MIC-3466

6U 14-slot backplane with CT bus and
rear I/O for *CompactPCI™*

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5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Packing List

Before installation, ensure that the following materials have been received:

* The MIC-3466 backplane

* This user's manual

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Technical Support and Sales Assistance

If you have any technical questions about the MIC-3466 or any other Advantech products, please visit our support website at:

• **http://www.advantech.com.tw/support**

For more information about Advantech's products and sales information, please visit:

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CHAPTER **1**

Introduction

1.1 General Information

The MIC-3466 is a 6U-sized CT backplane that provides fourteen CompactPCI slots. One slot is assigned to the CPU board and thirteen slots to the peripheral boards. The MIC-3466 supports front and rear I/O wiring, providing simplified system cabling. The backplane also complies with PICMG 2.5 Computer Telephony Specification, providing H.110 CT bus on the P4 connectors.

The MIC-3466 provides a 6-pin connector for connecting up to 4 cooling fans. A 20-pin connector can be used for connecting an external alarm module (MIC-3920/MIC-3921) to detect system internal conditions, such as bus voltages, fan speed, and temperatures.

In order to provide users with a flexible system configuration, the MIC-3466 includes three standard ATX power connectors to accpet up to three ATX power supplies.

The MIC-3466 complies with PICMG 2.1 Hot-Swap Specification, providing full hot-swapping capability. Users can build a hot-swap system using hot-swap plug-in boards and software.

1.2 Features

- Front and rear I/O supports
- H.110 CT bus compliant (PICMG 2.5)
- Fourteen 32-bit CompactPCI slots (64-bit upon request)
- Complies with PICMG 2.1 Hot-Swap Specification
- Accepts up to three ATX power supplies
- Alarm module interface
- Fan interface

1.3 Specification

- 14 CompactPCI slots (one system slot and 13 peripheral slots)

- Front and rear I/O supports

- Bus width: 32-bit (64-bit upon request)

- 10-layer PCB, 3.0 mm thick

- Separate power and ground planes

- Power connectors: Three ATX power connectors for connecting standard ATX power supplies

- 20-pin connector for MIC-3920/MIC-3921 alarm board signals

- Complies with CompactPCI Specification PICMG 2.0, Ver.2.1

- Complies with CompactPCI Hot Swap Specification PICMG 2.1, Ver.1.0

- Complies with Computer Telephony Specification PICMG 2.5, Ver.1.0

- V I/O Voltage: 3.3 V or 5 V, jumper selectable

- Logic Ground and Chassis Ground can be isolated or common

- Dimensions: 325.2 x 262.2 mm

- Operating temperature: -40 ~ 80°C (-40 ~ 176°F)

CHAPTER **2**

Hardware Configuration

2.1 Slot Assignments

The CompactPCI specification defines slot numbering seperating for physical and logical slots. Each slot has a physical number and a logical number (refer to the CompactPCI specification version 2.0 R2.1 for further information on slot assignments). The physical numbers are printed on the backplane, enclosed in circles or triangles, below each slot. Slot 8, marked by a triangle, is the system slot and can only be used by a CPU board. The other slots (slot 1~7, and 9~14) are peripheral slots and can be used by peripheral cards.

The logical number of each slot is defined according to the IDSEL signal and the associated address used to select the slot. Table 2-1 shows the system slot and peripheral slot relationships for the primary bus segment and Table 2-2 shows the system slot and peripheral slot relationships for the secondary bus segment on the MIC-3466.

Connector P1 on the system slot (slot 8) is a keyed connector providing 32-bit CompactPCI bus between the system slot and the peripheral slots 1~7. Connector P2 on the system slot (slot 8) is an un-keyed connector providing 64-bit CompactPCI bus between the system slot and the peripheral slots 1~7. Connector P4 on the system slot (slot 8) is a keyed connector provideding 32-bit CompactPCI bus between the system slot and the connector P1 on peripheral slots 9~14. Connector P5 on the system slot (slot 8) is an un-keyed connector providing 64-bit CompactPCI bus between the system slot and the connector P2 on peripheral slots 9~14. Connector P4 on each peripheral slots 1~7 and 9~14 are connectors providing telephony signals. This bus is compliant with H.110 CT bus, PICMG 2.5 Computer Telephony Specifications.

Appendix A gives the pin assignment for all the slots on the MIC-3466.

