MIC-3000 Series

USER'S Manual

MIC-3041L

Advantech CompactPCI™

Modular Industrial Computer

Copyright Notice

Acknowledgements

CE Notification

The MIC-3041L, developed by Advantech Co., Ltd., has passed the CE test for environment specifications when shielded cables are used for external wiring. We recommend the use of shielded cables.

Product warranty

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for one year from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.
If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. For example, CPU speed, Advantech products used, other hardware and software used, etc. Note anything abnormal and list any on-screen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandise authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
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:

- One MIC-3041L CompactPCI™ enclosure with backplane
- One box of accessories
- One warranty certificate
- One CD-ROM for user manual (PDF file)

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-3041L 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:

- **http://www.advantech.com.**

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General Information

1.1 Introduction

MIC-3041L is an ideal entry level CompactPCI platform. It is designed as a cost effective 4U high enclosure with a 6U CompactPCI H.110 CT bus or non-CT bus backplane. It is suitable for telecommunication, computer telephony integration, and industrial automation. The built-in high quality backplane with 64 bit / 66MHz bus speed offers best impedance control, meets open architecture standards and is compatible with all Advantech CompactPCI boards.

The MIC-3041L supports build-in on-board IDE, floppy and USB connectors for cost-effective solution. The MIC-3041L-TA supports IEEE 1101.11 rear I/O transition board, but not for MIC-3041L-CA. Users can route I/O signals to the rear transition board to simplify system cabling. Front boards pop in and out without any hardwiring. Efficient hot swappable fan module gives easy self-maintenance capability. The system slots can support CPU boards featuring desktop Intel® Pentium® IV processors up to 2.2GHz (MIC-3358) or Intel® Pentium® M processors up to 1.8GHz (MIC-3369). With the chassis management module (968A390021, also call MIC-3924L-A), the chassis temperature and fan speed can be detected. A 1U space is reserved for two IDE drive bays on top of the chassis, and the built-in slim line CD-ROM and floppy drive provides storage media needs.

To achieve the most cost effective combination for entry-level CT applications or entry to middle-end industrial applications, one can have a MIC-3041L enclosure with a MIC-3358 6U CPCI board and Intel Pentium IV processor without any rear I/O transition board. This gives the best performance and price balance and makes the MIC 3041L the most cost effective solution.

There are two kinds of MIC-3041L:

- **MIC-3041L-TA:** MIC-3041L enclosure, w/ 4-slot CompactPCI™ 6U backplane (MIC-3805) supporting non-CT bus application.
- **MIC-3041L-CA:** MIC-3041L enclosure, w/ 4-slot CompactPCI™ 6U backplane (MIC-3803) supporting CT bus application.
- **Please contact your local distributor for MIC-3041L-CA, not for standard ordering process.**

1.2 Features

- Four 6U card slots
- Supports front and rear I/O
- Supports H.110 CT application or non-CT application
- Two IDE storage devices
- 300W ATX power supply with PFC
- Hot-swap compliant backplane
- A hot-swap fan module
- Integrated intelligent management module, 968A390021 (also call MIC-3924L-A), which can detect the chassis temperature and fan speed.

1.3 Specifications

1.3.1 General

- **Construction:** Aluminum frame and galvanized sheet steel
- 6-slot space (24 TE), including one system slot and three peripheral slots
- "Hot swappable" platform complies with PICMG 2.1 R 2.0 Hot Swap

Specification

- **Dimensions** (W x H x D, mounting flanges not included):
  4U: 440 x 177 x 300 mm (17.3" x 7" x 11.8")
- **Weight:** 11.2 kg (24.7 lb)
- **Operating temperature:** 0 ~ 45° C
- **Storage temperatur**e: -20° C ~ 60° C
- **Relative humidity:** 10 ~ 95% @ 40° C, non-condensing
- **Operating altitude:** 0 ~ 3,048 meters (0 ~ 10,000 feet)
- **Storage/transit altitude:** 0 ~ 12,190 meters (40,000 feet)
- **Shock:** 10 G (operating); 30 G (storage/transit)
- **Random vibration:** 1.0 Grms (operating)

1.3.2 Hot-swap Fans

- **Air flow:** One 163-CFM fan (outlet)
- **Power consumption:** 0.45 A @ 12 V, 0.09 A @ 12V
- **Rated fan speed:** 2170/4500 rpm
- **Life expectancy:** 50,000 hours @ 25° C

1.3.3 Power Supply

- **Input:** 100~240 V AC @ 50~60 Hz with auto switching capability -- PFC (Power Factor Correction).
- **Output** (per module)**:** 300W, +3.3V,+5V,+12V total output power shall not exceed 280W
- **Maximum load:** +3.3V @ 28A, +5V @ 30A, +12V @ 15A, -5V @0.3A, -12V @ 0.8A, +5Vsb @ 2.0 A
- **Minimum load:** +3.3 V @ 0.3 A, + 5V @0.1 A, +12 V @ 0 A, -12V @0A
- **MTBF:** 100,000 hours @ 25° C
- **Safety:** UL/CE

