

Linear Circuits
Data Acquisition and Conversion

Data Book
Volume 2

Linear Products Data Book Guide

Data Book	Contents	Document No.
● Linear Circuits Vol 1 Amplifiers, Comparators, and Special Functions	Operational Amplifiers Voltage Comparators Video Amplifiers Hall-Effect Devices Timers and Current Mirrors Magnetic-Memory Interface Frequency-to-Voltage Converters Sonar Ranging Circuits/Modules Sound Generators	SLYD003 1989
● Linear Circuits Vol 2 Data Acquisition and Conversion	A/D and D/A Converters DSP Analog Interface Analog Switches and Multiplexers Switched-Capacitor Filters	SLYD004 1989
● Linear Circuits Vol 3 Voltage Regulators and Supervisors	Supervisor Functions Series-Pass Voltage Regulators Shunt Regulators Voltage References DC-to-DC Converters PWM Controllers	SLYD005 1989
● Telecommunications Circuits	Equipment Line Interfaces Subscriber Line Interfaces Modems and Receivers/Transmitters Ringers, Detectors, Tone Encoders PCM Interface Transient Suppressors	SCTD001A 1988/89
● Optoelectronics and Image Sensors	Optocouplers CCD Image Sensors and Support Phototransistors IR-Emitting Diodes Hybrid Displays	SOYD002A 1990
● Interface Circuits	High-Voltage (Display) Drivers High-Power (Peripheral/Motor) Drivers Line Drivers, Receivers, Transceivers EIA RS-232, RS-422, RS-423, RS-485 IBM 360/370, IEEE 802.3, CCITT Military Memory Interface	SLYD002 1987
● Speech System Manuals	TSP50C4X Family	SPSS010 1990

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INTRODUCTION

Texas Instruments offers an extensive line of industry-standard integrated circuits for peripheral support applications of microprocessor-based systems, DSP (digital signal processing) related analog interfaces, and other high-speed digitizing requirements that demand ADC and DAC conversion.

TI data acquisition system circuits represent technologies from traditional bipolar through Advanced Low-Power Schottky (ALS), IMPACT™, LinCMOS™, Advanced LinCMOS™, and LinEPIC™ processes. The ALS and IMPACT™ oxide-isolated technology provides the data acquisition family with improved speed-conversion characteristics. LinCMOS™ and Advanced LinCMOS™ technologies feature improvements in resolution, power consumption, and temperature stability. LinEPIC™ has both improved speed conversion and reduced power consumption.

This data book (Volume 2 of 3) provides information on the following types of products:

- Single-Slope and Dual-Slope Analog-to-Digital (ADC) Converters
- Successive-Approximation Semi-Flash, and Flash ADC Converters
- Current Multiplying and Video DAC Converters
- Color Palette Chips
- Analog Interface for Digital Signal Processors
- Analog Switches and Multiplexers
- Switched-Capacitor Filter Integrated Circuits

These products cover the requirements of consumer applications, industrial process controls, digital signal processing, microprocessor interface, electronic instrumentation, digital audio equipment, video work stations, and imaging. New surface-mount packages (8 to 28 leads) include both ceramic and plastic chip carriers, and the small-outline (D) plastic packages that optimize board density with minimum impact on power-dissipation capability. Test equipment with handlers and automated assembly bonders strengthen the production capabilities to provide a lower cost-to-performance ratio. TI continues to enhance quality and reliability of integrated circuits by improving materials, processes, test methods, and test equipment. In addition, specifications and programs are continuously updated. Quality and performance are monitored throughout all phases of manufacturing.

The alphanumeric listing in this data book includes all devices in Volumes 1, 2, and 3. Products in this data book are shown in **bold type**. The alphanumeric index provides a method of quickly locating the correct device type. The selection guide includes a functional description of each device that provides key parameter information and packaging types. Ordering information and mechanical data are in the last section of the data book.

While this volume offers design and specification data for data acquisition circuit components only, complete technical data for any TI semiconductor product is available from your nearest TI Field Sales Office, local authorized TI distributor, or by writing directly to:

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