GAOLIN ELECTRONICS

CPCI/PXI 3U14SLOTS BACKPLANE

Technology Specification

PB32141B0-100

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3U14Slots CPCI/PXI 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)
- Packet Switching Backplane Specification PICMG 2.16 R1.0 (September5,2001)
- PCI extensions for Instrumentation Hardware Specification R2.2 (September 22,2004)

BUS STRUCTURES:

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TECHNICAL DATA:

- 14 Slots:1 System slot + 13 Peripheral Slots with bridge
- All Peripheral slots support 32bit/33Mhz CPCI bus
- Mechanical dimension: 425.72×128.7×3.8(width *height * thickness), support 3U card
- PCB Type: 10 layer
- Power connector: Two CPCI Power Receptacle for Redundant PSU
- Maximum voltage drop on backplane power: <20mV
- V(I/O): +3.3V / +5V selectable
- Impedance: 65ohm ±10% for CPCI trace; 75ohm ±10 % for PXI local bus trace
- Operating temperature: -25℃ ~ +85℃
- Storage temperature: -40℃ ~ +85℃
- 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	KEY AREA						
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
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

P1 of Slot 2~8

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	KEY AREA						
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
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

P2 of Slot 1

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	SMB_SDA	SMB_SCL	SMB_ALERT	GND
18	GND	**PXI_TRIG3**	**PXI_TRIG4**	**PXI_TRIG5**	GND	**PXI_TRIG6**	GND
17	GND	**PXI_TRIG2**	GND	PRST#	REQ6#	GNT6#	GND
16	GND	**PXI_TRIG1**	**PXI_TRIG0**	DEG#	GND	**PXI_TRIG7**	GND
15	GND	**PXI_BRSVA15**	GND	FAL#	REQ5#	GNT5#	GND
14	GND	BP(I/O)	BP(I/O)	BP(I/O)	GND	BP(I/O)	GND
13	GND	BP(I/O)	GND	V(I/O)	BP(I/O)	BP(I/O)	GND
12	GND	BP(I/O)	BP(I/O)	BP(I/O)	GND	BP(I/O)	GND
11	GND	BP(I/O)	GND	V(I/O)	BP(I/O)	BP(I/O)	GND
10	GND	BP(I/O)	BP(I/O)	BP(I/O)	GND	BP(I/O)	GND
9	GND	BP(I/O)	GND	V(I/O)	BP(I/O)	BP(I/O)	GND
8	GND	BP(I/O)	BP(I/O)	BP(I/O)	GND	BP(I/O)	GND
7	GND	BP(I/O)	GND	V(I/O)	BP(I/O)	BP(I/O)	GND
6	GND	BP(I/O)	BP(I/O)	BP(I/O)	GND	BP(I/O)	GND
5	GND	BP(I/O)	NC	V(I/O)	BP(I/O)	BP(I/O)	GND
4	GND	V(I/O)	**PXI_BRSVB4**	BP(I/O)	GND	BP(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
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

P2 of Slot 2（Trigger Slot）

22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	**PXI_LBR0**		**PXI_LBR1**	**PXI_LBR2**	**PXI_LBR3**	GND
20	GND	**PXI_LBR4**	**PXI_LBR5**	**PXI_STAR0**	GND	**PXI_STAR1**	GND
19	GND	**PXI_STAR2**		**PXI_STAR3**	**PXI_STAR4**	**PXI_STAR5**	GND
18	GND	**PXI_TRIG3**	**PXI_TRIG4**	**PXI_TRIG5**	GND	**PXI_TRIG6**	GND
17	GND	**PXI_TRIG2**	GND		**PXI_CLK10_IN**	**PXI_CLK10**	GND
16	GND	**PXI_TRIG1**	**PXI_TRIG0**		GND	**PXI_TRIG7**	GND
15	GND	**PXI_BRSVA15**	GND		**PXI_STAR6**	**PXI_LBR6**	GND
14	GND				GND		GND
13	GND		GND	V(I/O)			GND
12	GND				GND		GND
11	GND		GND	V(I/O)			GND
10	GND				GND		GND
9	GND		GND	V(I/O)			GND
8	GND				GND		GND
7	GND		GND	V(I/O)			GND
6	GND				GND		GND
5	GND		GND	V(I/O)			GND
4	GND	V(I/O)	**PXI_BRSVB4**		GND		GND
3	GND	**PXI_LBR7**	GND	**PXI_LBR8**	**PXI_LBR9**	**PXI_LBR10**	GND
2	GND	**PXI_LBR11**	**PXI_LBR12**		**PXI_STAR7**	**PXI_STAR8**	GND
1	GND	**PXI_STAR9**	GND	**PXI_STAR10**	**PXI_STAR11**	**PXI_STAR12**	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

P2 of Slot 3~14

22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	**PXI_LBR0**		**PXI_LBR1**	**PXI_LBR2**	**PXI_LBR3**	GND
20	GND	**PXI_LBR4**	**PXI_LBR5**	**PXI_LBL0**	GND	**PXI_LBL1**	GND
19	GND	**PXI_LBL2**		**PXI_LBL3**	**PXI_LBL4**	**PXI_LBL5**	GND
18	GND	**PXI_TRIG3**	**PXI_TRIG4**	**PXI_TRIG5**	GND	**PXI_TRIG6**	GND
17	GND	**PXI_TRIG2**	GND		**PXI_STAR**	**PXI_CLK10**	GND
16	GND	**PXI_TRIG1**	**PXI_TRIG0**		GND	**PXI_TRIG7**	GND
15	GND	**PXI_BRSVA15**	GND		**PXI_LBL6**	**PXI_LBR6**	GND
14	GND				GND		GND
13	GND		GND	V(I/O)			GND
12	GND				GND		GND
11	GND		GND	V(I/O)			GND
10	GND				GND		GND
9	GND		GND	V(I/O)			GND
8	GND				GND		GND
7	GND		GND	V(I/O)			GND
6	GND				GND		GND
5	GND		GND	V(I/O)			GND
4	GND	V(I/O)	**PXI_BRSVB4**		GND		GND
3	GND	**PXI_LBR7**	GND	**PXI_LBR8**	**PXI_LBR9**	**PXI_LBR10**	GND
2	GND	**PXI_LBR11**	**PXI_LBR12**		**PXI_LBL7**	**PXI_LBL8**	GND
1	GND	**PXI_LBL9**	GND	**PXI_LBL10**	**PXI_LBL11**	**PXI_LBL12**	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

Backplane Connector Description

Optional Power Taps :

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

VI/O Taps (JP1&JP2):

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

POW_ON :

输出开关插座。

RESET:

系统硬件复位插座。

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:

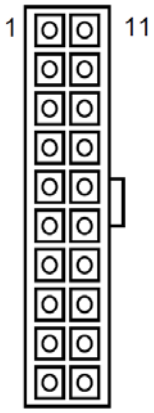
All the alarm signals and various power supply are connected to it. It is used to connect external monitor module.

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

INPUT: 交流输入端

Pin	Signal	Pin	Signal	Pin	Signal
1	**ACL/-DC**	**2**	**ACN/+DC**	**3**	**CGND**

POWER_1&POWER_2:



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

注意:

第 7~10 槽位置背部 J1，J2 位置连接器被桥接模块占用，所以不支持 RI/O，此产品最多支持 10 个 RI/O。

Top View Of the Backplane：