

The Hytec 8925 is a DIN-Rail mounted board which allows connection from one or two 20-way header plugs to two 20-way terminal strips.

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TC8211/TC8210F 64-CHANNEL ANALOGUE INPUT VME64X TRANSITION CARD

USERS MANUAL

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Revision History

The following table shows the revision history for this document.

Date	Version	Revision
23/10/17	1.0	Use manual issue

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1. INTRODUCTION

The Newwood Solutions TC8211/8210F is a single-width VME64X Transition Card which routes 64 channels of analogue I/O with the following characteristics:-

- 4 groups of 16 analogue channel pairs
- 4 50-way SCSI connectors 1-4 routed to 8002/8004 Carrier Board sites A-D respectively
- 16 channels of differential filters condition analogue inputs
- Common mode bias resistors for differential inputs
- 4 DC-DC Converter socketed sites allow 5V to +/-12V isolated power to be supplied to each IP slot on the Newwood 8802 or Hytec 8002/8004.
- 4 signal pairs for External Trigger
- 4 signal pairs for External Clock
- Analogue Ground connections
- Ground discharge limited on insertion

2. SPECIFICATION

Mechanical:	Standard 6U high VME64X transition board
Operating temp:	0 to 45 deg C ambient
Number of channels:	64
Input/output voltage range:	0 to +2.5V
Input filter:	1K in each arm with 0.1uF across them or customer request values
Common mode resistors:	1M to Agnd from each arm
Power:	+5V @ 4A typical if DC-DC converters fitted.

3. BOARD DESCRIPTION

The board is primarily intended to route 4 groups of 16 analogue inputs to IP ADC boards mounted on a VME IP carrier card from four rear panel connectors. This board also has provision to fit R-C filters across the differential inputs of the ADCs.

Viewing the component side of the board there are four similar groups each with two 5-pin sockets. These allow Hytec DC-DC Converter boards to be fitted which supply +/-12V to their respective sites via the P0/P2 VME connectors. Each converter's output is smoothed by two 100uF tantalum bead capacitors.

The P2 mating connector is the 160 way DIN connector at the base of the board. The P0 mating connector is situated above it. The four analogue groups are designated A-D from the base upwards.

Front panel SCSI connectors 1-4 feed sites A-D and are numbered upwards from the lowest connector.

Noise filters are provided for all 16 channels of each group.

The filters incorporate 1K in series with each analogue signal (high and low) bridged by 100nF capacitors (or as requested).

Common mode biasing resistors are also fitted for the ADC inputs. These have the values 1Mohms (or as requested).

Ground discharge resistors are fitted at the base of the board.

4. OPERATION

If isolated power is required plug-in the DC-DC Converter boards and if necessary secure them with appropriate screws through the holes provided. Ensure that a 4A fuse is fitted at the base of the board.

LK1-LK4 connect isolated analogue grounds to VME ground for each group 1-4.

These should only be inserted if isolation is not required.

Connect signals according to the table of connections shown in appendix A.

5. CONNECTORS

Four 50-way connectors routed to carrier board sites A, B, C and D provide 16 single-ended voltage inputs or 15 difference inputs.

6. APPENDIX A

Pin Assignments for Connectors 1-4

Pin	Signal	Pin	Signal
1	Inp1 -	26	Inp1 +
2	Inp2 -	27	Inp2 +
3	Inp3 -	28	Inp3 +
4	Inp4 -	29	Inp4 +
5	Inp5 -	30	Inp5 +
6	Inp6 -	31	Inp6 +
7	Inp7 -	32	Inp7 +
8	Inp 8 -	33	Inp8 +
9	Inp9 -	34	Inp9 +
10	Inp10 -	35	Inp10 +
11	Inp11 -	36	Inp11 +
12	Inp12 -	37	Inp12 +
13	Inp13 -	38	Inp13 +
14	Inp14 -	39	Inp14 +
15	Inp15 -	40	Inp15 +
16	Inp16 -	41	Inp16 +
17	IO1	42	IO3
18	Xtrig -	43	Xtrig +
19	IO2	44	IO4
20	XClk -	45	XClk +
21	AGnd	46	+12V
22	AGnd	47	+12V
23	AGnd	48	-12V
24	AGnd	49	-12V
25	AGnd	50	AGnd

7. APPENDIX B

Circuit diagram showing one group input

