The Embedded I/O Company

TEWS TECHNOLOGIES

TCP040-TM

PIM Carrier Transition Module for 3U cPCI

Version 1.0

User Manual

Issue 1.1

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TCP040-TM-10

Transition Module for 3U cPCI PMC Carrier with back I/O via J2

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

Issue	Description	Date
1.0	Initial Issue	September 2006
1.1	Figure “Block Diagram”: Power Connections added Figure “Connector Location and Pin Assignment”: Correct name of CompactPCI Rear-I/O Connector from RJ5 to RJ2.	October 2006

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1 Product Description

The TCP040-TM is a 3U PIM Carrier Transition Module to be used with 3U CompactPCI PMC carrier like TEWS' TCP270 or 3U CompactPCI Modules with back I/O. It provides easy access to the PMC I/O lines of 3HE CompactPCI PMC carriers and most TEWS CompactPCI Modules with back I/O.

It distributes all I/O lines of one PMC from the cPCI RJ2 connector to a PIM module.

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

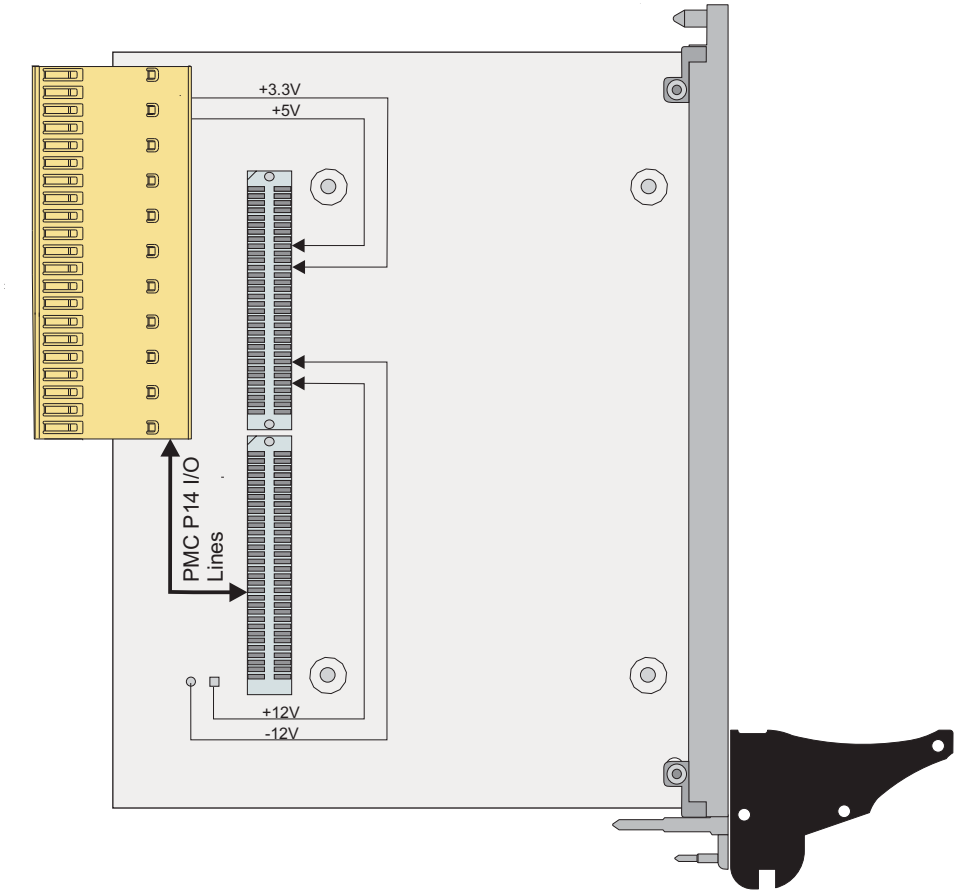

Figure 1-1 : Block Diagram

2 Technical Specification

cPCI Interface		
Mechanical Interface	3U CompactPCI Transition Module according to PICMG 2.0 Rev. 3.0 4 HP Front Panel	
Electrical Interface	PICMG 2.3 R1.0 compliant interface to PMC back I/O lines	
I/O Interface		
Number of PIMs supported	1	
Front Panel	3U EMI front panel	
Physical Data		
Power Requirements	None, additional power may be required by the PIM module.	
Temperature Range	Operating Storage	-40°C to +85 °C -40°C to +100°C
MTBF	1177000 h	
Humidity	5 – 95 % non-condensing	
Weight	90 g	

