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TEWS TECHNOLOGIES

TCP001-TM-10

Transition Module for 6U cPCI IP Carrier

Version 1.0

User Manual

Issue 1.2

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TCP001-TM-10

Transition Module for 6U cPCI IP Carrier with 4 50 pin Ribbon Cable Connectors

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Style Conventions

Hexadecimal characters are specified with prefix 0x, i.e. 0x029E (that means hexadecimal value 029E).

For signals on hardware products, an ‚Active Low' is represented by the signal name with # following, i.e. IP_RESET#.

Access terms are described as:

W	Write Only
R	Read Only
R/W	Read/Write
R/C	Read/Clear
R/S	Read/Set

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1.0	First Issue	October 2002
1.1	MTBF Value added	October 2004
1.2	New address TEWS LLC	September 2006

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1 Product Description

The TCP001-TM-10 is a Transition Module to be used with 6U cPCI IP carrier, providing easy access to the IP I/O lines of cPCI IP carrier with back I/O.

It distributes all 200 IP I/O lines from the cPCI RJ4 and RJ5 connector to four 50 pin ribbon cable connectors allowing easy rack internal wiring.

The routing between the cPCI RJ4 and RJ5 connector and the four ribbon cable connectors is PICMG 2.4 R1.0 compliant.

The TCP001-TM-10 has no front panel.

The operating temperature range is -40°C to +85°C.

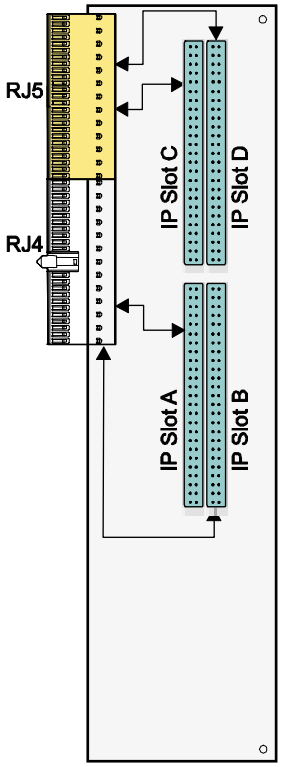


Figure 1-1 : Block Diagram

2 Technical Specification

Form Factor	cPCI Rear Transition Module for 6U cPCI IP Carrier
Board Size	233.35 mm x 60 mm
I/O Routing	PICMG 2.4 R1.0 compliant I/O mapping (RJ4 and RJ5)
Interface to IP I/O Lines	Four connectors for 50 conductor flat cable
Front panel	No front panel
Weight:	95 g
MTBF	1362000 h
Temperature Range	Operating: -40°C to +85°C Storage: -40°C to 125°C
Humidity	5-95 % non-condensing

Figure 2-1: Technical Specification

3 Connectors

3.1 X1 (IP A)

X1 Pin	Signal Name	cPCI Backplane	
		Pin	Connector
1	IO_A1	A11	RJ4
2	IO_A2	B11	RJ4
3	IO_A3	C11	RJ4
4	IO_A4	D11	RJ4
5	IO_A5	E11	RJ4
6	IO_A6	A10	RJ4
7	IO_A7	B10	RJ4
8	IO_A8	C10	RJ4
9	IO_A9	D10	RJ4
10	IO_A10	E10	RJ4
11	IO_A11	A9	RJ4
12	IO_A12	B9	RJ4
13	IO_A13	C9	RJ4
14	IO_A14	D9	RJ4
15	IO_A15	E9	RJ4
16	IO_A16	A8	RJ4
17	IO_A17	B8	RJ4
18	IO_A18	C8	RJ4
19	IO_A19	D8	RJ4
20	IO_A20	E8	RJ4
21	IO_A21	A7	RJ4
22	IO_A22	B7	RJ4
23	IO_A23	C7	RJ4
24	IO_A24	D7	RJ4
25	IO_A25	E7	RJ4
26	IO_A26	A6	RJ4
27	IO_A27	B6	RJ4
28	IO_A28	C6	RJ4
29	IO_A29	D6	RJ4
30	IO_A30	E6	RJ4
31	IO_A31	A5	RJ4
32	IO_A32	B5	RJ4
33	IO_A33	C5	RJ4
34	IO_A34	D5	RJ4
35	IO_A35	E5	RJ4
36	IO_A36	A4	RJ4

X1 Pin	Signal Name	cPCI Backplane	
		Pin	Connector
37	IO_A37	B4	RJ4
38	IO_A38	C4	RJ4
39	IO_A39	D4	RJ4
40	IO_A40	E4	RJ4
41	IO_A41	A3	RJ4
42	IO_A42	B3	RJ4
43	IO_A43	C3	RJ4
44	IO_A44	D3	RJ4
45	IO_A45	E3	RJ4
46	IO_A46	A2	RJ4
47	IO_A47	B2	RJ4
48	IO_A48	C2	RJ4
49	IO_A49	D2	RJ4
50	IO_A50	E2	RJ4

