Hardware Installation Guide

TERM04
DIN-Rail Screw-Termination Module

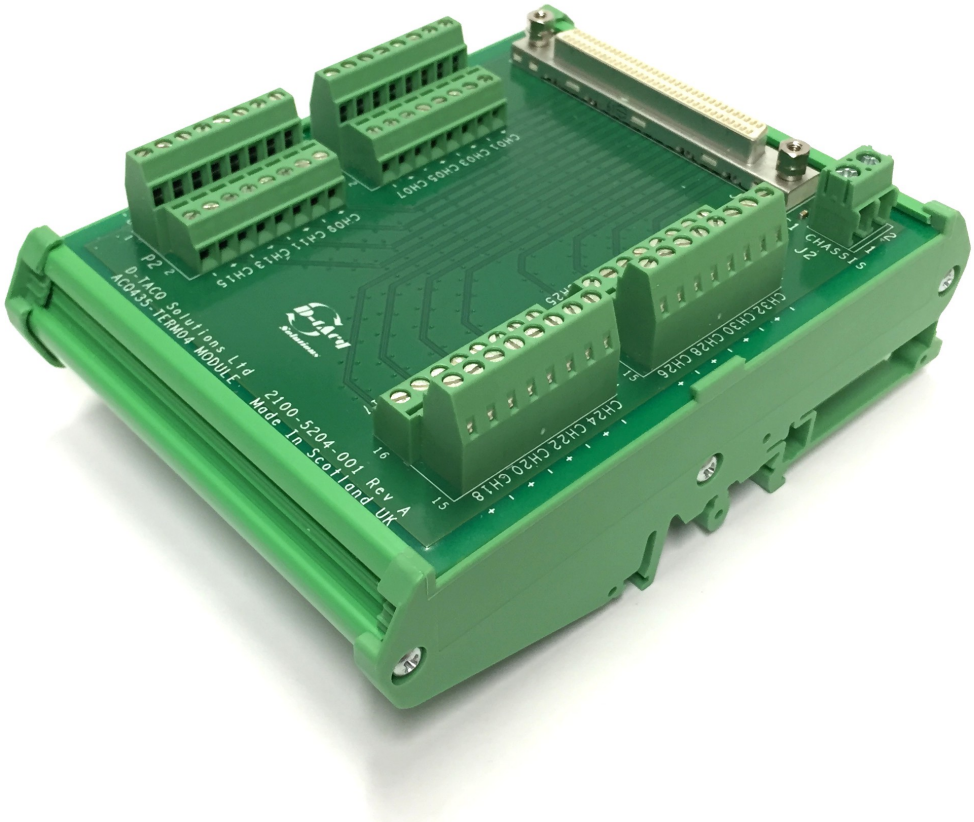
Table of Contents

1 Overview

TERM04 is a DIN-Rail mountable breakout panel for various D-TACQ products which use SCSI-68 or VHDCI connectors. The panel accepts up to 32 differential channels and is compatible with products including:

ACQ424ELF	DIO432FMC
ACQ425ELF	ACQ132CPCI
ACQ435ELF	ACQ164CPCI
ACQ437ELF	ACQ196CPCI
AO424ELF	ACQ216CPCI

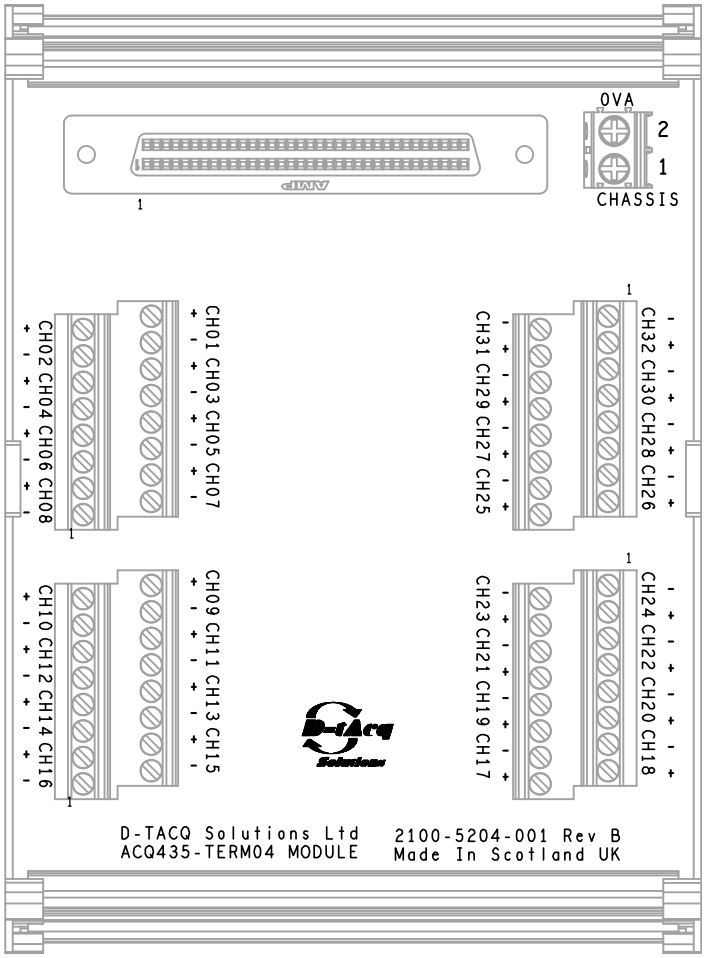
Please see individual product datasheets for pinout details, available on the D-TACQ website. Typical pinouts are also provided below.