1.4 Dimensions

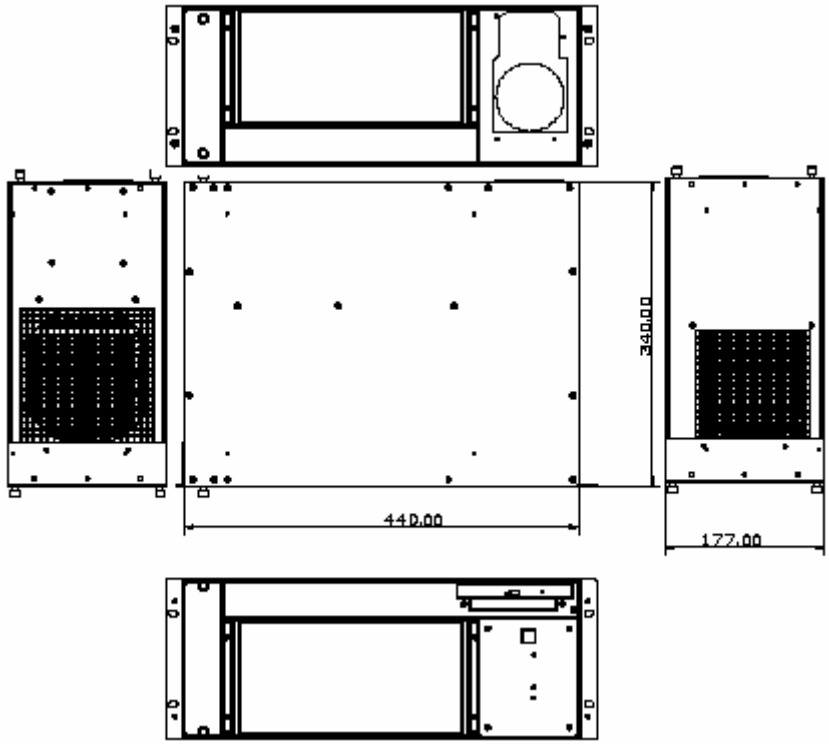


Figure 1-1: MIC-3041L dimensions.

Figure 1-2: Appearance of MIC-3041L

2

Installation

2.1 Initial Inspection

We have carefully inspected the MIC-3041LL mechanically and electrically before shipping. It should be free of marks and scratches and in perfect working order upon receipt. As you unpack the MIC-3041L, check it for signs of shipping damage (damaged box, scratches, dents, etc.). If it is damaged or fails to meet specifications, notify our service department or your local representative immediately. Also notify the carrier. Retain the shipping carton and packing material for inspection by the carrier. After inspection, we will make arrangements to repair or replace the unit.

Warning! We strongly recommend that only qualified, experienced personnel install or remove components. They must exercise extreme caution when doing so.

2.2 The MIC-3041L Illustration

The MIC-3041L is designed to be installed and maintained easily.

Figure 2-1 and Figure 2-2 illustrate important components on the front and hot swappable parts of the enclosure.

Figure 2-1: Front view of MIC-3041L

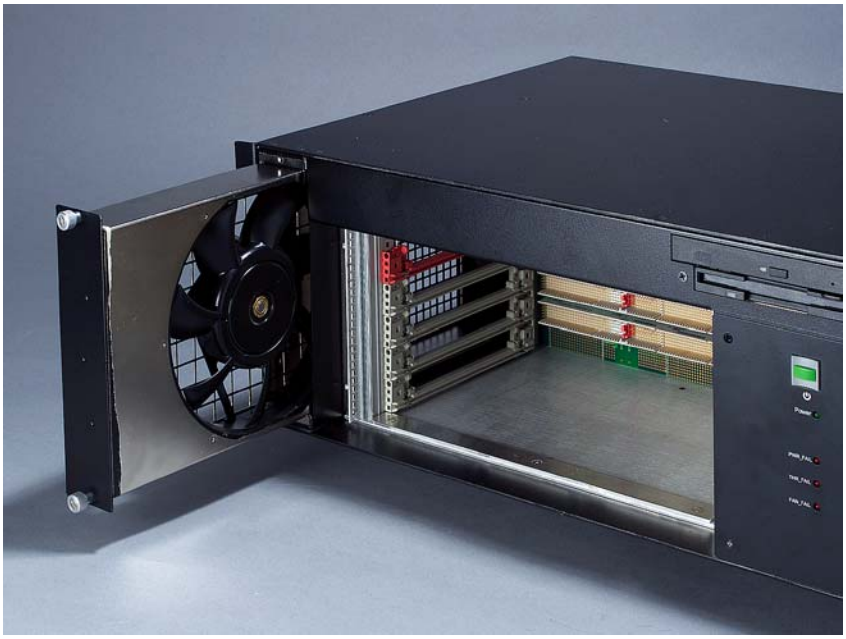


Figure 2-2: Removable parts of MIC-3041L

2.3 Installation Procedures

2.3.1 Card Installation and Removal

The CompactPCI™ connectors are firm and rigid, and require careful handling while plugging and unplugging. Improper installation of a card can easily damage the backplane of the chassis.

