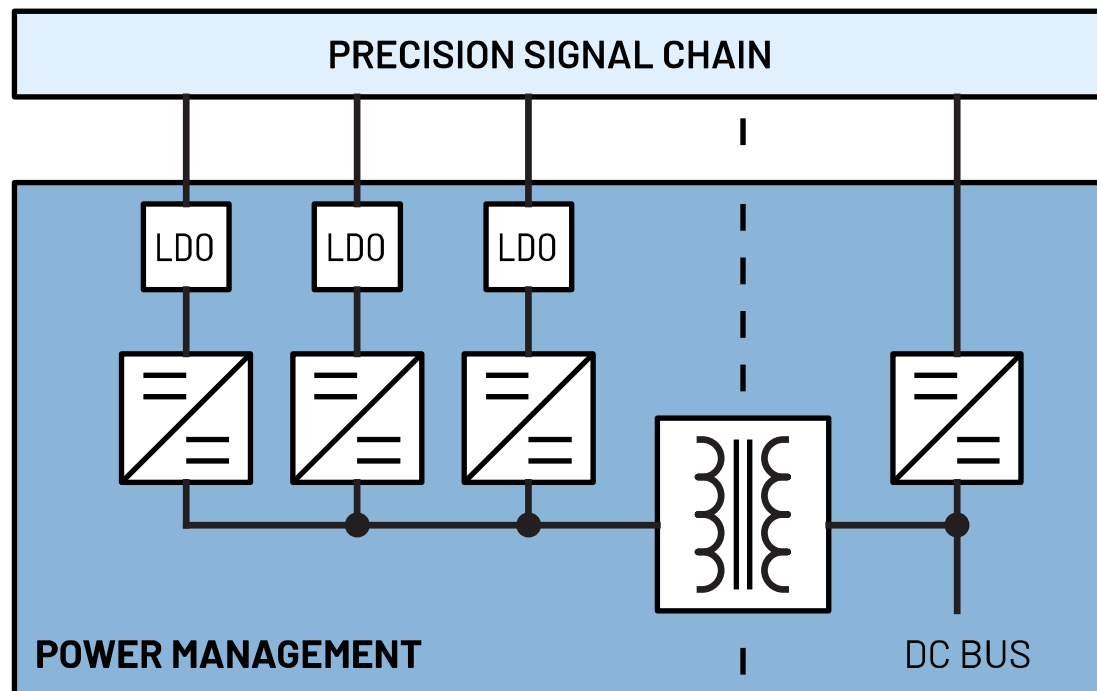


# POWER SOLUTIONS FOR PRECISION TECHNOLOGY SIGNAL CHAINS

## PRECISION HIGH VOLTAGE High Voltage Drive

Rev. 0 | Mar. 2022



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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.

Non-isolated
<u>1-Channel</u>

POWER RE	
PARAMETER	
Supply Voltage	
Supply Current	
PSRR	

APPENDIX

[Parts Guide](#)

[USER GUIDE](#)

[Power Requirements](#)