P5   Rear Panel I/O   Rear Panel I/O

P4   H.110   CT Bus

P3   Rear Panel I/O   Rear Panel I/O

P2   CompactPCI 64-bit Primary Bus   CompactPCI 64-bit Secondary Bus

P1   CompactPCI 32-bit Primary Bus   CompactPCI 32-bit Secondary Bus

Physical Slot Number

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

Peripheral Slot   System Slot   Peripheral Slot
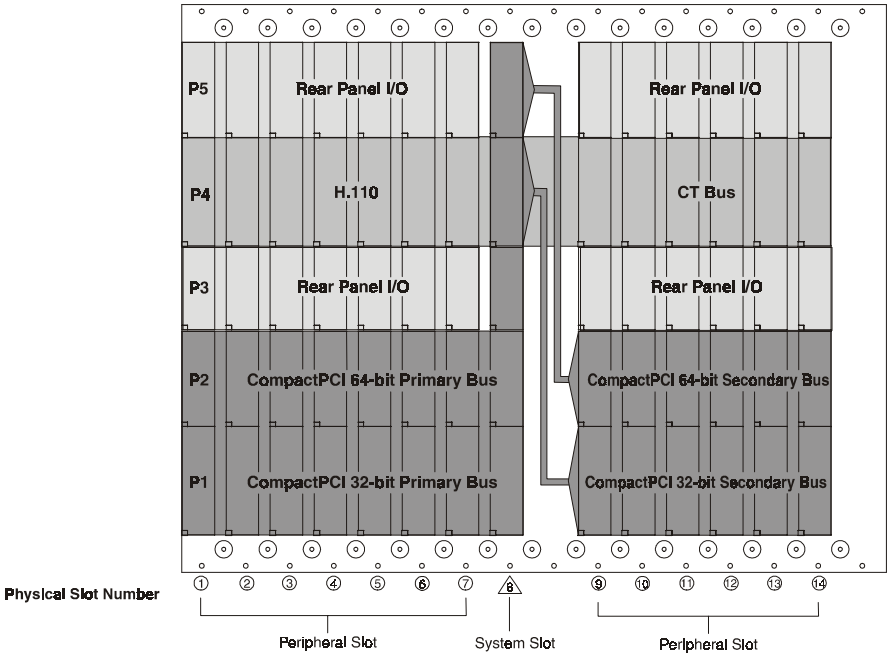
Figure 2-1: Slot numbering of the MIC-3466

Table 2-1: System to peripheral slot signal assignment on primary bus segment

Signal	Connector: Pin	Signal	Connector: Pin
System Slot 8, (Logical Slot 1):		Peripheral Slot 7, (Logical slot 2)	
CLK1	P2:A1	CLK	P1:D6
AD31	P1:E6	IDSEL	P1:B9
REQ0#	P1:A6	REQ#	P1:A6
GNT0#	P1:E5	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 6, (Logical slot 3)	
CLK6	P2:A21	CLK	P1:D6
AD30	P1:A7	IDSEL	P1:B9
REQ1#	P2:C1	REQ#	P1:A6
GNT1#	P2:D1	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 5, (Logical slot 4)	
CLK0	P1:D6	CLK	P1:D6
AD29	P1:B7	IDSEL	P1:B9
REQ2#	P2:E1	REQ#	P1:A6
GNT2#	P2:D2	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 4, (Logical slot 5)	
CLK5	P2:A20	CLK	P1:D6
AD28	P1:C7	IDSEL	P1:B9
REQ3#	P2:E2	REQ#	P1:A6
GNT3#	P2:C3	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 3, (Logical slot 6)	
CLK2	P2:A2	CLK	P1:D6
AD27	P1:E7	IDSEL	P1:B9
REQ4#	P2:D3	REQ#	P1:A6
GNT4#	P2:E3	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 2, (Logical slot 7)	
CLK3	P2:B2	CLK	P1:D6
AD26	P1:A8	IDSEL	P1:B9
REQ5#	P2:D15	REQ#	P1:A6
GNT5#	P2:E15	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 1, (Logical slot 8)	
CLK4	P2:A3	CLK	P1:D6
AD25	P1:D8	IDSEL	P1:B9
REQ6#	P2:D17	REQ#	P1:A6
GNT6#	P2:E17	GNT#	P1:E5

**Table 2-2: System to peripheral slot signal assignment on second
ary bus segment**

Signal	Connector: Pin	Signal	Connector: Pin
System Slot 8, (Logical Slot 1):		Peripheral Slot 9, (Logical slot 2)	
BCLK0	P1:D6	CLK	P1:D6
AD31	P1:E6	IDSEL	P1:B9
REQ0#	P1:A6	REQ#	P1:A6
GNT0#	P1:E5	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 10, (Logical slot 3)	
BCLK0	P1:D6	CLK	P1:D6
AD30	P1:A7	IDSEL	P1:B9
REQ1#	P2:C1	REQ#	P1:A6
GNT1#	P2:D1	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 11, (Logical slot 4)	
BCLK1	P2:A1	CLK	P1:D6
AD29	P1:B7	IDSEL	P1:B9
REQ2#	P2:E1	REQ#	P1:A6
GNT2#	P2:D2	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 12, (Logical slot 5)	
BCLK2	P2:A2	CLK	P1:D6
AD28	P1:C7	IDSEL	P1:B9
REQ3#	P2:E2	REQ#	P1:A6
GNT3#	P2:C3	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 13, (Logical slot 6)	
BCLK3	P2:B2	CLK	P1:D6
AD27	P1:E7	IDSEL	P1:B9
REQ4#	P2:D3	REQ#	P1:A6
GNT4#	P2:E3	GNT#	P1:E5
System Slot 8, (Logical Slot 1):		Peripheral Slot 14, (Logical slot 7)	
BCLK4	P2:A3	CLK	P1:D6
AD26	P1:A8	IDSEL	P1:B9
REQ5#	P2:D15	REQ#	P1:A6
GNT5#	P2:E15	GNT#	P1:E5

