

# GAOLIN ELECTRONICS

## CPCI/H.110 6U8SLOTS BACKPLANE

### Technology Specification

CB6108011-307

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## CPCI/H.110 6U Slots Backplane Technology Specification

### DESIGN ACCORDING TO:

- CPCI Computer Telephony Specification PICMG 2.5 R1.0
- 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:

P5	H.110							I/O	DUAL ATX PSU Receptacle
P4	H.110							I/O	
P3	I/O								
P2	64bit/33MHz CPCI								
P1									
Slot	1	2	3	4	5	6	7	8	
SPEC	Peripheral Slots + H.110							System	

### TECHNICAL DATA:

- 8 Slot: 1 System Slot +7 Peripheral slots
- Mechanical dimension: 262.05×171.72×3.8mm (width×height×thickness), support 6U card;
- PCB Type: 10 layers
- Power connector: Two ATX 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 ±15 ohm for differential signal trace
- Operating temperature: -40°C ~ +85°C
- Storage temperature: -55°C ~ +85°C
- MTBF: 700,000h

**PIN ASSIGNMENT:**

See following tables.

**P1 of Slot 1~7**

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	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
<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 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#	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	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
<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 1~7**

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
<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**

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
<b>Pin</b>	<b>Z</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>

**P3 of Slot 1~8**

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>

**P4 of Slot 1~7**

25	NP	SGA4	SGA3	SGA2	SGA1	SGA0	FG
24	NP	GA4	GA3	GA2	GA1	GA0	FG
23	NP	+12V	/CT_Reset	/CT_EN	-12V	CT_MC	FG
22	NP	PFS0#	RSVD	RSVD	RSVD	RSVD	FG
21	NP	-SELVbat	PFS1#	RSVD	RSVD	SELVbatRtn	FG
20	NP	NP	NP	NP	NP	NP	NP
19	NP	NP	NP	NP	NP	NP	NP
18	NP	VRG	NP	NP	NP	VRGRtn	NP
17	NP	NP	NP	NP	NP	NP	NP
16	NP	NP	NP	NP	NP	NP	NP
15	NP	-Vbat	NP	NP	NP	VbatRtn	NP
14	<b>KEY AREA</b>						
13							
12							
11	NP	CT_D29	CT_D30	CT_D31	V(I/O)	/CT_FRAME_A	GND
10	NP	CT_D27	+3.3V	CT_D28	+5V	/CT_FRAME_B	GND
9	NP	CT_D24	CT_D25	CT_D26	GND	/FR_COMP	GND
8	NP	CT_D21	CT_D22	CT_D23	+5V	CT_C8_A	GND
7	NP	CT_D19	+5V	CT_D20	GND	CT_C8_B	GND
6	NP	CT_D16	CT_D17	CT_D18	GND	CT_NETREF_1	GND
5	NP	CT_D13	CT_D14	CT_D15	+3.3V	CT_NETREF_2	GND
4	NP	CT_D11	+5V	CT_D12	+3.3V	SCLK	GND
3	NP	CT_D8	CT_D9	CT_D10	GND	SCLK-D	GND
2	NP	CT_D4	CT_D5	CT_D6	CT_D7	GND	GND
1	NP	CT_D0	+3.3V	CT_D1	CT_D2	CT_D3	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>



**P4 of Slot 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	<b>KEY AREA</b>						
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
<b>Pin</b>	<b>Z</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>

**P5 of Slot 1~7**

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

**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						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>

## Backplane Connector Description

### Optional power taps:

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

### JP1、JP2:

The optional power taps are for +5V, 3.3V, +5V is default.

### JP3:

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: ATX 电源使能。短接此两脚, 可使 ATX 电源正常输出。

### System Monitor (JP4):

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

### System Management(JP5):

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

### JP6:

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

**Shelf address setting (JP7):**

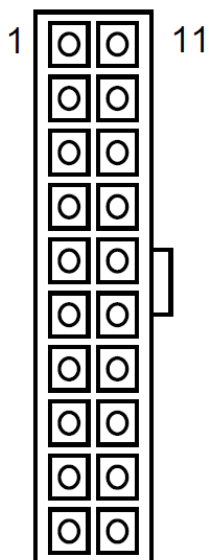
Pin	Signal	Pin	Signal
9	SGA4	10	GND
7	SGA3	8	GND
5	SGA2	6	GND
3	SGA1	4	GND
1	SGA0	2	GND

**JP8:**

Pin	Signal	Pin	Signal
1	PFS0#	2	FAL#

**JP9:**

Pin	Signal	pin	Signal
1	PFS1#	2	FAL#

**XP1&XP2: 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

### BACKPLANE TOP VIEW