High Voltage Drive

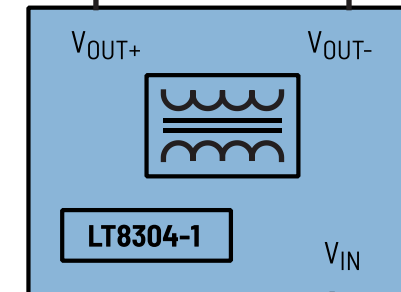
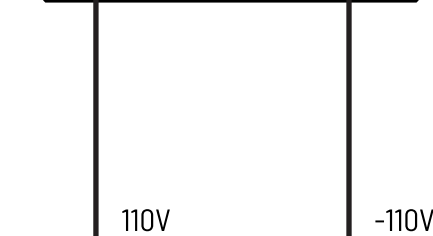
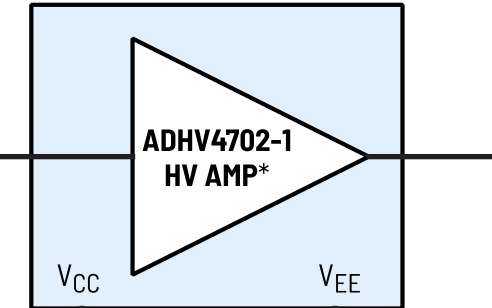
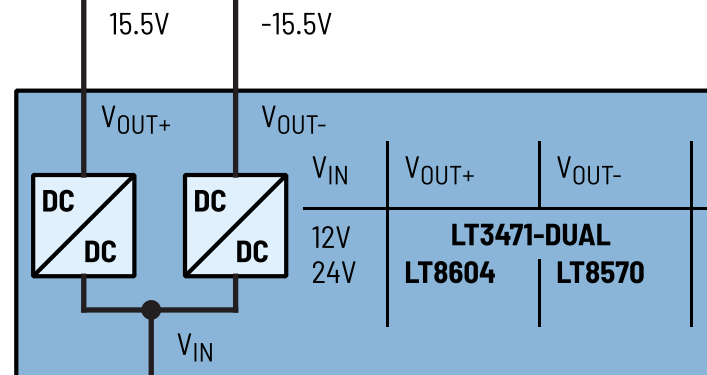
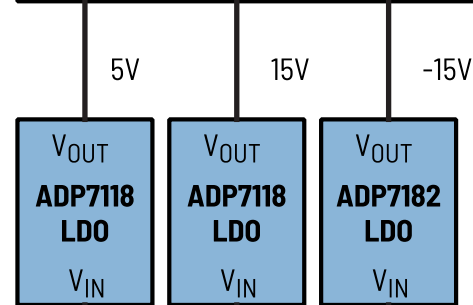
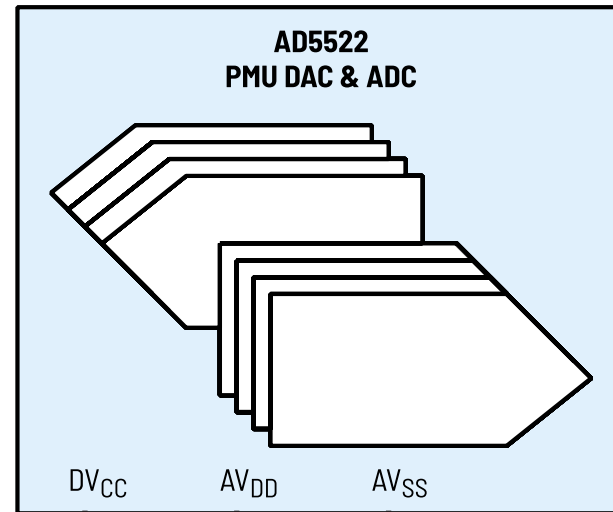
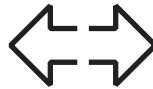
Non-isolated; Multichannel

With ADHV4702-1 Driver

With LTC6090 Driver

With LTC6091 Driver

CONTROLLER



\*ADHV4702-1 x N circuits require LT8304-1 x N power converters.

