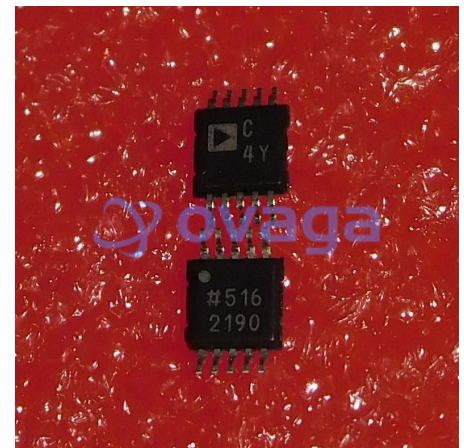


16-Bit, ± 0.5 LSB, 500 kSPS PulSAR® Differential A/D Converter in MSOP/QFN;
Temperature Range: Industrial

Manufacturers	Analog Devices, Inc
Package/Case	MSOP-10
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for AD7693BRMZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD7693 is a 16-bit, successive approximation analog-to-digital converter (ADC) that operates from a single power supply, VDD. It contains a low power, high speed, 16-bit sampling ADC with no missing codes, an internal conversion clock, and a versatile serial interface port. The reference voltage, VREF, is applied externally and can be set up to the supply voltage, VDD. On the CNV rising edge, it samples the voltage difference between the IN+ and IN- pins. The voltages on these pins swing in opposite phase between 0 V and VREF about VREF/2.

Its power scales linearly with throughput.

Using the SDI input, the SPI-compatible serial interface also features the ability to daisy-chain several ADCs on a single 3-wire bus and provides an optional busy indicator. It is compatible with 1.8 V, 2.5 V, 3 V, or 5 V logic, using the separate VIO supply.

The AD7693 is housed in a 10-lead MSOP with operation specified from -40°C to $+85^{\circ}\text{C}$.

Features

16-bit resolution with no missing codes

Throughput: 500 kSPS

INL/DNL: ± 0.25 LSB typ, ± 0.5 LSB max (± 8 ppm of FSR)

Dynamic range: 96.5 dB

SINAD: 96 dB at 1 kHz

THD: -120 dB at 1 kHz

True differential analog input range: $\pm V_{REF}$ 0 V to V_{REF} with V_{REF} up to V_{DD} on both inputs

No pipeline delay

Single-supply 5 V operation with 1.8 V/2.5 V/3 V/5 V logic interface

Proprietary serial interface SPI[®]-/QSPI[™]-/MICROWIRE[™]-/DSP-compatible¹

Daisy-chain multiple ADCs, selectable busy indicator

Power dissipation: 40 nJ/conversion

40 μ W at 5 V/1 kSPS

4 mW at 5 V/100 kSPS

18 mW at 5 V/500 kSPS

Standby current: 1 nA

10-lead package: MSOP (MSOP-8 size)

Pin-for-pin compatible with the 16-bit AD7687 and AD7688 and the 18-bit AD7690 and AD7691

