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Bias Generation and Level Setting Made Easy with Multiple Range, User Programmable Voltage Output D/A Converter

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](http://www.analog.com) (NASDAQ: ADI) today introduced a single-chip, universal output D/A converter which combines a 16-bit data converter, ± 2 ppm/ $^{\circ}\text{C}$ 2.5-V reference, output buffer and gain scaling function on-chip. The innovative feature set of the AD5761R converter removes the need for external components, including gain setting precision resistors and amplifiers. In data acquisition and actuator control applications, this quickens and simplifies system design, enabling both unipolar and bipolar operation, through a software register update. Without affecting system design effort, cost or size, the new, flexible D/A converter facilitates design reuse across multi-functional end-equipment, while also enabling enhanced system functionality through the multiple output voltage ranges. Additionally, ADI announced two dual DC-DC regulators that power the new D/A converter with two independently regulated positive and negative rails for power sensitive applications. This simple two-chip solution enables users to generate bipolar 10-V outputs from only a single, low-voltage positive supply rail, which greatly simplifies system design and removes the need for routing multiple high-voltage rails.

- Download the AD5761R D/A converter data sheet, view product page and order samples: <http://www.analog.com/en/digital-to-analog-converters/da-converters/ad5761r/products/product.html>
- Download the ADP5070 and ADP5071 dual DC-DC regulator data sheets, view product pages and order samples: <http://www.analog.com/ADP5070> and www.analog.com/ADP5071
- Learn how the online ADIsimPower™ tool supports the ADP5070 and ADP5071 dual DC regulators : http://download.analog.com/PMP/ADP507x_Designer.zip
- Connect with engineers and precision D/A converter experts on EngineerZone®, ADI's online technical support community: https://ez.analog.com/community/data_converters/precision_dacs
- Connect with power design experts on EngineerZone: <https://ez.analog.com/community/power>

Offering a 60 percent space savings over previous discrete solutions, the AD5761R's single-chip 3-mm $\times$ 3-mm LFCSP standard package is ideal for designs within shrinking form factors, such as actuator control. The total unadjusted error specification — $\pm 0.15\%$ FSR max — is a true error including all on-chip circuitry and reference. This enables more accurate end systems and eliminates multiple system calibration routines in industrial environments. For a lower cost, less accurate option within the same series, a pin compatible 12-bit version and non-reference options are also available.

AD5761R Key Specifications:

- 8 software-programmable output ranges with 5% over-range: 0 V to 5 V, 0 V to 10 V, 0 V to 16 V, 0 V to 20 V, ± 3 V, ± 5 V, ± 10 V, and -2.5 V to $+7.5$ V
- Robust feature set including diagnostic, temperature, brownout and short circuit alert

Pricing and Availability

Product	Production Availability	Option	Operating Temperature Range	Packaging	Price Each In 1,000 Quantities
AD5761R	NOW	16-bit Reference on-chip	-40°C to $+125^{\circ}$	16-lead TSSOP 16-lead LFCSP	\$4.85
AD5721R	NOW	12-bit Reference on-chip	-40°C to $+125^{\circ}$	16-lead TSSOP 16-lead LFCSP	\$2.75
AD5761	NOW	16-bit	-40°C to $+125^{\circ}$	16-lead TSSOP 16-lead LFCSP	\$4.00
AD5721	NOW	12-bit	-40°C to $+125^{\circ}$	16-lead TSSOP 16-lead LFCSP	\$2.15
ADP5070	NOW	1.0A Boost Switch 0.6A Inverter Switch	-40°C to 125°	20-lead LFCSP	\$2.19
ADP5071	NOW	2.0A Boost Switch 1.2A Inverter Switch	-40°C to 125°	20-lead LFCSP	\$2.39

Complementary Products

Complementary low-noise reference products for the AD5761R include the [ADR4525 and other products comprising the ADR45XX family](#). Complementary low-noise positive LDOs include the [ADM7160](#) for 5-V systems, the [ADP7118](#) for 12-V systems and the [ADP7142](#) for 24-V systems. The [ADP7182 is a complementary low-noise negative LDO](#) for 5-V, 12-V and 24-V systems.

About Analog Devices

Innovation, performance, and excellence are the cultural pillars on which Analog Devices has built one of the longest standing, highest growth companies within the technology sector. Acknowledged industry-wide as the world leader in data conversion and signal conditioning technology, Analog Devices serves over 100,000 customers, representing virtually all types of electronic equipment. Celebrating over 40 years as a leading global manufacturer of high-performance integrated circuits used in analog and digital signal processing applications, Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices' is included in the S&P 500 Index.

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