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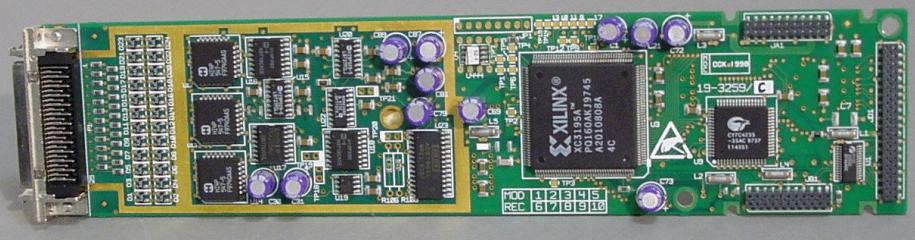
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ProDAQ

ADVANCED VXI DATA ACQUISITION SYSTEMS

3411
24-CHANNEL ENHANCED ADC FUNCTION CARD



VXI bus

- 24 Differential Channels
- Accuracy better than 0.02% (with optional Vref Source)
- Less than 1 μV RMS Noise
- Accuracy for Thermocouples 1° C, for PT100 0.1° C
- Open Thermocouple Detection
- 16-bit Resolution
- 100 kHz Internal, 20kHz Aggregate Conversion Rate
- Programmable Gain and Filtering
- 2 or 16 kSamples FIFO
- Up to 192 Differential ADC Channels per VXIbus Slot

POWER

The ProDAQ 3411 Enhanced Analog-to-Digital Converter Function Card is one of the ProDAQ high density cards, which can be fitted into ProDAQ Motherboards. ProDAQ modules are the most versatile VXIbus modules in the market. They provide the user with the highest channel density and functionality available today.

The ProDAQ 3411 Enhanced ADC Function Card contains a 100 kHz Analog-to-Digital Converter with 24 fully differential inputs, each having a $\pm$10V max. range. This results in a remarkable number of 192 fully differential input channels in a single VXIbus slot, if eight ADC function cards are fitted into one ProDAQ Motherboard.

The gain is programmable from 1 to 1000, providing the user with voltage ranges from $\pm$10V to $\pm$10mV. Three different filter bandwidth and bypass can be selected by software.

The voltage from the ProDAQ 3201 Programmable Voltage Reference card can be switched directly to the programmable gain amplifier for calibration ”on-the-fly” or self-test purposes. Using the Voltage Reference Option an accuracy of better than 0.02% can be achieved.

The accuracy for temperature measurements is 1° C for thermocouples and 0.1° C for PT100s over the entire temperature range, if used with our ProDAQ 5000 series of Signal Conditioning Cards and our Signal Conditioning Unit. (Note this does not include any sensor errors).

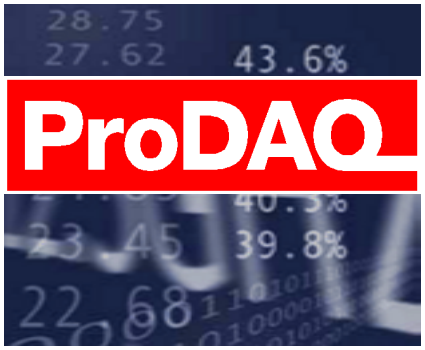
The RMS noise is less than 1μV at a gain of 1000.

The ProDAQ 3411 Enhanced ADC Function Card is supplied with VXI*plug&play* drivers, that can be used with all popular software packages. The driver automatically detects and initializes all the function cards installed in one of the ProDAQ motherboard modules, removing any possibility of configuration errors.

The ProDAQ modules and function cards allow the user to safely and simply expand their existing hardware and software systems.

bustec

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Number of Input Channels	24
Input Type	Differential
Input Voltage Range	max. ±10V min. 10 mV
Resolution	16 bit (monotonic)
Gain Selection	1, 10, 100, 1000
Sensitivity	0.305mV / bit (at gain 1) 0.381μV / bit (at gain 1000)
Filter Selection	1000Hz, 100Hz, 10Hz 2-pole Butterworth and Bypass
Filter Bandwidth	6kHz @ 20V_{pp} 10kHz @ 16V_{pp}
Dynamic Range	92dB
Integral Linearity Error	Typ. ±0.01% Max. ±0.02%
Diff. Linearity Error	Max. +1.5 LSB Min. -1 LSB
Total Full Scale Error	< 0.2% uncalibrated < 0.02% cal. with V_{ref} Note: @ 25° ±1° C
Sampling Rate	100kHz Internal, 20 kHz Aggregate
Settling Time	51 μsec to 0.01% (gain 1, filter bypass)
Input Impedance	> 10MΩ / 25pF
Input Protection	±35V
Input Coupling	DC
Input Offset Voltage	max. ±5mV typ. ±1mV (gain 1) ±50μV (gain 1000)
CMRR	120dB typ. @ 1kHz 80db min. @ 1kHz

Thermal Drift	±1 LSB / 10° C
Noise	< 1μV RMS (gain 1000, 10Hz Filter)
Trigger Input	Motherboard or Front-Panel Connector
Trigger Output	Motherboard or Front-Panel Connector
FIFO	2 kSamples or 16 kSamples
Operating Temperature	0° C to 50° C
Storage Temperature	-40° C to 70° C
Input Connector	50-pin SCSI Female
Dimensions	235 x 53mm (2.1 x 9.1 inch)
Weight	< 100g
Current Consumption	Voltage (V) Current (mA) +15 20 -15 10 +12 40 +5 190 Note: ±15V derived from VXIbus ±24V
Power Consumption	< 1.9 Watts
Warm-up Time	< 30 Min.
Software Support	VXI*plug&play* driver for the WIN95 and WINNT frameworks
Configuration	Cards can be factory installed or field installed by user
Warranty Period	12 month standard (Extended periods available at additional cost)

Ordering Information

3411-AA	24 Ch. Enhanced ADC with 2 kWord FIFO
3411-AB	24 Ch. Enhanced ADC with 16 kWord FIFO

Related Products:

3120-AA	Standard Motherboard
3150-AA	High-Performance Motherboard
3201-AA	Voltage Reference Card
5010-AA	Signal Conditioning Unit
5X1Y-AA	Power Supply Unit
5310-AA	Isothermal Termination Panel
5410-AX	4 Wire Connector Card
8010-AA	0.5 Meter SCSI Cable

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