2.2 Connector and Jumper Locations

The MIC-3466 provides connectors and jumpers for users to configure the backplane for specific application. Table 2-3 gives a brief description to each connector on the backplane. Figure 2-2 and Figure 2-3 illustrate the connector locations of the MIC-3466.

Table 2-3: MIC-3466 Connector and jumper description

Name	Function
JP1	V I/O voltage selection jumper
JP2	Power switch connector
JP5	Fan module connector
JP6	ATX power connector 1
JP7	ATX power connector 2
JP8	ATX power connector 3
JP9	Power supply status connector
CN5	Alarm board interface connector
CN9	Peripheral power connector 2
CN10	Peripheral power connector 1
CN11	Peripheral power connector 3
S1 ~ S30	Screw terminal for external power supply
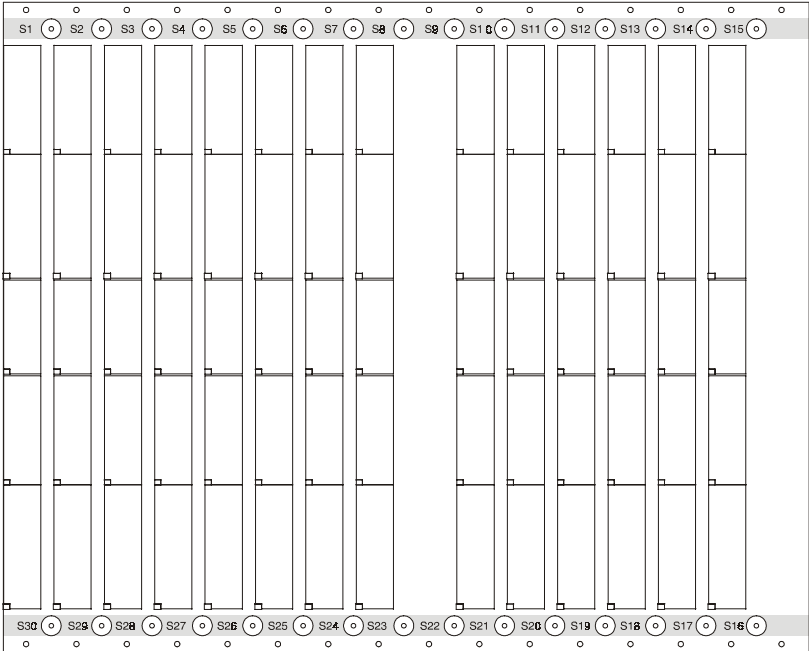
Figure 2-2: The connector and jumper locations on the front side
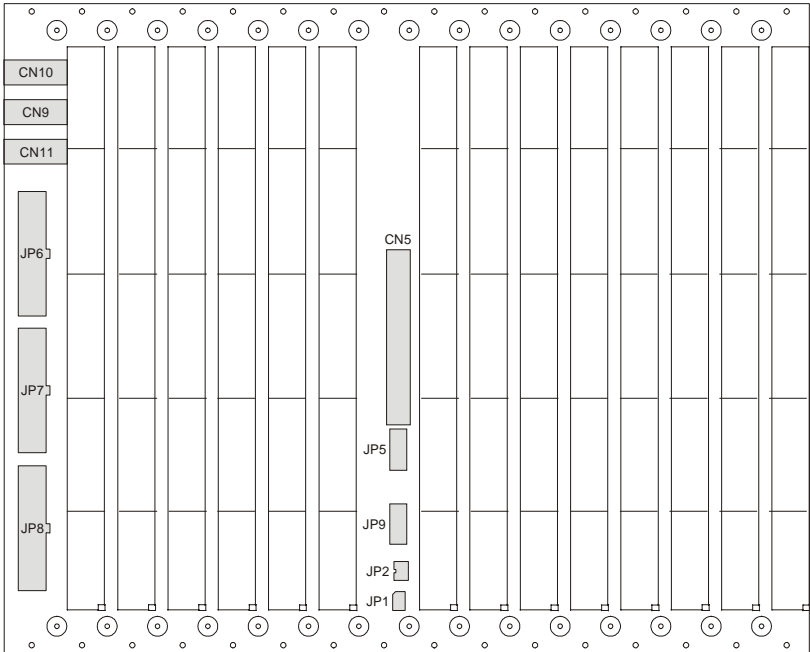
Figure 2-3: The connector and jumper locations on the rear side

2.2.1 Alarm Board Interface (CN5)

The 20-pin connector CN5 is an interface for an external monitoring and alarm module, such as MIC-3920/MIC-3921, which monitors the conditions of the system. It contains bus voltages 3.3 V, 5 V, 12 V and -12 V, and utilizes four fan tachometer signals.