The system card can be installed only in the system slot. Do not insert the system card into any other slot, or insert a peripheral card into the system slot. The system slot is marked by a triangle enclosing the slot number 5. Please refer to chapter 3. The insert/eject handles on CompactPCI™ cards help users to install and remove the cards easily and safely. Follow the procedures below to install a card into a chassis:

To install a card:

1. Hold the card horizontally. Be sure that the card is oriented correctly. The components of the card should be pointing to the up side.
2. Be sure that the handles of the card are not latched. Release the handles if they are latched. Handles from different vendors may have different latch designs.

Caution: Keep your fingers away from the latch hinges to prevent your fingers from getting pinched.

3. Insert the card into the chassis by sliding the left and right edges of the card into the card guides.

4. Push the card into the slot gently by sliding the card along the card guide until the handles meet the rectangular holes of the cross rails. Please refer to figure 2-3.

Figure 2-3: Installing a card into the chassis

Note: If the card is correctly positioned and has been slid all the way into the chassis, the handles should match the rectangular holes. If not, remove the card from the card guide and repeat step 3 again. Do not try to install a card by forcing it into the chassis.

5. Pull the right handle to the left and pull the left handle to the right to push the card into place and fixed.
6. Secure the card by locking the handles into place.

To remove a card:

1. Unscrew the screws on the card front panel. Release the locking latches on the handles.
2. To push the red buttons on the right and left handles to loosen the card from the backplane.
3. Slide the card out.

2.3.2 Before Operating the System

Before operating your system, check your power supply source firstly.

Two mounting flanges are included for users who would like to install the MIC-3041L on a 19" rack.

2.3.3 Installing a 3.5” Hard Disk Drive

Follow the procedures to install 3.5" hard disk drives in the MIC-3041L:

1. Remove the top plate.
2. Mount the HDD on the HDD rack with screws.
3. Connect the IDE cable to the HDD.
4. Power on and check the HDD can be found during initializing.

Figure 2-4: 3.5” Hard Disk Drive and cable location

2.3.4 Connecting with rear I/O module

The MIC-3041L is limited to be used with rear I/O module. Please refer to appendix B for the details. To install the RIO module, please follow the steps below:

1. Remove the blank panel above the system RIO slot. (Suggest to remove all the blank panels for installation)
2. User can find there is one IDE cable with two IDE connectors (40 pins) inside.
3. Connecting with the right connector on board, and slide into the card cage.
4. Power up the system and check all the storage devices work properly.

2.3.5 Configuring the build-in IDE by RIO module

MIC-3803 and MIC-3805 have build-in onboard IDE connectors. No IDE adapter is needed. Please note, not all of the RIO has two channels to support 2x IDE and CDROM at same time because of hardware limitation. Please consult your sales for a suitable configuration.

Note: (1) RIO-3309C/RIO-3309L only has one IDE channel, thus the IDE CD-ROM is connected to "USB to IDE" daughter board.

(2) Please use Windows 2000 SP4 for USB driver installation. If neither CPU board nor RIO have PS/2 port, please use Com port mouse with USB keyboard to copy USB 2.0 driver to floppy or HDD for USB 2.0 driver installation.

2.3.6 Replacing the Hot-swap Fan and Air Filter

The MIC-3041L provides one hot-swap fans at the left hand sides of the MIC-3041L. Please refer to Figure 2-5. It can be removed without turning off the system power or interrupting system operation.

Follow these steps to replace a fan:

1. Unfasten the fan's holder.
2. Slide the fan's holder out.
3. Replace the old fan with a new one.
4. Slide the fan's holder in.
5. Fasten the new fan's holder.

Figure 2-5: Hot swappable fan maintenance

The air filter may become dirty after a period of time. Follow these steps to replace a filter:

1. Remove the top plate.
2. Replace the dirty filter with a clean one.
3. Reattach the top plate.

Repeat steps 1 to 3 to replace other filters.

3

Backplane

3.1 General Information

There are two kinds of backplanes for MIC-3041L series. MIC-3803 is backplane with H.110 CT bus, and MIC-3805 is backplane without H.110 CT bus. Both backplanes provide four CompactPCI™ slots. One slot is assigned to the CPU board and the other slots for three peripheral boards. The MIC-3041L supports onboard IDE, floppy and USB connecters, providing cost effective solution. The backplane also provides several 3-pin connectors to connect hot-swappable cooling fan module. In order to provide users with a flexible system configuration, the MIC-3041L includes one standard ATX power connector to accept one ATX power supply. The MIC-3041L 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.

