MIC-3035

1U high 2-slot CompactPCI™ enclosure

Copyright Notice

Acknowledgements

CE Notification

The MIC-3035, 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.

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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-3035 CompactPCI™ enclosure with two-slot backplane
- One box of accessories, including one IDE flat cable, a pair of FDD and CD-ROM mounting brackets, a pair of rackmount brackets, four rubber stands, as several well as screws.
- One warranty certificate
- 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-3035 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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CHAPTER 1

General Information

1.1 Introduction

The MIC-3035 is a slim rugged 1U-high enclosure with two 6U CompactPCI™ slots for rack mounting. Being only 1U in height, the MIC-3035 provides the space efficiency required in applications such as CT and networking.

The MIC-3035 can accommodate up to four devices, including one slim-type FDD, one slim-type CD-ROM and two 3.5" HDDs. With its flexible module design, various configurations can be made according to particular application requirements.

1.2 Features

- The most compact 1U-high enclosure
- Two 6U-sized CompactPCI(tm) slots (one system slot and one peripheral slot)
- Accepts up to four devices
- 200 W ATX power supply
- Optional intelligent fault detection and alarm module

1.3 Specifications

1.3.1 General

- **Construction:** Aluminum frame and galvanized sheet steel
- 2-slot space (8 TE), including one system slot and one peripleral slot
- "Hot swappable" platform complies with PICMG 2.1 R 1.0 Hot Swap Specification
- **Dimensions** (W x H x D, mounting flanges not included)**:** 440 x 44 x 371 mm (17.3" x 1.7" x 14.6")
- **Weight:** 5.2 kg (11.5 lb)
- **Operating temperature:** 0 ~ 45° C (32 ~ 113° F)
- **Storage temperature**: -20° C ~ 60° C (-4 ~ 158° F)
- **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 Fans

- **Air flow**: Three 10.5-CFM cooling fans (flow in), two 10.5-CFM cooling fans (flow out)
- **Power consumption:** 0.10 A @ 12 V
- **Rated fan speed:** 7800 rpm
- **Life expectancy:** 50,000 hours @ 25° C

1.3.3 Power Supply

- **Input:** 100~240 V_{AC} @ 50~60 Hz, switchable
- PFC (Power Factor Correction) can reach the furget of 95% @ 115 V, full load, following the standard of IEC 1000-3-2
- **Output:** +3.3 V @ 14 A, +5 V @ 16 A, +12 V @ 9 A, -12 V @ 0.7 A
- **Minumum load:** +3.3 V @ 1.0 A, + 5V @ 2 A, +12 V @ 1.0 A
- **Max output**: 185 W for +5V, +3.3 V and +12 V, 110 W for +5 V and +3.3 V
- **MTBF:** 100,000 hours @ 70% load
- **Safety:** UL/CUL/CE/FCC

1.4 Dimensions

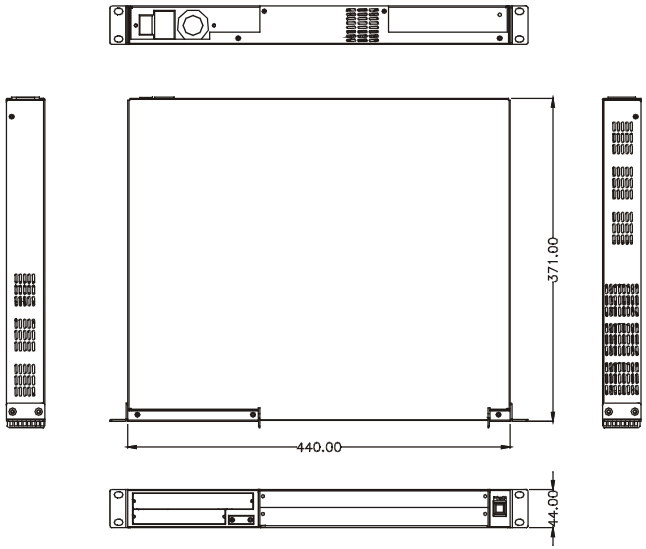


Figure 1-1: MIC-3035 dimensions

1.5 Ordering Information

- **MIC-3035:** 1U-high CompactPCI™ enclosure with 2- slot backplane, cooling fans, poweer supply, and holding brackets for 2xHDD, slim-type FFD and slim-type CD-ROM.
- **MIC-3377/M:** Single-slot 6U CompactPCI™ Pentium® III processor board with VGA and dual LANs
- **MIC-3357:** Single-slot 6U CompactPCI™ Pentium® MMX processor board with VGA and three LANs (Available in August 2001)

CHAPTER 2

Installation

2.1 Initial Inspection

We have carefully inspected the MIC-3035 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-3035, 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-3035 Illustration

The MIC-3035 is designed to be installed and maintained easily. Figure 2-1 and Figure 2-2 illustrate important components on the front and rear side of the enclosure.

