16 Bit 250 KS/s ADC with 16 Channel Multifunction Digital I/Board and Bridge Signal Conditioner

Ordern-No.: CP246-xxxx Series/Model: CP246



_ Click to enlarge

16 Bit 250 KS/s ADC with 16 Multifunction Digital I/O Channels and Signal Bridge Conditioning

Main Product Features

- **Single slot solution for bridge conditioning and ADC**
- **16-Bit 250 Ks/s ADC per channelDifferential Inputs**
- **Bridge Completion for 1, 2, or 4 active arms**
- **Programmable shunt calibration, gain and excitation per channel**
- **6 pole, low pass filter with programmable cutoff from 20 to 50 kHz**
- **Programmable bridge balance**
- **16 multi-function digital I/O channels**

The CP246 is a single-width, 6U, CompactPCI/PXI module with 8 channels of Bridge Signal Conditioning feeding 8 independent 16-bit Analog to Digital Converters (ADC). This single-width solution incorporates both signal conditioning and ADC to eliminate the need for complex field wiring.
The CP246 supports 10 wire transducer connections and contains fully programmable gain, shunt calibration, bridge balance, excitation and filter on a per channel basis. The maximum sampling rate of each analog to digital converter is 250 Ksamples per second. The ADC per channel architecture generates simultaneously sampled signals. PXI trigger and/or the front panel expansion bus provide a means to connect multiple CP246s together to expand the simultaneously sampled channel count.
The CP246 bridge conditioner inputs provide bridge completion, an excitation supply, anti-aliasing filtering and amplification. On-board bridge completion handles 120Ω, 350Ω or 1000Ω bridges in ¼, ½ and full configurations. The per-channel excitation sources are programmable from 0 to 10 volts in 4096 steps and contain alarm circuitry to monitor excitation supply health. Each channel can be programmed for either voltage or current excitation. The on-board filters can be ordered as either Bessel or Butterworth.

Standard filter cutoff frequency selections include 20Hz, 200Hz, 1kHz, 2kHz or 5kHz, 10 kHz, 20 kHz and 50kHz. The filter may also be bypassed for wideband applications. The gain settings are also programmable from 1 to 2000 in a 1,2,5 progression. Bridge may be nulled using the on-board 12-bit DAC.
In addition to the signal conditioning and ADC's, the CP246 provides 16 multi-function digital I/O channels. Any of these channels can be configured as a digital input, a digital output or selectively attached to a frequency in, counter in, or timer out channel.
SOFTWARE
The CP246 comes with a Plug and Play driver for configuring and using the device and application examples to illustrate its basic functionality.
In addition, KineticSystems includes a copy of SoftView, a simple yet powerful tool that integrates KineticSystems' entire line of PXI/Compact PCI instruments under a single software package.

SoftView highlights include:

- Instrument Identification, configuration and operation
- Out-of-the-box solution to explore and evaluate an instrument's capability
- Manage multiple instruments simultaneously
- Data collection, manipulation via a powerful formula engine, and display from digital and analog input channels
- Ability to drive digital and analog outputs
- Not just a Soft Front Panel for an instrument, but for an entire system

Applications

- rocket engine tests
- Structural Testing (Material Research)
- Wind tunnel tests
- RDT temperature measurement
- Vibration and torque measurements
- Automatic test equipment (ATE)
- Generally for digital measurements and monitoring

Manufacturer page

http://www.kscorp.com/

Datenblatt-Download

PXI/cPCI Bridge Signal Conditioner with 16-Bit ADC Module (469.3 KiB)

Opening the Download-Files May require the Adobe-Acrobat-Reader.
Click here to download the Adobe-Acrobat-Reader.

If you have questions please don't hesitate to contact us any time.

Phone +49 (89) 3133007, **Fax** +49 (89) 3146706, wuntronic@wuntronic.de or send us our Contact form

Wuntronic GmbH, Heppstrasse 30, D-80995 Munich, Germany