NEWWOOD SOLUTIONS Ltd

Derby Office: 15 Kings Croft, Allestree, Derby, DE22 2FP.
Tel +44 (0)1332 721326

Reading Office: 13 Highfield Road, Tilehurst, Reading RG31 6YR.
Tel +44 (0) 118 9012298

Email: sales@newwoodsolutions.co.uk Web: www.newwoodsolutions.co.uk

SCB 9307
Digital Input Signal Conditioning Board

Product Specification

Document Nos.: SCB9307/G/X/2.1
Date: 31/12/2019
Author: AB/MCB/MRN

Revision History

The following table shows the revision history for this document.

Date	Version	Change Notes
02/11/2009	2.0	PCB Issue 2
30/12/2019	2.1	Change from Hytec to Newwood Solutions for contact details

Contents

1. INTRODUCTION

The SCB 9307 is a small optically isolated 32-channel input signal conditioning board used to route signals from front panel SCSI connectors to a group of I/O in the VDIO8005 when mounted on a VME64X VTB 8308 Transition Board. Thirty two pairs of circuits are isolated. All circuits are current limited to 4.7mA. A logic 1 is asserted when current is drawn from the input diode of each circuit to isolated ground. A power connector accepts isolated +5V power from the transition board to power the pull-up resistors on the outputs.

2. PRODUCT SPECIFICATIONS

2.1 Power Requirements

+5V is accepted from the transition board. Fused at 1A.
+24V isolated power from an external power supply via the transition board SCSI inputs.
Pins 48 and 50 +24V, pins 33-47 0V on PL2 of the 9307 SCB

2.2 Operating Temperature Range

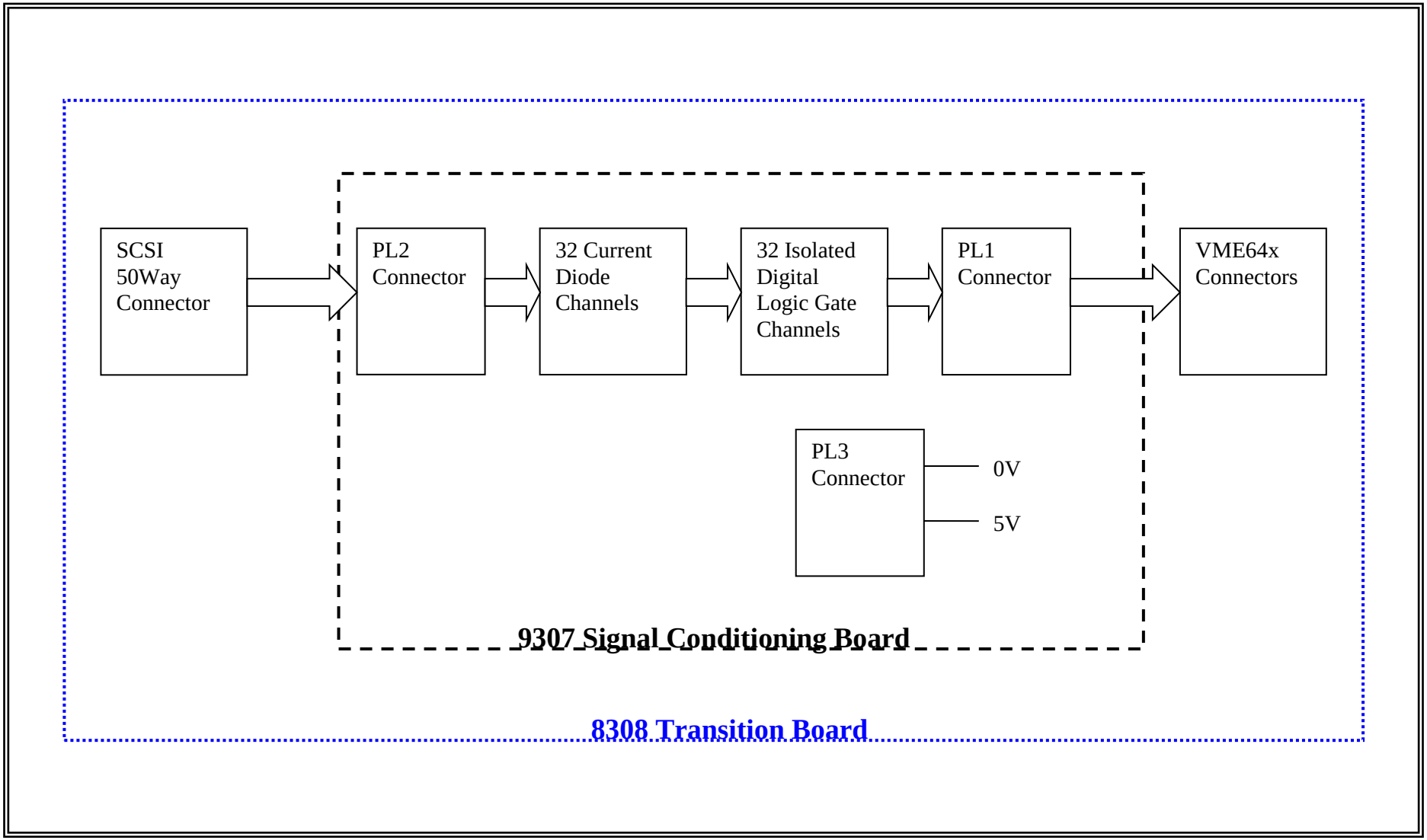
0 to +45 deg Celsius ambient.