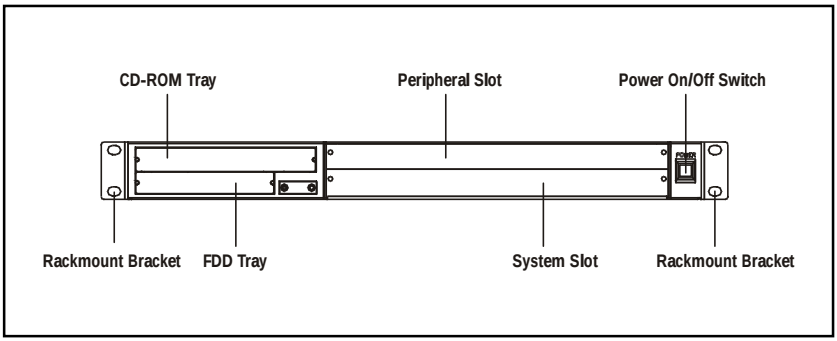


Figure 2-1: Front view of MIC-3035

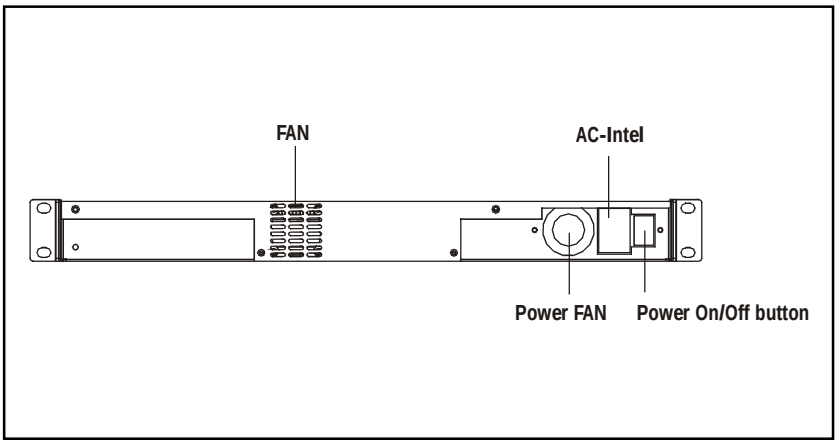


Figure 2-2: Rear view of MIC-3035

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. The CompactPCI™ specification allows the system slot to be in any position in the backplane. Do not insert the system card into the other slot, or insert a peripheral card into the system slot. The system slot is marked by a triangle enclosing the slot number. Please refer to the backplane user's manual.

Note: Another easy way to distinguish the system slot is that the system slot uses red guide rails while the peripheral slots use gray ones.

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 upper 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 both edges of the card into the card guides.
4. Push the card into the slot gently by sliding the card along the card guide rails until the handles meet the rectangular holes of the handle locker rails.

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. Left-pull the right handle and right-pull the left handle to push the card into place.
6. Secure the card by locking the handles into place.

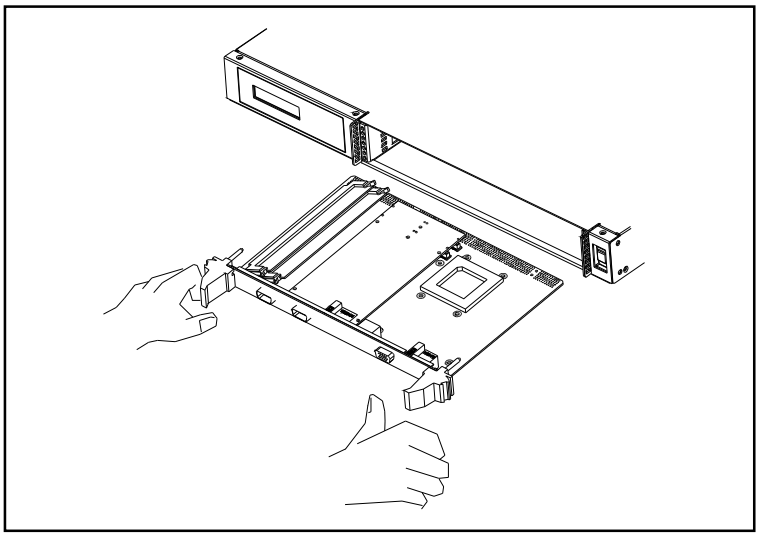


Figure 2-3: Installing a card into the chassis

To remove a card:

1. Release the locking latches on the handles.
2. Push the both handles out to release the card from the backplane.
3. Slide the card out.

2.3.2 Before Operating the System

Before operating your system, first check your power supply source. The power supply module included in the MIC-3035 chassis accepts a full input range of 100~240 V_{AC} without any switch setting.

Two mounting flanges are included for users who would like to install the MIC-3035 on a 19" rack.

2.3.3 Installing Peripherals

The MIC-3035 accepts four devices, including two 3.5" devices, one slim-type CD-ROM drive, and slim-type FDD drive.

There are two types of mounting brackets shipped with the MIC-3035. The HDD mounting bracket is designed for mounting two 3.5" hard disk drives, and one pair of mounting brackets are for a slim-type floppy disk drive as well as a slim-type CD-ROM drive. Please refer to Figure 2-4, 2-5, and 2-6 for an illustration of mounting. Figure 2-7 shows the recommended device bay configuration.

2.3.4 Installing a 3.5" Hard Disk Drive

Follow the procedures below to install 3.5" hard disk drives in the MIC-3035:

1. Unfasten and remove the upper cover plate of the MIC-3035.
2. Unfasten the HDD mounting bracket.
3. Fasten the hard disk drives on the HDD mounting bracket.
4. Fasten the mounting bracket with the hard disk drives in the MIC-3035.
5. Connect the IDE flat cable to the installed devices, and to the connector CN2 on the backplane. (You can find an IDE flat cable in the accessary box.)
6. Close the upper cover.

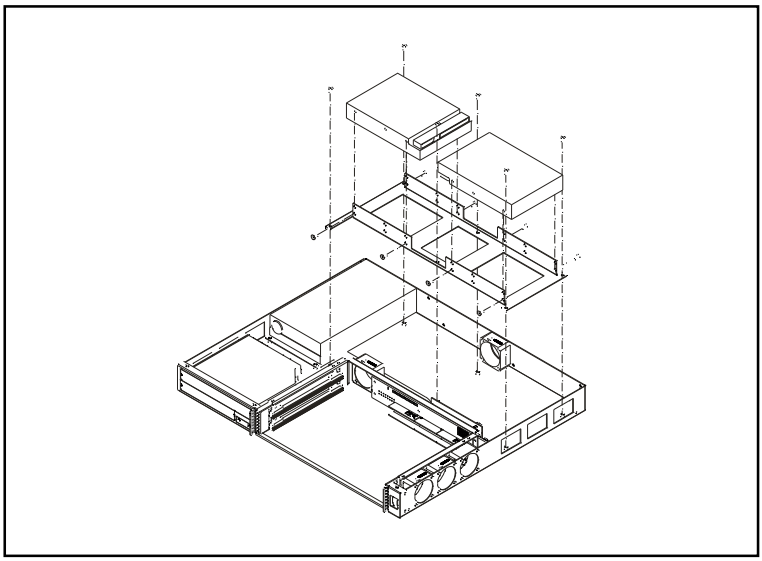


Figure 2-4: Inatalling 3.5" hard disk drives

2.3.5 Installing a Slim-type Floppy Disk Drive

A space is reserved for a slim-type floppy disk drive in the left-front device bay. Follow the procedures below to install a slim-type floppy disk drive.

1. Fasten one pair of the FDD mounting brackets to both sides of a slim-type floppy disk drive. (You may find the mounting brackets in the accessary box.)
2. Unfasten and remove the upper cover plate of the MIC-3035.
3. Fasten the mounting brackets with the floppy disk drive on the MIC-3035. (Please refer to Figure 2-5)
4. Connect the FFC cable to the installed device and to the connector CN1 on the backplane.
5. Close the upper cover.