Figure 3-1: Connector X1 (IP A)

3.2 Connector X2 (IP B)

X2 Pin	Signal Name	cPCI Backplane	
		Pin	Connector
1	IO_B1	A25	RJ4
2	IO_B2	B25	RJ4
3	IO_B3	C25	RJ4
4	IO_B4	D25	RJ4
5	IO_B5	E25	RJ4
6	IO_B6	A24	RJ4
7	IO_B7	B24	RJ4
8	IO_B8	C24	RJ4
9	IO_B9	D24	RJ4
10	IO_B10	E24	RJ4
11	IO_B11	A23	RJ4
12	IO_B12	B23	RJ4
13	IO_B13	C23	RJ4
14	IO_B14	D23	RJ4
15	IO_B15	E23	RJ4
16	IO_B16	A22	RJ4
17	IO_B17	B22	RJ4
18	IO_B18	C22	RJ4
19	IO_B19	D22	RJ4
20	IO_B20	E22	RJ4
21	IO_B21	A21	RJ4
22	IO_B22	B21	RJ4
23	IO_B23	C21	RJ4
24	IO_B24	D21	RJ4
25	IO_B25	E21	RJ4
26	IO_B26	A20	RJ4
27	IO_B27	B20	RJ4
28	IO_B28	C20	RJ4
29	IO_B29	D20	RJ4
30	IO_B30	E20	RJ4
31	IO_B31	A19	RJ4
32	IO_B32	B19	RJ4
33	IO_B33	C19	RJ4
34	IO_B34	D19	RJ4
35	IO_B35	E19	RJ4
36	IO_B36	A18	RJ4
37	IO_B37	B18	RJ4
38	IO_B38	C18	RJ4
39	IO_B39	D18	RJ4

X2 Pin	Signal Name	cPCI Backplane	
		Pin	Connector
40	IO_B40	E18	RJ4
41	IO_B41	A17	RJ4
42	IO_B42	B17	RJ4
43	IO_B43	C17	RJ4
44	IO_B44	D17	RJ4
45	IO_B45	E17	RJ4
46	IO_B46	A16	RJ4
47	IO_B47	B16	RJ4
48	IO_B48	C16	RJ4
49	IO_B49	D16	RJ4
50	IO_B50	E16	RJ4

Figure 3-2: Connector X2 (IP B)

3.3 Connector X3 (IP C)

X3 Pin	Signal Name	cPCI Backplane	
		Pin	Connector
1	IO_C1	A11	RJ5
2	IO_C2	B11	RJ5
3	IO_C3	C11	RJ5
4	IO_C4	D11	RJ5
5	IO_C5	E11	RJ5
6	IO_C6	A10	RJ5
7	IO_C7	B10	RJ5
8	IO_C8	C10	RJ5
9	IO_C9	D10	RJ5
10	IO_C10	E10	RJ5
11	IO_C11	A9	RJ5
12	IO_C12	B9	RJ5
13	IO_C13	C9	RJ5
14	IO_C14	D9	RJ5
15	IO_C15	E9	RJ5
16	IO_C16	A8	RJ5
17	IO_C17	B8	RJ5
18	IO_C18	C8	RJ5
19	IO_C19	D8	RJ5
20	IO_C20	E8	RJ5
21	IO_C21	A7	RJ5
22	IO_C22	B7	RJ5
23	IO_C23	C7	RJ5
24	IO_C24	D7	RJ5
25	IO_C25	E7	RJ5
26	IO_C26	A6	RJ5
27	IO_C27	B6	RJ5
28	IO_C28	C6	RJ5
29	IO_C29	D6	RJ5
30	IO_C30	E6	RJ5
31	IO_C31	A5	RJ5
32	IO_C32	B5	RJ5
33	IO_C33	C5	RJ5
34	IO_C34	D5	RJ5
35	IO_C35	E5	RJ5
36	IO_C36	A4	RJ5
37	IO_C37	B4	RJ5
38	IO_C38	C4	RJ5
39	IO_C39	D4	RJ5

X3 Pin	Signal Name	cPCI Backplane	
		Pin	Connector
40	IO_C40	E4	RJ5
41	IO_C41	A3	RJ5
42	IO_C42	B3	RJ5
43	IO_C43	C3	RJ5
44	IO_C44	D3	RJ5
45	IO_C45	E3	RJ5
46	IO_C46	A2	RJ5
47	IO_C47	B2	RJ5
48	IO_C48	C2	RJ5
49	IO_C49	D2	RJ5
50	IO_C50	E2	RJ5

