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Find the *Pentek 4452* at our website: ***Click HERE***

Model 4452

16-Channel 16-bit A/D and D/A Converter VXI Module



Features

- Simultaneous sampling
- 16-bit 80 dB dynamic range
- Input anti-aliasing and output smoothing filters
- Software programmable attenuation, gain, compression and sampling rate
- Ideal for digital audio
- Includes platform-independent VI driver for National Instruments LabVIEW
- VXI *plug&play* compliant

Ordering Information

Model	Description
4452	16-Ch 16-bit A/D & D/A VXI module

General Information

Although effective in a variety of applications, Model 4452 is specifically designed for digital audio use, providing sixteen individual analog inputs and outputs with 16-bit resolution.

Preset Standard Sampling Rates

Preset sampling rates can be chosen under program control for the common digital audio applications, including 44.1 kHz for CD, 48 kHz for DAT and 8 kHz for digital telecommunications.

Any other sampling rate from 4 kHz to 50 kHz can be derived from the internal clock or provided externally. Due to the delta-sigma conversion technique employed, all channels are sampled simultaneously with virtually zero phase delay between channels.

Precision Data Conversion

The data converters provide greater than 80 dB dynamic range at both input and output. For telecommunications applications built-in µ-law and A-law companding can be selected at input and output.

Signal Conditioning Built in

The delta-sigma converters include digital low pass filtering to prevent aliasing. These linear-phase filters track the sampling rate and exhibit extremely sharp rolloffs and flat passband response. Matching filters are provided at each D/A output to remove sampling components. Input gain and output attenuation are included. Gain and attenuation changes are timed at zero crossings to prevent switching noise.

Specifications

Input: ±2.8 V full scale, 100 kohm impedance, ±0.5 dB frequency response

Input gain: programmable from 0.0 dB to +22.5 dB in 1.5 dB steps

Output: ±2.8 V full scale, 50 ohm impedance, ±0.5 dB frequency response

Output attenuation: programmable from 0.0 to 94.5 dB in 1.5 dB steps

Input and output filters: digital, track at 45% of sampling rate; –74 dB stopband at ≥55% of sampling rate; ±0.1 dB ripple, 0 ms group delay variance

A/D and D/A conversion: 16 bits, 80 dB dynamic range; ±0.9 LSB differential non-linearity; 74 dB SINAD

Compression/decompression: software programmable 8-bit A-law or µ-law

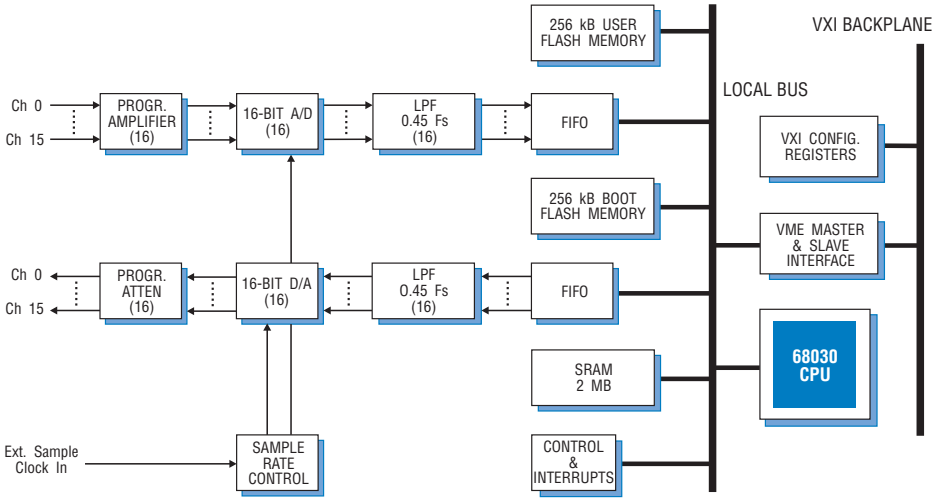
Sampling rates: 4 kHz to 50 kHz from internal or ext. clock; preset rates of 8, 16, 24, 32, 44.1, 48 kHz and others

VXI interface: A16/A24/D16/D32 device; memory-mapped registers for status and control; all data transfers in and out of the module are buffered in the 2 MB local SRAM which is mapped to the VXIbus

Power: 6.0 A at +5 V; 0.2 A at +12 V; 0.2 A at –12 V; 0.5 A at –5 V from the VXIbus

Size: standard C-size VXI module

Block Diagram, Model 4452



PENTEK

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