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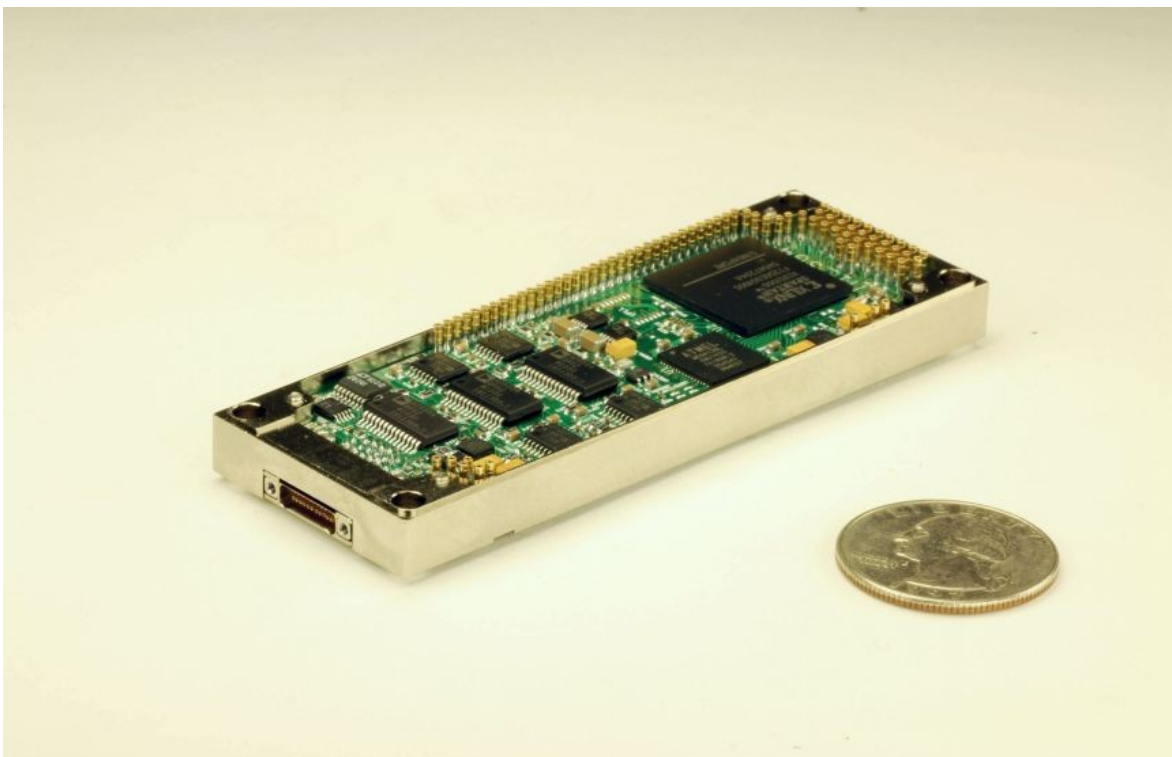
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MICRO PCM ENCODER SERIES

MODEL MI_SG4

4 CHANNEL SIGNAL CONDITIONING MODULE

The 4-channel differential input configuration is intended to condition transducer signals that require significant signal conditioning flexibility. The unit provides programmable analog anti-aliasing four-pole filtering, programmable gain and programmable offset that can be set uniquely for each channel. Each channel has its own ADC. Each channel has its own programmable FIR filter that can be turned on or off. The MI_SG_ADD8 module can be placed on top to increase the number of channels to 12. Voltage or current excitation can be provided by other modules.



Electrical Specifications:

Analog Inputs:

4 (12 with MI_SG_ADD8 module added) Differential Inputs with full signal conditioning, programmable simultaneous sampling.

Gain: High resolution programmable with >16,000 possible gains from 0.5 to 5,000.

Offset: High resolution programmable with >8,000 offsets from -4.5V to +4.5V.

Anti Aliasing Filters: High resolution programmable 4 pole Butterworth with >8,000 cutoff frequencies from 3 Hz to 20 kHz.

Allowable input signal levels on either input from -5V to + 5V.

Maximum Input \pm 40 volts will not damage any analog input.

Input Impedance: 1.0 Gig ohm (Power On)

System Gain Accuracy: \pm 0.2% maximum over the operating temperature range.

A/D: 1 per channel, 16 Bits, 0 + 5.0 Volts, DC to 1 Mega samples per second.

Fir Filters:

Each channel has its own independent programmable FIR filter with programmable tap length from 16 to 1024. These filters can be turned on or off on an individual channel basis. Independent oversampling rates are programmable for each channel. Canned FIR filters are provided or the user can design FIR filters and download with PC design SW included.

Environmental:

Operating Temperature:	-40°C to +85°C
Storage Temperature:	-55°C to +125°C
Humidity:	Relative humidity of 85% for two hours at 65°C.
Altitude:	Unlimited
Vibration:	20g's RMS from 5 to 2000Hz in each major axis.
Acceleration:	Constant acceleration of 100g's in each axis.
Shock:	100g's for 10m second in each major axis.

Mechanical:

Size: inches mm
Length 3.50 88.9
Width 1.25 31.75
Height 0.291 7.39
Weight: 25 g
Engraving: MI_SG4

MI_SG4 PINOUT:

J1 CONNECTOR : AIRBORN, NK-2F2-025-435-TH00

MATE: AIRBORN, NM-212-025-161-JCAC

<u>PIN</u>	<u>FUNCTION</u>	<u>PIN</u>	<u>FUNCTION</u>
13	IN1+	3	IN2+
11	IN1-	1	IN2-
12	AGND	2	AGND
16	IN4+	24	IN3+
14	IN4-	23	IN3-
15	AGND	25	AGND
6	DGND		
7	STP0		
8	STP1		
9	STP2		
21	TCK_ATMEL1	5	TMS_PROM
22	TDI_ATMEL1	4	TDO_PROM
10	TMS_ATMEL1	17	TDI_PROM
20	TDO_ATMEL1	18	TCK_PROM
19	RESET_ATMEL1_N		