

# GAOLIN ELECTRONICS

## 3U12SLOTS CPCI BACKPLANE

### Technology Specification

CB31120B1-100

Issue Date: 2013-05-18

## CPCI 3U 12Slots 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 (October 1, 1999)

### BUS STRUCTURES:

P2	32Bit/33MHz CPCI withBridge												ATX Connector	
P1														
Slot	1	2	3	4	5	BM	6	7	8	9	10	11		12
SPEC	Peripheral											System		

### TECHNICAL DATA:

- 12 Slots: 1 System slot and 11 Peripheral Slots with PCI bridge ;
- All Peripheral slots support 32Bit/33MHz CPCI bus;
- Mechanical dimension: 274.36 × 128.7 × 3.8mm (width × height × thickness), support 3U card;
- PCB Type: 10 layer;
- Power connector: One ATX Power;
- 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 12**

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	BRSVPA15	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 1~11**

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#	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>

**P2 of Slot 12**

22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	CLK6	GND				GND
20	GND	CLK5	GND				GND
19	GND	GND	GND	SMB_SDA	SMB_SCL	SMB_ALERT	GND
18	GND						GND
17	GND			PRST#	REQ6#	GNT6#	GND
16	GND			DEG#	GND		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	VI/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 1~11**

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>

备注：中断信号

	Slot #	IDSEL	A3	B3	C3	E3
BUS#2	1	SAD27	INTA#	INTB#	INTC#	INTD#
	2	SAD28	INTB#	INTC#	INTD#	INTA#
	3	SAD29	INTC#	INTD#	INTA#	INTB#
	4	SAD30	INTD#	INTA#	INTB#	INTC#
	5	SAD31	INTA#	INTB#	INTC#	INTD#

BUS#1	B	AD26	INTB#	INTC#	INTD#	INTA#
	6	AD26	INTC#	INTD#	INTA#	INTB#
	7	AD27	INTD#	INTA#	INTB#	INTC#
	8	AD28	INTA#	INTB#	INTC#	INTD#
	19	AD29	INTB#	INTC#	INTD#	INTA#
	10	AD30	INTC#	INTD#	INTA#	INTB#
	11	AD31	INTD#	INTA#	INTB#	INTC#
	12(SYS)	GND	INTA#	INTB#	INTC#	INTD#

## Backplane Connector Description

### Optional Power Taps :

The optional power taps are for +12V, -12V, +5V, +3V, GND.

### VI/O Taps (JP1&JP2):

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

### PWR\_ON: (开关插座, 出厂默认短接)

Pin	Signal	pin	Signal
1	INH#	2	GND

### LED: (指示灯插座)

Pin	Signal	pin	Signal
1	+12V	2	GND

### RESET: (复位插座)

Pin	Signal	pin	Signal
1	PRST#	2	GND

### FAL:

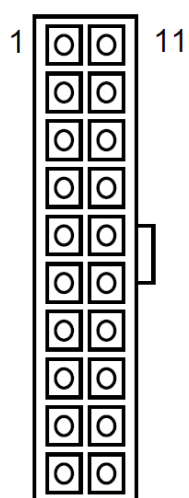
Pin	Signal	pin	Signal
1	FAL#	2	GND

### Volt: (电压插座)

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

**IPMB:**

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

**XP: ATX Power Connector**

Pin	Signal	Pin	Signal
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GND	13	GND
4	+5V	14	PS_ON_L
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	POWER GOOD	18	-5V
9	5V STB	19	+5V
10	+12V	20	+5V



正面视图