2.2.2 Fan Module Connector (JP5)

The JP5 connector provides +12 V power for fan operation and accepts the tachometer output from the fans. It accepts up to four fan signals.

2.2.3 ATX Power Connector (JP6, JP7, and JP8)

These connectors accept three standard ATX power supplies.

Note: Do not use ATX power supplies and plug-in power modules at the same time.

2.2.4 Power Connectors for Peripherals (CN10, CN9, and CN11)

The CN10, CN9, and CN11 connectors provide power to the peripherals, such as hard disk drives or floppy disk drives.

2.2.5 V I/O Voltage Selection (JP1)

This jumper is used to select the V I/O voltage. MIC-3466 allows V I/O to be set to either 5 V or 3.3 V. Since the MIC-3466 default is configured for use with 5 V CompactPCI boards (blue keyed connectors), once the jumper is set to 3.3 V, the CompactPCI keys must be changed to 3.3 V at the same time (as yellow keyed connectors).

Table 2-3: V I/O voltage selection

V I/O	JP1
3.3 V	 +3.3V ⊡ VIO ⊡ +5V ○○
5 V	 +3.3V ○○ VIO ⊡ +5V ⊡

2.2.6 Power Switch (JP2)

This connector provides power on/off control of the ATX power
supply or the plug-in power module. If the CompactPCI chassis
provides a 2-pin power switch cord, connect this cord to the JP2
connector and users can control the power on/off by the power
switch. Or users can directly short this connector by a jumper and
control the power on/off by the ATX power supply switch.

2.2.7 Power Supply Status Connector (JP9)

This connector provides voltage feedbacks for the power supply used.
Three voltages can be sensed: +3.3 V, +5 V, and +12 V, and then the
feedback to the power supply will stabilize the power supply output.
A power good singal can be detected and transfered to the alarm
module (MIC-3920/MIC-3921) for power supply status monitoring.
This connector can function well only if the power supply provides
the same function and pin assignment as the JP9 connector.

2.2.8 Screw terminal for external power supply

Along the upper and lower edges of the MIC-3466 are 30 power pads
providing external power supply I/O. These 30 pads facilitate input or
output of the different powers and grounds. Contact Advantech for
installation help.

2.3 Ground Configuration

Along the top and bottom of the MIC-3466 are 32 mounting holes. The holes are arranged in an alternating pattern of chassis (frame) grounded pads and logic grounded pads. The square pad holes are connected to chassis ground, and the round pad holes are connected to logic ground. To isolate chassis and logic grounds, install mounting screws in only square pad mounting holes.
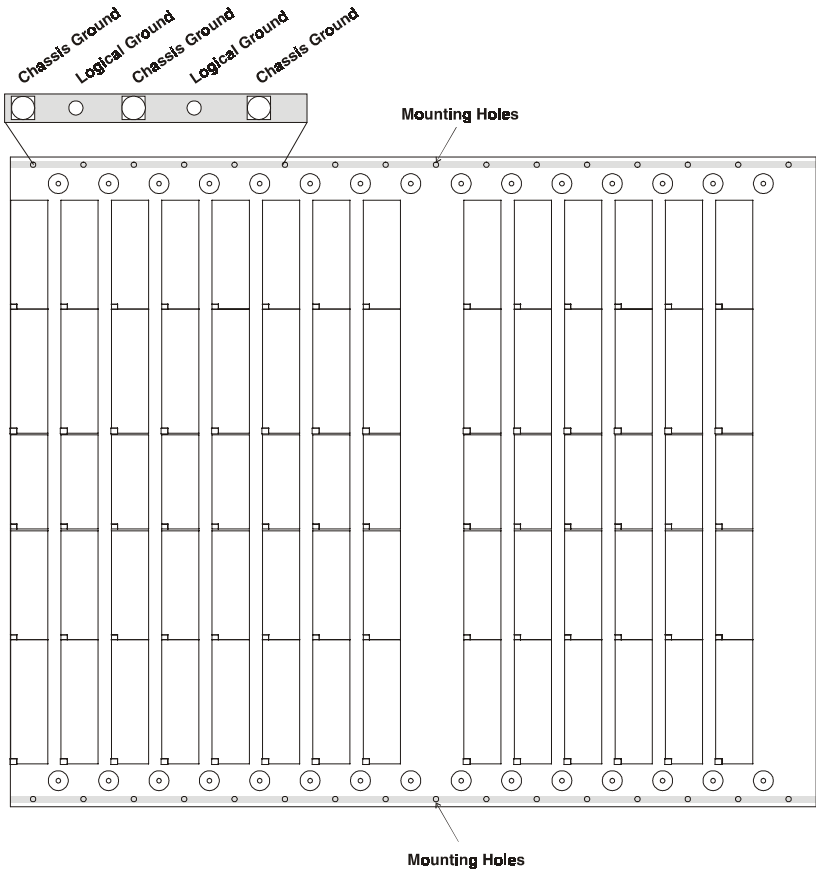
Figure 2-4. Mounting Holes Illustration

