

SD16 - High Performance 16-Channel Analog I/O Module

The SD16 module provides 16 channels of 18-bit, 48 kHz sigma-delta A/D and D/A conversion, ideal for high channel count, precise data acquisition and audio applications. This low cost, high channel density, high resolution analog I/O is unrivaled in the industry.

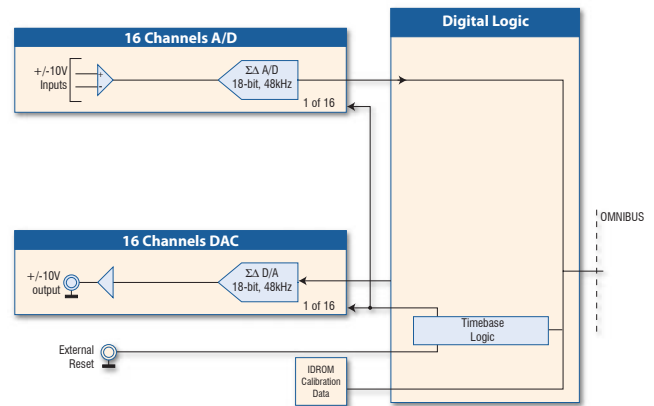
Each input channel employs sigma-delta modulation with 384x oversampling, providing highly effective digital anti-alias filtering. The excellent S/N and THD performance of the SD16 precision measurements with up to 100 dB SFDR.

The output channels include an 8X interpolation filter, digital attenuation and de-emphasis. This provides spectrally pure analog output waves even with only 2 points per wave, with a 97 dB dynamic range.

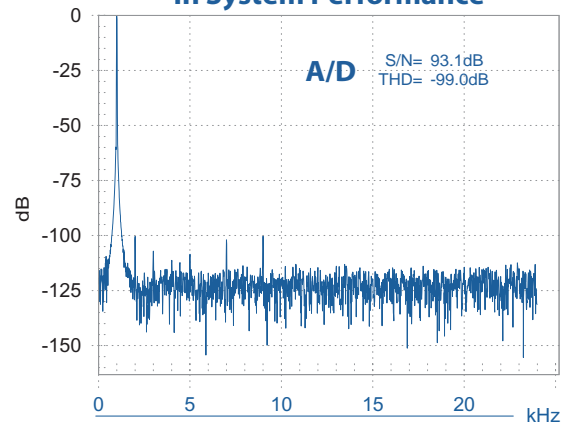
When coupled with a DSP card, the SD16 module could be used to cancel echo, feedback and other unwanted signals with adaptive filtering.

Software examples demonstrating module operation and communication are included in all Toolsets. A full calibration report ships with every module.

Interface	Compatible with all OMNIBUS host products Consumes one interrupt to host
Power Requirements	5 V @ 150mA; +15 V @ 280mA; -15 V @ 50mA
Physicals	OMNIBUS mezzanine card; 2.000" X 4.600"
A/D Converters	8 Burr-Brown PCM3001 SD stereo codecs
Resolution	18-bit
Update Rate (Fs)	32-48 kHz, programmable via host Board DDS
Oversampling	384 X
Analog Input Range	+/- 10 V
S/N Ratio	92 dB
THD	-95 dB
DC Gain Accuracy	2%
Input Type	Unbalanced (single-ended - AC coupled)
Input Impedance	10 kOhm - AC coupled
Digital Filter	Passband .454 x sample rate Fs
Characteristics	Passband ripple .05 dB
	Stopband .583 x Fs min
Group Delay	17.4/Fs seconds
Conversion Trigger Sources	Host DDS
Interface to DSP	Memory-mapped interface
D/A Converters	8 Burr-Brown PCM3001 SD stereo codecs
Resolution	18-bit
Oversampling	384 X
Output Range	+/- 10 V
Output Analog Filter	1 pole; -3 dB at 170 kHz
Update Rate	32-48 kHz, programmable via host Board DDS
S/N Ratio	96 dB
THD + Noise	-90 dB
Conversion Trigger Sources	Host DDS
Interface to DSP	Memory-mapped interface



In System Performance



Ordering Information

SD16

80020-8