SUPPLY  
12V  
24V

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**High Voltage Drive**

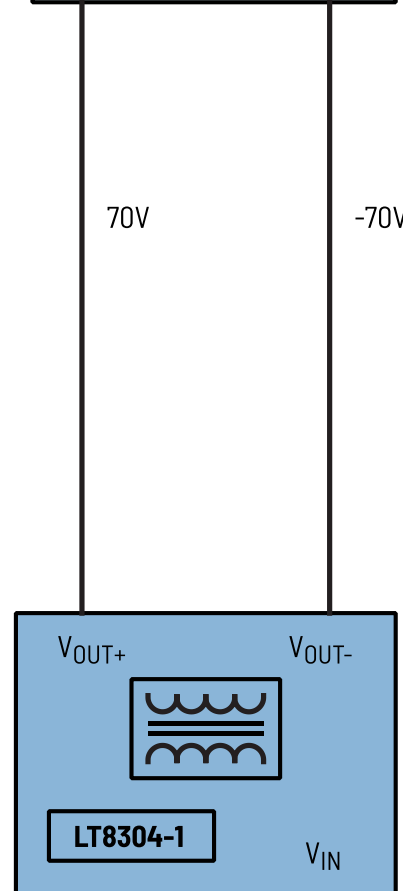
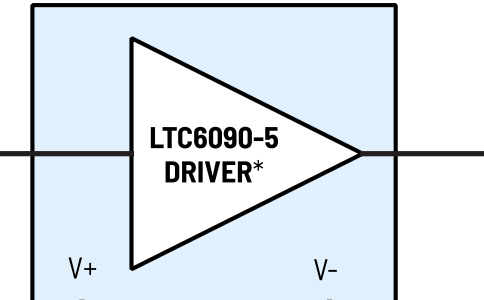
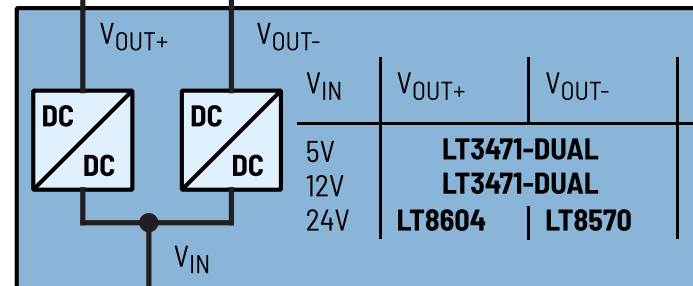
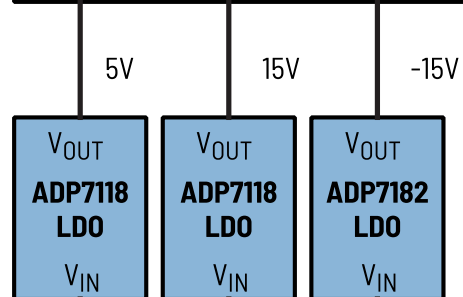
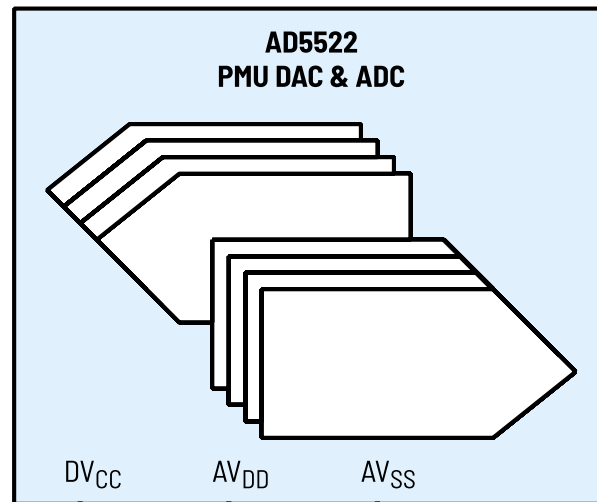
Non-isolated; Multichannel

[With ADHV4702-1 Driver](#)

[With LTC6090 Driver](#)

[With LTC6091 Driver](#)

CONTROLLER



\*LTC6090-5 x N circuits require LT8304-1 x N power converters.