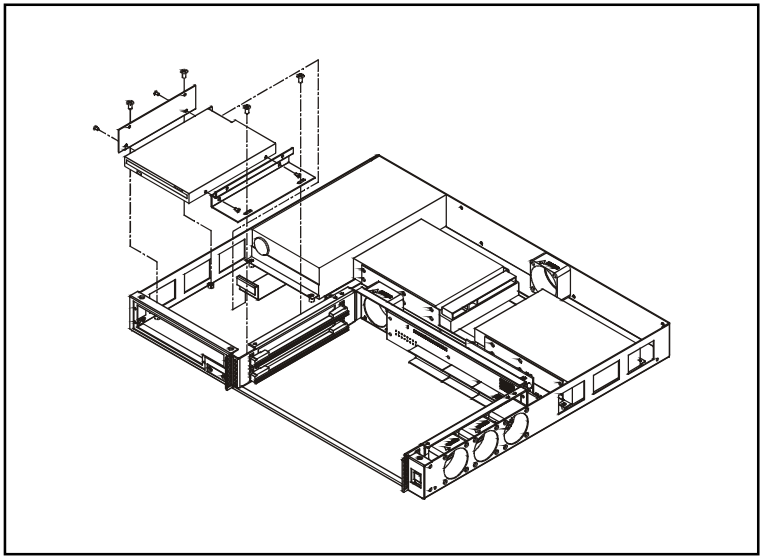


Figure 2-5: Installing a slim-type floppy disk drive

2.3.6 Installing a Slim-type CD-ROM Drive

A space is reserved for a slim-type CD-ROM drive in the left-front device bay. Follow the procedures below to install a CD-ROM drive.

1. Unfasten and remove the upper cover plate of the MIC-3035.
2. Fasten the CD-ROM to the mounting brackets. (please refer to Figure 2-6)
3. Connect the FPC cable to the installed device and to the connector JP3 on the backplane.
4. Close the upper cover.

