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TECHNOLOGY GROUP

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Custom engineering
so your equipment works exactly as you specify.

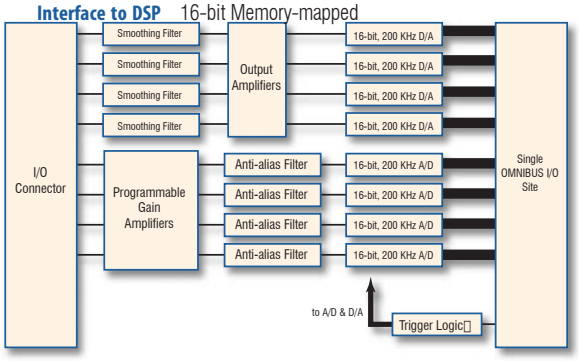
- Critical and expedited services
- In stock / Ready-to-ship
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- ITAR-certified secure asset solutions

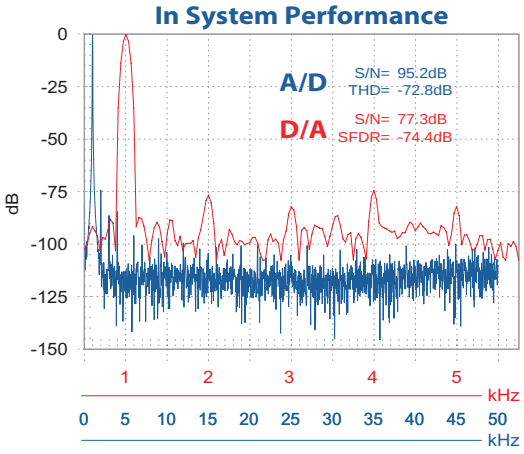
Expert team | Trust guarantee | 100% satisfaction

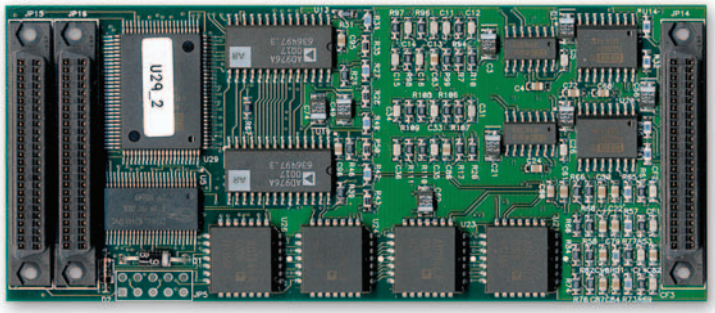
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Find the *Molex / Innovative Integration A4D4* at our website: ***Click HERE***

Interface	Compatible with all OMNIBUS host products Consumes one interrupt to host
Power Requirements	5V@130mA analog; 5V@160mA, +15V@100mA,-15V@100mA
Physicals	OMNIBUS mezzanine card; 2.000" X 4.600"
A/D Converters	4 Analog Devices AD976AA, a successive approximation architecture for low data latency
Resolution	16-bit
Update Rate	0 to 200 kHz
Settling Time	5 us (no filtering) @ 10 V step to 0.0008%
Analog Input Range	+/-10V, +/-5V, +/-2.5V, +/-1.25V, software programmable
S/N Ratio	85 - 90 dB
THD	-70 dB (improved if filter defeated)
Dynamic Range	90 dB
Gain Error	Trimmable on each channel – factory calibrated
Differential Linearity Error	+3/-2 LSB
Offset Error	Trimmable on each channel – factory calibrated
Aperature Delay	40 ns
Programmable Gain	1,2,4,8 standard; 1,2,5,10 available special order
Input Type	Differential
Input Impedance	1 MOhm||5 pF; Each input leg is tied to ground with 1 MOhm resistor
Filter characteristics	6-pole filter -3 dB set at 100 kHz
Conversion Trigger Sources	Software, host timers or external trigger
Interface to DSP	Memory-mapped 32-bit result returned for each A/D pair
D/A Converters	4 analog devices AD7846
Resolution	16-bit
Output Range	+/- 10 V custom ranges may be special ordered
Settling Time	7 us (unfiltered) to 0.003%
Dynamic Range	96 dB
Offset Error	Trimmable on each channel – factory calibrated to +/- 4 LSB
Gain Error Differential	Trimmable on each channel – factory calibrated to +/- 4 LSB
Nonlinearity Error D/A	+/- 1 LSB – Monotonic
Glitch Energy	400 nV-sec typical at MSB transition
Interface to DSP	16-bit Memory-mapped







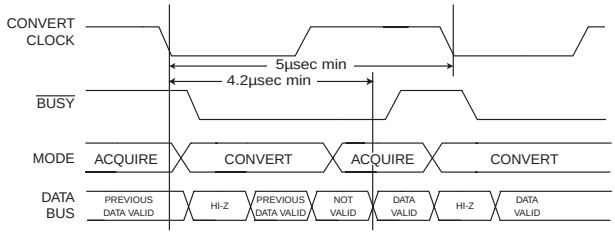
A4D4 - Instrumentation Grade Analog I/O Module

The A4D4 module is ideal for high-accuracy analog measurement and control systems with data acquisition speeds up to 200 kHz. The A4D4 provides analog I/O that is tightly coupled with the host for control systems, process monitoring and data acquisition. Applications include vibration measurement and control, SONAR and semiconductor process equipment to name a few.

The four analog inputs on the A4D4 module are successive approximation type A/D converters, which allow low data latency critical in control applications. Each A/D channel has a six-pole analog anti-alias filter and differential inputs for noise rejection. Potentiometers allow each channel gain/offset error correction for accurate measurements.

Four channels of 16-bit instrumentation grade D/A converters are provided using Analog Devices AD7846. The D/A's provide analog signal output for control and signal generation. Each channel has potentiometers for gain/offset error correction and single pole filters set at 72kHz.

Software examples demonstrating module operation and communication are included in the Zuma/Armada Toolsets. A full calibration report ships with every module.



Conversion Timing with Outputs Enabled After Conversion ($\overline{CS}$ Tied Low)

Ordering Information

A4D4	80020-1

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