SUPPLY  
5V  
12V  
24V

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**High Voltage Drive**

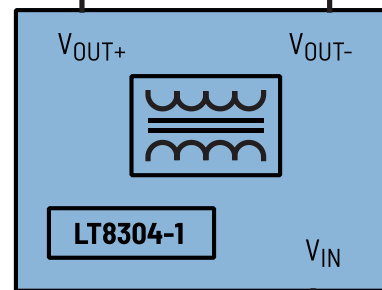
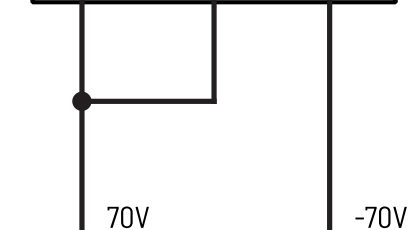
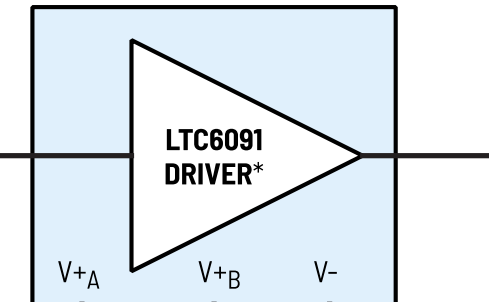
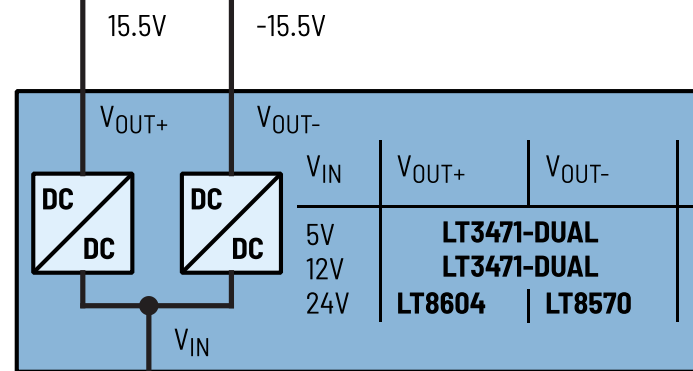
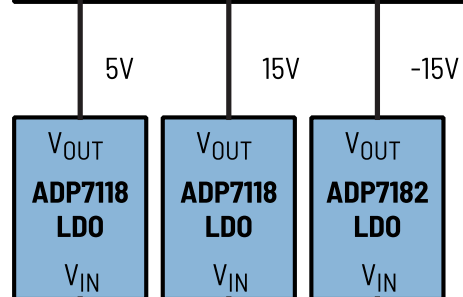
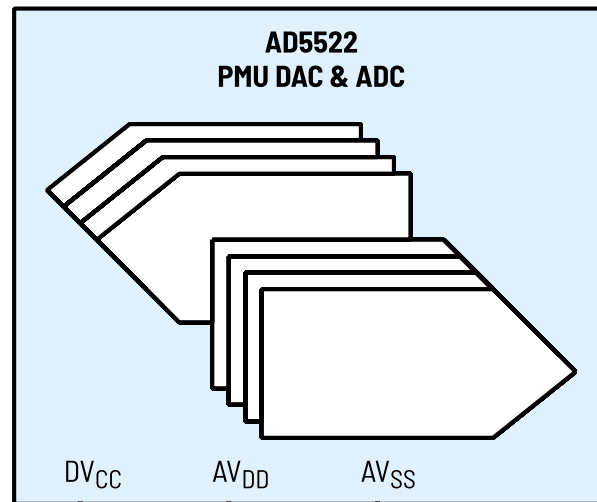
Non-isolated; Multichannel

[With ADHV4702-1 Driver](#)

[With LTC6090 Driver](#)

[With LTC6091 Driver](#)

CONTROLLER



\*LTC6091 x N circuits require LT8304-1 x N power converters.

SUPPLY  
 5V  
 12V  
 24V

High Voltage Drive

Non-isolated; Multichannel

With ADHV4702-1 Driver
With LTC6090 Driver
With LTC6091 Driver

PART #	DESCRIPTION
<b><u>LT8304-1</u></b>	100VIN Micropower No-Opto Isolated Flyback Converter with 150V/2A Switch
<b><u>LT3471</u></b>	Dual 1.3A, 1.2MHz Boost/Inverter in 3mm ×3mm DFN
<b><u>LT8570</u></b>	Boost/SEPIC/Inverting DC/DC Converter with 65V Switch, Soft-Start and Sync.
<b><u>LT8604</u></b>	High Efficiency 42V/120mA Synchronous Buck
<b><u>ADP7118</u></b>	20V, 200mA, Low Noise, CMOS LDO Linear Regulator
<b><u>ADP7182</u></b>	-28V, -200mA, Low Noise, Linear Regulator

Non-isolated; Multichannel

- With ADHV4702-1 Driver
- With LTC6090 Driver
- With LTC6091 Driver

## POWER REQUIREMENTS

PARAMETER	STAGES	PMU DAC & ADC			Driver	
	Part #	AD5522			[1] ADHV4702-1	
	Pin				[2] LTC6090	[3] LTC6091
		$V_{DD}$	$V_{SS}$	$V_{CC}$	$V_{CC}/V+$	$V_{EE}/V-$
Supply Voltage	V	15	-15	5	[1] 110 [2] 70 [3] 70	-110 -70 -70
Supply Current	mA	36	-36	1.5	[1] 3.3 [2] 4.3 [3] 4.3 (per amp)	-3.3 -4.3 -4.3 (per amp)
PSRR	dB	45 (100kHz)	50 (100kHz)	80 (100kHz)	[1] 35 (100kHz) [2] 80 (100kHz) [3] 75 (100kHz)	83 (100kHz) 40 (100kHz) 40 (100kHz)

**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.