2.3 Mechanical

Printed circuit board with two 50-way sockets PL1, PL2 and 6 way power plug PL3 (+5V and GND)
Board Dimensions: 2.55 x 1.80 inches

2.4 Signal Specifications

Digital Inputs (32)
PL2/1 to PL2/32 provide the digital inputs consisting of a 4.7mA current diode in series with an opto-coupler input photodiode
PL1/1 to PL1/32 are the photo-transistor collector outputs with 4K7 pull-up resistor to +5V
When sufficient current flows in the input circuit, the output transistor saturates to provide a logic low signal.



Block Diagram of connections between the 8308 transition card and 9307 SCB module

Table of Signal Allocation PL1 on 9307 SCB

Pin	Signal	Pin	Signal
1	VME Isolated digital input 1	26	VME Isolated digital input 26
2	VME Isolated digital input 2	27	VME Isolated digital input 27
3	VME Isolated digital input3	28	VME Isolated digital input 28
4	VME Isolated digital input 4	29	VME Isolated digital input 29
5	VME Isolated digital input 5	30	VME Isolated digital input 30
6	VME Isolated digital input 6	31	VME Isolated digital input 31
7	VME Isolated digital input 7	32	VME Isolated digital input 32
8	VME Isolated digital input 8	33	Not Connected
9	VME Isolated digital input 9	34	Not Connected
10	VME Isolated digital input 10	35	Not Connected
11	VME Isolated digital input 11	36	Not Connected
12	VME Isolated digital input 12	37	Not Connected
13	VME Isolated digital input 13	38	Not Connected
14	VME Isolated digital input 14	39	Not Connected
15	VME Isolated digital input 15	40	Not Connected
16	VME Isolated digital input 16	41	Not Connected
17	VME Isolated digital input 17	42	Not Connected
18	VME Isolated digital input 18	43	Not Connected
19	VME Isolated digital input 19	44	Not Connected
20	VME Isolated digital input 20	45	Not Connected
21	VME Isolated digital input 21	46	Not Connected
22	VME Isolated digital input 22	47	Not Connected
23	VME Isolated digital input 23	48	Not Connected
24	VME Isolated digital input 24	49	Not Connected
25	VME Isolated digital input 25	50	Not Connected

Table of Signal Allocation PL2 on 9307 SCB

Pin	Signal	Pin	Signal
1	Input 1 from SCSI	26	Input 26 from SCSI
2	Input 2 from SCSI	27	Input 27 from SCSI
3	Input 3 from SCSI	28	Input 28 from SCSI
4	Input 4 from SCSI	29	Input 29 from SCSI
5	Input 5 from SCSI	30	Input 30 from SCSI
6	Input 6 from SCSI	31	Input 31 from SCSI
7	Input 7 from SCSI	32	Input 32 from SCSI
8	Input 8 from SCSI	33	Isolated GND
9	Input 9 from SCSI	34	Isolated GND
10	Input 10 from SCSI	35	Isolated GND
11	Input 11 from SCSI	36	Isolated GND
12	Input 12 from SCSI	37	Isolated GND
13	Input 13 from SCSI	38	Isolated GND
14	Input 14 from SCSI	39	Isolated GND
15	Input 15 from SCSI	40	Isolated GND
16	Input 16 from SCSI	41	Isolated GND
17	Input 17 from SCSI	42	Isolated GND
18	Input 18 from SCSI	43	Isolated GND
19	Input 19 from SCSI	44	Isolated GND
20	Input 20 from SCSI	45	Isolated GND
21	Input 21 from SCSI	46	Isolated GND
22	Input 22 from SCSI	47	Isolated GND
23	Input 23 from SCSI	48	Isolated 24V supply
24	Input 24 from SCSI	49	Isolated GND
25	Input 25 from SCSI	50	Isolated 24V supply

PL3 9307 SCB Connections

Pins 1&2 +5V
Pins 3 GND
Pin 4 Not Connected
Pin 5 Not Connected
Pin 6 Not Connected

8308 Transition Board 50Way SCSI Pin Allocation

Pin	Signal	Pin	Signal
1	Isolated Digital Input 2	26	Isolated Digital Input 1
2	Isolated Digital Input 4	27	Isolated Digital Input 3
3	Isolated Digital Input 6	28	Isolated Digital Input 5
4	Isolated Digital Input 8	29	Isolated Digital Input 7
5	Isolated Digital Input 10	30	Isolated Digital Input 9
6	Isolated Digital Input 12	31	Isolated Digital Input 11
7	Isolated Digital Input 14	32	Isolated Digital Input 13
8	Isolated Digital Input 16	33	Isolated Digital Input 15
9	Isolated Digital Input 18	34	Isolated Digital Input 17
10	Isolated Digital Input 20	35	Isolated Digital Input 19
11	Isolated Digital Input 22	36	Isolated Digital Input 21
12	Isolated Digital Input 24	37	Isolated Digital Input 23
13	Isolated Digital Input 26	38	Isolated Digital Input 25
14	Isolated Digital Input 28	39	Isolated Digital Input 27
15	Isolated Digital Input 30	40	Isolated Digital Input 29
16	Isolated Digital Input 32	41	Isolated Digital Input 31
17	Isolated GND	42	Isolated GND
18	Isolated GND	43	Isolated GND
19	Isolated GND	44	Isolated GND
20	Isolated GND	45	Isolated GND
21	Isolated GND	46	Isolated GND
22	Isolated GND	47	Isolated GND
23	Isolated GND	48	Isolated GND
24	Isolated +24V supply input	49	Isolated GND
25	Isolated +24V supply input	50	Isolated GND