2.4 Computer Telephony Bus

The MIC-3466 provides H.110 CT bus on the P4 connectors, which complies with the PICMG 2.5 Computer Telephony Specification. The CT bus is routed across the P4 connectors on the peripheral slots. Please refer to Appendix A for pin assignment information.

2.5 Clock Routing Configuration

The MIC-3466 is configured to comply with the clock routing specified in the CompactPCI Hot Swap Specification, PICMG 2.1, version 1.0. This Specification requires that each slot be independently clocked.

If users would like to reconfigure the backplane to comply with the earlier CompactPCI Specification, PICMG 2.0, version 2.1, which allows the MIC-3466 to be backward compatible with CPUs using shared clocks, please contact Advantech for help.

Pin Assignments

A.1 System Slot P1 Connector

Table A-1: System slot P1 connector

Pin	Z	A	B	C	D	E	F
25	GND	5V	REQ64#	ENUM#	3.3V	5V	GND
24	GND	AD[1]	5V	V(I/O)	AD[0]	ACK64#	GND
23	GND	3.3V	AD[4]	AD[3]	5V	AD[2]	GND
22	GND	AD[7]	GND	3.3V	AD[6]	AD[5]	GND
21	GND	3.3V	AD[9]	AD[8]	M66EN	C/BE[0]#	GND
20	GND	AD[12]	GND	V(I/O)	AD[11]	AD[10]	GND
19	GND	3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERR#	GND	3.3V	PAR	C/BE[1]#	GND
17	GND	3.3V	SDONE	SBO#	GND	PERR#	GND
16	GND	DEVSEL#	GND	V(I/O)	STOP#	LOCK#	GND
15	GND	3.3V	FRAME#	IRDY#	GND	TRDY#	GND
12-14			KEY AREA				
11	GND	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND
10	GND	AD[21]	GND	3.3V	AD[20]	AD[19]	GND
9	GND	C/BE[3]#	IDSEL	AD[23]	GND	AD[22]	GND
8	GND	AD[26]	GND	V(I/O)	AD[25]	AD[24]	GND
7	GND	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND
6	GND	REQ#	GND	3.3V	CLK	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	RST#	GND	GNT#	GND
4	GND	BRSVP1A4	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

▓ = long pins ☐ = short pins ☐ = medium length pins

#: Low active

A.2 System Slot P2 Connector

Table A-2: System slot P2 connector

Pin	Z	A	B	C	D	E	F
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	RSV	RSV	RSV	GND
18	GND	N/C	N/C	N/C	GND	N/C	GND
17	GND	N/C	GND	PRST#	REQ6#	GNT6#	GND
16	GND	N/C	N/C	DEG#	GND	N/C	GND
15	GND	N/C	GND	FAL#	REQ5#	GNT5#	GND
14	GND	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND
13	GND	AD[38]	GND	V (I/O)	AD[37]	AD[36]	GND
12	GND	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND
11	GND	AD[45]	GND	V (I/O)	AD[44]	AD[43]	GND
10	GND	AD[49]	AD[48]	AD[47]	GND	AD[46]	GND
9	GND	AD[52]	GND	V (I/O)	AD[51]	AD[50]	GND
8	GND	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND
7	GND	AD[59]	GND	V (I/O)	AD[58]	AD[57]	GND
6	GND	AD[63]	AD[62]	AD [61]	GND	AD[60]	GND
5	GND	C/BE[5]#	GND	V (I/O)	C/BE[4]#	PAR64	GND
4	GND	V (I/O)	N/C	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	CLK4	GND	NT3#	EQ4#	GNT4#	GND
2	GND	CLK2	CLK3	SYSEN#	GNT2#	REQ3#	GND
1	GND	CLK1	GND	REQ1#	GNT1#	REQ2#	GND

