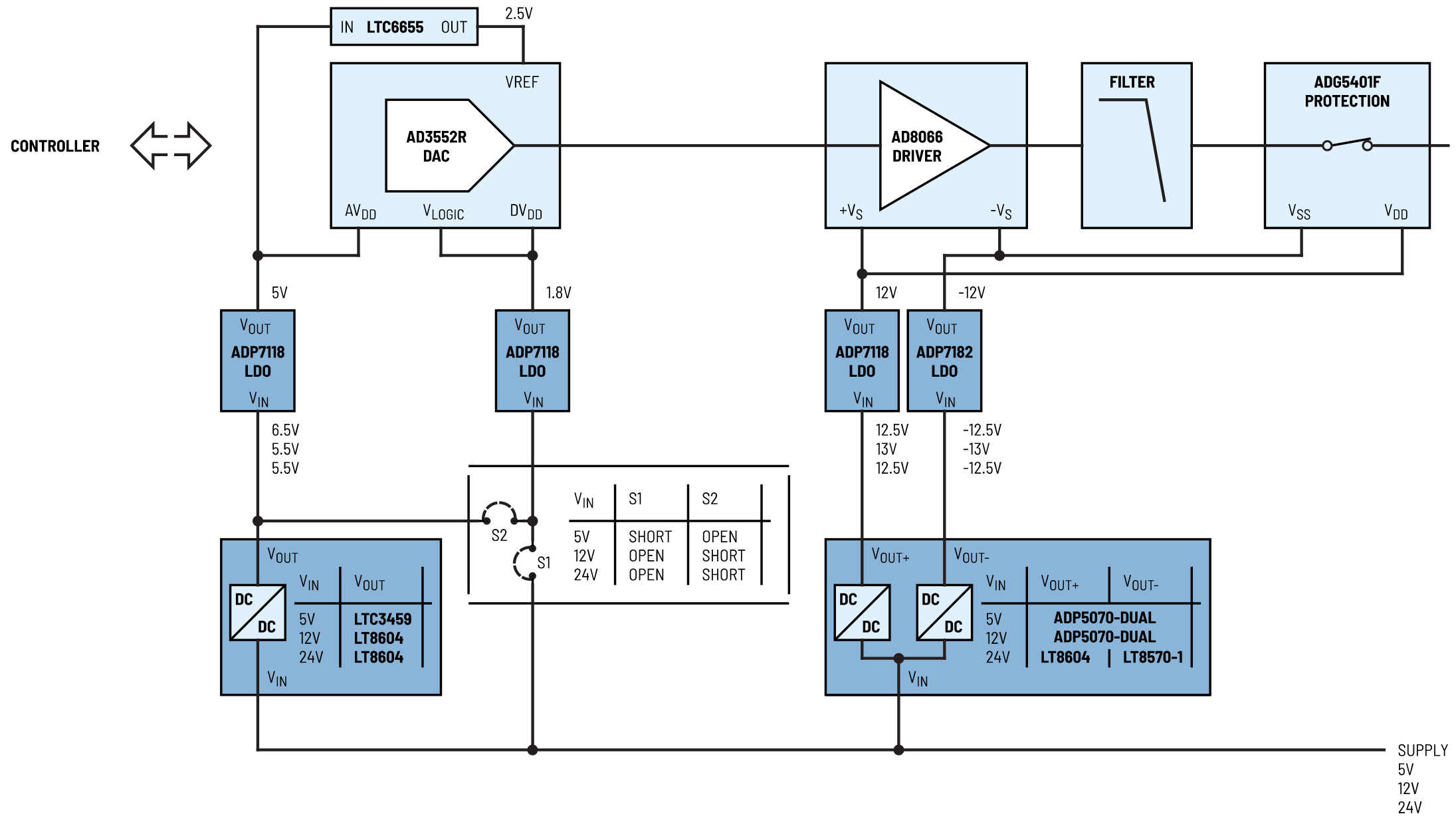
Precision Wide Bandwidth

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1–Channel

PART #	DESCRIPTION
ADP5070	1A/0.6A, DC-to-DC Switching Regulator w/ Independent Positive and Negative Outputs
LT8604	High Efficiency 42V/120mA Synchronous Buck
LT8570–1	Boost/SEPIC/Inverting DC/DC Converter with 65V Switch, Soft-Start and Sync.
LTC3459	10V Micropower Synchronous Boost Converter in ThinSOT
ADP7118	20V, 200mA, Low Noise, CMOS LDO Linear Regulator
ADP7182	–28V, –200mA, Low Noise, Linear Regulator

Current and Voltage Drive
Optimized for Flexibility

Non-isolated
1-Channel

POWER REQUIREMENTS

PARAMETER	STAGES	DAC			Filter	Output Driver		Reference	Protection	
	Part #	AD3552R			-	AD8066		LTC6655	ADG5401F	
	Pin	DV_{DD}	V_{LOGIC}	AV_{DD}		$+V_S$	$-V_S$	IN	V_{DD}	V_{SS}
Supply Voltage	V	1.8	1.8	5	-	12	-12	5	12	-12
Supply Current	mA	0.5	0.001	17.5	-	7.4	-7.4	1.8	0.24	0.12
PSRR	dB	-			-	64 (1MHz)	34 (1MHz)	40 (10kHz)	82 (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 power dissipation if needed.

Note 4: The actual supply current requirement shall be multiplied depending on the number of channels on the signal chain.