3.2 Features

- Four CompactPCI™ slots (one system slot and three peripheral slots)
- 64-bit PCI bus compliant
- Complies with PICMG 2.1 Hot-Swap Specification
- Accepts redundant ATX power supply
- Chassis alarm module for environment monitoring.
- Hot-swappable fan interface.

3.3 Specification

- Four CompactPCI™ slots (one system slot and three peripheral slots)
- Bus width: 64-bit
- 8-layer PCB, 3.0 mm thick
- Power connector: One ATX power connector for connecting standard ATX power supply
- Complies with CompactPCI™ Specification PICMG 2.0, R.3.0
- Complies with CompactPCI™ Hot Swap Specification PICMG 2.1, R2.0.
- Complies with CompactPCI™ Computer Telephony PICMG2.5, R1.0 (optional)
- Dimensions: 146 x 255.85 mm

3.4 Slot Assignments

The CompactPCI™ specification defines slot numbering separation for physical and logical slots. Each slot has a physical number and a logical number (refer to the CompactPCI™ specification version 2.0 R3.0 for further information on slot assignments). The physical numbers are printed on the backplane, enclosed in

circles or triangles. Slot5 of MIC-3803 and MIC-3805 marked by a triangle, is the system slot and can only be used by a CPU board. The other slots are peripheral slots. The logical number of each slot is defined according to the IDSEL signal and the associated address used to select the slot. Table 3-1 shows the system slot and peripheral slots relationships on the backplane. The system slot has a logical number of 1, and the peripheral slot has a logical number of 2~4. The connectors in logical slot 1 are designated as 1-P1, 1-P2, 1-P3, 1-P4, 1-P5 from the bottom up.

Nomenclature for connectors in the other slot is similar, such as 2-P1 and 2-P2. Connector P1 on the system slot is a keyed connector providing 32-bit CompactPCI™ bus between the system slot and the peripheral slot. Connector P2 on the system slot is an un-keyed connector providing 64-bit CompactPCI™ bus between the system slot and the peripheral slots.

Please check appendix A for the pin assignment for all the connectors on the backplane.

Table 3-1 : MIC-3803 & MIC-3805 System to peripheral slot signal assignment

System Slot (Logical Slot 1)		**Peripheral Slot (Logical Slot 2)**	
CLK0	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 (Logical Slot 1)		**Peripheral Slot (Logical Slot 3)**	
CLK1	P2:A1	CLK	P1:D6
AD30	P1:A7	IDSEL	P1:B9
REQ1#	P2:C1	REQ#	P1:A6
GNT1#	P2:D1	GNT#	P1:E5
System Slot (Logical Slot 1)		**Peripheral Slot (Logical Slot 4)**	
CLK2	P2:A2	CLK	P1:D6
AD29	P1:B7	IDSEL	P1:B9
REQ2#	P2:E2	REQ#	P1:A6
GNT2#	P2:D2	GNT#	P1:E5
System Slot (Logical Slot 1)		**Peripheral Slot (Logical Slot 5)**	
CLK3	P2:B2	CLK	P1:D6
AD28	P1:C7	IDSEL	P1:B9
REQ3#	P2:E2	REQ#	P1:A6
GNT3#	P2:C3	GNT#	P1:E5

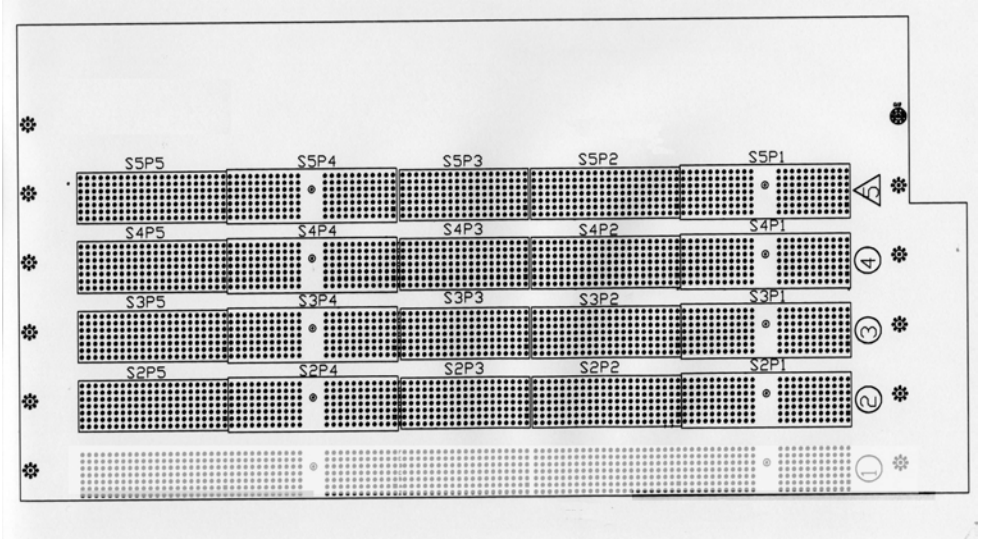


Figure 3-1: MIC-3803/MIC-3805 Backplane slot numbering

3.5 Connector and Jumper Locations

The backplane provides connectors and jumpers for users to configure the backplane for specific application. Table 3-2 gives a brief description to each connector on the backplane. Figure 3-3 to Figure 3-6 illustrate the connector locations of the backplane.