#: Low active

Note: GA[4...0] shall be used for geographic addressing on the backplane

A.3 System Slot P3 Connector

Table A-3: System slot P3 connector

Pin	Z	A	B	C	D	E	F
19	GND	N/C	N/C	N/C	N/C	N/C	GND
18	GND	N/C	N/C	N/C	N/C	N/C	GND
17	GND	N/C	N/C	N/C	N/C	N/C	GND
16	GND	N/C	N/C	N/C	N/C	N/C	GND
15	GND	N/C	N/C	N/C	N/C	N/C	GND
14	GND	N/C	N/C	N/C	N/C	N/C	GND
13	GND	N/C	N/C	N/C	N/C	N/C	GND
12	GND	N/C	N/C	N/C	N/C	N/C	GND
11	GND	N/C	N/C	N/C	N/C	N/C	GND
10	GND	N/C	N/C	N/C	N/C	N/C	GND
9	GND	N/C	N/C	N/C	N/C	N/C	GND
8	GND	N/C	N/C	N/C	N/C	N/C	GND
7	GND	N/C	N/C	N/C	N/C	N/C	GND
6	GND	N/C	N/C	N/C	N/C	N/C	GND
5	GND	N/C	N/C	N/C	N/C	N/C	GND
4	GND	N/C	N/C	N/C	N/C	N/C	GND
3	GND	N/C	N/C	N/C	N/C	N/C	GND
2	GND	N/C	N/C	N/C	N/C	N/C	GND
1	GND	N/C	N/C	N/C	N/C	N/C	GND

A.4 System Slot P4 Connector

Table A-4: System slot P4 connector

Pin	Z	A	B	C	D	E	F
25	GND	5V	REQ64#	ENUM#	3.3V	5V	GND
24	GND	AD[1]	5V	V(I/O)	AD[0]	ACK64#	GND
23	GND	3.3V	AD[4]	AD[3]	5V	AD[2]	GND
22	GND	AD[7]	GND	3.3V	AD[6]	AD[5]	GND
21	GND	3.3V	AD[9]	AD[8]	M66EN	C/BE[0]#	GND
20	GND	AD[12]	GND	V(I/O)	AD[11]	AD[10]	GND
19	GND	3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERR#	GND	3.3V	PAR	C/BE[1]#	GND
17	GND	3.3V	SDONE	SBO#	GND	PERR#	GND
16	GND	DEVSEL#	GND	V(I/O)	STOP#	LOCK#	GND
15	GND	3.3V	FRAME#	IRDY#	GND	TRDY#	GND
12-14			KEY AREA				
11	GND	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND
10	GND	AD[21]	GND	3.3V	AD[20]	AD[19]	GND
9	GND	C/BE[3]#	IDSEL	AD[23]	GND	AD[22]	GND
8	GND	AD[26]	GND	V(I/O)	AD[25]	AD[24]	GND
7	GND	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND
6	GND	REQ#	GND	3.3V	CLK	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	RST#	GND	GNT#	GND
4	GND	BRSVP1A4	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

■ = long pins ▭ = short pins ▭ = medium length pins

#: Low active

A.5 System Slot P5 Connector

Table A-5: System slot P5 connector

Pin	Z	A	B	C	D	E	F
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	RSV	RSV	RSV	GND
18	GND	N/C	N/C	N/C	GND	N/C	GND
17	GND	N/C	GND	PRST#	REQ6#	GNT6#	GND
16	GND	N/C	N/C	DEG#	GND	N/C	GND
15	GND	N/C	GND	FAL#	REQ5#	GNT5#	GND
14	GND	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND
13	GND	AD[38]	GND	V (I/O)	AD[37]	AD[36]	GND
12	GND	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND
11	GND	AD[45]	GND	V (I/O)	AD[44]	AD[43]	GND
10	GND	AD[49]	AD[48]	AD[47]	GND	AD[46]	GND
9	GND	AD[52]	GND	V (I/O)	AD[51]	AD[50]	GND
8	GND	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND
7	GND	AD[59]	GND	V (I/O)	AD[58]	AD[57]	GND
6	GND	AD[63]	AD[62]	AD [61]	GND	AD[60]	GND
5	GND	C/BE[5]#	GND	V (I/O)	C/BE[4]#	PAR64	GND
4	GND	V (I/O)	N/C	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	CLK4	GND	NT3#	EQ4#	GNT4#	GND
2	GND	CLK2	CLK3	SYSEN#	GNT2#	REQ3#	GND
1	GND	CLK1	GND	REQ1#	GNT1#	REQ2#	GND