Figure 3-3: Connector X3 (IP C)

3.4 Connector X4 (IP D)

X4 Pin	Signal Name	cPCI Backplane	
		Pin	Connector
1	IO_D1	A22	RJ5
2	IO_D2	B22	RJ5
3	IO_D3	C22	RJ5
4	IO_D4	D22	RJ5
5	IO_D5	E22	RJ5
6	IO_D6	A21	RJ5
7	IO_D7	B21	RJ5
8	IO_D8	C21	RJ5
9	IO_D9	D21	RJ5
10	IO_D10	E21	RJ5
11	IO_D11	A20	RJ5
12	IO_D12	B20	RJ5
13	IO_D13	C20	RJ5
14	IO_D14	D20	RJ5
15	IO_D15	E20	RJ5
16	IO_D16	A19	RJ5
17	IO_D17	B19	RJ5
18	IO_D18	C19	RJ5
19	IO_D19	D19	RJ5
20	IO_D20	E19	RJ5
21	IO_D21	A18	RJ5
22	IO_D22	B18	RJ5
23	IO_D23	C18	RJ5
24	IO_D24	D18	RJ5
25	IO_D25	E18	RJ5
26	IO_D26	A17	RJ5
27	IO_D27	B17	RJ5
28	IO_D28	C17	RJ5
29	IO_D29	D17	RJ5
30	IO_D30	E17	RJ5
31	IO_D31	A16	RJ5
32	IO_D32	B16	RJ5
33	IO_D33	C16	RJ5
34	IO_D34	D16	RJ5
35	IO_D35	E16	RJ5
36	IO_D36	A15	RJ5
37	IO_D37	B15	RJ5
38	IO_D38	C15	RJ5
39	IO_D39	D15	RJ5

X4 Pin	Signal Name	cPCI Backplane	
		Pin	Connector
40	IO_D40	E15	RJ5
41	IO_D41	A14	RJ5
42	IO_D42	B14	RJ5
43	IO_D43	C14	RJ5
44	IO_D44	D14	RJ5
45	IO_D45	E14	RJ5
46	IO_D46	A13	RJ5
47	IO_D47	B13	RJ5
48	IO_D48	C13	RJ5
49	IO_D49	D13	RJ5
50	IO_D50	E13	RJ5

Figure 3-4: Connector X4 (IP D)

3.5 cPCI RJ4

Position	Row					
	A	B	C	D	E	F
25	IO_B1	IO_B2	IO_B3	IO_B4	IO_B5	GND
24	IO_B6	IO_B7	IO_B8	IO_B9	IO_B10	GND
23	IO_B11	IO_B12	IO_B13	IO_B14	IO_B15	GND
22	IO_B16	IO_B17	IO_B18	IO_B19	IO_B20	GND
21	IO_B21	IO_B22	IO_B23	IO_B24	IO_B25	GND
20	IO_B26	IO_B27	IO_B28	IO_B29	IO_B30	GND
19	IO_B31	IO_B32	IO_B33	IO_B34	IO_B35	GND
18	IO_B36	IO_B37	IO_B38	IO_B39	IO_B40	GND
17	IO_B41	IO_B42	IO_B43	IO_B44	IO_B45	GND
16	IO_B46	IO_B47	IO_B48	IO_B49	IO_B50	GND
15	nc	nc	nc	nc	nc	GND
14	key	key	key	key	key	GND
13	key	key	key	key	key	GND
12	key	key	key	key	key	GND
11	IO_A1	IO_A2	IO_A3	IO_A4	IO_A5	GND
10	IO_A6	IO_A7	IO_A8	IO_A9	IO_A10	GND
9	IO_A11	IO_A12	IO_A13	IO_A14	IO_A15	GND
8	IO_A16	IO_A17	IO_A18	IO_A19	IO_A20	GND
7	IO_A21	IO_A22	IO_A23	IO_A24	IO_A25	GND
6	IO_A26	IO_A27	IO_A28	IO_A29	IO_A30	GND
5	IO_A31	IO_A32	IO_A33	IO_A34	IO_A35	GND
4	IO_A36	IO_A37	IO_A38	IO_A39	IO_A40	GND
3	IO_A41	IO_A42	IO_A43	IO_A44	IO_A45	GND
2	IO_A46	IO_A47	IO_A48	IO_A49	IO_A50	GND
1	nc	nc	nc	nc	nc	GND