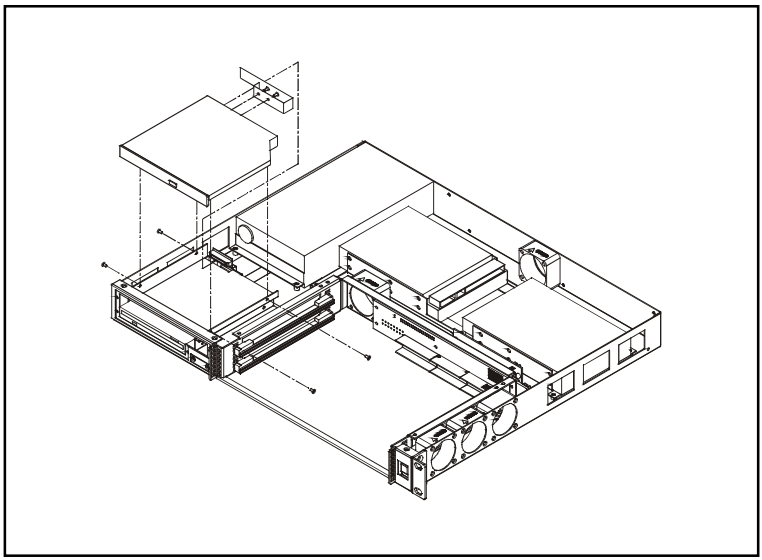


Figure 2-6: Installing a slim-type CD-ROM drive

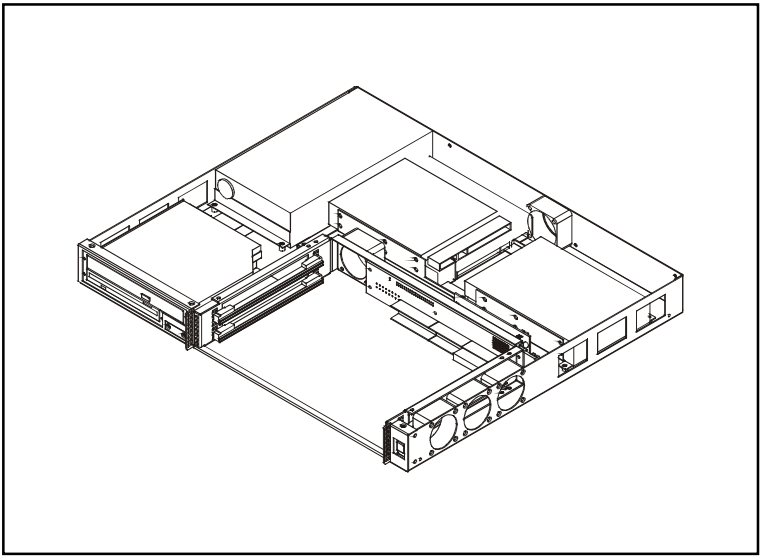


Figure 2-7: Recommended device bay configuration

CHAPTER 3

Backplane

3.1 General Information

This backplane is used for the 1U-high CompactPCI™ enclosures, MIC-3035 and MIC-3037, and provides two CompactPCI slots. One slot is assigned to the CPU board and the other slot to one peripheral board. The MIC-3035 supports front I/O wiring, providing simplified system cabling.

The backplane provides four 3-pin connector for connecting up to 5 cooling fans. A 20-pin connector can be used for connecting an optional alarm module to detect the system internal conditions, such as bus voltages, fan speed, and temperatures.

In order to provide users with a flexible system configuration, the MIC-3035 includes one standard ATX power connector to accpet one ATX power supply.

The MIC-3035 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

- Two CompactPCI™ slots (one system slot and one peripheral slot)
- 64-bit bus width
- Complies with PICMG 2.1 Hot-Swap Specification
- Accepts one ATX power supply
- Alarm module interface
- Fan interface

3.3 Specification

- Two CompactPCI slots (one system slot and one peripheral slot)
- 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, Ver.3.0
- Complies with CompactPCI Hot Swap Specification PICMG 2.1, Ver.1.0
- Logic Ground and Chassis Ground are common
- Dimensions: 36 x 224 mm
- Operating temperature: -40 ~ 80° C (-40 ~ 176° F)

3.4 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 R 3.0 for further information on slot assignments). The physical numbers are printed on the backplane, enclosed in circles or triangles, below each slot. Slot 2, marked by a triangle, is the system slot and can only be used by a CPU board. The other slot (slot 1) are a peripheral slot and can be used by one peripheral card.

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 slot relationships on the backplane. Physical slot 2 (system slot) has a logical number of 1, and physical slot 1 has a logical number of 2. The connectors in logical slot 1 are designated as 1-P1, 1-P2 and 1-P3 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 (slot 2) is a keyed connector providing 32-bit CompactPCI bus between the system slot and the peripheral slot. Connector P2 on the system slot (slot 2) is an un-keyed connector providing 64-bit CompactPCI bus between the system slot and the peripheral slots. Connector P3 on the system slot (slot 2) is open for user definition.

Appendix A gives the pin assignment for all the connectors on the backplane.

System Slot 2, (Logical Slot 1):		Peripheral Slot 1, (Logical slot 2)	
CLK0	P1:D6	CLK	P1:D6
AD28	P1:C7	IDSEL	P1:B9
REQ3#	P2:E2	REQ#	P1:A6
GNT3#	P2:C3	GNT#	P1:E5

Table 3-1: System to peripheral slot signal assignment

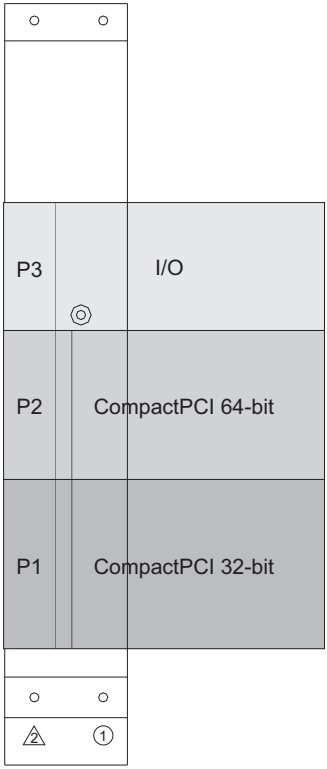


Figure 3-1: Slot numbering of the backplane

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 3-2 and Figure 3-3 illustrate the connector locations of the backplane.

