

FEATURES

Complete with High Accuracy Sample/Hold and A/D Converter

Differential Nonlinearity: $\pm 0.002\%$ FSR max (DAS1153)

Nonlinearity: DAS1152: $\pm 0.005\%$ FSR max
DAS1153: $\pm 0.003\%$ FSR max

Low Differential Nonlinearity T.C.: $\pm 2\text{ppm}/^\circ\text{C}$ max

High Throughput Rate: 25kHz min (DAS1152)

High Feedthrough Rejection: -96dB

Byte-Selectable Tri-State Buffered Outputs Internal Gain & Offset Potentiometers

Improved Second Source to A/D/A/M 824 and A/D/A/M 825 Modules

Low Cost

APPLICATIONS

Process Control Data Acquisition

Automated Test Equipment

Seismic Data Acquisition

Nuclear Instrumentation

Medical Instrumentation

Robotics

GENERAL DESCRIPTION

The DAS1152/DAS1153 are 14-/15-bit sampling analog-to-digital converters having a maximum throughput rate of 25kHz/20kHz. They provide high accuracy, high stability, and functional completeness all in a 2" x 4" x 0.44" metal case.

Guaranteed high accuracy system performance such as nonlinearity of $\pm 0.005\%$ FSR (DAS1152)/ $\pm 0.003\%$ FSR (DAS1153) and differential nonlinearity of $\pm 0.003\%$ FSR (DAS1152)/ $\pm 0.002\%$ FSR (DAS1153) are provided. Guaranteed stability such as differential nonlinearity T.C. of $\pm 2\text{ppm}/^\circ\text{C}$ (DAS1153) maximum, zero T.C. of $\pm 80\mu\text{V}/^\circ\text{C}$ maximum, gain T. C. of $\pm 8\text{ppm}/^\circ\text{C}$ maximum and power supply sensitivity of $\pm 0.001\%$ FSR/% Vs are also provided by the DAS1152/DAS1153.

The DAS1152/DAS1153 make extensive use of both integrated circuit and thin film components to obtain their excellent performance, small size, and low cost. The devices contain a precision sample/hold amplifier, high accuracy 14-/15-bit analog-to-digital converter, tri-state output buffers, internal gain and offset trim potentiometers, and power supply bypass capacitors (as shown in Figure 1).

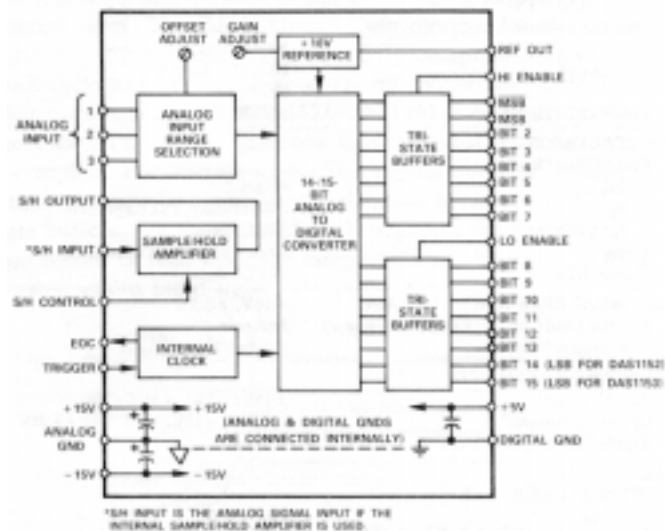


Figure 1. DAS1152/DAS1153 Block Diagram

Four analog input voltage ranges are selectable via user pin programming: 0V to +5V, 0V to +10V, $\pm 5\text{V}$, and $\pm 10\text{V}$. Unipolar coding is provided in true binary format with bipolar coding displayed in offset binary and two's complement. Tri-state buffers provide easy interface to bus structured applications.