APPLICATION		REVISIONS			
NEXT ASSY	USED ON	REV	DESCRIPTION	DATE	APPROVED

CONTRACT NO. 1430		QUAD TRON, INC.				
APPROVALS	DATE	MICRO MODULE PCM ENCODER, MODEL MI_MUX32 32CHANNEL, HIGH LEVEL MUTIPLEXER				
DRAWN	03/23/07					
CHECKED	03/23/07	SIZE	FSCM NO.	DRAWING NO.		REV
ISSUE	03/23/07	A	OBPE4	57-2606	SHEET1 OF 5	

MICRO PCM ENCODER SERIES

MODEL MI_MUX32

32 CHANNEL, HIGH LEVEL, SINGLE ENDED MULTIPLEXER MODULE, EXPANDABLE TO 128 CHANNELS

The 32 channel high level, single ended multiplexer is intended for signals already signal conditioned. The 32 Channels can be expanded to 128 Channels by adding another three (3) 32 Channel modules on top. Each input can accept voltage from various system sources including batteries, transducers, sensors, and other pre conditioned analog signals. These signals are multiplexed and encoded into data words for transmission in a PCM output format.

Electrical Specifications:

Analog Inputs:

32 High Level, Single Ended Inputs.

Expandable up to 128 Channels, in increments of 32 by adding 32 channel modules.

Each Channel individually programmable for ±2.5 Volts In or 0+5 Volts In.

Maximum Input ± 40 volts will not damage any analog input.

A/D:

16 Bits, up to 1 Meg sample per second.

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.

ENGRAVING: MI_MUX32

ADD ON MODULES: MI_MUX32-ADD1, Channels 33 up to 64
MI_MUX32_ADD2, Channels 65 up to 96
MI_MUX32_ADD3, Channels 97 up to 128

Mechanical:

Size:
Length: 3.50 inches; Width: 1.25 inches; Height: 0.310 inches.

J1 pin connections
Connector P.N.: Nanonics # STMO51M6HN; TYCO # 4-1589487-5
Mate P.N.: P.N.: Nanonics # STMO51PC2DC018N; TYCO # 7-1589474-9

1	IN1	19	IN14	38	TMS_CPLD
2	IN2	20	IN13	39	STP0
3	IN3	21	IN12	40	STP1
4	IN4	22	IN11	41	STP2
5	IN5	23	IN10	42	AGND
6	IN6	24	IN9	43	AGND
7	IN7	25	IN25	44	IN24
8	IN8	26	IN26	45	IN23
9	AGND	27	IN27	46	IN22
10	TDI_ATMEL1	28	IN28	47	IN21
11	TDO_ATMEL1	29	IN29	48	IN20
12	TMS_ATMEL1	30	IN30	49	IN19
13	TCK_ATMEL1	31	IN31	50	IN18
14	RESET_ATMEL1_N	32	IN32	51	IN 17
15	DGND	33	AGND		
16	AGND	34	AGND		
17	IN16	35	TDO_CPLD		
18	IN15	36	TDI_CPLD		
		37	TCK_CPLD		

PIN	SIGNAL	FUNCTION
1	IN1	Single ended input channel 1
2	IN2	Single ended input channel 2
3	IN3	Single ended input channel 3
4	IN4	Single ended input channel 4
5	IN5	Single ended input channel 5
6	IN6	Single ended input channel 6
7	IN7	Single ended input channel 7
8	IN8	Single ended input channel 8
24	IN9	Single ended input channel 9
23	IN10	Single ended input channel 10
22	IN11	Single ended input channel 11
21	IN12	Single ended input channel 12
20	IN13	Single ended input channel 13
19	IN14	Single ended input channel 14
18	IN15	Single ended input channel 15
17	IN16	Single ended input channel 16
51	IN17	Single ended input channel 17
50	IN18	Single ended input channel 18
49	IN19	Single ended input channel 19
48	IN20	Single ended input channel 20

PIN	SIGNAL	FUNCTION
47	IN21	Single ended input channel 21
46	IN22	Single ended input channel 22
45	IN23	Single ended input channel 23
44	IN24	Single ended input channel 24
25	IN25	Single ended input channel 25
26	IN26	Single ended input channel 26
27	IN27	Single ended input channel 27
28	IN28	Single ended input channel 28
29	IN29	Single ended input channel 29
30	IN30	Single ended input channel 30
31	IN31	Single ended input channel 31
32	IN32	Single ended input channel 32
9	AGND	Analog Ground
16	AGND	Analog Ground
33	AGND	Analog Ground
34	AGND	Analog Ground
42	AGND	Analog Ground
43	AGND	Analog Ground
35	TDO_CPLD	CPLD JTAG
36	TDI_CPLD	CPLD JTAG
37	TCK_CPLD	CPLD JTAG
38	TMS_CPLD	CPLD JTAG
10	TDI_ATMEL	Micro Controller JTAG & Reset
11	TDO_ATMEL	Micro Controller JTAG & Reset
12	TMS_ATMEL	Micro Controller JTAG & Reset
13	TCK_ATMEL	Micro Controller JTAG & Reset
14	RESET_ATMEL_N	Micro Controller JTAG & Reset
15	DGND	Digital Ground
39	STP0	Strapping pins for card address, pulled high. Connect to DGND for Binary 0.
40	STP1	Strapping pins for card address, pulled high. Connect to DGND for Binary 0.
41	STP2	Strapping pins for card address, pulled high. Connect to DGND for Binary 0.