Figure 2-1 : Technical Specification

3 Pin Assignment

3.1 Overview

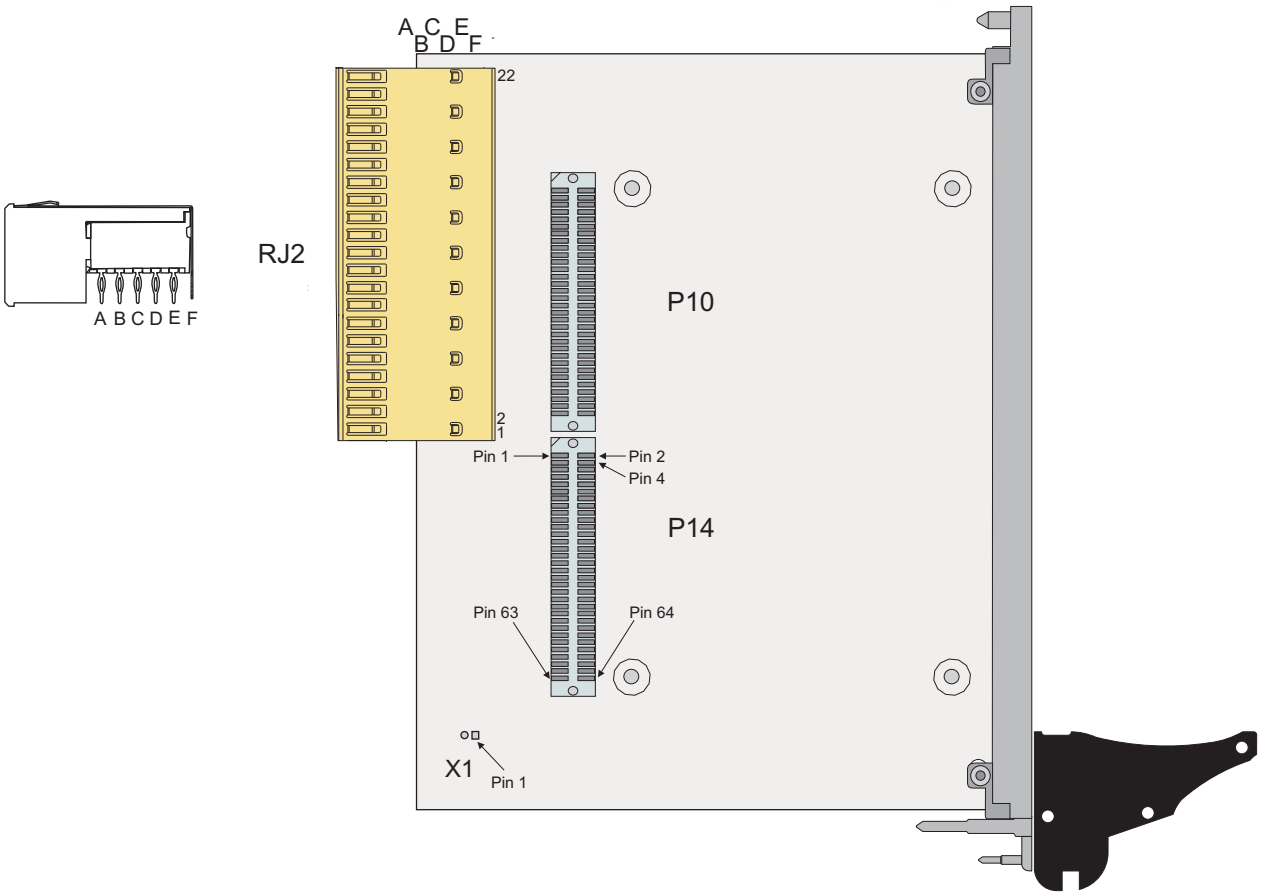

Figure 3-1 : Connector Location and Pin Assignment

3.2 CompactPCI RJ2 Connector

Position	Row					
	A	B	C	D	E	F
22	NC	NC	NC	NC	NC	GND
21	NC	NC	NC	NC	NC	GND
20	NC	NC	NC	NC	NC	GND
19	NC	NC	NC	NC	NC	GND
18	NC	NC	NC	NC	NC	GND
17	NC	NC	NC	NC	NC	GND
16	NC	NC	NC	NC	NC	GND
15	NC	NC	NC	NC	NC	GND
14	3.3V	3.3V	3.3V	5V	5V	GND
13	PMC I/O 5	PMC I/O 4	PMC I/O 3	PMC I/O 2	PMC I/O 1	GND
12	PMC I/O 10	PMC I/O 9	PMC I/O 8	PMC I/O 7	PMC I/O 6	GND
11	PMC I/O 15	PMC I/O 14	PMC I/O 13	PMC I/O 12	PMC I/O 11	GND
10	PMC I/O 20	PMC I/O 19	PMC I/O 18	PMC I/O 17	PMC I/O 16	GND
9	PMC I/O 25	PMC I/O 24	PMC I/O 23	PMC I/O 22	PMC I/O 21	GND
8	PMC I/O 30	PMC I/O 29	PMC I/O 28	PMC I/O 27	PMC I/O 26	GND
7	PMC I/O 35	PMC I/O 34	PMC I/O 33	PMC I/O 32	PMC I/O 31	GND
6	PMC I/O 40	PMC I/O 39	PMC I/O 38	PMC I/O 37	PMC I/O 36	GND
5	PMC I/O 45	PMC I/O 44	PMC I/O 43	PMC I/O 42	PMC I/O 41	GND
4	PMC I/O 50	PMC I/O 49	PMC I/O 48	PMC I/O 47	PMC I/O 46	GND
3	PMC I/O 55	PMC I/O 54	PMC I/O 53	PMC I/O 52	PMC I/O 51	GND
2	PMC I/O 60	PMC I/O 59	PMC I/O 58	PMC I/O 57	PMC I/O 56	GND
1	V I/O	PMC I/O 64	PMC I/O 63	PMC I/O 62	PMC I/O 61	GND