2 Connectors

2.1 Screw-Terminals

Screw-Terminal channels are marked on the PCB and are as follows.



2.2 SCSI Connector

Please check the datasheet of the product you wish to connect to TERM04. The board is labelled for 32 channels, however a 16-channel product will typically only use every second channel.

2.2.1 32-Channel Pinout

TERM04 provides the following connections from the SCSI-68 connector to the screw-terminals.

Pin No.	***Signal***	***Pin No.***	***Signal***
1	0VA	35	0VA
2	0VA	36	0VA
3	CH01+	37	CH01-
4	CH02+	38	CH02-
5	CH03+	39	CH03-
6	CH04+	40	CH04-
7	CH05+	41	CH05-
8	CH06+	42	CH06-
9	CH07+	43	CH07-
10	CH08+	44	CH08-
11	CH09+	45	CH09-
12	CH10+	46	CH10-
13	CH11+	47	CH11-
14	CH12+	48	CH12-
15	CH13+	49	CH13-
16	CH14+	50	CH14-
17	CH15+	51	CH15-
18	CH16+	52	CH16-
19	CH17+	53	CH17-
20	CH18+	54	CH18-
21	CH19+	55	CH19-
22	CH20+	56	CH20-
23	CH21+	57	CH21-
24	CH22+	58	CH22-
25	CH23+	59	CH23-
26	CH24+	60	CH24-
27	CH25+	61	CH25-
28	CH26+	62	CH26-
29	CH27+	63	CH27-
30	CH28+	64	CH28-
31	CH29+	65	CH29-
32	CH30+	66	CH30-
33	CH31+	67	CH31-
34	CH32+	68	CH32-

2.2.2 Typical 16-Channel Pinout

In this case (e.g. connected to an ACQ425ELF), TERM04 provides every odd channel as analogue inputs, and every even channel is connected to signal ground, as per the ACQ425ELF datasheet.

Pin No.	***Signal***	***TERM04 Channel***	***Pin No.***	***Signal***	***TERM04 Channel***
1	0VA		35	0VA	
2	0VA		36	0VA	
3	CH01+	CH01+	37	CH01-	CH01-
4	0VA		38	0VA	
5	CH02+	CH03+	39	CH02-	CH03-
6	0VA		40	0VA	
7	CH03+	CH05+	41	CH03-	CH05-
8	0VA		42	0VA	
9	CH04+	CH07+	43	CH04-	CH07-
10	0VA		44	0VA	
11	CH05+	CH09+	45	CH05-	CH09-
12	0VA		46	0VA	
13	CH06+	CH11+	47	CH06-	CH11-
14	0VA		48	0VA	
15	CH07+	CH13+	49	CH07-	CH13-
16	0VA		50	0VA	
17	CH08+	CH15+	51	CH08-	CH15-
18	0VA		52	0VA	
19	CH09+	CH17+	53	CH09-	CH17-
20	0VA		54	0VA	
21	CH10+	CH19+	55	CH10-	CH19-
22	0VA		56	0VA	
23	CH11+	CH21+	57	CH11-	CH21-
24	0VA		58	0VA	
25	CH12+	CH23+	59	CH12-	CH23-
26	0VA		60	0VA	
27	CH13+	CH25+	61	CH13-	CH25-
28	0VA		62	0VA	
29	CH14+	CH27+	63	CH14-	CH27-
30	0VA		64	0VA	
31	CH15+	CH29+	65	CH15-	CH29-
32	0VA		66	0VA	
33	CH16+	CH31+	67	CH16-	CH31-
34	0VA		68	0VA	

2.2.3 Cables

Matching connector type is 68 way male Micro D (SCSI-II Type), 4-40 screw.

It is common practice for customers to manufacture their own cables to fit in with their own sensor requirements.

D-TACQ Solutions supply a standard range of cables and can also produce custom solutions. TERM04 may be used with standard cables such as L-COM CA900MM-1M SCSI-68 to SCSI-68 or CA2060MM-1M SCSI-68 to VHDCI.

