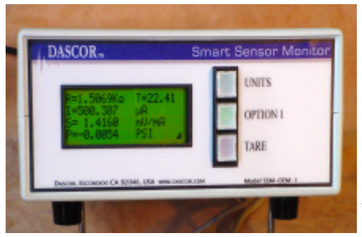
Other Products



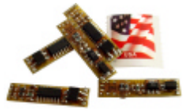
DASCOR SSM-03, the MSC 1210/11 Based Smart Sensor Monitor

Based on Texas Instruments/Burr Brown MSC1210/11 chips, SSM-03 architecture provides rapid development platform for a wide variety of instrumentation applications requiring multiple inputs (4 differential, 8 single-ended), high accuracy and resolution (to 24 bit) and versatile output formats (LCD, LED, RS232, RS485 multi-drop, voltage, or current). Powerful capabilities support variety of unique applications: distributed data acquisition nodes for bridge structural health, transportation infrastructure shock and environmental exposure data monitoring and logging. Other applications include primary support for fluid sensors including pH, REDOX, O_2 and inductive conductivity plus acceleration, pressure, humidity and temperature. With 8051 core and DASCOR's proprietary firmware, capabilities include temperature compensation and linearization (to 7th order polynomial) plus creation of virtual channels via mathematical processing of data from actual, real-time data inputs.

As a distributor for Sensorex sensors, DASCOR provides turnkey solutions for most liquid related monitoring, logging and control challenges. DASCOR's intricate reseller relationship with ICSensors and Micron Instruments strengthens the ability to provide timely answers to complex pressure and acceleration instrumentation challenges.

DASCOR XTR105 Evaluation Module

This DASCOR module is based on Texas Instruments/Burr Brown XTR105 current loop signal conditioner and provides a wide variety of user configurable component locations to allow usage with almost any type of sensor. Pads specifically provided to support bridge completion, balance and temperature compensation resistors.

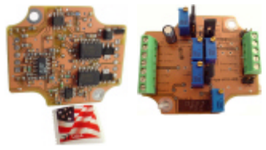


DASCOR XTR105 Embedded Signal Conditioner

Also based on XTR105, this DASCOR module derived from evaluation module to meet specific requirements of high volume user. Intended to be embedded in housing of pressure sensor (typically from Micron Instruments) to provide complete loop powered signal conditioning in package less than 5/16" in diameter and one inch in length.

DASCOR M1A Series Data Loggers

Durable environmental data loggers utilize number of Texas Instruments/Burr Brown chips. Loggers can be configured to support up to 8 channels at 12-bit resolution with up to 80KB of non-volatile data storage. Currently used internationally for critical solid propellant missile health monitoring and for severe duty applications within oil industry. High speed (to 500 KS/s) and high resolution (to 24-bit) variants available with flash memory in the Gigabyte range. Complete signal conditioning included along with 9-volt battery that can power logger for a year or more. (Application users include U.S. DOD, UK MOD, Baker Hughes, Micron Instruments and others.)



DASCOR Dual XTR110's

Special purpose dual current loop signal conditioners use XTR110 chips to provide bridge signal and bridge resistance outputs for all humidity and temperature readings from same sensor. Typical applications incorporate sensors from Hygrometrix, Inc.

DASCOR Precision Load Cell Conditioner

Sophisticated loop-powered signal conditioner for application with state-of-the-art precision load cells. Designed by DASCOR to be intrinsically safe while maintaining maximum accuracy and stability over a wide range of operating conditions. Production versions intended to be embedded directly into the load cell. Call DASCOR for additional information on this product.

DASCOR INA116/XTR105 Electrometer Input Evaluation Module

The INA116 front end provides input impedances on the order of 10^{15} Ohms, suitable for pH sensors and other devices required very low current loading.