Figure 3-2 : RJ2 Pin Assignment

3.3 X1 (±12 Volt Supply)

The TCP040-TM does not directly support +12V and -12V supply for the PIM module. The +12V and -12V supply pins of the PIM module are routed to the not populated 2pin header X1. If the PIM needs ±12V supply, a connector can be mounted at X1 to provide a connection to ±12 Volt from the backplane or rack power supply.

Pin	Signal	Level
1	+12 Volt	If connected: +12 V ref. to GND Else: floating
2	-12 Volt	If connected: -12 V ref. to GND Else: floating

Figure 3-3 : X1 Pin Assignment

3.4 P10 Connector

Pin	Signal	Level
1	NC	-
3	NC	-
5	+5 Volt	+5V ref. to GND
7	NC	-
9	NC	-
11	NC	-
13	GND	0V ref. to GND
15	NC	-
17	NC	-
19	NC	-
21	+5 Volt	+5V ref. to GND
23	NC	-
25	NC	-
27	NC	-
29	GND	0V ref. to GND
31	NC	-
33	NC	-
35	NC	-
37	+5 Volt	+5V ref. to GND
39	NC	-
41	NC	-
43	NC	-
45	GND	0V ref. to GND
47	NC	-
49	NC	-
51	NC	-
53	+5 Volt	+5V ref. to GND
55	NC	-
57	NC	-
59	NC	-
61	-12 Volt*)	-12V ref. to GND
63	NC	-

Pin	Signal	Level
2	+12 Volt*)	+12V ref. to GND
4	NC	-
6	NC	-
8	NC	-
10	+3.3 Volt	+3.3V ref. to GND
12	NC	-
14	NC	-
16	NC	-
18	GND	0V ref. to GND
20	NC	-
22	NC	-
24	NC	-
26	+3.3 Volt	+3.3V ref. to GND
28	NC	-
30	NC	-
32	NC	-
34	GND	0V ref. to GND
36	NC	-
38	NC	-
40	NC	-
42	+3.3 Volt	+3.3V ref. to GND
44	NC	-
46	NC	-
48	NC	-
50	GND	0V ref. to GND
52	NC	-
54	NC	-
56	NC	-
58	+3.3 Volt	+3.3V ref. to GND
60	NC	-
62	NC	-
64	NC	-

Figure 3-4 : P10 Pin Assignment

*) +12V and -12V are not directly supported by the TCP040-TM. These pins are routed to a not populated 2pin header. If the PIM needs +-12V supply, a connector can be mounted on the TCP040-TM to provide a connection to +/-12 Volt from the backplane or rack power supply.

3.5 P14 Connector

Pin	Signal	Level	Pin	Signal	Level
1	PMC I/O 1		2	PMC I/O 2	
3	PMC I/O 3		4	PMC I/O 4	
5	PMC I/O 5		6	PMC I/O 6	
7	PMC I/O 7		8	PMC I/O 8	
9	PMC I/O 9		10	PMC I/O 10	
11	PMC I/O 11		12	PMC I/O 12	
13	PMC I/O 13		14	PMC I/O 14	
15	PMC I/O 15		16	PMC I/O 16	
17	PMC I/O 17		18	PMC I/O 18	
19	PMC I/O 19		20	PMC I/O 20	
21	PMC I/O 21		22	PMC I/O 22	
23	PMC I/O 23		24	PMC I/O 24	
25	PMC I/O 25		26	PMC I/O 26	
27	PMC I/O 27		28	PMC I/O 28	
29	PMC I/O 29		30	PMC I/O 30	
31	PMC I/O 31	*)	32	PMC I/O 32	*)
33	PMC I/O 33		34	PMC I/O 34	
35	PMC I/O 35		36	PMC I/O 36	
37	PMC I/O 37		38	PMC I/O 38	
39	PMC I/O 39		40	PMC I/O 40	
41	PMC I/O 41		42	PMC I/O 42	
43	PMC I/O 43		44	PMC I/O 44	
45	PMC I/O 45		46	PMC I/O 46	
47	PMC I/O 47		48	PMC I/O 48	
49	PMC I/O 49		50	PMC I/O 50	
51	PMC I/O 51		52	PMC I/O 52	
53	PMC I/O 53		54	PMC I/O 54	
55	PMC I/O 55		56	PMC I/O 56	
57	PMC I/O 57		58	PMC I/O 58	
59	PMC I/O 59		60	PMC I/O 60	
61	PMC I/O 61		62	PMC I/O 62	
63	PMC I/O 63		64	PMC I/O 64	

Figure 3-5 : Pin Assignment I/O Connector

*) Depends on PMC used