

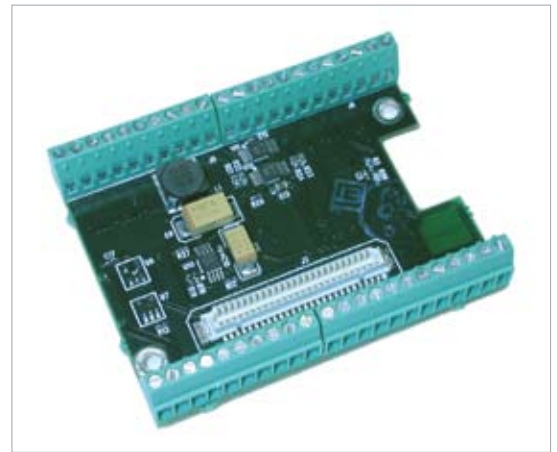
# MDA300

## DATA ACQUISITION BOARD

- Multi-Function Data Acquisition Board with Temp, Humidity Sensor
- Compatible with MoteView Driver Support
- Up to 11 Channels of 12-bit Analog Input
- Onboard Sensor Excitation and High-Speed Counter
- Convenient Micro-Terminal Screw Connections

### Applications

- Environmental Data Collection
- Agricultural and Habitat Monitoring
- Viticulture and Nursery Management
- HVAC Instrumentation and Control
- General Data Collection and Logging



## MDA300

Developed at UCLA's Center for Embedded Network Sensing (CENS), the MDA300 is an extremely versatile data acquisition board that also includes an onboard temperature/humidity sensor. With its multi-function direct user interface, the MDA300 offers a convenient and flexible solution to those sensor modalities commonly found in areas such as environmental and habitat monitoring as well as many other custom sensing applications.

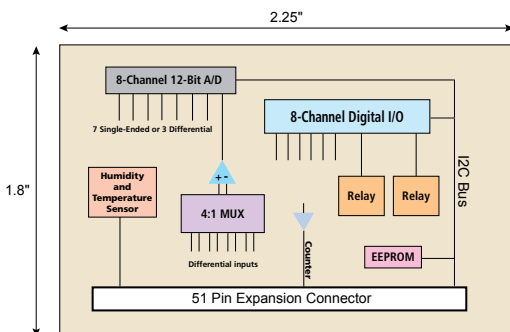
As part of a standard mesh network of Motes, the MDA300's easy access micro-terminals also make it an economical solution for a variety of applications and a key component in the next generation of low-cost wireless weather stations. Data logging and display is supported via Crossbow's MoteView user interface.

Crossbow's MoteView software is designed to be the primary interface between a user and a deployed network of wireless sensors. MoteView provides an intuitive user interface to database management along with sensor data visualization and analysis tools. Sensor data can be logged to a database residing on a host PC, or to a database running autonomously on a Stargate gateway.

### Communication and Control Features Including:

- 7 single-ended or 3 differential ADC channels
- 4 precise differential ADC channels
- 6 digital I/O channels with event detection interrupt
- 2.5, 3.3, 5V sensor excitation and low-power mode
- 64K EEPROM for onboard sensor calibration data
- 2 relay channels, one normally open and one normally closed
- 200 Hz counter channel for wind speed, pulse frequencies
- External I2C interface

Drivers for the MDA300 board are included in Crossbow's MoteWorks™ software platform. MoteWorks enables the development of custom sensor applications and is specifically optimized for low-power, battery-operated networks. MoteWorks is based on the open-source TinyOS operating system and provides reliable, ad-hoc mesh networking, over-the-air-programming capabilities, cross development tools, server middleware for enterprise network integration and client user interface for analysis and configuration.



MDA300C Block Diagram

### Ordering Information

Model	Description
MDA300CA	Mote Data Acquisition Board with Temperature and Humidity