

# GAOLIN ELECTRONICS

## CPCI 3U18SLOTS BACKPLANE

### Technology Specification

CB31180B0-100

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## CPCI 3U 18Slots Backplane Technology Specification

### DESIGN ACCORDING TO:

- CPCI Specification PICMG 2.0 R3.0 (October 1, 1999)
- CPCI Hot Swap Specification PICMG 2.1 R1.0 (August 3, 1998)
- CPCI System Management Specification PICMG 2.9 R1.0 (February 2, 2000)
- Keying of CPCI Boards and Backplanes PICMG 2.10 R1.0 (October 1, 1999)
- CPCI Power Interface Specification PICMG 2.11 R1.0 (October1, 1999)

### BUS STRUCTURES:

<b>P2</b>	<b>32bit/33MHz CPCI with Bridge</b>																	<b>Atx Connector</b>	
<b>P1</b>																			
<b>Slot</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>		<b>18</b>
<b>SPEC</b>	<b>System</b>	<b>Peripheral</b>																	

### TECHNICAL DATA:

- 18 Slots:1 System slot + 17 Peripheral Slots with bridge
- All Peripheral slots support 32bit/33Mhz CPCI bus
- Mechanical dimension: 425.72 × 128.7 × 3.8mm(width × height × thickness), support 3U card
- PCB Type: 10 layer
- Power connector: ATX Power Receptacle
- Maximum voltage drop on backplane power: <20mV
- V(I/O): +3.3V / +5V selectable
- Impedance: 65ohm ±10% for trace
- Operating temperature: -40°C ~ +85°C
- Storage temperature: -55°C ~ +85°C
- MTBF: 700,000h

**PIN ASSIGNMENT:**

See following tables.

**P1 of Slot 1**

25	GND	5V	REQ64#	ENUM#	3.3V	5V	GND
24	GND	AD1	5V	V(I/O)	AD0	ACK64#	GND
23	GND	3.3V	AD4	AD3	5V	AD2	GND
22	GND	AD7	GND	3.3V	AD6	AD5	GND
21	GND	3.3V	AD9	AD8	GND	C/BE0#	GND
20	GND	AD12	GND	V(I/O)	AD11	AD10	GND
19	GND	3.3V	AD15	AD14	GND	AD13	GND
18	GND	SERR#	GND	3.3V	PAR	C/BE1#	GND
17	GND	3.3V	IPMB_SCL	IPMB_SDA	GND	PERR#	GND
16	GND	DEVSEL#	GND	V(I/O)	STOP#	LOCK#	GND
15	GND	3.3V	FRAME#	IRDY#	GND	TRDY#	GND
14	<b>KEY AREA</b>						
13							
12							
11	GND	AD18	AD17	AD16	GND	C/BE2#	GND
10	GND	AD21	GND	3.3V	AD20	AD19	GND
9	GND	C/BE3#	GND	AD23	GND	AD22	GND
8	GND	AD26	GND	V(I/O)	AD25	AD24	GND
7	GND	AD30	AD29	AD28	GND	AD27	GND
6	GND	REQO#	GND	3.3V	CLK0	AD31	GND
5	GND	BRSVP1A5	BRSVP1B5	RST#	GND	GNT0#	GND
4	GND	IPMB_PWR	HEALTHY#	V(I/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
<b>Pin</b>	<b>Z</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>

**P1 of Slot 2~18**

25	GND	5V	REQ64#	ENUM#	3.3V	5V	GND
24	GND	AD1	5V	V(I/O)	AD0	ACK64#	GND
23	GND	3.3V	AD4	AD3	5V	AD2	GND
22	GND	AD7	GND	3.3V	AD6	AD5	GND
21	GND	3.3V	AD9	AD8	M66EN	C/BE0#	GND
20	GND	AD12	GND	V(I/O)	AD11	AD10	GND
19	GND	3.3V	AD15	AD14	GND	AD13	GND
18	GND	SERR#	GND	3.3V	PAR	C/BE1#	GND
17	GND	3.3V	IPMB_SCL	IPMB_SDA	GND	PERR#	GND
16	GND	DEVSEL#	GND	V(I/O)	STOP#	LOCK#	GND
15	GND	3.3V	FRAME#	IRDY#	BD_SEL#	TRDY#	GND
14	<b>KEY AREA</b>						
13							
12							
11	GND	AD18	AD17	AD16	GND	C/BE2#	GND
10	GND	AD21	GND	3.3V	AD20	AD19	GND
9	GND	C/BE3#	IDSEL	AD23	GND	AD22	GND
8	GND	AD26	GND	V(I/O)	AD25	AD24	GND
7	GND	AD30	AD29	AD28	GND	AD27	GND
6	GND	REQ#	GND	3.3V	CLK	AD31	GND
5	GND	BRSVPA15	BRSVP1B5	RST#	GND	GNT#	GND
4	GND	IPMB_PWR	HEALTHY#	V(I/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
<b>Pin</b>	<b>Z</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>