2.3 Grounding

A 2-pin screw-terminal is provided for two grounding options: 0VA and Chassis. The two terminals are marked on the PCB and are connected via a 1MΩ resistor and 1nF capacitor in parallel. The terminals are

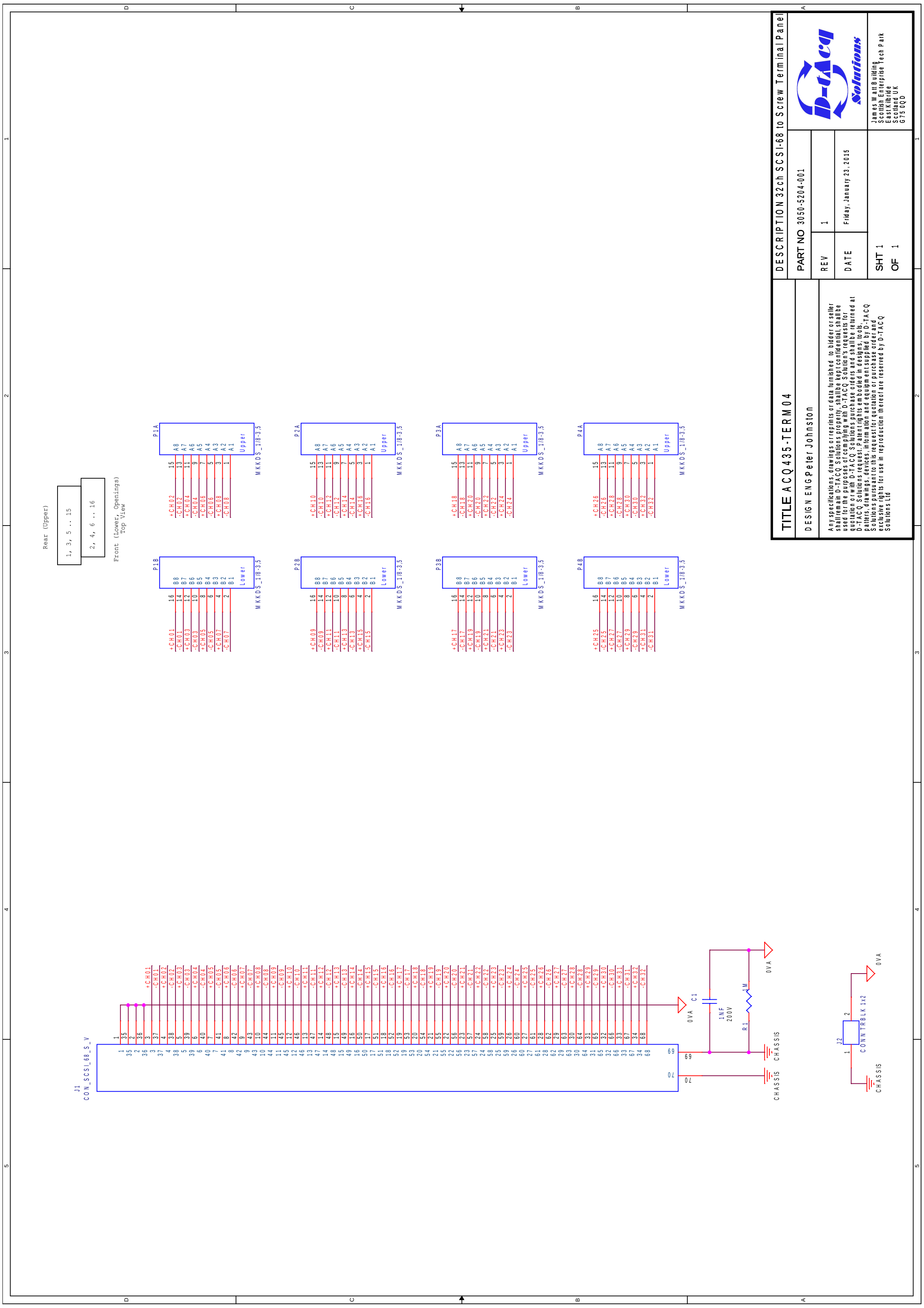
2.3.1 0VA

This terminal is connected to signal ground (0VA, pins 1, 2, 35 and 36) from the SCSI-68 connector.

2.3.2 Chassis

This is connected to the shell of the SCSI-68 connector.

3 Schematic


TITLE ACQ435-TERM04
DESCRIPTION 32ch SCSI-68 to Screw Terminal Panel
PART NO 3050-5204-001
DESIGN ENG Peter Johnston
REV 1
DATE Friday, January 23, 2015
SHT 1
OF 1