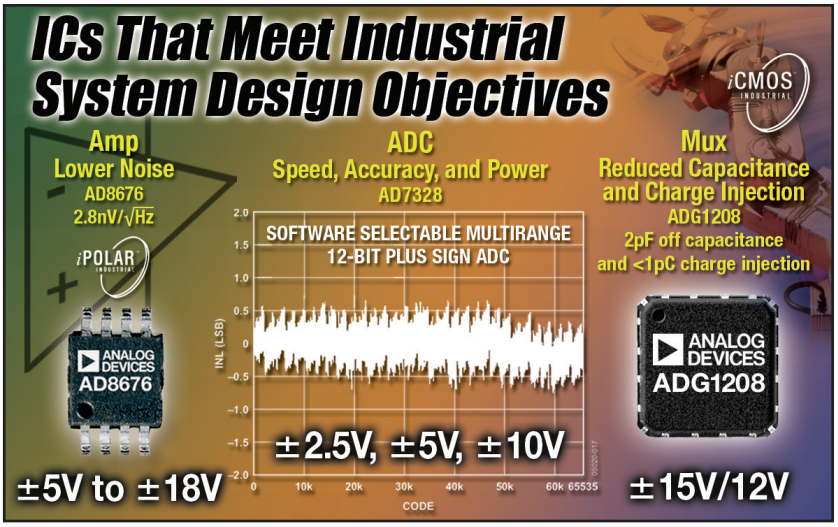
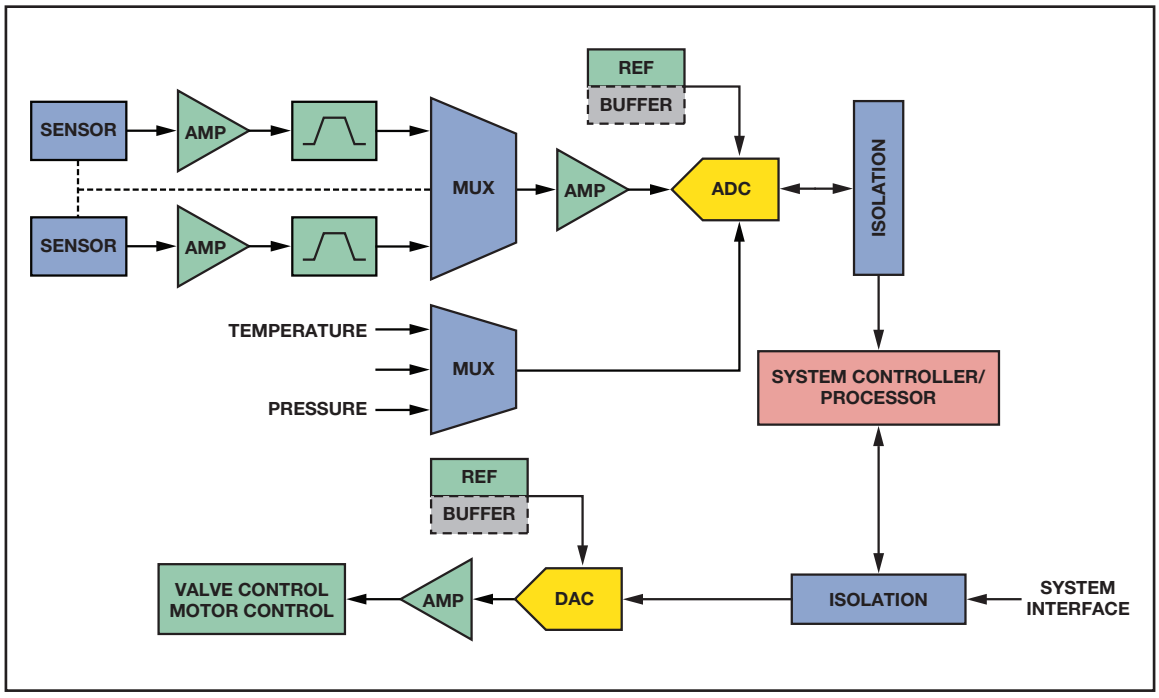
ICs for Programmable Logic Control and Distributed Control Systems

For designers of industrial PLC/DCS systems, performance, reliability, and power dissipation have never been more important. The designer needs to balance the need for high voltages and harsh electronic environments with ever reducing form factors. Analog Devices' leadership in industrial IC technology, with the development of the *i*CMOS™ and *i*Polar™ processes, has uniquely defined high voltage and low voltage integration to deliver smaller, higher performance, and more cost effective ICs for industrial systems.

