

GAOLIN ELECTRONICS

CPCI/ PSB 6U4SLOTS BACKPLANE

Technology Specification

CB6104110-430

Issue Date: 2013-05-18

CPCI /PSB 6U4Slots 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:

DUAL PCIH47 PSU Receptacle				
P5	I/O			
P4	I/O			
P3	PSB 10/100/1000M			
P2	64bit/66MHz CPCI			
P1				
Slot	1	2	3	4
SPEC	System	Peripheral PSB Node		Peripheral PSB Fabric

TECHNICAL DATA:

- 4 Slots; 1 system slot + 3 Peripheral Slots;
- Mechanical dimension: 395.35×80.28×4.0mm (width×height×thickness), support 6U card.
- PCB Type: 10 layers
- 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 trace, 100ohm ±10% for differential PSB signal.
- Packets switching: 10M/100M/1000M bps
- 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	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#	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	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 2~4

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#	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	BRSVP1A5	BRSVP1B5	PCI_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				GND
20	GND	CLK5	GND		GND		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	SYSEN#	GNT2#	REQ3#	GND
1	GND	CLK1	GND	REQ1#	GNT1#	REQ2#	GND
Pin	Z	A	B	C	D	E	F

P2 of Slot 2~4

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)	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		GND				GND
2	GND						GND
1	GND		GND				GND
Pin	Z	A	B	C	D	E	F

P3 of Slot 1 ~ 3

19	GND	GND	GND	GND	GND	GND	GND
18	GND	ALPn1_DB+	ALPn1_DB	GND	ALPn2_DB+	ALPn2_DB-	GND
17	GND	ALPn1_DA+	ALPn1_D	GND	ALPn2_DA+	ALPn2_DA-	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

Note:**Slot n: n=1, 2, 3**

P3 of Slot 4

19	GND	GND	GND	GND	GND	GND	GND
18	GND			GND			GND
17	GND			GND			GND
16	GND			GND			GND
15	GND			GND			GND
14	GND			GND			GND
13	GND			GND			GND
12	GND			GND			GND
11	GND			GND			GND
10	GND			GND			GND
9	GND			GND			GND
8	GND			GND			GND
7	GND			GND			GND
6	GND	ALP31_DA+	ALP31_DA-	GND	ALP32_DA+	ALP32_DA-	GND
5	GND	ALP31_DB+	ALP31_DB-	GND	ALP32_DB+	ALP32_DB-	GND
4	GND	ALP21_DA+	ALP21_DA-	GND	ALP22_DA+	ALP22_DA-	GND
3	GND	ALP21_DB+	ALP21_DB-	GND	ALP22_DB+	ALP22_DB-	GND
2	GND	ALP11_DA+	ALP11_DA-	GND	ALP12_DA+	ALP12_DA-	GND
1	GND	ALP11_DB+	ALP11_DB-	GND	ALP12_DB+	ALP12_DB-	GND
Pin	Z	A	B	C	D	E	F

P4 of Slot 1 ~ 4

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 ~ 4

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

Additional connector:**JP1:**

用于 VI/O 设置，可根据需要将 VI/O 设置为+5V 或 3.3V。

JP2:

PCI 总线 66M/33M 选择。断开为 66M，短接为 33M。

RESET:

系统板复位。可连接外部复位微动按钮，给系统板复位。

PWR_ON:

可作前置开关使用。

M3 接线柱 (+12V, GND, +5V, +3.3V):

+12V 与 GND 用于风扇供电，其他预留。

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

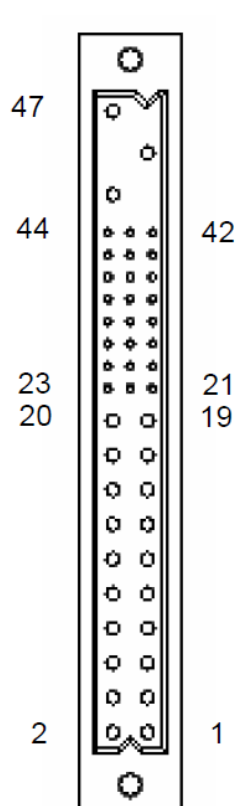
Volt:

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: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

TOP VIEW