Figure 3-5 : cPCI RJ4

3.6 cPCI RJ5

Position	Row					
	A	B	C	D	E	F
22	IO_D1	IO_D2	IO_D3	IO_D4	IO_D5	GND
21	IO_D6	IO_D7	IO_D8	IO_D9	IO_D10	GND
20	IO_D11	IO_D12	IO_D13	IO_D14	IO_D15	GND
19	IO_D16	IO_D17	IO_D18	IO_D19	IO_D20	GND
18	IO_D21	IO_D22	IO_D23	IO_D24	IO_D25	GND
17	IO_D26	IO_D27	IO_D28	IO_D29	IO_D30	GND
16	IO_D31	IO_D32	IO_D33	IO_D34	IO_D35	GND
15	IO_D36	IO_D37	IO_D38	IO_D39	IO_D40	GND
14	IO_D41	IO_D42	IO_D43	IO_D44	IO_D45	GND
13	IO_D46	IO_D47	IO_D48	IO_D49	IO_D50	GND
12	nc	nc	nc	nc	nc	GND
11	IO_C1	IO_C2	IO_C3	IO_C4	IO_C5	GND
10	IO_C6	IO_C7	IO_C8	IO_C9	IO_C10	GND
9	IO_C11	IO_C12	IO_C13	IO_C14	IO_C15	GND
8	IO_C16	IO_C17	IO_C18	IO_C19	IO_C20	GND
7	IO_C21	IO_C22	IO_C23	IO_C24	IO_C25	GND
6	IO_C26	IO_C27	IO_C28	IO_C29	IO_C30	GND
5	IO_C31	IO_C32	IO_C33	IO_C34	IO_C35	GND
4	IO_C36	IO_C37	IO_C38	IO_C39	IO_C40	GND
3	IO_C41	IO_C42	IO_C43	IO_C44	IO_C45	GND
2	IO_C46	IO_C47	IO_C48	IO_C49	IO_C50	GND
1	nc	nc	nc	nc	nc	GND

Figure 3-6 : cPCI RJ5

4 Pin Assignment

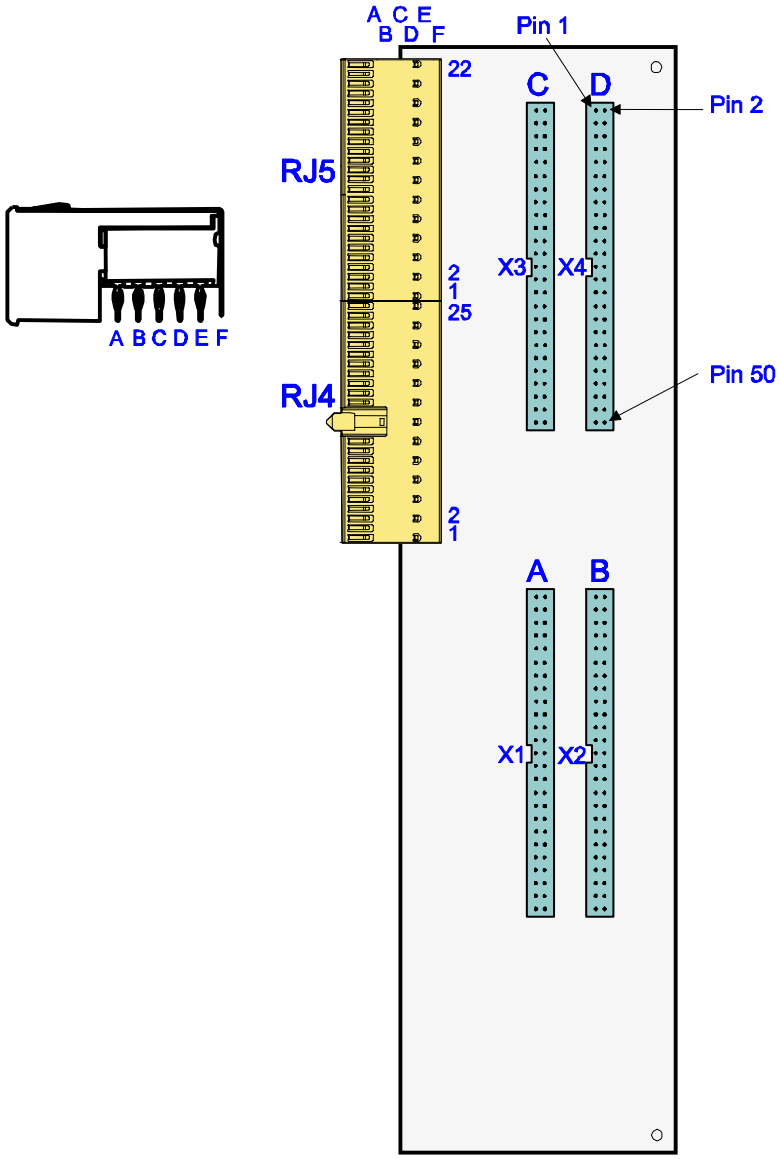


Figure 4-1 : Pin Assignment

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