



**Electro Standards Laboratories**

ADVANCED SYSTEMS DESIGN & SERVICES

## SPECIFICATIONS

Model 4328 (Cat No. 304328)

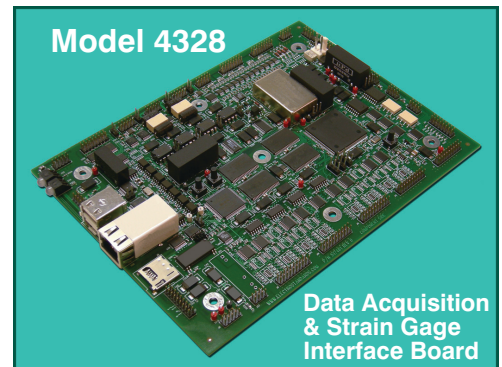
# CellMite® ProD High Performance Embedded Data Acquisition and Strain Gage Interface Board

The CellMite® ProD Model 4328 is a high performance data acquisition and strain gage interface module from Electro Standards Laboratories that is suitable for embedded applications that require high speed and high accuracy analog and digital data acquisition.

The CellMite® ProD features dual 24-bit independent strain gage channels with simultaneous sampling at 15K samples/second that can also be configured as quad 24-bit strain gage channels sampled at 5K samples/second. In addition, the CellMite® ProD features 12 additional 12-bit analog input channels with a throughput of 1M samples/second. Digital data acquisition is also supported with 64-bits of simultaneously sampled digital inputs. The digital inputs can be sampled at 20M samples/second.

The CellMite® ProD has four 16-bit high performance analog output channels with user specified scaling and offset, with a range of +/-10 volts. Direct PC or network communication is supported by USB, RS232, RS485 and Ethernet data channels. The communication channels are optically isolated in order to minimize system ground loops. For applications requiring on-board data storage, the CellMite® ProD features 1MWord of onboard memory along with an SD Card slot for additional bulk data storage.

The CellMite® ProD also supports dual quadrature encoder or pulsed inputs often used for measuring rotational position or velocity. The CellMite® ProD features a wide input voltage range of 10VDC-36VDC, along with 3kVDC isolation. The CellMite® ProD is designed for ruggedized applications and operates from -40°C to +85°C.



### Specifications:

#### Analog Signal Inputs:

*Very High Resolution, High Speed (Strain Gage) Channels:*

Analog Input: Differential, strain gage compatible  
3mv/V nominal

Excitation: 5VDC

Resolution: 24-bit

Accuracy: 0.01%

Number of Channels: 4

Max. Sampling Rate: Dual channels operated, 15K samples/second, simultaneous.  
Quad channels operated, 5K samples/second.

Shunt Resistors: one per strain gage channel,  
60K precision.

*Moderate Resolution, High Speed Channels:*

Analog Input: Differential, general purpose.

Input Range: +/-5 Volts

Resolution: 12-bit

Number of Channels: 12

Max. Sampling Rate: Single channel, 12M samples/second.  
12 channels operated,  
1M samples/second

#### Analog Signal Outputs:

Resolution: 16-bit

Range: +/- 10V

Scaling: User selectable gain and offset

Channels: 4, One analog output channel isolated output

#### Digital Signal Inputs:

Input type: Logic, TTL, and HC compatible with hysteresis

Number of Channels: 64 bits, simultaneously sampled

Max Sampling Rate: 20 M samples/second

#### Digital Counter Inputs:

Excitation: 5VDC

Interface: Single ended or Differential

Type: Dual quadrature or Pulse

#### Digital Contact Inputs:

Type: Optically isolated

Channels: 4

#### Digital Trigger:

Type: Digital Trigger

#### Digital Outputs:

Type: Optically isolated solid state relays

Switching: AC or DC signals

Range: 0 to +/-400V Peak, 120 mA

Channels: 4

#### Digital Data Output:

Interface Type: USB, RS232, RS485, 10/100Base-T Ethernet

Isolation: Optical

#### Input Power:

Range: 10VDC-36VDC, std, 4.5VDC-9VDC

Power: 5W (Ex. 200 mA at 24 VDC)

#### Data Storage:

Onboard: 1M Word

Removable: SD Card

#### Electronic Identification:

Type: Solid State TagID™

Channels: 4, one for each strain gage

#### Indicators:

Discrete: Dual LEDs

Alphanumeric: LCD display, optional

#### Mechanical:

Size: 7.5" x 5.5" x 1"

Mounting: 7 mounting holes

Signal Connectors: 2mm ribbon

Environment: Operating -40°C to +85°C

diagram on the back



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