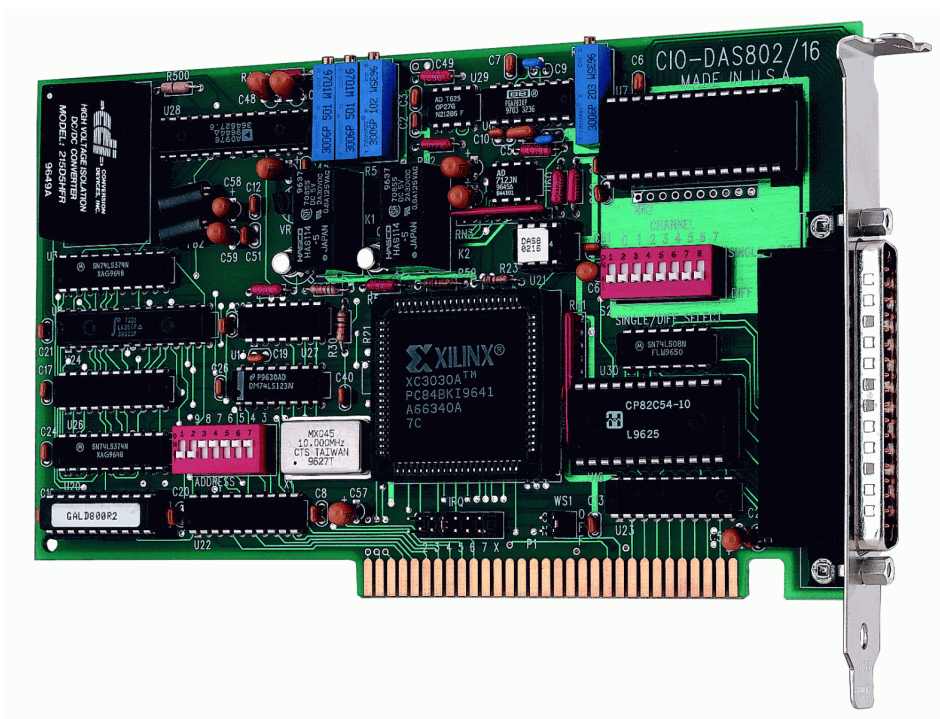


# CIO-DAS802/16

Analog Input and Digital I/O

## User's Guide



# **CIO-DAS802/16**

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### **User's Guide**



**MEASUREMENT  
COMPUTING™**

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## About this User's Guide

### What you will learn from this user's guide

This user's guide explains how to install, configure, and use the CIO-DAS802/16 board so that you get the most out of its analog input and digital I/O features. This user's guide also refers you to related documents available on our web site, and to technical support resources.

### Conventions in this user's guide

The following conventions are used in this manual to convey special information:

**For more information on ...**

Text presented in a box signifies additional information and helpful hints related to the subject matter you are reading.

**Caution!** Shaded caution statements present information to help you avoid injuring yourself and others, damaging your hardware, or losing your data.

<#:#> Angle brackets that enclose numbers separated by a colon signify a range of numbers, such as those assigned to registers, bit settings, etc.

**bold text** **Bold** text is used for the names of objects on the screen, such as buttons, text boxes, and check boxes. For example:  
**1.** Insert the disk or CD and click the **OK** button.

*italic text* *Italic* text is used for the names of manuals and help topic titles, and to emphasize a word or phrase. For example:  
The *InstaCal* installation procedure is explained in the *Quick Start Guide*.  
*Never* touch the exposed pins or circuit connections on the board.

### Where to find more information

For additional information relevant to the operation of your hardware, refer to the *Documents* subdirectory where you installed the MCC DAQ software (C:\Program Files\Measurement Computing\DAQ by default), or search for your device on our website at [www.mccdaq.com](http://www.mccdaq.com).

If you need to program at the register level in your application, refer to the *Register Map for the CIO-DAS802/16*. This document is available on our website at [www.mccdaq.com/registermaps/RegMapCIO-DAS802-16.pdf](http://www.mccdaq.com/registermaps/RegMapCIO-DAS802-16.pdf).

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# Introducing the CIO-DAS802/16

## Overview: CIO-DAS802/16 features

The CIO-DAS802/16 is an extension of the popular CIO-DAS08 architecture. The CIO-DAS802/16 has a set of registers identical to the CIO-DAS08, and an additional set of registers for the extended features. Software written for the DAS08 will work without modification, but will not provide access to the extended features. The connector is nearly identical to the CIO-DAS08, and more closely resembles the CIO-DAS08-PGA.

The CIO-DAS802/16 provides eight channels of 16-bit analog input, seven digital I/O, and three 16-bit down counters.

You can configure each analog channel for differential or single-ended input using a bank of on-board switches. Input ranges are software-selectable as either bipolar or unipolar:

- Bipolar:  $\pm 10$  V,  $\pm 5$  V,  $\pm 2.5$  V, and  $\pm 1.25$  V
- Unipolar: 0 to 10 V, 0 to 5 V, 0 to 2.5 V, and 0 to 1.25 V

The digital channels are TTL level. Three digital channels are configured as inputs, and four channels are configured as outputs. The DOUT1 through DOUT4 can be used to control external EXP boards. DIN1 can be used to trigger and gate A/D conversions.

The CIO-DAS802/16 provides a 100 kHz sample rate.

You can set an interrupt level for the CIO-DAS802/16, and enable a wait state generator with on-board jumpers.

## Software features

For information on the features of *InstaCal* and the other software included with your CIO-DAS802/16, refer to the *Quick Start Guide* that shipped with your device.