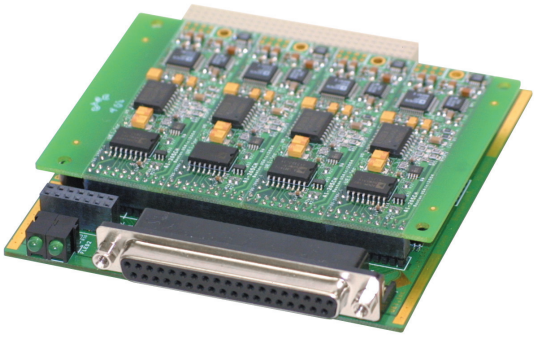
DNA/DNR-AI-205

Simultaneous Sampling High-Speed Analog DAQ Board

- DNA-AI-205 for "CUBE" chassis
- DNR-AI-205 for RACKtangle chassis
- Four fully isolated differential channels
- Maximum sampling rate of 250kHz per channel
- ±100V max input range
- 18-bit resolution
- Simultaneous sampling
- Supports polyphase FIR filtering and decimation
- Optional FIR stage bypass

10-Year Availability Guarantee

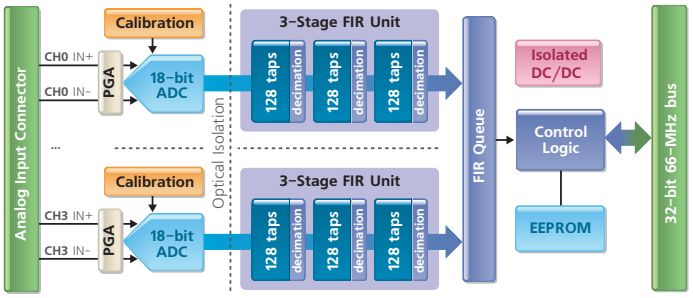


Supports UEIDaq Framework Data Acquisition Software Library for Windows. Linux and QNX drivers available. Visit our website for more details.

General Description:

The DNA/DNR-AI-205 is a powerful and unique analog input data acquisition board, compatible with UEI's popular "CUBE"/RACKtangle™ chassis respectively. The board offers 4 A/D channels with input ranges up to ±100 volts, 18-bit resolution, 250 kS/s Simultaneous sampling and full channel-to-channel isolation. The board also features a three stage polyphase FIR filter that provides digital filtering capability in real-time. There is nothing like this board available anywhere else at any price.

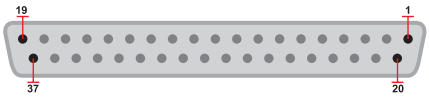
Block Diagram:



Pinout Diagram:

DB-37 (female)
37-pin connector:

N/C	37	19	N/C
CH0 DIO1	36	18	CH0 AGND
CH0 AGND	35	17	CH0 DIO0
CH0 IN-	34	16	CH0 AGND
CH0 SHIELD	33	15	CH0 IN+
CH1 AGND	32	14	N/C
CH1 DIO0	31	13	CH1 DIO1
CH1 AGND	30	12	CH1 AGND
CH1 IN+	29	11	CH1 IN-
N/C	28	10	CH1 SHIELD
CH2 DIO1	27	9	CH2 AGND
CH2 AGND	26	8	CH2 DIO0
CH2 IN-	25	7	CH2 AGND
CH2 SHIELD	24	6	CH2 IN+
CH3 AGND	23	5	N/C
CH3 DIO0	22	4	CH3 DIO1
CH3 AGND	21	3	CH3 AGND
CH3 IN+	20	2	CH3 IN-
		1	CH3 SHIELD



Technical Specifications:

Max Sampling Rate	250 kHz/channel
Number of Channels	4 (individual A/D per channel)
DIOs per channel	2
FIR Unit: Size Decimation Ratio Number of Taps FIR Coefficient	 3 stages 1-128 (default - 5) 128 per stage loadable
Onboard FIFO Size	2048 samples
Input Ranges	±100V, ±10V, ±1V, ±0.1V
Input Impedance	2 MΩ (to ground); 4 MΩ (differential)
Input Bias Current	±1.5 nA
Input Bandwidth	75 kHz
Isolation	350Vrms (between channels) 500Vrms (to system ground)
Input Overvoltage	2000V ESD, ±150V overvoltage protection (powered or unpowered)
Total Harmonic Distortion	–100 dB
ENOBs @ G=1:	18 bits @ 10 Hz (filtered) 17.1 bits @ 60 kHz (native)
Signal/(N+D) ratio	100 dB
Integral Non-linearity	2.5 LSB
Channel Crosstalk	120 dB
Power Consumption	3W
Physical Dimensions	3.875 x 3.875"(98 x 98 mm)
Operating Temp. (tested)	-40°C to +85°C
Operating Humidity	95%, non-condensing
Vibration *IEC 60068-2-6* *IEC 60068-2-64*	5 g, 10-500 Hz, sinusoidal 5 g (rms), 10-500 Hz, broad-band random
Shock *IEC 60068-2-27*	50 g, 3 ms half sine, 18 shocks @ 6 orientations 30 g, 11 ms half sine, 18 shocks @ 6 orientations

Connection Options:

Cable Required	Screw Terminal Panel	Description
DNA-CBL-37S	DNA-STP-37	Shielded cable and 37 connector screw terminal panel
DNA-CBL-37	DNA-STP-37	Ribbon cable and 37 connector screw terminal panel.