Sensor Sources

Sensorex Corporation	**Talon Technical Sales**	**Hygrometrix, Inc.**	**IC Sensors Div.**	**Micron Instruments, Inc.**
Fluid Sensors, pH, ORP, O_2, etc.	**Oil Field Related Instrumentation**	**Humidity Instrumentation**	**Measurement Specialties Pressure & Acceleration**	**Semiconductor strain and Pressure Gages**
www.sensorex.com	**www.tlntech.com**	**www.hygrometrix.com**	**www.icsensors.com**	**www.micronstruments.com**

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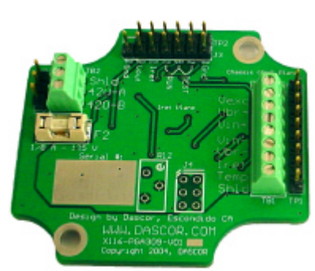
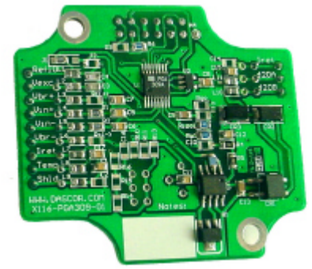
PGA309-XTR116 Evaluation Module

PGA309-XTR116 Evaluation Module

Available Features

- ? ?Direct connection to Texas Instruments/Burr Brown PGA309DK Evaluation Module
- ? ?Fully supported by Texas Instruments/ Burr Brown Evaluation Module software
- ? ?Configurable for many types of sensors, including strain gage-bridge based pressure, acceleration and humidity
- ? ?Component selection through Texas Instruments/Burr Brown White Paper and software
- ? ?Pads provided for all optional components discussed in noted white paper
- ? ?Completely loop powered
- ? ?Polarity insensitive loop
- ? ?Fused with over-voltage protection on loop
- ? ?Uses standard 0805 SMT capacitors and resistors
- ? ?Factory or field-programmed
- ? ?Can be miniaturized to fit sensor housings
- ? ?Easily re-packaged and manufactured in custom variants
- ? ?Volume production available to ISO-9000
- ? ?Fits a standard Bud AN1301 die-cast aluminum box
- ? ?Custom machining and paint available





General

The DASCOR XTR116-PGA309 Signal Conditioner Evaluation Module generates a 4-20 mA current loop signal utilizing two Texas Instruments/Burr Brown integrated circuits. The PGA309 provides programmable excitation, gain, offset, temperature and linearization, while the XTR116 drives the loop, provides regulated power and an optional ratiometric reference for the PGA309.

Solder pads are provided for all anticipated optional components allowing the user wide latitude in customizing the module.

Applications

- ? ?Evaluation of PGA309 in stand-alone or in current loop applications
- ? ?Prototyping and evaluating smart sensor transmitters
- ? ?Programmable front-ends for data loggers and other instrumentation
- ? ?Evaluation of embedded signal conditioners
- ? ?Pre-production proof-of-concept prototypes

Designed and Manufactured by

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XTR116-PGA309 Signal Conditioner

The Texas Instruments/Burr Brown PGA309 offers low cost and minimal power consumption plus a highly accurate and versatile signal conditioner chip that can be rapidly adapted to multiple applications including intelligent sensors and data loggers. DASCOR has coupled the PGA309 with the XTR116, 4-20 mA current loop chip in a small stand-alone module that can be used to evaluate the PGA309 by itself, or in a current loop environment where all power is derived from the loop.

The board replicates many of the features, components and functions found on the larger PGA309DK evaluation board from Texas Instruments/Burr Brown. It connects directly to the PC interface board through a short ribbon cable and is fully programmable by the TI/BB software included in the Development Kit. Complete details, procedures and specifications for the PGA309 and XTR116 are included in their respective data sheets that can be downloaded from the Texas Instruments website. In addition, a White Paper authored by Art Kay is available that provides intricate detail of combining the PGA and XTR116. Copies of this paper are currently available by request from TI/BB or DASCOR at www.TI.com or www.dascor.com