Analog Devices offers a wide variety of amplifiers, *i*Coupler® digital isolators, voltage references, multiplexers, ADCs, DACs, and MicroConverter® products for industrial system designers to meet their design objectives.





Programmable logic controller signal chain.

Converters

Part Number	Resolution (Bits)	Description
Analog-to-Digital Converters		
AD7328	13	Multichannel with bipolar input, 8-channel, 12-bit plus sign ADC
AD7366/AD7367	12, 14	True bipolar input, dual, 1 µs, 14-bit, 2-channel SAR ADC
AD7476A	12	12-bit, 1 MSPS, low power ADC in SC70 and MSOP packages
AD7792/AD7793	16, 24	3-channel, 40 nV, 450 µA Σ-Δ ADC with on-chip in-amp and reference
AD7795/AD7794	16, 24	6-channel, 40 nV, 450 µA Σ-Δ ADC with on-chip in-amp and reference
AD7798/AD7799	16, 24	3-channel, 27 nV, 450 µA Σ-Δ ADC with on-chip in-amp
Digital-to-Analog Converters		
AD5764R/AD5744R	16, 14	Quad high accuracy, serial bipolar voltage output DAC
AD5754R/AD5734R/ AD5724R	16, 14, 12	Quad unipolar/bipolar voltage output DAC with software-programmable output
AD5360/AD5361/ AD5362/AD5363	16, 14	16-/8-channel serial bipolar voltage output DAC (also consider AD5668)
AD5666/AD5664R	16	Quad serial unipolar DACs with on-chip reference ($\overline{\text{LDAC}}$ and $\overline{\text{CLR}}$ pins on AD5666)
AD5060	16	Single serial unipolar high accuracy serial DAC in 8-SOT (also consider AD5061)

Switches and Multiplexers

Part Number	Configuration	Description
ADG1204/ADG1208/ ADG1211	4:1/8:1 mux 4 × SPST	Portfolio offering switches with the lowest capacitance per channel (2 pF) and charge injection (<1 pC). In TSSOP and 3 mm × 3 mm LFCSP packages
ADG1408/ADG1409/ ADG1433	8:1/diff 4:1 3 × SPDT	Portfolio offering switches with low R_{ON} (max 5 Ω) and low R_{ON} flatness (0.5 Ω). In TSSOP and 4 mm × 4 mm LFCSP packages

Amplifiers

Part Number	Signal Chain Focus	Description
AD822/AD8512/OP2177/OP284/ OP291/AD8676/ADTL082	Front ends	Various 36 V and 12 V, bipolar and JFET precision and low cost op amp devices
AD8656-series AD8606-series	ADC drivers 4 to 20 mA loop drivers	Precision, 2.7 V to 6 V, low noise, 28 MHz op amps
AD8666/AD8662/AD8607/AD8628/ AD8638	Utility functions REF buffering	Various 1.8 V to 16 V, CMOS precision and low cost, low drift op amps

References

Part Number	Output Voltage Range (V)	Description
ADR360/ADR361/ADR363/ ADR364/ADR365/ADR366	2.048 to 5	Low power, low noise voltage reference family with sink/source capability
ADR380/ADR381	2.048, 2.5	2.048 V/2.5 V band gap voltage reference family
ADR390/ADR391/ADR392/ ADR395	2.048 to 5	Micropower, low noise precision voltage reference family with shutdown
ADR42x/ADR43x/ADR44x	2.048 to 5	High precision, low noise XFET® voltage reference families
ADR01/ADR02/ADR03/ADR06	3 to 10	Ultracompact precision voltage reference family

Isolation Products

Part Number	Configuration	Description
ADuM1100/ADuM120x/ ADuM130x/ADuM140x	Single, dual, triple, quad channel	Single to quad channel digital isolators capable of up to 100 Mbps data rate and 2.5 kV rms isolation
ADuM524x	Dual channel, 50 mW	Dual-channel digital isolation with integrated, isolated 50 mW power supply

Microcontrollers

Part Number	MCU Core	Description
ADuC845/ADuC847/ADuC848	8051 core and flash	Dual, 24-/16-bit analog front end with PGA, PWM, and DAC
ADuC702x	ARM7® core and flash	Fast (1 MSPS), multichannel 12-bit SAR ADC; 12-bit DACs, up to 126 kB flash

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Printed in the U.S.A. PH06644-1.5-2/07

www.analog.com/industrial

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