## 备注：中断信号

	Slot #	IDSEL	A3	B3	C3	E3
BUS#1	1 (SYS)	-	INTA#	INTB#	INTC#	INTD#
	2	AD31	INTD#	INTA#	INTB#	INTC#
	3	AD30	INTC#	INTD#	INTA#	INTB#
	4	AD29	INTB#	INTC#	INTD#	INTA#
	5	AD28	INTB#	INTC#	INTD#	INTA#
	6	AD27	INTD#	INTA#	INTB#	INTC#
	7	AD26	INTC#	INTD#	INTA#	INTB#
BUS#2	8	AD25	INTA#	INTB#	INTC#	INTD#
	9	SAD31	INTD#	INTA#	INTB#	INTC#
	10	SAD30	INTC#	INTD#	INTA#	INTB#
	11	SAD29	INTB#	INTC#	INTD#	INTA#
	12	SAD28	INTB#	INTC#	INTD#	INTA#
	13	SAD27	INTD#	INTA#	INTB#	INTC#
	14	SAD26	INTC#	INTD#	INTA#	INTB#
BUS#3	15	SAD25	INTA#	INTB#	INTC#	INTD#
	16	TAD31	INTD#	INTA#	INTB#	INTC#
	17	TAD30	INTC#	INTD#	INTA#	INTB#
	18	TAD29	INTB#	INTC#	INTD#	INTA#

**P2 of Slot 1**

22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	CLK6	GND				GND
20	GND	CLK5	GND				GND
19	GND	GND	GND	SMB_SD	SMB_SC	SMB_AL	GND
18	GND						GND
17	GND			PRST#	REQ6#	GNT6#	GND
16	GND			DEG#			GND
15	GND			FAL#	REQ5#	GNT5#	GND
14	GND						GND
13	GND						GND
12	GND						GND
11	GND						GND
10	GND						GND
9	GND						GND
8	GND						GND
7	GND						GND
6	GND						GND
5	GND						GND
4	GND	V(I/O)					GND
3	GND	CLK4	GND	GNT3#	REQ4#	GNT4#	GND
2	GND	CLK2	CLK3	GND	GNT2#	REQ3#	GND
1	GND	CLK1	GND	REQ1#	GNT1#	REQ2#	GND
<b>Pin</b>	<b>Z</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>

**P2 of Slot 8, 15**

22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	CLK6	GND				GND
20	GND	CLK5	GND				GND
19	GND	GND	GND				GND
18	GND						GND
17	GND				REQ6#	GNT6#	GND
16	GND				GND		GND
15	GND				REQ5#	GNT5#	GND
14	GND						GND
13	GND						GND
12	GND						GND
11	GND						GND
10	GND						GND
9	GND						GND
8	GND						GND
7	GND						GND
6	GND						GND
5	GND						GND
4	GND	VI/O					GND
3	GND	CLK4	GND	GNT3#	REQ4#	GNT4#	GND
2	GND	CLK2	CLK3		GNT2#	REQ3#	GND
1	GND	CLK1	GND	REQ1#	GNT1#	REQ2#	GND
<b>Pin</b>	<b>Z</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>

**P2 of Slot 2~18**

22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND						GND
20	GND						GND
19	GND						GND
18	GND						GND
17	GND						GND
16	GND						GND
15	GND						GND
14	GND						GND
13	GND						GND
12	GND						GND
11	GND						GND
10	GND						GND
9	GND						GND
8	GND						GND
7	GND						GND
6	GND						GND
5	GND						GND
4	GND						GND
3	GND						GND
2	GND						GND
1	GND						GND
<b>Pin</b>	<b>Z</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>



**Optional VI/O Taps (JP1&JP2 ):**

设置 CPCI 总线的 VI/O 电压: +3.3V / +5V selectable, 出厂默认+5V.

**Optional Power Taps :**

The optional power taps are for GND, 5V, 3.3V, +12V.

**PWR\_ON:**

When using ATX power supply, this connector could be used to turn the power supply on if shorted the header of it.

**RESET:**

This connector can reset the system board by shorting the headers of it.

**IPMB:**

System Management.

Pin	Signal	Pin	Signal
1	IPMB_PWR	2	SMB_ALERT
3	IPMB_SDA	4	SMB_SDA
5	IPMB_SCL	6	SMB_SCL
7	GND	8	GND
9	GND	10	GND

**Volt:**

All the alarm signals and various power supply are connected to it. It is used to connect external monitor module.

Pin	Signal	Pin	Signal
1	-12V	2	PRST#
3	+12V	4	DEG#
5	3.3V	6	FAL#
7	5V	8	GND
9	INH#	10	GND

**XP1:** 背板供电接口.

<b>Pin</b>	<b>Signal</b>	<b>Pin</b>	<b>Signal</b>
<b>1</b>	+3.3	<b>11</b>	+3.3
<b>2</b>	+3.3	<b>12</b>	-12V
<b>3</b>	GND	<b>13</b>	GND
<b>4</b>	+5V	<b>14</b>	INH#
<b>5</b>	GND	<b>15</b>	GND
<b>6</b>	+5V	<b>16</b>	GND
<b>7</b>	GND	<b>17</b>	GND
<b>8</b>	FAL#	<b>18</b>	
<b>9</b>	DEG#	<b>19</b>	+5V
<b>10</b>	+12V	<b>20</b>	+5V
<b>21</b>	+12V	<b>23</b>	+5V
<b>22</b>	+3.3V	<b>24</b>	GND

**BACKPLANE TOP VIEW**