POTENTIAL APPLICATIONS

- When coupled with a bridge-based sensor, the DASCOR module can provide (with suitable calibration) automatic correction for temperature and linearity—turning an inexpensive but repeatable sensor into a precision device.
- With its low cost and highly sensitive inputs, the DASCOR module can often completely replace standard signal-conditioning instrumentation amplifiers (inamps) upstream of digital recording systems.
- By adding an INA116 electrometer inamp ahead of the board (also available as an evaluation module from DASCOR), sensors can be accommodated that possess very high input impedances and temperature coefficients up to several percent per degree C.
- With one-wire communications, architecture can be easily adapted to work as a highly versatile front-end for embedded processors and data loggers.
- With its small size, module can be integrated directly into sensor housing. Chip-On-Board scale reductions are also possible.
- With its very low energy consumption requirements, module can be powered from 4-20 mA current loops, RS232 interfaces or from small, long-life batteries often found in data loggers.

DASCOR welcomes inquiries about adapting this new technology to your specific requirements. Our NRE charges are low and often waived on larger volumes. With both onshore and offshore, custom and volume manufacturing capabilities to ISO-9000 standards, DASCOR is capable of providing this product at low cost and in both low and high volume quantities.

Several of DASCOR's most prominent products and development projects based on Texas Instruments/Burr Brown IC's are noted on the back cover.

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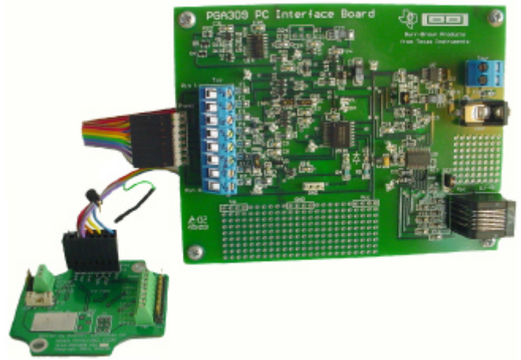
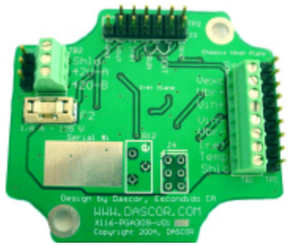


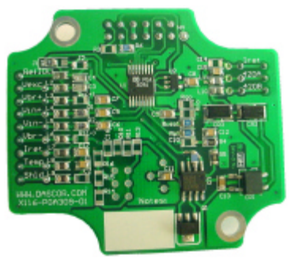
XTR116-PGA309 Signal Conditioner Evaluation Module

The DASCOR evaluation module includes Euro-style terminal blocks for the current loop and sensor leads. Additional headers (25 mil posts on 100 mil centers) are provided in parallel with the loop and signal connections and for all signals common to the PGA309DK interface board that is part of the PGA309DK Development Kit from Texas Instruments/Burr Brown.



The DASCOR Evaluation Board is designed to mount into a Bud AN1301 die-cast aluminum box. A heavy ground plane helps to isolates the signal conditioning components from outside influences. Also, it serves as a heat sink to the box for the current loop pass transistor. All connections, including a fast-blow fuse, are accessible on the top surface.

Dual 33-Volt TUV's further protect the circuit from transient over-voltage conditions on the loop. On the bottom of the board, multiple ferrite beads provide RF filtering on all signal lines. A full-wave bridge rectifier is in the loop to allow either polarity to be connected without damage to the circuit. Solder pads are provided for all anticipated components used for custom filtering and for setting up the external bridge to act as a temperature sensor for the PGA-309.



DASCOR specializes in the development of instrumentation products based on a set of proprietary architectures and firmware for OEM users. For instance, the PGA309 evaluation board from DASCOR is especially well suited to allow rapid, low-cost adaptation to meet demanding special performance, form and fit requirements including immediate high-volume manufacturing. Inquiries regarding DASCOR's evaluation modules plus our application customization and manufacturing capabilities are welcomed and will be answered immediately.

As a distributor for Sensorex sensors (pH, ORP, Conductivity, etc.) and as a reseller for other leading sensor manufacturers, DASCOR prides itself in providing turnkey, value-based solutions to fulfill your most challenging instrumentation and control needs.

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