

TVME020-TM

VME64x Rear I/O PIM Carrier

Version 1.0

User Manual

Issue 1.1

September 2006

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TVME020-TM

VME64x Rear I/O PIM Carrier

TVME020-TM-10

VME64x Rear I/O PIM Carrier

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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. RESET#.

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Issue	Description	Date
1.0	Initial Issue	January 2005
1.1	New address TEWS LLC	September 2006

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1 Product Description

The TVME020-TM-10 is a VME64x Rear I/O 2 Slot PIM Carrier to be used with 6U VME64x PMC carrier boards with PMC back I/O on VME P2, providing easy access to the PMC rear I/O lines.

The TVME020-TM supports the ANSI/VITA 35-2000 PMC to VME-P2/VME64x-P2 I/O Pin mapping.

With the TVME020-TM-10 all 64 PMC1 I/O lines on VME P2 rows a + c are available at PIM slot 1 and all 46 PMC2 I/O lines on VME P2 rows z + d are available at PIM slot 2.

The TVME020-TM-10 provides +5V and +3.3V power supply at the PIM slots.

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

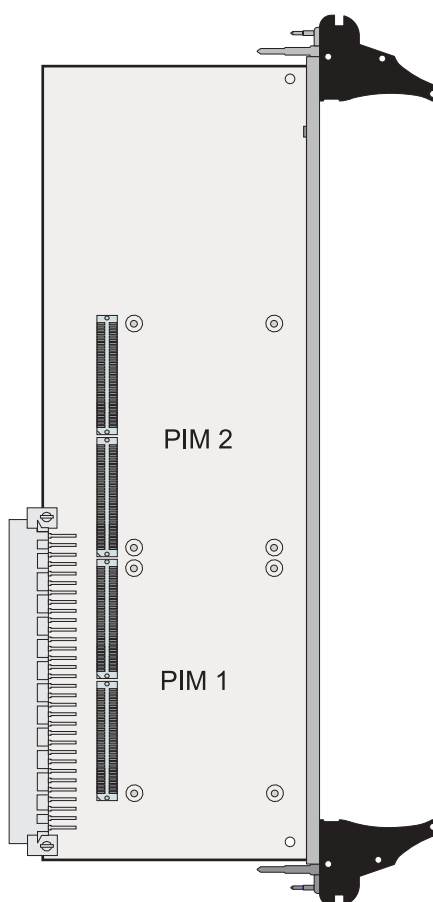


Figure 1-1 : Block Diagram

2 Technical Specification

Form Factor	6U VME64x Rear I/O PIM Carrier Transition Module
Board Size	233.35 mm x 80 mm
Number of PIM slots	2
PMC PIM I/O Mapping	ANSI/VITA 35-2000 PMC to VME-P2/VME64x-P2
Number of PMC PIM I/O lines	PIM slot 1: 64 I/O lines
	PIM slot 2: 46 I/O lines
Front panel	EMI front panel
Supply Voltage Requirements	+5V Supply (VME64x Backplane)
Max Current Load (PIM1 + PIM2 total max)	Max 1A@ +5V DC
	Max 0.8A@ +3.3V DC
Weight	175g
MTBF	690000 h
Temperature Range	Operating: -40°C to +85°C
	Storage: -40°C to +85°C
Humidity	5-95 % non-condensing