\#: Low active

Note: GA[4...0] shall be used for geographic addressing on the backplane

A.6 Peripheral Slot P1 Connector

Table A-6: Peripheral slot P1 connector

Pin	Z	A	B	C	D	E	F
25	GND	5V	REQ64#	ENUM#	3.3V	5V	GND
24	GND	AD[1]	5V	V(I/O)	AD[0]	ACK64#	GND
23	GND	3.3V	AD[4]	AD[3]	5V	AD[2]	GND
22	GND	AD[7]	GND	3.3V	AD[6]	AD[5]	GND
21	GND	3.3V	AD[9]	AD[8]	M66EN	C/BE[0]#	GND
20	GND	AD[12]	GND	V(I/O)	AD[11]	AD[10]	GND
19	GND	3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERR#	GND	3.3V	PAR	C/BE[1]#	GND
17	GND	3.3V	SDONE	SBO#	GND	PERR#	GND
16	GND	DEVSEL#	GND	V(I/O)	STOP#	LOCK#	GND
15	GND	3.3V	FRAME#	IRDY#	GND	TRDY#	GND
12-14				KEY AREA			
11	GND	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND
10	GND	AD[21]	GND	3.3V	AD[20]	AD[19]	GND
9	GND	C/BE[3]#	IDSEL	AD[23]	GND	AD[22]	GND
8	GND	AD[26]	GND	V(I/O)	AD[25]	AD[24]	GND
7	GND	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND
6	GND	REQ#	GND	3.3V	CLK	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	RST#	GND	GNT#	GND
4	GND	BRSVP1A4	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

▨ = long pins   ▭ = short pins   ▭ = medium length pins

#: Low active

A.7 Peripheral Slot P2 Connector

Table A-7: Peripheral slot P2 connector

Pin	Z	A	B	C	D	E	F
22	GND	GND4	GND3	GND2	GND1	GND0	GND
21	GND	N/C	GND	N/C	N/C	N/C	GND
20	GND	N/C	N/C	N/C	GND	N/C	GND
19	GND	N/C	GND	N/C	N/C	N/C	GND
18	GND	N/C	N/C	N/C	GND	N/C	GND
17	GND	N/C	GND	PRST#	N/C	N/C	GND
16	GND	N/C	N/C	DEG#	GND	N/C	GND
15	GND	N/C	GND	FAL#	N/C	N/C	GND
14	GND	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND
13	GND	AD[38]	GND	V (I/O)	AD[37]	AD[36]	GND
12	GND	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND
11	GND	AD[45]	GND	V (I/O)	AD[44]	AD[43]	GND
10	GND	AD[49]	AD[48]	AD[47]	GND	AD[46]	GND
9	GND	AD[52]	GND	V (I/O)	AD[51]	AD[50]	GND
8	GND	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND
7	GND	AD[59]	GND	V (I/O)	AD[58]	AD[57]	GND
6	GND	AD[63]	AD[62]	AD[61]	GND	AD[60]	GND
5	GND	C/BE[5]#	GND	V (I/O)	C/BE[4]#	PAR64	GND
4	GND	V (I/O)	N/C	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	N/C	GND	N/C	N/C	N/C	GND
2	GND	N/C	N/C	SYSEN#	N/C	N/C	GND
1	GND	N/C	GND	N/C	N/C	N/C	GND

#: Low active
Note: GA[4...0] shall be used for geographic addressing on the backplane

A.8 Peripheral Slot P3 Connnector

Table A-8: Peripheral slot P3 connector

Pin	Z	A	B	C	D	E	F
19	GND	N/C	N/C	N/C	N/C	N/C	GND
18	GND	N/C	N/C	N/C	N/C	N/C	GND
17	GND	N/C	N/C	N/C	N/C	N/C	GND
16	GND	N/C	N/C	N/C	N/C	N/C	GND
15	GND	N/C	N/C	N/C	N/C	N/C	GND
14	GND	N/C	N/C	N/C	N/C	N/C	GND
13	GND	N/C	N/C	N/C	N/C	N/C	GND
12	GND	N/C	N/C	N/C	N/C	N/C	GND
11	GND	N/C	N/C	N/C	N/C	N/C	GND
10	GND	N/C	N/C	N/C	N/C	N/C	GND
9	GND	N/C	N/C	N/C	N/C	N/C	GND
8	GND	N/C	N/C	N/C	N/C	N/C	GND
7	GND	N/C	N/C	N/C	N/C	N/C	GND
6	GND	N/C	N/C	N/C	N/C	N/C	GND
5	GND	N/C	N/C	N/C	N/C	N/C	GND
4	GND	N/C	N/C	N/C	N/C	N/C	GND
3	GND	N/C	N/C	N/C	N/C	N/C	GND
2	GND	N/C	N/C	N/C	N/C	N/C	GND
1	GND	N/C	N/C	N/C	N/C	N/C	GND