Table 3-2: Backplane's connector and jumper description

Function	MIC-3803	MIC-3805
ATX power connector 1	ATX1	ATX1
Led board connector	CN7	CN7
Fan module connectors	FAN1~FAN6	FAN1~FAN6
Power switch connector	CN8	CN8
V I/O voltage selections	T1~T3	T1~T3
64-bit CompactPCI™ bus	P1, P2	P1, P2
I/O transition	P3, P5	P3,P4, P5
H.110 CT bus (slot 2~4)	P4	NA
Alarm Module Connector	CN9	CN9
M66EN	JP7	JP7
64EN	JP2~JP6 **	JP2~JP6**
IDE	CN12	CN12
FLOPPY	CN10	CN10
USB	CN11	CN11
RIO USB and BP USB dip switch* **	NA	SW3

** JP2 is used to set 64EN for physical slot 2,JP3 is used to set 64EN for physical slot, JP4 is used to set 64EN for physical slot 4.

*** If one turns the four dip switch to the left hand side, than he can use the USB on the RIO and the USB on the backplane will be off.

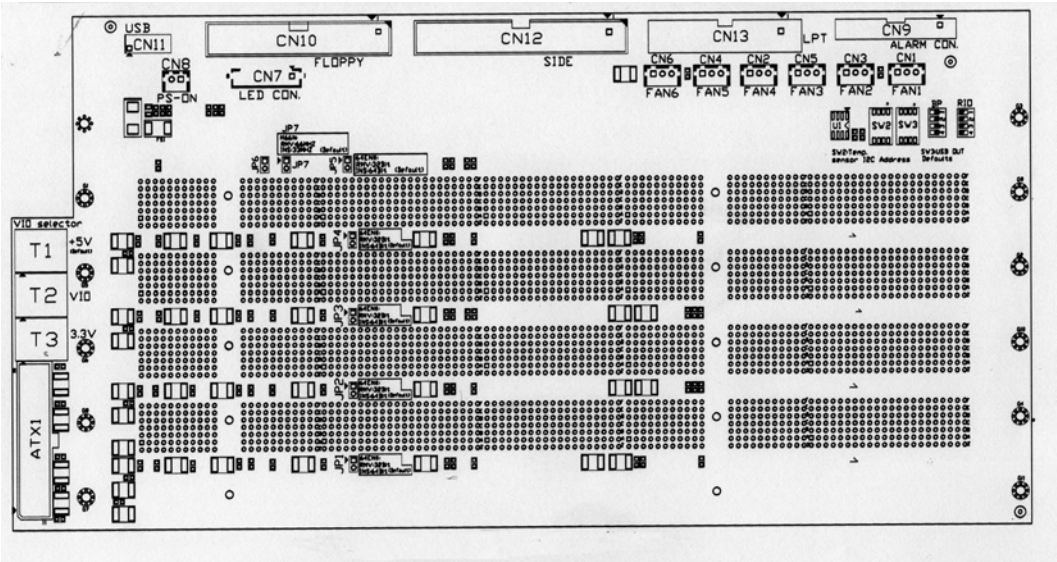


Figure 3-2: MIC-3803/MIC-3805 connector and jumper locations on the rear side

3.5.1 ATX Power Connector (ATX1)

This connector accepts one standard ATX power supply.

3.5.2 Power Switch

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 JP1 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.

3.5.3 V I/O Voltage Selection

This jumper is used to select the V I/O voltage. The backplane allows V I/O to be set to either 5 V or 3.3 V. Since the default is configured for use with 5V CompactPCI™ boards, once the jumper is set to 3.3 V, the CompactPCI™ keys must be changed to 3.3 V at the same time.

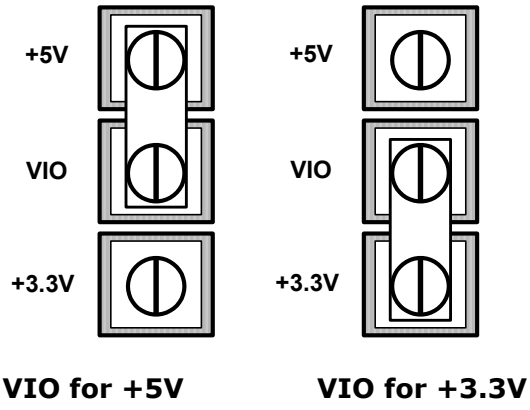


Figure 3-3: V I/O voltage selection

3.5.4 Fan Module Connector

The FAN connectors provide +12 V power for fan operation and accepts the tachometer output from the fans.