Figure 2-1 : Technical Specification

3 VME64x RP2 Connector

RP2 Pin	Row Z	Row A	Row B	Row C	Row D
1	PMC2_IO02	PMC1_IO02	+5V	PMC1_IO01	PMC2_IO01
2	GND	PMC1_IO04	GND	PMC1_IO03	PMC2_IO03
3	PMC2_IO05	PMC1_IO06	-	PMC1_IO05	PMC2_IO04
4	GND	PMC1_IO08	-	PMC1_IO07	PMC2_IO06
5	PMC2_IO08	PMC1_IO10	-	PMC1_IO09	PMC2_IO07
6	GND	PMC1_IO12	-	PMC1_IO11	PMC2_IO09
7	PMC2_IO11	PMC1_IO14	-	PMC1_IO13	PMC2_IO10
8	GND	PMC1_IO16	-	PMC1_IO15	PMC2_IO12
9	PMC2_IO14	PMC1_IO18	-	PMC1_IO17	PMC2_IO13
10	GND	PMC1_IO20	-	PMC1_IO19	PMC2_IO15
11	PMC2_IO17	PMC1_IO22	-	PMC1_IO21	PMC2_IO16
12	GND	PMC1_IO24	GND	PMC1_IO23	PMC2_IO18
13	PMC2_IO20	PMC1_IO26	+5V	PMC1_IO25	PMC2_IO19
14	GND	PMC1_IO28	-	PMC1_IO27	PMC2_IO21
15	PMC2_IO23	PMC1_IO30	-	PMC1_IO29	PMC2_IO22
16	GND	PMC1_IO32	-	PMC1_IO31	PMC2_IO24
17	PMC2_IO26	PMC1_IO34	-	PMC1_IO33	PMC2_IO25
18	GND	PMC1_IO36	-	PMC1_IO35	PMC2_IO27
19	PMC2_IO29	PMC1_IO38	-	PMC1_IO37	PMC2_IO28
20	GND	PMC1_IO40	-	PMC1_IO39	PMC2_IO30
21	PMC2_IO32	PMC1_IO42	-	PMC1_IO41	PMC2_IO31
22	GND	PMC1_IO44	GND	PMC1_IO43	PMC2_IO33
23	PMC2_IO35	PMC1_IO46	-	PMC1_IO45	PMC2_IO34
24	GND	PMC1_IO48	-	PMC1_IO47	PMC2_IO36
25	PMC2_IO38	PMC1_IO50	-	PMC1_IO49	PMC2_IO37
26	GND	PMC1_IO52	-	PMC1_IO51	PMC2_IO39
27	PMC2_IO41	PMC1_IO54	-	PMC1_IO53	PMC2_IO40
28	GND	PMC1_IO56	-	PMC1_IO55	PMC2_IO42
29	PMC2_IO44	PMC1_IO58	-	PMC1_IO57	PMC2_IO43
30	GND	PMC1_IO60	-	PMC1_IO59	PMC2_IO45
31	PMC2_IO46	PMC1_IO62	GND	PMC1_IO61	GND
32	GND	PMC1_IO64	+5V	PMC1_IO63	+5V

Figure 3-1 : VME RP2 Connector

4 Connector J10 (PIM 1)

J10 Pin	Signal Name	Signal Name	J10 Pin
1	NC	+12 Volt ⁽¹⁾	2
3	NC	NC	4
5	+5 Volt	NC	6
7	NC	NC	8
9	NC	+3.3 Volt	10
11	NC	NC	12
13	GND	NC	14
15	NC	NC	16
17	NC	GND	18
19	NC	NC	20
21	+5 Volt	NC	22
23	NC	NC	24
25	NC	+3.3 Volt	26
27	NC	NC	28
29	GND	NC	30
31	NC	NC	32
33	NC	GND	34
35	NC	NC	36
37	+5 Volt	NC	38
39	NC	NC	40
41	NC	+3.3 Volt	42
43	NC	NC	44
45	GND	NC	46
47	NC	NC	48
49	NC	GND	50
51	NC	NC	52
53	+5 Volt	NC	54
55	NC	NC	56
57	NC	+3.3 Volt	58
59	NC	NC	60
61	-12 Volt ⁽¹⁾	NC	62
63	NC	NC	64

(1) Not available on TVME020-TM-10

Figure 4-1 : Connector J10 (PIM 1)

