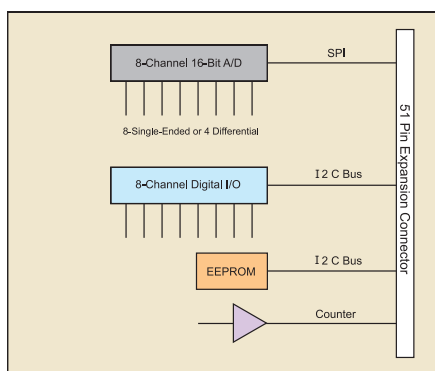# MDA320

DATA ACQUISITION BOARD

- Multi-Function Data Acquisition Board

- Compatible with MoteView Driver Support

- Up to 8 Channels of 16-bit Analog Input

- Onboard Sensor Excitation and High-Speed Counter

- Convenient Micro-Terminal Screw Connections

Applications

- Industrial Vibration Monitoring

- Seismic and Acoustic Analysis

- Controlled Environment Agriculture

- HVAC Instrumentation and Control

- Environmental Data Collection

MDA320CA Block Diagram

MDA320CA

The MDA320CA is a high-performance data acquisition board with up to 8 channels of 16-bit analog input. It combines a reduced feature set with the same versatile functionality found in MEMSIC's popular MDA300 data acquisition board. This board is designed for use in cost-sensitive applications requiring precision data collection and analysis.

With improved micro-terminal connections, the MDA320CA offers users a rapid and convenient interface to a wide variety of discrete external sensing devices. Data logging and display is supported via MEMSIC's MoteView user interface.

MEMSIC'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.
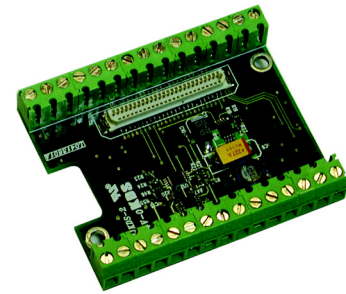
Communication and control features include:

- 8 single-ended 0-2.5V inputs, or 4 differential 0-2.5V ADC channels

- 8 digital 0-2.5V I/O channels with event detection interrupt

- 2.5, 3.3, 5V battery sensor excitation and low-power mode

- 64K EEPROM for onboard sensor calibration data

- 200 Hz counter channel for wind speed, pulse frequencies

- External I2C interface

Drivers for the MDA300 board are included in MEMSIC'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.

Ordering Information

Model	Description
MDA320CA	Mote Data Acquistion Board