3.5.5 LED Status Connector

This connector provides digital outputs for the alarm module (MIC-3924L-A). There are two alarm LEDs (red) for fan fail and temperature alert notification. The LED will flash while the fan is failed or the temperature is

3.6 Clock Routing Configuration

The backplane is configured to comply with the clock routing specified in the CompactPCI™ Specification, PICMG 2.0, R3.0. This Specification requires that each slot be independently clocked.

Appendix A

Pin Assignments

A.1 MIC-3803 and MIC-3805 System Slot P1 Connector

Table A-1: MIC-3803 and MIC-3805 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	IPMBSCL	IPMBSDA	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]#	GND	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	REQ0#	GND	+3.3V	CLK	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	RST#	GND	GNT0#	GND
4	GND	IPMBPWR	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 MIC-3803 and MIB-3805 System Slot P2 Connector

Table A-2: MIC-3803 and MIC-3805 system slot P2 connector

Pin	Z	A	B	C	D	E	F
22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	NC	GND	RSV	RSV	RSV	GND
20	GND	NC	GND	RSV	GND	RSV	GND
19	GND	GND	GND	RSV	RSV	RSV	GND
18	GND	BRSVP2A18	BRSVP2B18	BRSVP2C18	BRSVP2D18	BRSVP2E18	GND
17	GND	BRSVP2A17	GND	PRST#	NC	NC	GND
16	GND	BRSVP2A16	BRSVP2B16	DEG#	GND	BRSVP2E16	GND
15	GND	BRSVP2A15	GND	FAL#	NC	NC	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)	BRSVP2B4	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	NC	GND	GNT3#	NC	NC	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 MIC-3803 and MIC-3805 System Slots P3 Connector

Table A-3: MIC-3803 and MIC-3805 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	HDD_D0	HDD_D2	N/C	HDD_D4	N/C	GND
12	GND	HDD_D1	HDD_D3	HDD_D12	HDD_D6	HDD_D7	GND
11	GND	HDD_D5	HDD_D9	HDD_D13	HDD_D10	HDD_D8	GND
10	GND	HDD_D15	HDD_D14	HDD_IOR#	HDD_DMREQ	HDD_D11	GND
9	GND	HDD_LED	N/C	HDD_IOW#	HDD_DA0	HDD_CS3#	GND
8	GND	HDD_DRQ	HDD_CBDET	HDD_DA0	HDD_DA1	HDD_DA2	GND
7	GND	FDD_DIR#	HDD_DMACK#	HDD_RST#	HDD_IORDY	HDD_CS1#	GND
6	GND	LPT_SLIN	LPT_INIT#	FDD_WGATE#	FDD_HDSEL#	FDD_DS0#	GND
5	GND	LPT_PE	LPT_SLCT	FDD_STEP#	FDD_MTR0#	FDD_WDATA#	GND
4	GND	LPT_ERR#	LPT_ACK#	FDD_RDATA#	FDD_WRTPRT#	FDD_TRK0#	GND
3	GND	LPT_STB#	LPT_AFD#	FDD_DRVEN0#	FDD_INDEX#	FDD_DSKCHG#	GND
2	GND	LPT_D5	LPTD6	LPT_D7	LPT_BUSY	FDD_DRVEN1	GND
1	GND	LPT_D0	LPTD1	LPT_D2	LPT_D3	LPT_D4	GND

#: Low active

A.4 MIC-3803 and MIC-3805 System Slot P4 Connector

Table A-4: MIC-3803 and MIC-3805 system slot P4 connector

Pin	Z	A	B	C	D	E	F
25	GND	N/C	N/C	N/C	N/C	N/C	GND
24	GND	N/C	N/C	N/C	N/C	N/C	GND
23	GND	N/C	N/C	N/C	N/C	N/C	GND
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
12-14	Key Area						
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.5 MIC-3803 and MIC-3805 System Slot P5 Connector

Table A-5: MIC-3803 and MIC-3805 System 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	USBD1-	N/C	N/C	GND
19	GND	N/C	N/C	USBD1+	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	USB_OC0#	N/C	N/C	N/C	N/C	GND
15	GND	USB_OC1#	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.6 MIC-3803 and MIC-3805 Peripheral Slot P1 Connector

Table A-6: MIC-3803 and MIC-3805 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	IPMBSCL	IPMBSDA	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	RRSVP1B5	RST#	GND	GNT#	GND
4	GND	IPMBPWR	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 MIC-3803 and MIC-3805 Peripheral Slot P2 Connector

