6U2S CompactPCI Backplane User Manual

(PICMG2.0R3.0)

TEL：+886-2-22690567
FAX：+886-2-22690327
www.mapsuka.com.tw
E-Mail：mapsuka@mapsuka.com.tw
April 22, 2008

1. Key Features :

- Conforms to PICMG 2.0 R3.0
- Supports Hot Swap feature of PICMG 2.1 R2.0
- Conforms to PICMG 2.9 R1.0
- VI/O are user selectable to a +5V or +3.3V
- All signal lines characteristic impedance are set to 65Ω
- FR4 material PCB
- 2 m/m HM connector

2. Mechanical

The CompactPCI 32/64-Bit 2.0 Series backplanes are 10-layer PCBs which are 6U (262.05 mm) tall, 3.2 mm thick, 59.96 mm width. Two layers are dedicated ground layers. The backplanes are attached to the subrack using a series of screws along the top and bottom edges of the backplanes.

3. Backplane Pattern Connection Specification

Slot1 (S1) : System
Slot2 (S2) : Peripheral

3.1 CLK line

Slot No.	S1	S2
CLK No.	System	CLK0

3.2 GNT/REQ line

Slot No.	S1	S2
GNT/ REQ	System	GNT0/ REQ0

3.3 IDSEL line

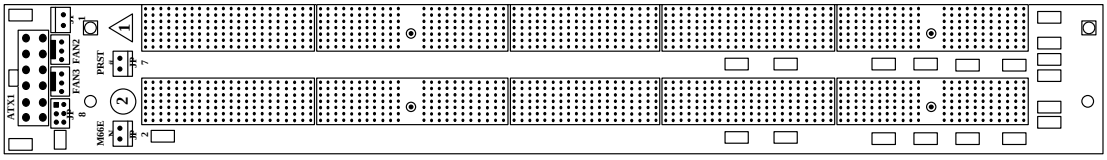
Slot No.	S1	S2
IDSEL	System	AD31

3.4 Interrupt line

Slot No.	S1	S2
Interrupt line	INTA#	INTD#
	INTB#	INTA#
	INTC#	INTB#
	INTD#	INTC#

4. Connectors and Jumpers

The relative position of connectors and jumpers on the backplane are shown as the following Figure.



4.1 JP1 jumper

Power switch function.

4.2 JP2 jumper

M66EN, the 66MHz Enabling line, is defined as GND for 33 MHz backplane.

66 MHz **33 MHz**

4.3 JP7 jumper

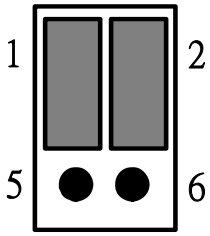
System reset function.

4.4 FAN2,FAN3 Connectors

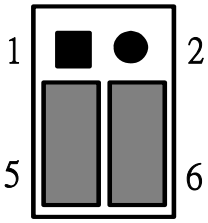
Supply fans source (+12V)

4.5 JP8 Jumper

VI/O Selector



VI/O = 3.3V



VI/O = 5V

4.6 ATX power connector

Pin	Power	Pin	Power
1	+3.3V	7	GND
2	+3.3V	8	+12V
3	GND	9	PSON#
4	+5V	10	-12V
5	GND	11	GND
6	PWOK	12	+5V

5. Backplane Pin Assignment Table

Table 5.1 CompactPCI System Slot P1 Connector Pin assignments

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64#(1)	ENUM#(2)	+3.3V	+5V	GND
24	GND	AD[1]	+5V	VI/O	AD[0]	ACK64#(1)	GND
23	GND	+3.3V	AD[4]	AD[3]	+5V	AD[2]	GND
22	GND	AD[7]	GND	+3.3V	AD[6]	AD[5]	GND
21	GND	+3.3V	AD[9]	AD[8]	M66EN	C/BE[0]#	GND
20	GND	AD[12]	GND	VI/O	AD[11]	AD[10]	GND
19	GND	+3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERR#	GND	+3.3V	PAR	C/BE[1]#	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERR#	GND
16	GND	DEVSEL#	GND	VI/O	STOP#	LOCK#	GND
15	GND	+3.3V	FRAME#	IRDY#	GND	TRDY#	GND
J1-12~14 Keying Area							
11	GND	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND

10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	C/BE[3]#	GND	AD[23]	GND	AD[22]	GND
8	GND	AD[26]	GND	VI/O	AD[25]	AD[24]	GND
7	GND	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND
6	GND	REQ0#	GND	+3.3V	CLK0	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	PCIRST#	GND	GNT0#	GND
4	GND	IPMB_PWR	HEALTHY#	VI/O	INTP	INTS	GND
3	GND	INTA#	INTB#	INTC#	+5V	INTD#	GND
2	GND	TCK	+5V	TMS	TDO	TDI	GND
1	GND	+5V	-12V	TRST#	+12V	+5V	GND
Pin	Z	A	B	C	D	E	F