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

Name	Function
ATX1	ATX power connector 1
CN1	Slim-type FDD connector
CN2	IDE HDD connector
CN3	Alarm board interface connector
FAN 1~4	Fan module connectors
JP1	Power switch connector
JP2	V I/O voltage selection
JP3	Slim-type CD-ROM connector
P1, P2	64-bit CompactPCI™ bus
P3	I/O transition

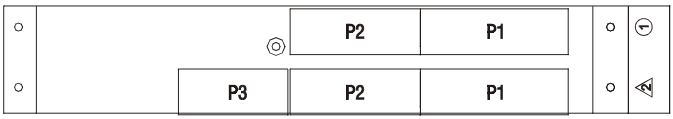


Figure 3-2: The connector and jumper locations on the front side

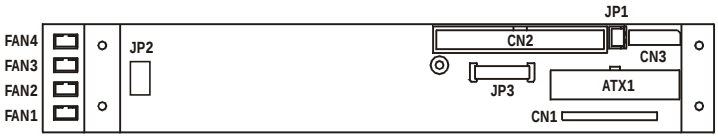


Figure 3-3: The connector and jumper locations on the rear side

3.5.1 ATX Power Connector (ATX1)

This connector accepts one standard ATX power supply.

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

3.5.2 Slim-type Floppy Disk Drive Connector (CN1)

This connector accepts one slim-type floppy disk drive.

3.5.3 IDE Hard Disk Drive Connector (CN2)

This connector accepts IDE hard disk drive. The MIC-3035 supports up to two hard disk drives. Please follow the section 2.3.4 for installation.

3.5.4 Alarm Board Interface (CN3)

The 30-pin connector CN3 is an interface for an optional external monitoring and alarm module which monitors the conditions of the system. This alarm module will be available in August 2001. For more information about it , please contact with our local sales representives or visit our website.

3.5.5 Power Switch (JP1)

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.

3.5.6 V I/O Voltage Selection (JP2)

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 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 3-3: V I/O voltage selection

V I/O	JP2
5 V (default)	
3.3 V	

3.5.7 Slim-type CD-ROM Connector (JP3)

This connector accepts slim-type CD-ROM drive. Please follow the section 2.3.6 for installation.

3.5.8 Fan Module Connector (FAN1~4)

The FAN connectors FAN 1~4 provide +12 V power for fan operation and accepts the tachometer output from the fans.

3.5.9 Screw Terminal for External Power Supply

Along the upper and lower edges of the backplane are 4 power pads providing external power supply I/O. These 4 pads facilitate input or output of powers and grounds. Contact Advantech for installation help.

3.6 Clock Routing Configuration

The backplane 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 3.0, which allows the backplane to be backward compatible with CPUs using shared clocks, please contact Advantech for help.

APPENDIX A

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	IPBSCL	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	REQ#	GND	3.3V	CLK	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	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

= 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	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	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	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	SIDE_D3	SIDE_D6	SIDE_D2	SIDE_D10	SIDE_D14	GND
18	GND	SIDE_D8	SIDE_D5	SIDE_D1	SIDE_D11	SIDE_D15	GND
17	GND	SIDE_D9	SIDE_D4	SIDE_D0	SIDE_D12	SIDE_D13	GND
16	GND	SIDE_D7	ICS1B-	IIORB-	ICS3B-	HDRDYB	GND
15	GND	HDBDRQ	IDACKB-	HDBSA2	R_IRQS	IIOWB-	GND
14	GND	N/C	N/C	HDBSA1	GND	HDBSA0	GND
13	GND	N/C	N/C	TX1	RX1	N/C	GND
12	GND	IID0	IID2	IID4	IID7	N/C	GND
11	GND	IID1	IID3	IID8	IID6	IID12	GND
10	GND	IID5	IID9	IID10	IID11	IID13	GND
9	GND	IID15	IID14	ODRQ-	PCS3-	PIOR-	GND
8	GND	PIRQ	PACK-	VCC5	PDA2	PIOW-	GND
7	GND	IDE_LED	GND	HRST-	PRDY	PCS1-	GND
6	GND	N/C	VCC5	GND	PDA0	PDA1	GND
5	GND	VCC5	N/C	N/C	SCL_EXT	SDA_EXT	GND
4	GND	N/C	N/C	N/C	N/C	N/C	GND
3	GND	DSK CHG#	MOA#	STEP#	HEAD#	TRACK0#	GND
2	GND	DSA#	N/C	RWC#	RDATA#	WP#	GND
1	GND	INDEX#	N/C	DIR#	WE#	WD#	GND

#: Low active

A.4 Peripheral Slot P1 Connector

Table A-4: 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	BRSVP1B5	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