Table A-7: MIC-3803 and MIC-3805 peripheral slot P2 connector

Pin	Z	A	B	C	D	E	F
22	GND	GA4	GA3	GA2	GA1	GA0	GND
21	GND	RSV	RSV	RSV	RSV	RSV	GND
20	GND	RSV	RSV	RSV	GND	RSV	GND
19	GND	RSV	RSV	RSV	RSV	RSV	GND
18	GND	BRSVP2A18	BRSVP2B18	BRSVP2C18	BRSVP2D18	BRSVP2E18	GND
17	GND	BRSVP2A17	GND	RSV	RSV	RSV	GND
16	GND	BRSVP2A16	BRSVP2B16	RSV	GND	BRSVP2E16	GND
15	GND	BRSVP2A15	GND	RSV	RSV	RSV	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)	BRSVP2B4	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	RSV	GND	RSV	RSV	RSV	GND
2	GND	RSV	RSV	UNC	RSV	RSV	GND
1	GND	RSV	GND	RSV	RSV	RSV	GND

#: Low active

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

A.8 MIC-3803 and MIC-3805 Peripheral Slot P3 Connector

Table A-8: MIC-3803 and MIC-3805 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

#: Low active

A.9 MIC-3805 Peripheral Slot P4 Connector

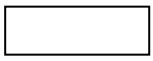
Table A-9: MIC-3805 peripheral slot P4 connector

Pin	Z	A	B	C	D	E	F
25	GND	N/C	N/C	N/C	N/C	N/C	GND
24	GND	N/C	N/C	N/C	N/C	N/C	GND
23	GND	N/C	N/C	N/C	N/C	N/C	GND
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
12-14	Key Area						
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.10 MIC-3803 Peripheral Slot P4 Connector

Table A-10: MIC-3803 peripheral slot P4 connector

Pin	Z	A	B	C	D	E	F
25	N/C	SGA4	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	-SEL_Vbat	#PF_S1	RSV	RSV	SELVbatRtn	FGND
20	N/C	N/C	N/C	N/C	N/C	N/C	GND
19	N/C	N/C	N/C	N/C	N/C	N/C	GND
18	N/C	VRG	N/C	N/C	N/C	VRGRtn	GND
17	N/C	N/C	N/C	N/C	N/C	N/C	GND
16	N/C	N/C	N/C	N/C	N/C	N/C	GND
15	N/C	-Vbat	N/C	N/C	N/C	VbatRtn	GND
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	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.11 MIC-3803 and MIC-3805 Peripheral Slot P5 Connector

Table A-11: MIC-3803and MIC-3805 peripheral slot P5 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.12 Fan Module Connectors

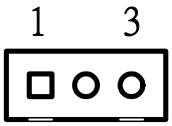


Table A-9: Fan Module Connectors

Pin	Assignment
1	+12V
2	GND
3	Fan speed

A.13 ATX Power Connector (ATX1)

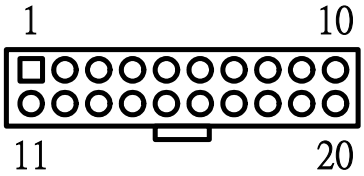


Table A-10: ATX Power Connector

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

A.14 LED board connector

Table A-11: LED board Connector

Pin	Signal	Pin	Signal
1	+3.3V	5	+12V
2	N/C	6	GND
3	+5V	7	GND
4	N/C	8	N/C

A.15 Alarm board Interface connector

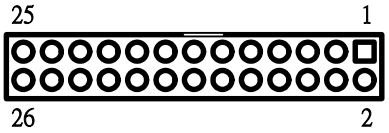


Table A-15: Alarm Board Interface Connector

MIC-3803				MIC-3805			
Pin	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**
1	+ 5V	14	+12V	1	+ 5V	14	+12V
2	+ 5V	15	IPMB power	2	+ 5V	15	IPMB power
3	+ 5V	16	N/C	3	+ 5V	16	N/C
4	N/C	17	Fan Speed5	4	N/C	17	Fan Speed5
5	+ 5V	18	SMB-SDA	5	+ 5V	18	SMB-SDA
6	+ 3.3V	19	Fan Speed 6	6	+ 3.3V	19	Fan Speed 6
7	Fan Speed1	20	SMB-SCL	7	Fan Speed1	20	SMB-SCL
8	N/C	21	IPMB-SCL	8	N/C	21	IPMB-SCL
9	Fan Speed2	22	PS_ON#	9	Fan Speed2	22	PS_ON
10	-12V	23	IPMB-SDA	10	-12V	23	IPMB-SDA
11	Fan Speed3	24	N/C	11	Fan Speed3	24	N/C
12	N/C	25	GND	12	N/C	25	GND
13	Fan Speed4	26	GND	13	Fan Speed4	26	GND