A.9 Peripheral Slot P4 Connector

Table A-9: Peripheral slot P4 connector

Pin	Z	A	B	C	D	E	F
25	N/C	SAG4	SGA3	SGA2	SGA1	SGA0	FGND
24	N/C	GA4	GA3	GA2	GA1	GA0	FGND
23	N/C	-12V	#CT_RT	#CT_EN	+12V	CT_MC	FGND
22	N/C	#PF_S0	RSV	RSV	RSV	RSV	FGND
21	N/C	-SELVbat	#PF_S1	RSV	RSV	SELVbatRtn	FGND
20	N/C	N/C	N/C	N/C	N/C	N/C	N/C
19	N/C	N/C	N/C	N/C	N/C	N/C	N/C
18	N/C	VRG	N/C	N/C	N/C	VRGRtn	N/C
17	N/C	N/C	N/C	N/C	N/C	N/C	N/C
16	N/C	N/C	N/C	N/C	N/C	N/C	N/C
15	N/C	-Vbat	N/C	N/C	N/C	VbatRtn	N/C
12-14				KEY AREA			
11	N/C	CT_D29	CT_D30	CT_D31	VIO	#CT_FA	GND
10	N/C	CT_D27	+3.3V	CT_D28	+5V	#CT_FB	GND
9	N/C	CT_D24	CT_D25	CT_D26	GND	#FR_CP	GND
8	N/C	CT_D21	CT_D22	CT_D23	+5V	CT_C8A	GND
7	N/C	CT_D19	+5V	CT_D20	GND	CT_C8B	GND
6	N/C	CT_D16	CT_D17	CT_D18	GND	CT_N1	GND
5	N/C	CT_D13	CT_D14	CT_D15	+3.3V	CT_N2	GND
4	N/C	CT_D11	+5V	CT_D12	+3.3V	SCLK	GND
3	N/C	CT_D8	CT_D9	CT_D10	GND	SCLK_D	GND
2	N/C	CT_D4	CT_D5	CT_D6	CT_D7	GND	GND
1	N/C	CT_D0	+3.3V	CT_D1	CT_D2	CT_D3	GND

� = long pins   ☐ = short pins   ☐ = medium length pins

#: Low active
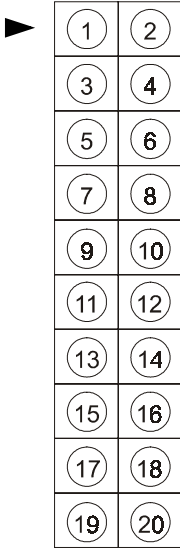
A.10 Peripheral Slot P5 Connector

Table A-10: Peripheral slot P5 connector

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

A.11 Alarm Board Interface Connector (CN5)

Pin	Assignment
20	FAN2
19	FAN1
18	FAN4
17	FAN3
16	N/C
15	POWER_FAIL#
14	SDCLK
13	GPI02
12	SDDAT
11	GPI01
10	N/C
9	PSON#
8	GND
7	GND
6	PRST#
5	+12V
4	-12V
3	+3.3V
2	+5V
1	+5V

```
      1    2
      3    4
      5    6
      7    8
      9   10
     11   12
     13   14
     15   16
     17   18
     19   20
```

A.12 Fan Module Connector (JP5)

Pin	Assignment
6	+12V
5	GND
4	FAN1
3	FAN2
2	FAN3
1	FAN4

A.13 ATX Power Connector (JP6, JP7, and JP8)

JP6		JP7		JP8	
Pin	Signal	Pin	Signal	Pin	Signal
1	+3.3V	1	+3.3V	1	+3.3V
2	+3.3V	2	+3.3V	2	+3.3V
3	GND	3	GND	3	GND
4	+5V	4	+5V	4	+5V
5	GND	5	GND	5	GND
6	+5V	6	+5V	6	+5V
7	GND	7	GND	7	GND
8	#FAL	8	#FAL	8	#FAL
9	N/C	9	N/C	9	N/C
10	+12V	10	+12V	10	+12V
11	+3.3V	11	+3.3V	11	+3.3V
12	-12V	12	-12V	12	-12V
13	GND	13	GND	13	GND
14	#PSON	14	#PSON	14	#PSON
15	GND	15	GND	15	GND
16	GND	16	GND	16	GND
17	GND	17	GND	17	GND
18	N/C	18	N/C	18	N/C
19	+5V	19	+5V	19	+5V
20	+5V	20	+5V	20	+5V

A.14 Power Connector for Peripherals (CN10, CN9, and CN11)

CN 9		CN 10		CN11	
Pin	Signal	Pin	Signal	Pin	Signal
1	+12V	1	+12V	1	+12V
2	GND	2	GND	2	GND
3	GND	3	GND	3	GND
4	+5V	4	+5V	4	+5V

A.15 Power Switch Connector (JP2)

Pin	Signal
1	#PSON
2	GND

A.16 Power Supply Status Connector (JP9)

Pin	Signal
1	+5V
2	N/C
3	#FAL
4	+3.3V
5	GND
6	+12V

A.17 Screw Terminal for External Power Supply

Number	Name	Number	Name
S1	VBATR	S16	+5V
S2	-VBAT	S17	GND
S3	-12V	S18	-12V
S4	+12V	S19	+12V
S5	GND	S20	GND
S6	+5V	S21	+5V
S7	+3.3V	S22	FGND
S8	+5V	S23	+5V
S9	VIO	S24	VIO
S10	GND	S25	GND
S11	+5V	S26	+5V
S12	+12V	S27	+12V
S13	GND	S28	GND
S14	+3.3V	S29	+3.3V
S15	FGND	S30	+5V