

# GAOLIN ELECTRONICS

## CPCI 3U4SLOTS BACKPLANE

### Technology Specification

CB3104311-200

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### 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/66MHz CPCI |   |   |        |
| P1   |                  |   |   |        |
| Slot | 1                | 2 | 3 | 4      |
| SPEC | Peripheral       |   |   | System |

### TECHNICAL DATA:

- 1 Slots: 1 System Slot +3 Peripheral slots
- All Peripheral slots support 32bit/66Mhz CPCI bus
- Mechanical dimension: 80.28 × 128.7 × 3.8mm (width × height × thickness), support 3U card.
- PCB Type: 10 layers
- Power connector: Tapped terminal
- 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 Slot4 (System Slot)**

|            |                 |          |           |          |          |          |          |
|------------|-----------------|----------|-----------|----------|----------|----------|----------|
| 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> |

**P1 of Slot 1~3(Peripheral Slots)**

|            |                 |          |           |          |          |          |          |
|------------|-----------------|----------|-----------|----------|----------|----------|----------|
| 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> |

**P2 of Slot4 (System Slot)**

|            |          |          |          |          |          |          |          |
|------------|----------|----------|----------|----------|----------|----------|----------|
| 22         | GND      | GA4      | GA3      | GA2      | GA1      | GA0      | GND      |
| 21         | GND      | CLK6     | GND      |          |          |          | GND      |
| 20         | GND      | CLK5     | GND      |          |          |          | GND      |
| 19         | GND      | GND      | GND      |          |          |          | 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 1~3 (Peripheral Slots)**

|            |          |          |          |          |          |          |          |
|------------|----------|----------|----------|----------|----------|----------|----------|
| 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> |

## Backplane Connector Description

### Optional Power Taps:

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

### Optional VI/O Taps (JP1):

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

### PWR\_ON:

When using ATX power supply, this connector could be used to turn the power supply on if shorted the header of it.

### RESET:

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

### BACKPLANE TOP VIEW