#: low active

A.16 IDE Interface connector

Table A-16: IDE Interface Connector

MIC-3803				MIC-3805			
Pin	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**
1	RESET#	21	DMREQ	1	RESET#	21	DMREQ
2	GND	22	GND	2	GND	22	GND
3	DD7	23	DIOW#	3	DD7	23	DIOW#
4	DD8	24	GND	4	DD8	24	GND
5	DD6	25	DIOR#	5	DD6	25	DIOR#
6	DD9	26	GND	6	DD9	26	GND
7	DD5	27	IORDY#	7	DD5	27	IORDY#
8	DD10	28	GND	8	DD10	28	GND
9	DD4	29	DMACK#	9	DD4	29	DMACK#

10	DD11	30	GND	10	DD11	30	GND
11	DD3	31	IRQ	11	DD3	31	IRQ
12	DD12	32	N/C	12	DD12	32	N/C
13	DD2	33	DA1	13	DD2	33	DA1
14	DD13	34	CBLDET	14	DD13	34	CBLDET
15	DD1	35	DA0	15	DD1	35	DA0
16	DD14	36	DA2	16	DD14	36	DA2
17	DD0	37	CS1#	17	DD0	37	CS1#
18	DD15	38	CS3#	18	DD15	38	CS3#
19	GND	39	DASP#	19	GND	39	DASP#
20	KEY	40	GND	20	KEY	40	GND

A.17 FDD Interface connector

Table A-17: FDD Interface Connector

MIC-3803				**MIC-3805**			
Pin	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**
1	GND	18	DIR#	1	GND	18	DIR#
2	DRVEN0	19	GND	2	DRVEN0	19	GND
3	GND	20	STEP#	3	GND	20	STEP#
4	N/C	21	GND	4	N/C	21	GND
5	N/C	22	WDATA#	5	N/C	22	WDATA#
6	DRVEN1	23	GND	6	DRVEN1	23	GND
7	GND	24	WGATE#	7	GND	24	WGATE#
8	INDEX#	25	GND	8	INDEX#	25	GND
9	GND	26	TRK0#	9	GND	26	TRK0#
10	MTR0#	27	GND	10	MTR0#	27	GND
11	GND	28	WRTPRT	11	GND	28	WRTPRT
12	N/C	29	GND	12	N/C	29	GND
13	GND	30	RDATA#	13	GND	30	RDATA#
14	DS0#	31	GND	14	DS0#	31	GND
15	GND	32	HDSEL#	15	GND	32	HDSEL#
16	N/C	33	GND	16	N/C	33	GND
17	GND	34	DSKCHG#	17	GND	34	DSKCHG#

A.18 LPT Interface connector

Table A-18: LPT Interface Connector

MIC-3803				MIC-3805			
Pin	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**	**Pin**	**Signal**
1	STB#	14	AFD#	1	STB#	14	AFD#
2	PD0	15	ERR#	2	PD0	15	ERR#
3	PD1	16	SLIN#	3	PD1	16	SLIN#
4	PD2	17	GND	4	PD2	17	GND
5	PD3	18	GND	5	PD3	18	GND
6	PD4	19	GND	6	PD4	19	GND
7	PD5	20	GND	7	PD5	20	GND
8	PD6	21	GND	8	PD6	21	GND
9	PD7	22	GND	9	PD7	22	GND
10	ACK#	23	GND	10	ACK#	23	GND
11	BUSY#	24	GND	11	BUSY#	24	GND
12	PE#	25	GND	12	PE#	25	GND
13	SLCT#	26	N/C	13	SLCT#	26	N/C

Appendix B

Ordering Information

- **MIC-3041L-TA:** 4U-high CompactPCI™ enclosure with 4-slot non-CT backplane (MIB-3805), hot swappable cooling fan modules, and 300W ATX power supply.
- **MIC-3041L-CA:** 4U-high CompactPCI™ enclosure with 4-slot CT backplane (MIB-3803), hot swappable cooling fan modules, and 300W ATX power supply

Recommend 6U CompactPCI™ SBC: User can refer to below table for the SBC and RIO accommodation.

Chassis	Master SBC	RIO	Alarm module
MIC-3041L-TA	MIC-3359	NA	968A390021 (MIC-3924L-A)
	MIC-3358L	RIO-3309L	
	MIC-3358A, MIC-3369A	RIO-3309C-A	
MIC-3041L-CA	MIC-3359	NA	968A390021 (MIC-3924L-A)
	MIC-3358L	NA	
	MIC-3358A, MIC-3369A	NA	

* MIC-3803 do not support rear I/O.

Default Alarm Module:

- 968A390021 (MIC-3924L-A): Chassis management module without remote control for general purpose chassis, with single SBC application.

Upgradeable Alarm Module

- 968A390001 (MIC-3924A-A): Chassis management module for general purpose chassis, with single SBC application.
- 968A390011 (MIC-3924B-A): Chassis management module for multi-SBC application.