5 Connector J14 (PIM 1)

J14 Pin	Signal Name	Signal Name	J14 Pin
1	PMC1 I/O 1	PMC1 I/O 2	2
3	PMC1 I/O 3	PMC1 I/O 4	4
5	PMC1 I/O 5	PMC1 I/O 6	6
7	PMC1 I/O 7	PMC1 I/O 8	8
9	PMC1 I/O 9	PMC1 I/O 10	10
11	PMC1 I/O 11	PMC1 I/O 12	12
13	PMC1 I/O 13	PMC1 I/O 14	14
15	PMC1 I/O 15	PMC1 I/O 16	16
17	PMC1 I/O 17	PMC1 I/O 18	18
19	PMC1 I/O 19	PMC1 I/O 20	20
21	PMC1 I/O 21	PMC1 I/O 22	22
23	PMC1 I/O 23	PMC1 I/O 24	24
25	PMC1 I/O 25	PMC1 I/O 26	26
27	PMC1 I/O 27	PMC1 I/O 28	28
29	PMC1 I/O 29	PMC1 I/O 30	30
31	PMC1 I/O 31	PMC1 I/O 32	32
33	PMC1 I/O 33	PMC1 I/O 34	34
35	PMC1 I/O 35	PMC1 I/O 36	36
37	PMC1 I/O 37	PMC1 I/O 38	38
39	PMC1 I/O 39	PMC1 I/O 40	40
41	PMC1 I/O 41	PMC1 I/O 42	42
43	PMC1 I/O 43	PMC1 I/O 44	44
45	PMC1 I/O 45	PMC1 I/O 46	46
47	PMC1 I/O 47	PMC1 I/O 48	48
49	PMC1 I/O 49	PMC1 I/O 50	50
51	PMC1 I/O 51	PMC1 I/O 52	52
53	PMC1 I/O 53	PMC1 I/O 54	54
55	PMC1 I/O 55	PMC1 I/O 56	56
57	PMC1 I/O 57	PMC1 I/O 58	58
59	PMC1 I/O 59	PMC1 I/O 60	60
61	PMC1 I/O 61	PMC1 I/O 62	62
63	PMC1 I/O 63	PMC1 I/O 64	64

Figure 5-1 : Connector J14 (PIM 1)

6 Connector J20 (PIM 2)

J20 Pin	Signal Name	Signal Name	J20 Pin
1	NC	+12 Volt ⁽¹⁾	2
3	NC	NC	4
5	+5 Volt	NC	6
7	NC	NC	8
9	NC	+3.3 Volt	10
11	NC	NC	12
13	GND	NC	14
15	NC	NC	16
17	NC	GND	18
19	NC	NC	20
21	+5 Volt	NC	22
23	NC	NC	24
25	NC	+3.3 Volt	26
27	NC	NC	28
29	GND	NC	30
31	NC	NC	32
33	NC	GND	34
35	NC	NC	36
37	+5 Volt	NC	38
39	NC	NC	40
41	NC	+3.3 Volt	42
43	NC	NC	44
45	GND	NC	46
47	NC	NC	48
49	NC	GND	50
51	NC	NC	52
53	+5 Volt	NC	54
55	NC	NC	56
57	NC	+3.3 Volt	58
59	NC	NC	60
61	-12 Volt ⁽¹⁾	NC	62
63	NC	NC	64

(1) Not available on TVME020-TM-10

Figure 6-1 : Connector J20 (PIM 2)

7 Connector J24 (PIM 2)

J24 Pin	Signal Name	Signal Name	J24 Pin
1	PMC2 I/O 1	PMC2 I/O 2	2
3	PMC2 I/O 3	PMC2 I/O 4	4
5	PMC2 I/O 5	PMC2 I/O 6	6
7	PMC2 I/O 7	PMC2 I/O 8	8
9	PMC2 I/O 9	PMC2 I/O 10	10
11	PMC2 I/O 11	PMC2 I/O 12	12
13	PMC2 I/O 13	PMC2 I/O 14	14
15	PMC2 I/O 15	PMC2 I/O 16	16
17	PMC2 I/O 17	PMC2 I/O 18	18
19	PMC2 I/O 19	PMC2 I/O 20	20
21	PMC2 I/O 21	PMC2 I/O 22	22
23	PMC2 I/O 23	PMC2 I/O 24	24
25	PMC2 I/O 25	PMC2 I/O 26	26
27	PMC2 I/O 27	PMC2 I/O 28	28
29	PMC2 I/O 29	PMC2 I/O 30	30
31	PMC2 I/O 31	PMC2 I/O 32	32
33	PMC2 I/O 33	PMC2 I/O 34	34
35	PMC2 I/O 35	PMC2 I/O 36	36
37	PMC2 I/O 37	PMC2 I/O 38	38
39	PMC2 I/O 39	PMC2 I/O 40	40
41	PMC2 I/O 41	PMC2 I/O 42	42
43	PMC2 I/O 43	PMC2 I/O 44	44
45	PMC2 I/O 45	PMC2 I/O 46	46
47	PMC2 I/O 47 ⁽¹⁾	PMC2 I/O 48 ⁽¹⁾	48
49	PMC2 I/O 49 ⁽¹⁾	PMC2 I/O 50 ⁽¹⁾	50
51	PMC2 I/O 51 ⁽¹⁾	PMC2 I/O 52 ⁽¹⁾	52
53	PMC2 I/O 53 ⁽¹⁾	PMC2 I/O 54 ⁽¹⁾	54
55	PMC2 I/O 55 ⁽¹⁾	PMC2 I/O 56 ⁽¹⁾	56
57	PMC2 I/O 57 ⁽¹⁾	PMC2 I/O 58 ⁽¹⁾	58
59	PMC2 I/O 59 ⁽¹⁾	PMC2 I/O 60 ⁽¹⁾	60
61	PMC2 I/O 61 ⁽¹⁾	PMC2 I/O 62 ⁽¹⁾	62
63	PMC2 I/O 63 ⁽¹⁾	PMC2 I/O 64 ⁽¹⁾	64

