

12-Bit, Octal ADCs Up to 70MSPS

Serial LVDS and Lowest Power



ADS527x Family—8-Channel, 10- and 12-Bit, 40/50/65/70MSPS ADCs with LVDS Interface

The new ADS527x ADC family sets a new standard of high performance and integration by offering 8 parallel ADCs and serial LVDS interface in a single TQFP-80 package. It consumes only 138mW/ch at 70MSPS, while achieving 70dB SNR performance—less than available products! And, the product family is both pin- and format-compatible, providing for a simple upgrade path.

Key Applications Include:

Imaging—benefits from low power consumption, excellent SNR performance, high integration for smaller board area and simplified interface.

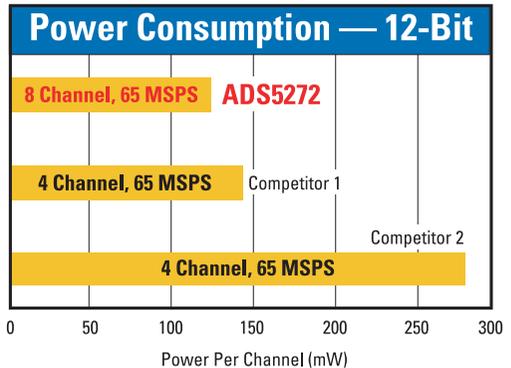
- **Ultrasound**
- **Gamma cameras / PET scanners**
- **X-ray**
- **Sonar**

Wireless Communications—benefits from high integration and excellent SFDR.

- **Multi-channel**
- **Multi-carrier**

Other Applications—where high system density, multichannel capability is required.

- **Optical networking**
- **Instrumentation**
- **Test and measurement**
- **...and more!**



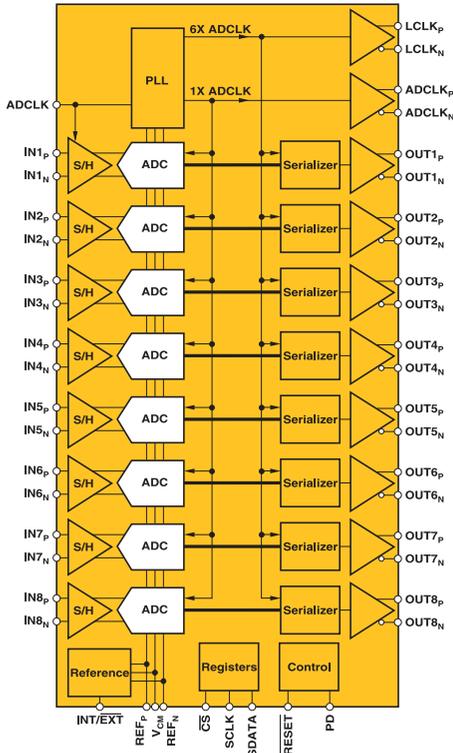
Recommended Operational Amplifiers

Device	Description
OPA847	3.9GHz GBWP, 950V/ μ s slew rate, -105dBc at 5MHz
OPA695	Ultra-wideband (1.4GHz), current-feedback amplifier
OPA698	Unity-gain stable, voltage limiting amp, 450MHz (G=+1) BW, 1100V/ μ s slew rate
THS4503	Low-distortion, fully differential, 370MHz BW, 2800V/ μ s slew rate



Octal ADCs with S
High

ADS527x Block Diagram



Key Specifications

- Sampling rates: 40, 50, 65, 70 MSPS
- Resolution: 10 and 12 bits
- No missing codes
- Serialized LVDS outputs meet or exceed the requirements of ANSI TIA/EIA-644-A standard
- CMOS technology
- Simultaneous Sample/Hold
- Internal/External References
- Pin- and format-compatible for easy upgrade
- Packaging: 80-lead TQFP PowerPAD™

The **ADS527x** family of high-performance, high-speed, 8-channel, parallel ADCs with integrated serial LVDS outputs reduce the number of interface lines and package size. Low power consumption allows for highest system integration. An internal or external reference option provides additional system flexibility.

ADS527x Pin- and Format-Compatible Family

Device	Bits	MSPS	SNR (dB)	SFDR (dB)	Power (mW/ch)
ADS5273	12	70	70.5	85	138
ADS5272	12	65	70.5	85	123
ADS5271	12	50	70.5	85	117
ADS5270	12	40	70.5	85	113
ADS5277	10	65	60.5	80	109
ADS5276	10	50	60.5	80	102
ADS5275	10	40	60.5	80	96

Get started today with Samples and Evaluation Modules!



Analog EVM

The **Analog Evaluation Module (EVM)** provides all electronics needed to evaluate one of the ADS527x products, provided the user has a method to attach to and analyze data from the LVDS data stream, such as the deserializer below.



Deserializer EVM

The **Deserializer EVM** provides a TI-proven solution to deserialize the source synchronous LVDS serial streams.

To order a sample or an EVM, contact your local TI sales representative.

For technical information on other high-speed data converters and amplifiers from TI, download the new **High-Speed Product Catalog** at:

www.ti.com/ads527x

or order it by calling 1-800-477-8924, ext. 10881, in North America, or the Product Information Center in your country. See listing below.



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Europe, Middle East, and Africa

Phone

Belgium (English) +32 (0) 27 45 55 32

Finland (English) +358 (0) 9 25173948

France +33 (0) 1 30 70 11 64

Germany +49 (0) 8161 80 33 11

Israel (English) 1800 949 0107

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Spain +34 902 35 40 28

Sweden (English) +46 (0) 8587 555 22

United Kingdom +44 (0) 1604 66 33 99

Fax +49 (0) 8161 80 2045

Internet support.ti.com/sc/pic/euro.htm

Japan

Fax International +81-3-3344-5317
Domestic 0120-81-0036

Internet/Email International support.ti.com/sc/pic/japan.htm
Domestic www.tij.co.jp/pic

Asia

Phone

International +886-2-23786800

Domestic **Toll Free Number**

Australia 1-800-999-084

China 800-820-8682

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Indonesia 001-803-8861-1006

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Philippines 1-800-765-7404

Singapore 800-886-1028

Taiwan 0800-006800

Thailand 001-800-886-0010

Fax 886-2-2378-8808

Email tiasia@ti.com

ti-china@ti.com

Internet support.ti.com/sc/pic/asia.htm

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