Application

Battery-powered equipment

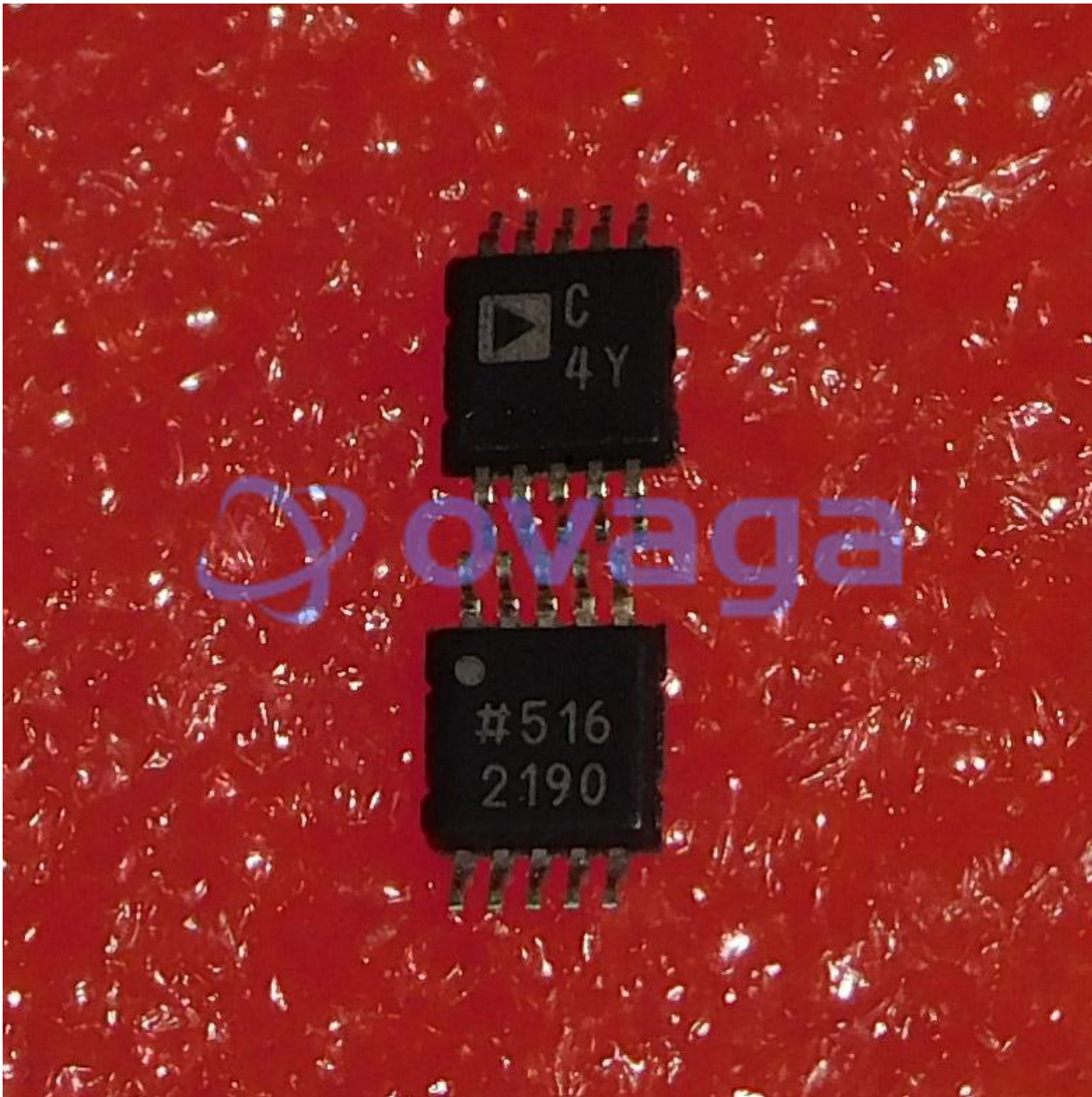
Data acquisitions

Seismic data acquisition systems

DVMs

Instrumentation

Medical instruments

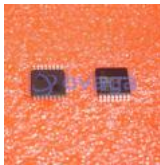


Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc
LFCSP-40



[AD7266BSUZ](#)

Analog Devices, Inc
TQPF-32



[AD574AJNZ](#)

Analog Devices, Inc
PDIP-28



[AD7401YRWZ](#)

Analog Devices, Inc
SOIC-16



[AD7938BSUZ](#)

Analog Devices, Inc
TQFP-32



[AD7192BRUZ-REEL](#)

Analog Devices, Inc
TSSOP-24



[AD7124-8BCPZ-RL7](#)

Analog Devices, Inc

LFCSP-32



[AD9680BCPZ-500](#)

Analog Devices, Inc

LFCSP-64