(1) Not available on TVME020-TM-10

Figure 7-1 : Connector J24 (PIM 2)

8 Board Overview

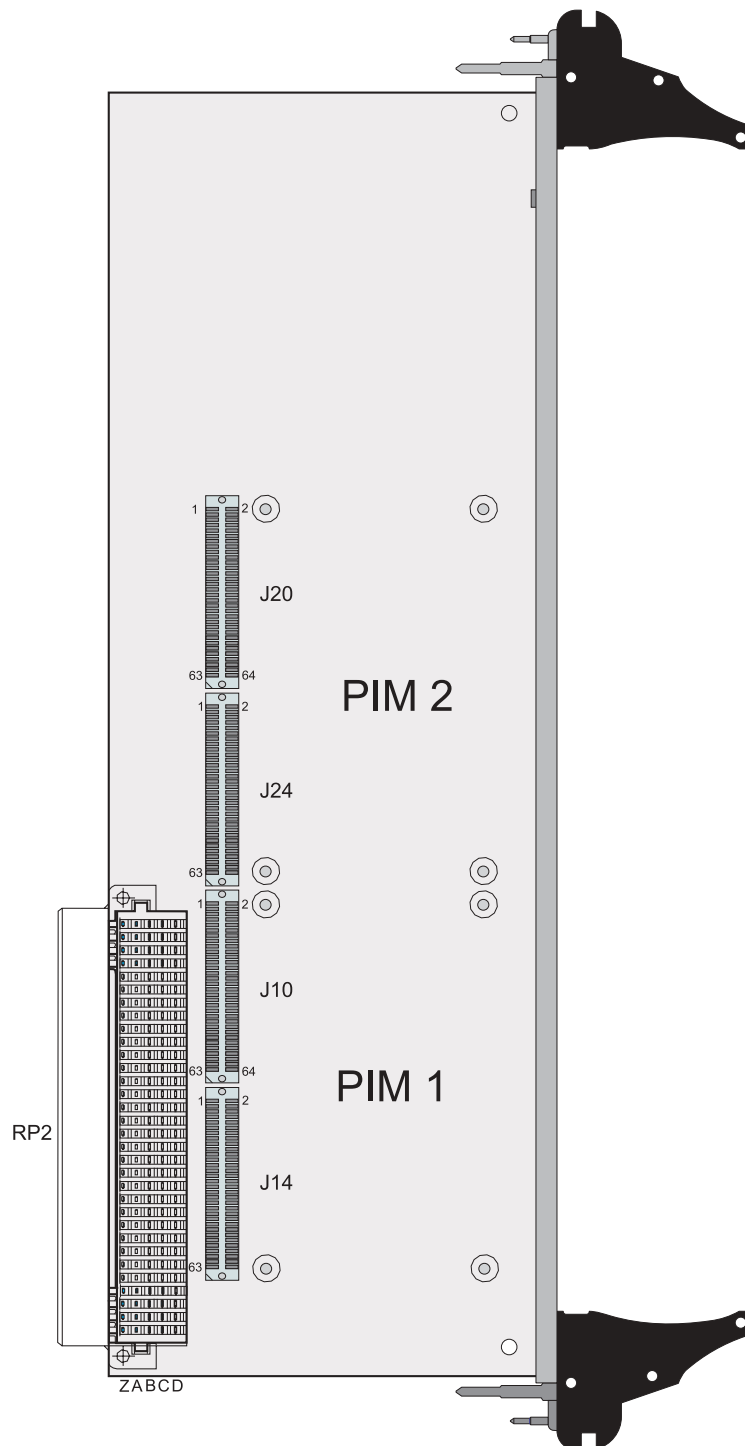


Figure 8-1 : Board Overview