

# QUAD TRON, INC.

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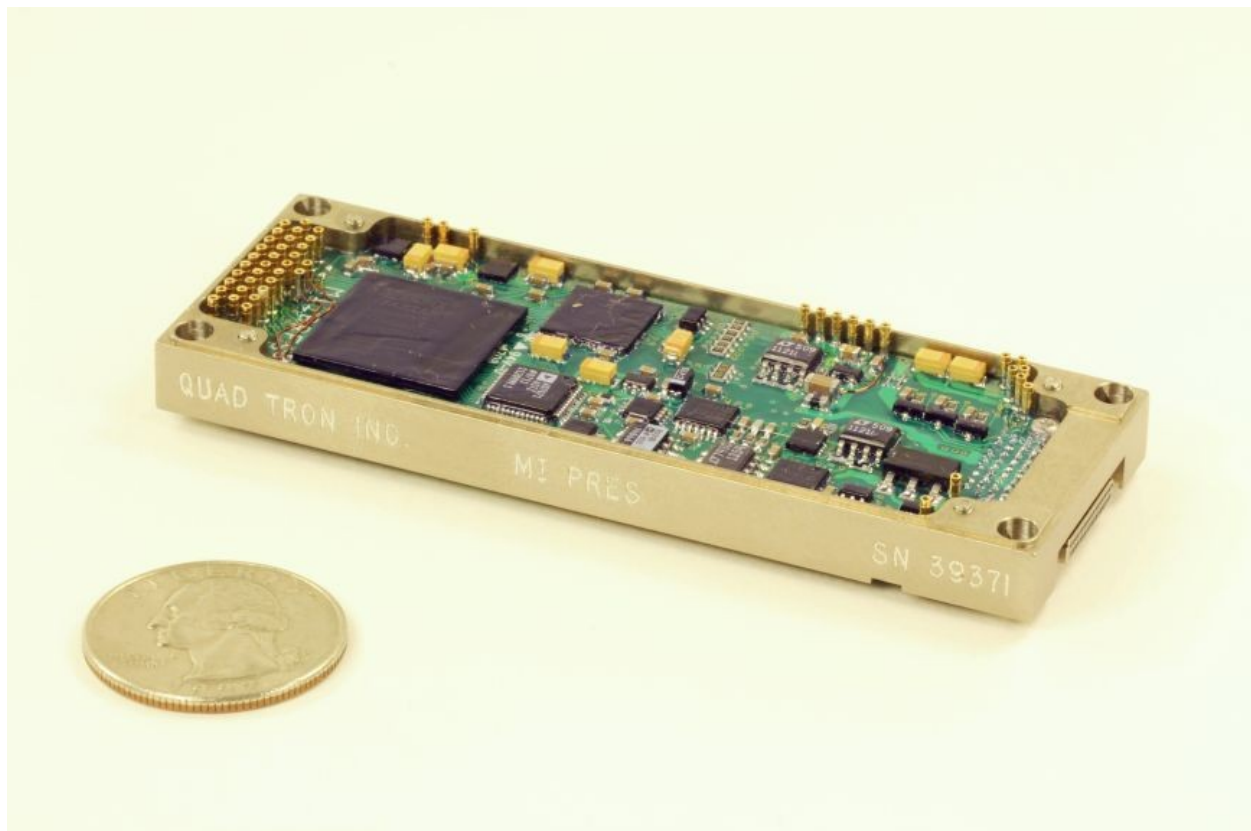
## MICRO PCM ENCODER SERIES

### MODEL MI\_PRES

### PRESSURE SCANNER INTERFACE MODULE

The MI\_PRES module interfaces to Pressure Systems Inc. Miniature Electronic Pressure Scanners ([PressureSystems.com](http://PressureSystems.com)). The MI\_PRES module interfaces to Pressure Systems Inc. models 16HD, 32HD, or 64HD pressure scanners to provide up to 64 channels of pressure, with both DTC and conventional scanners. The MI\_PRES module provides adjustable scanner excitation, scanner power, and scanner multiplexer address. The MI\_PRES module provides A/D conversion of the addressed pressure channel for insertion into the PCM data stream. The module also provides A/D conversion of scanner excitation and temperature for insertion into the PCM data stream.

One MI\_PSP module is required which generates isolated power and excitation for use by the MI\_PRES module. Multiple MI\_PRES modules can use the same MI\_PSP module. The MI\_PRES modules mount on TOP of the MI\_PSP module.



**Electrical Specifications:**

A/D: 16 bits, 1 mega sample ( full scan rate accommodated ).

Scanner Address Bits: 12 volts, open collector, internally pulled up.

Scanner Power: Isolated, +12 volts and -12 volts provided.

Scanner Excitation: Isolated, Software adjustable, 4.9 to 5.4 volts ( high resolution ).

Excitation Accuracy:  $\pm 0.05\%$ , -40 degree C to +85 degree C.

**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:	24 g	

Engraving: MI\_PRES

**Mux Addressing:**

<u>MUX ADDRESS</u>	<u>FUNCTION</u>
0-63	PRES_SCAN
64	VT
128	V+ SENSE
256	BOARD TEMPERATURE

**Temperature Coding:**

Displayed in deg C as, 2's complement,  
SIGN, 7 bits integer, 2 bits fractional

LSB=1/4 deg C

in LSB's of 16 bit PCM word,

<u>Deg C</u>	<u>Digital Code</u>
-40	\$360(hex) = 864(decimal)
0	0
+85	\$154(hex) = 340(decimal)

## **MI\_PRES Pinout:**

J1 CONNECTOR :

Connector P.N.: AIRBORN NK-2E2-037-325-TH00  
Mate P.N.: AIRBORN NM-222-037-261-JCAC

### **PIN NAME**

1	B+
2	B+RTN
3	NC
4	NC
5	-12V
6	-12V
7	EXC_OUT+
8	EXC_OUT+
9	+12V
10	+12V
11	TDI_MC
12	TMS_MC
13	TCK_MC
14	TDO_MC
15	RESET_MC
16	TDO_PROM
17	TMS_PROM
18	TCK_PROM
19	TDI_PROM
20	NC
21	VT
22	V+SENSE
23	PRES_SCAN
24, 25	AGND
26, 27	SCANGND
28	STP0
29	STP1
30	STP2
31	DGND
32	SCAN_MUX_OC_ADRS0
33	SCAN_MUX_OC_ADRS1
34	SCAN_MUX_OC_ADRS2
35	SCAN_MUX_OC_ADRS3
36	SCAN_MUX_OC_ADRS4
37	SCAN_MUX_OC_ADRS5