= long pins = short pins = medium length pins

#: Low active

A.5 Peripheral Slot P2 Connector

Table A-5: 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	BRSVP2BC18	GND	BRSVP2E18	GND
17	GND	BRSVP2A17	GND	RSV	RSV	RSV	GND
16	GND	BRSVP2A16	BRSVP2B16	RSV	GND	BRSVP2E16	GND
15	GND	BRSVP2A15	GND	RSV	RSV	NRSV	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.6 Slim-type Floppy Drive Connector (CN1)

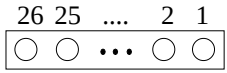


Table A-6: Slim-type Floppy Drive Connector

Pin	Signal	Pin	Signal
1	VCC5	2	INDEX#
3	VCC5	4	DSA#
5	VCC5	6	DSKCHG
7	N/C	8	N/C
9	N/C	10	MOA#
11	N/C	12	DIR#
13	RWC#	14	STEP#
15	GND	16	WD#
17	GND	18	WE#
19	GND	20	TRACK0#
21	GND	22	WP#
23	GND	24	RDATA#
25	GND	26	HEAD#

low active

A.7 Hard Disk Drive Connector (CN2)

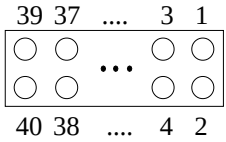


Table A-7: Hard Disk Drive Connector

Pin	Signal	Pin	Signal
1	HEST-	2	GND
3	IID7	4	IID8
5	IID6	6	IID9
7	IID5	8	IID10
9	IID4	10	IID11
11	IID3	12	IID12
13	IID2	14	IID13
15	IID1	16	IID14
17	IID0	18	IID15
19	GND	20	N/C
21	PDRQ-	22	GND
23	PIOW-	24	GND
25	PIOR-	26	GND
27	PRDY	28	Pull low
29	PACK-	30	GND
31	PIRQ	32	N/C
33	PDA1	34	Pull low
35	PDA0	36	PDA2
37	PCS1-	38	PCS3-
39	HDD_LED	40	GND

A.8 Slim-type CD-ROM Connector (JP3)

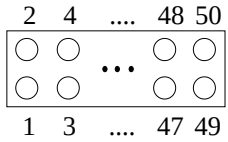


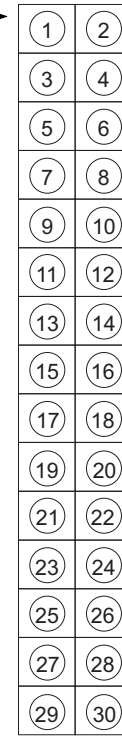
Table A-8: Slim-type CD-ROM Connector

Pin	Signal	Pin	Signal
1	N/C	2	N/C
3	GND	4	N/C
5	SIDE_D8	6	HRST-
7	SIDE_D9	8	SIDE_D7
9	SIDE_D10	10	SIDE_D6
11	SIDE_D11	12	SIDE_D5
13	SIDE_D12	14	SIDE_D4
15	SIDE_D13	16	SIDE_D3
17	SIDE_D14	18	SIDE_D2
19	SIDE_D15	20	SIDE_D1
21	HDBORQ	22	SIDE_D0
23	IIORB-	24	GND
25	GND	26	IIOWB-
27	IDACKB-	28	HDRDYB
29	Pull high	30	R_IRQ_S
31	Pull low	32	HDBSA1
33	HDBSA2	34	HDBSA0
35	ICS3B-	36	ICS1B-
37	VCC5	38	CD_LED
39	VCC5	40	VCC5
41	VCC5	42	VCC5
43	GND	44	GND
45	GND	46	GND
47	GND	48	Pull low
49	N/C	50	N/C

A.9 Alarm Board Interface Connector (CN3)

Table A-9: Alarm Board Interface Connector

Pin	Assignment
1	+5V
2	+3V
3	+5V
4	NC
5	SDA_EXT
6	NC
7	SCL_EXT
8	NC
9	TX1
10	NC
11	RXI
12~18	NC
19~20	GND
21~30	NC



A.10 Fan Module Connectors (FAN 1~4)

Table A-10: Fan Module Connectors

Pin	Assignment
1	+12 V
2	GND

A.11 ATX Power Connector (ATX1)

Table A-11: ATX Power Connector

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

A.12 Power Switch Connector (JP2)

Table A-12: Power Switch Connector

Pin	Signal
1	PSON#
2	GND