

GAOLIN ELECTRONICS

CPCI+ PSB 6U8SLOTS BACKPLANE

Technology Specification

CB6108110-310

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CPCI/PSB 6U8SLOT 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)
- CPCI Packet Switching Backplane Specification PICMG 2.16 R1.0 (September 5, 2001)

BUS STRUCTURES:

Three PCIH47 PSU Receptacle								
P5	I/O							PSB
P4	I/O							
P3	PSB 10/100/1000M							
P2	64bit/33MHz CPCI							
P1								
Slot	1	2	3	4	5	6	7	8
SPEC	System	Peripheral PSB Node						PSB

TECHNICAL DATA:

- 8 Slot: 1 System Slot +7 Peripheral slots
- Mechanical dimension: 395.40 × 171.72 × 4.0mm (width × height × thickness), support 6U card.
- PCB Type: 10 layer,
- Power connector: Three PCIH47 Power Receptacle
- Maximum voltage drop on backplane power: <20mV
- V(I/O): +3.3V / +5V selectable
- Impedance: 65ohm ±10% for PCI Bus trace, 100ohm ±10% for differential PSB signal.
- Operating temperature: -40°C ~ +85°C
- Storage temperature: -55°C ~ +85°C
- MTBF: 700,000h

PIN ASSIGNMENT:

See following tables.

P1 of Slot1

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#	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	REQ#	GND	3.3V	CLK	AD31	GND
5	GND	BRSVP1A5	BRSVP1B5	PCI_RST#	GND	GNT#	GND
4	GND	IPMB_PWR	HEALTHY1#	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	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	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	REQ0#	GND	3.3V	CLK0	AD31	GND
5	GND	BRSVP1A5	BRSVP1B5	PCI_RST#	GND	GNT0#	GND
4	GND	IPMB_PWR	HEALTHY1#	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	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	AD35	AD34	AD33	GND	AD32	GND
13	GND	AD38	GND	V(I/O)	AD37	AD36	GND
12	GND	AD42	AD41	AD40	GND	AD39	GND
11	GND	AD45	GND	V(I/O)	AD44	AD43	GND
10	GND	AD49	AD48	AD47	GND	AD46	GND
9	GND	AD52	GND	V(I/O)	AD51	AD50	GND
8	GND	AD56	AD55	AD54	GND	AD53	GND
7	GND	AD59	GND	V(I/O)	AD58	AD57	GND
6	GND	AD63	AD62	AD61	GND	AD60	GND
5	GND	C/BE5#	GND	V(I/O)	C/BE4#	PAR64	GND
4	GND	V(I/O)	BRSVP2B4	C/BE7#	GND	C/BE6#	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 2~8

22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND						GND
20	GND				GND		GND
19	GND						GND
18	GND	BRSVP2A18	BRSVP2B18	BRSVP2C18	GND	BRSVP2E18	GND
17	GND	BRSVP2A17	GND				GND
16	GND	BRSVP2A16	BRSVP2B16		GND	BRSVP2E16	GND
15	GND	BRSVP2A15	GND				GND
14	GND	AD35	AD34	AD33	GND	AD32	GND
13	GND	AD38	GND	V(I/O)	AD3	AD36	GND
12	GND	AD42	AD41	AD40	GND	AD39	GND
11	GND	AD45	GND	V(I/O)	AD4	AD43	GND
10	GND	AD49	AD48	AD47	GND	AD46	GND
9	GND	AD52	GND	V(I/O)	AD5	AD50	GND
8	GND	AD56	AD55	AD54	GND	AD53	GND
7	GND	AD59	GND	V(I/O)	AD5	AD57	GND
6	GND	AD63	AD62	AD61	GND	AD60	GND
5	GND	C/BE5#	GND	V(I/O)	C/BE	PAR64	GND
4	GND	V(I/O)	BRSVP2B4	C/BE7#	GND	C/BE6#	GND
3	GND		GND				GND
2	GND						GND
1	GND		GND				GND
Pin	Z	A	B	C	D	E	F

P3 of Slot 1~7

19	GND						GND
18	GND	aLPn_DB+	aLPn_DB-	GND	aLPn_DD+	aLPn_DD-	GND
17	GND	aLPn_DA+	aLPn_DA-	GND	aLPn_DC+	aLPn_DC-	GND
16	GND	bLPn_DB+	bLPn_DB-	GND	bLPn_DD+	bLPn_DD-	GND
15	GND	bLPn_DA+	bLPn_DA-	GND	bLPn_DC+	bLPn_DC-	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
Pin	Z	A	B	C	D	E	F

Note:

N=1~7, 与槽号对应

P3 of Slot 8

19	GND	SGA4	SGA3	SGA2	SGA1	SGA0	GND
18	GND			GND			GND
17	GND			GND			GND
16	GND	ALP4_DA+	ALP4_DA-	GND	ALP4_DC+	ALP4_DC-	GND
15	GND	ALP4_DB+	ALP4_DB-	GND	ALP4_DD+	ALP4_DD-	GND
14	GND	BLP4_DA+	BLP4_DA-	GND	BLP4_DC+	BLP4_DC-	GND
13	GND	BLP4_DB+	BLP4_DB-	GND	BLP4_DD+	BLP4_DD-	GND
12	GND	ALP3_DA+	ALP3_DA-	GND	ALP3_DC+	ALP3_DC-	GND
11	GND	ALP3_DB+	ALP3_DB-	GND	ALP3_DD+	ALP3_DD-	GND
10	GND	BLP3_DA+	BLP3_DA-	GND	BLP3_DC+	BLP3_DC-	GND
9	GND	BLP3_DB+	BLP3_DB-	GND	BLP3_DD+	BLP3_DD-	GND
8	GND	ALP2_DA+	ALP2_DA-	GND	ALP2_DC+	ALP2_DC-	GND
7	GND	ALP2_DB+	ALP2_DB-	GND	ALP2_DD+	ALP2_DD-	GND
6	GND	BLP2_DA+	BLP2_DA-	GND	BLP2_DC+	BLP2_DC-	GND
5	GND	BLP2_DB+	BLP2_DB-	GND	BLP2_DD+	BLP2_DD-	GND
4	GND	ALP1_DA+	ALP1_DA-	GND	ALP1_DC+	ALP1_DC-	GND
3	GND	ALP1_DB+	ALP1_DB-	GND	ALP1_DD+	ALP1_DD-	GND
2	GND	BLP1_DA+	BLP1_DA-	GND	BLP1_DC+	BLP1_DC-	GND
1	GND	BLP1_DB+	BLP1_DB-	GND	BLP1_DD+	BLP1_DD-	GND
Pin	Z	A	B	C	D	E	F

P4 of Slot1~8

25	GND						GND
24	GND						GND
23	GND						GND
22	GND						GND
21	GND						GND
20	GND						GND
19	GND						GND
18	GND						GND
17	GND						GND
16	GND						GND
15	GND						GND
14	KEY AREA						
13							
12							
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
Pin	Z	A	B	C	D	E	F

P5 of Slot 1~7

22	GND						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
Pin	Z	A	B	C	D	E	F

P5 of Slot 8

22	GND						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	ALP7_DA+	ALP7_DA-	GND	ALP7_DC+	ALP7_DC-	GND
11	GND	ALP7_DB+	ALP7_DB-	GND	ALP7_DD+	ALP7_DD-	GND
10	GND	BLP7_DA+	BLP7_DA-	GND	BLP7_DC+	BLP7_DC-	GND
9	GND	BLP7_DB+	BLP7_DB-	GND	BLP7_DD+	BLP7_DD-	GND
8	GND	ALP6_DA+	ALP6_DA-	GND	ALP6_DC+	ALP6_DC-	GND
7	GND	ALP6_DB+	ALP6_DB-	GND	ALP6_DD+	ALP6_DD-	GND
6	GND	BLP6_DA+	BLP6_DA-	GND	BLP6_DC+	BLP6_DC-	GND
5	GND	BLP6_DB+	BLP6_DB-	GND	BLP6_DD+	BLP6_DD-	GND
4	GND	ALP5_DA+	ALP5_DA-	GND	ALP5_DC+	ALP5_DC-	GND
3	GND	ALP5_DB+	ALP5_DB-	GND	ALP5_DD+	ALP5_DD-	GND
2	GND	BLP5_DA+	BLP5_DA-	GND	BLP5_DC+	BLP5_DC-	GND
1	GND	BLP5_DB+	BLP5_DB-	GND	BLP5_DD+	BLP5_DD-	GND
Pin	Z	A	B	C	D	E	F

Backplane Connector Description

Optional VI/O Taps (JP1、JP2):

The optional power taps are for +5V, 3.3V。

PWR_ON:

This connector is used for ATX power supply by shorting it with cap.

RESET:

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

JP3: Shelf Address Setup

Pin	Signal	Pin	Signal
1	SGA0	2	GND
3	SGA1	4	GND
5	SGA2	6	GND
7	SGA3	8	GND
9	SGA4	10	GND

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

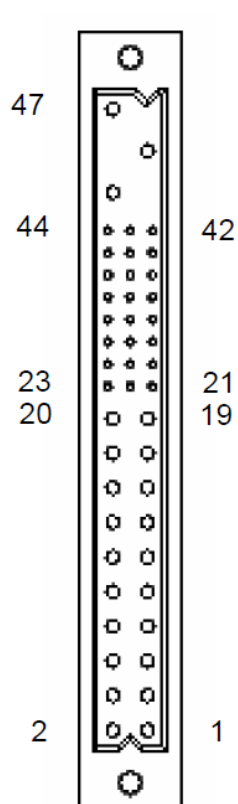
Volt:

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

INPUT1&INPUT2: 输入端

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

POWER_1& 2& 3: Modular Power 47P Connector


Pin	Signal	Pin	Signal
47	ACL/-DC IN	31	GA2
46	ACN/+DC IN	30	V1 SENSE
45	CGND	29	V1ADJ
44	V3 SHARE	28	GA1
43	IPMB_PWR	27	EN#
42	+FAL#	26	RESERVED
41	V2 SHARE	25	GA0
40	IPMB_SDA	24	RTN
39	INH#	23	RESERVED
38	DEG#	22	RTN
37	IPMB_SCL	21	V4
36	V3 SENSE	20	V3
35	V1 SHARE	19	RTN
34	S RTN	13-18	V2
33	V2 SENSE	5-12	RTN
32	V2ADJ	1-4	V1

Bacplane Top View

