

12-bit 10 MHz A/D Converter MIX Module



General Information

Model 4248-101 is a high-speed A/D front end for wideband signal processing. It provides fast, direct links between the signal and the powerful DSP resources of Pentek's MIX subsystems.

With a 16 ksample on-board memory, signals can either be captured in noncontiguous blocks or buffered for real-time transfer without loss of data.

Signal Purity

Even at 10 MHz, the 12-bit A/D converter with its integral sample-and-hold amplifier maintains signal purity. Both signal-to-noise ratio and distortion are better than 65 dB below full-scale input. In-band harmonics are typically 72 dB down. Input overload is detected and latched so that the processor may be warned of signal saturation.

Buffer for Rapid Block Transfers

A FIFO is provided at the output of the A/D converter to accumulate 12-bit digital words and allow efficient block transfers over the MIX bus.

Sampling Control

An on-board programmable counter divides a 10 MHz clock in integer steps to generate the sample clock.

Specifications

Input: single-ended, ± 1.0 V full scale, front panel BNC; 50 ohms input impedance

A/D converter: 12-bits up to 10 MHz with integral S/H (Burr-Brown ADC603); in-band harmonics -72 dBc typ.; total harmonic distortion -69 dBc typ.; SNR -65 dB below full scale, typ.

Sampling rate: DC to 10 MHz

Data buffer: 16 ksamples long

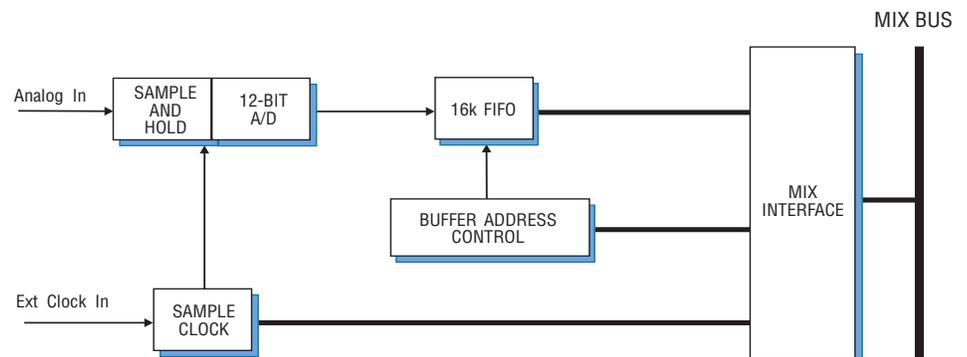
MIX interface: memory mapped; FIFO data output; status/control and interrupt mask registers; sample clock divisor; interrupts on FIFO full, half-full and empty

Power: 2.0 A at +5 V; 0.25 A at +12 V, 0.6 A at -12 V from the MIX bus

Features

- High speed conversion to 10 MHz rate with 12-bit resolution
- Low noise and distortion plus overload detection

Block Diagram, Model 4248-101



Ordering Information

Model Description
4248-101 12-bit 10 MHz A/D
 MIX module