Table 5.2 CompactPCI System Slot P2 Connector Pin assignments

Pin	Z	A	B	C	D	E	F
22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	CLK6	GND	RSV	RSV	RSV	GND
20	GND	CLK5	GND	RSV	GND	RSV	GND
19	GND	GND	GND	RSV	RSV	RSV	GND
18	GND	BRSVP2A18	BRSVP2B18	BRSVP2C18	GND	BRSVP2E18	GND
17	GND	BRSVP2A17	GND	PRST#	REQ6#	GNT6#	GND
16	GND	BRSVP2A16	BRSVP2B16	DEG#	GND	BRSVP2E16	GND
15	GND	BRSVP2A15	GND	FAL#	REQ5#	GNT5#	GND
14	GND	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND
13	GND	AD[38]	GND	VI/O	AD[37]	AD[36]	GND
12	GND	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND
11	GND	AD[45]	GND	VI/O	AD[44]	AD[43]	GND
10	GND	AD[49]	AD[48]	AD[47]	GND	AD[46]	GND
9	GND	AD[52]	GND	VI/O	AD[51]	AD[50]	GND
8	GND	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND
7	GND	AD[59]	GND	VI/O	AD[58]+	AD[57]	GND
6	GND	AD[63]	AD[62]	AD[61]	GND	AD[60]	GND
5	GND	C/BE[5]#	GND	VI/O	C/BE[4]#	PAR64	GND
4	GND	VI/O	BRSVP2B4	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	CLK4	GND	GNT3#	REQ4#	GNT4#	GND
2	GND	CLK2	CLK3	SYSEN#	GNT2#	REQ3#	GND
1	GND	CLK1	GND	REQ1#	GNT1#	REQ2#	GND

Pin	Z	A	B	C	D	E	F

Table 5.3 CompactPCI Peripheral Slot P1 Connector Pin assignments

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64#(1)	ENUM#(2)	+3.3V	+5V	GND
24	GND	AD[1]	+5V	VI/O	AD[0]	ACK64#(1)	GND
23	GND	+3.3V	AD[4]	AD[3]	+5V	AD[2]	GND
22	GND	AD[7]	GND	+3.3V	AD[6]	AD[5]	GND
21	GND	+3.3V	AD[9]	AD[8]	M66EN	C/BE[0]#	GND
20	GND	AD[12]	GND	VI/O	AD[11]	AD[10]	GND
19	GND	+3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERR#	GND	+3.3V	PAR	C/BE[1]#	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERR#	GND
16	GND	DEVSEL#	GND	VI/O	STOP#	LOCK#	GND
15	GND	+3.3V	FRAME#	IRDY#	BD_SEL#	TRDY#	GND
J1-12~14 Keying Area							
11	GND	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND
10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	C/BE[3]#	IDSEL	AD[23]	GND	AD[22]	GND
8	GND	AD[26]	GND	VI/O	AD[25]	AD[24]	GND
7	GND	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND
6	GND	REQ#	GND	+3.3V	CLK	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	PCIRST#	GND	GNT#	GND
4	GND	IPMB_PWR	HEALTHY#	VI/O	INTP	INTS	GND
3	GND	INTA#	INTB#	INTC#	+5V	INTD#	GND
2	GND	TCK	+5V	TMS	TDO	TDI	GND
1	GND	+5V	-12V	TRST#	+12V	+5V	GND
Pin	Z	A	B	C	D	E	F

Table 5.4 CompactPCI Peripheral Slot P2 Connector Pin assignments

Pin	Z	A	B	C	D	E	F
22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	RSV	RSV	RSV	RSV	RSV	GND
20	GND	RSV	RSV	RSV	GND	RSV	GND
19	GND	RSV	RSV	RSV	RSV	RSV	GND

18	GND	BRSVP2A18	BRSVP2B18	BRSVP2C18	GND	BRSVP2E18	GND
17	GND	BRSVP2A17	GND	RSV	RSV	RSV	GND
16	GND	BRSVP2A16	BRSVP2B16	RSV	GND	BRSVP2E16	GND
15	GND	BRSVP2A15	GND	RSV	RSV	RSV	GND
14	GND	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND
13	GND	AD[38]	GND	VI/O	AD[37]	AD[36]	GND
12	GND	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND
11	GND	AD[45]	GND	VI/O	AD[44]	AD[43]	GND
10	GND	AD[49]	AD[48]	AD[47]	GND	AD[46]	GND
9	GND	AD[52]	GND	VI/O	AD[51]	AD[50]	GND
8	GND	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND
7	GND	AD[59]	GND	VI/O	AD[58]+	AD[57]	GND
6	GND	AD[63]	AD[62]	AD[61]	GND	AD[60]	GND
5	GND	C/BE[5]#	GND	VI/O	C/BE[4]#	PAR64	GND
4	GND	VI/O	BRSVP2B4	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	RSV	GND	RSV	RSV	RSV	GND
2	GND	RSV	RSV	UNC	RSV	RSV	GND
1	GND	RSV	GND	RSV	RSV	RSV	GND
Pin	Z	A	B	C	D	E	F