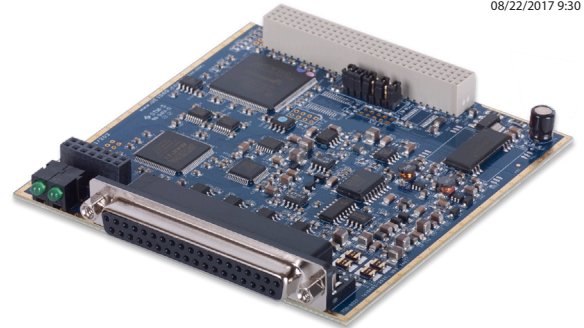


DNA/DNR/DNF-AI-201-100

High Speed Analog In Data Acquisition Board

- DNA-AI-201-100 for "Cube" chassis
- DNR-AI-201-100 for RACKtangle™ I/O chassis
- DNF-AI-201-100 for FLATRACK I/O chassis
- 24 single-ended or 12 differential inputs
- 16-bit resolution, ±15V input range
- 100 kS/s max sampling rate
- Programmable gains of 1, 2, 5, 10
- Entire analog front end isolated from digital circuitry

10-Year
Availability
Guarantee

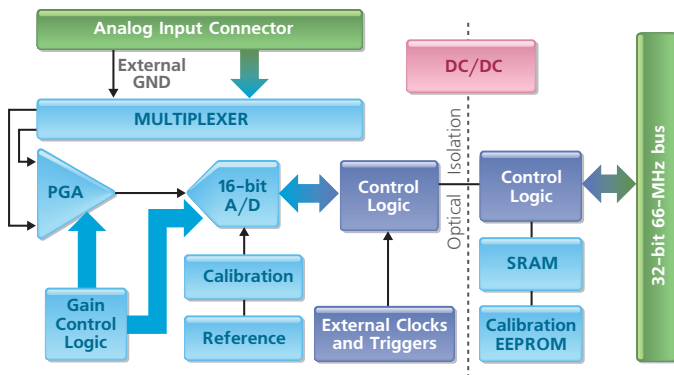


Supports UEIDAQ Framework Data Acquisition Software Library for Windows. Linux and QNX drivers available. Visit our website for more details.

General Description:

The DNA/DNR-201-100 is a 24-channel single ended, 12-channel differential A/D board. The DNA-boards are compatible with all of our popular "CUBE" series chassis while the DNR-series boards are used in the RACKtangle I/O series chassis. Both versions provide identical electrical specifications and performance including 16-bit resolution and 100 kS/s resolution with a maximum input range of ±15 Volts. The board is fully isolated from the PowerDNA cube and is the ideal A/D board for a wide variety of high speed, high resolution data acquisition (DAQ) and control applications.

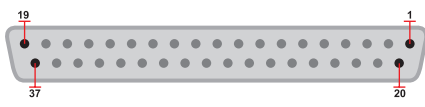
Block Diagram:



Pinout Diagram:

DB-37 (female)
37-pin connector:

AIN12	37	19	AIN0
AIN13	36	18	AIN1
AIN14	35	17	AIN2
AGND	34	16	AGND
AIN15	33	15	AIN3
AIN16	32	14	AIN4
AIN17	31	13	AIN5
AGND	30	12	AGND
AIN18	29	11	AIN6
AIN19	28	10	AIN7
AIN20	27	9	AIN8
N/C	26	8	N/C
AIN21	25	7	AIN9
AIN22	24	6	AIN10
AIN23	23	5	AIN11
CLK_OUT	22	4	TRIG_IN
+18V 40mA max	21	3	EXT_CLK
-18V 40mA max	20	2	AGND
	1	1	AGND



Technical Specifications:

Resolution	16 bits
Number of Channels:	
Single-Ended	24
Differential	12
Maximum Sampling Rate	100 kS/s, aggregate
Onboard FIFO Size	512 samples
Input Range	±15V
Programmable Gains	1, 2, 5, 10 (by channel)
Input Impedance	10 MΩ
Input Bias Current	±15 nA
Input Overvoltage	±40V, 2000V ESD powered or unpowered
A/D Conversion Time	2 μs
A/D Settling Time	10μs @ G=1; 15μs @ G=2; 25μs @ G=5; 50μs @ G=10
Nonlinearity	1 LSB
System Noise	1.2 LSB
Isolation	350Vrms
Effective Number of Bits	14.8
Total Harmonic Distortion+N onlinearity+Noise	91 dB
Channel Crosstalk	85 dB @ 1 kS/s
Power Consumption	2.0W
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	5 g, 10-500 Hz, sinusoidal
IEC 60068-2-64	5 g (rms), 10-500 Hz, broad-band random
Shock IEC 60068-2-27	100 g, 3 ms half sine, 18 shocks @ 6 orientations 30 g, 11 ms half sine, 18 shocks @ 6 orientations
MTBF	600,000 hours

Connection Options:

Screw Terminal Panel	Compatible Cables	Description
DNA-STP-37	DNA-CBL-37 (ribbon), DNA-CBL-37S (shielded)	Connects all board signals to a 37-conductor screw terminal panel.
DNA-5B-CONN	DNA-CBL-37 (ribbon), DNA-CBL-37S (shielded)	Connects to 24-channel mating panel. DNA-5B-CONN supports further connection to the signal-conditioning 5B back panels using PD-CBL-5B cable.