

BUF(PCI)13
PCI Bus Expansion Adapter Set
User's Guide

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Product Configuration

- BUS-PC(PCI)... 1
- BUS-PAC(PCI)... 1
- PC-MB14(PCI)... 1
- ATX power control cable... 1
- Connecting cable ... 1
- User's Guide (this booklet) ... 1

Unpacking:

This card is specially packed in an anti-static bag to prevent damage in shipping.

Check the contents to make sure that you have everything listed above. If you do not have all the items, contact your distributor or CONTEC group office where you purchased.

Note!

Do not remove the board from its protective packaging until the computer case is open and ready for installation. Electrical static can cause damage to electrical components.

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1. Introduction

About the BUF(PCI)13 Board

Thank you for purchasing the BUF(PCI)13 expansion bus adapter. The BUF(PCI)13 is an expansion bus adapter that allows a PCI bus expansion slot to be added by connecting the adapter to the PC.

The BUF(PCI) product includes the following items.

- BUS-PC(PCI) : Install on the PC.
- BUS-PAC(PCI) : Install in the dedicated slot on the PC-MB14(PCI).
- PC-MB14(PCI) : Install as a motherboard in the PC case*, such as CONTEC's FA-UNTT-F8DR.
- ATX power control cable
- Connecting cable

* For selecting a PC case for mounting PC-MB14(PCI), see the dimensions for the PC-MB14(PCI) later in this manual.

The products available for mounting are as follows:

- FA-UNIT-F8DR
- FA-UNIT-F8DR/M

Features

- To add a PCI bus expansion slot, mount the BUS-PC(PCI) in a PCI bus expansion slot in the PC, and the PC-MB14(PCI) and BUS-PAC(PCI) in the PC case.
- Compatible with 32-bit PCI bus Rev 2.1 (+5V specifications)
- Using the ATX power for the PC-MB14(PCI) allows interconnection with the power supplied to the PC.

Limited Three-Year Warranty

CONTEC Products are warranted by CONTEC Co., LTD. to be free from defects in material and workmanship for up to three years from the date of purchase by the original purchaser.

Repair will be free of charge only when this device is returned freight prepaid with a copy of the original invoice and a Return Merchandise Authorization to the distributor or the CONTEC group office, from which it was purchased.

This warranty is not applicable for scratches or normal wear, but only for the electronic circuitry and original boards. The warranty is not applicable if the device has been tampered with or damaged through abuse, mistreatment, neglect, or unreasonable use, or if the original invoice is not included, in which case repairs will be considered beyond the warranty policy.

How to Obtain Service

For replacement or repair, return the device freight prepaid, with a copy of the original invoice. Please obtain a Return Merchandise Authorization Number (RMA) from the CONTEC group office where you purchased before returning any product.

*** No product will be accepted by CONTEC group without the RMA number.**

Liability

The obligation of the warrantor is solely to repair or replace the product. In no event will the warrantor be liable for any incidental or consequential damages due to such defect or consequences that arise from inexperienced usage, misuse, or malfunction of this device.

Handling Precautions

Please be careful to observe the following precautions whenever handling this product.

- Do not subject the board to physical shock or bending. This can damage the board.
- Do not attempt to modify the board in any way. The manufacturer will not be responsible for any boards that have been modified.
- Do not touch the gold-plated contacts (edge connectors) with your bare hands. This can prevent proper connections. If the contacts have been touched, they should be wiped clean with an industrial alcohol solution.
- The board should be used with a PC expansion slot that meets PCI bus standards, or with a CONTEC FA-UNIT-F8DR unit.
- Never insert the board in a slot, or remove it, when the power supply is on. This can cause damage to the board. Always be sure the PC power is off before inserting or removing the board.
- The total current consumption of boards mounted in expansion slots of the PC-MB14(PCI) must not exceed the allowable power capacity of the PC-MB14(PCI). This can cause damage.
- Be sure that external power supply voltage and drive current do not exceed rated levels.
- Do not connect any signal other than specified to the on-board connector, or it may cause a fault.
- Plug the board into the specified expansion slot.

Restrictions

The BUF(PCI)13 can only be used with certain personal computers and boards. Be sure to verify operating capabilities before using.

<Personal computer compatibility>

The BUF(PCI)13 provides bus expansion by means of PCI-to-PCI Bridge. Recognition of the BUF(PCI)13 depends on whether the BIOS installed in the personal computer can recognize PCI-to-PCI Bridge. Please confirm PC manufacturer or vendor whether BIOS can recognize PCI-to-PCI bridge device.

<Boards that cannot be used>

The following boards cannot be used in the PC-MB14(PCI) expansion slot.

- (1) Graphic display boards (VGA boards)
- (2) Boards designed to increase the number of units expanded with a PCI bus.
- (3) A board specifically listed in the PC manual as one that cannot be used.
- (4) A board might not operate depending on its specifications, although it may well be in compliance with the PCI bus specification.

About the Manual

This manual is organized as follows:

Chapter 1 Introduction

Chapter 2 Identifying Each Part of the Boards
Identifies the name of each part on the boards and explains its function.

Chapter 3 Setting Up
Explains installation of the boards through starting the system.

Chapter 4 Specifications
Explains the specifications of this product and items to be checked when the product malfunctions.

Chapter 5 Index

2. Identifying Each Part of the Board

BUS-PC(PCI)

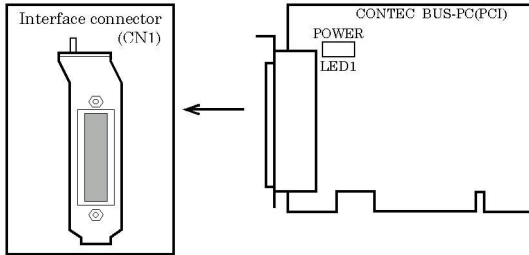


Figure 2.1. BUS-PC(PCI) Installation

CN1 : Attaches to the connecting cable (included)

LED1 : Indicates when the power supply is on

BUS-PAC(PCI)

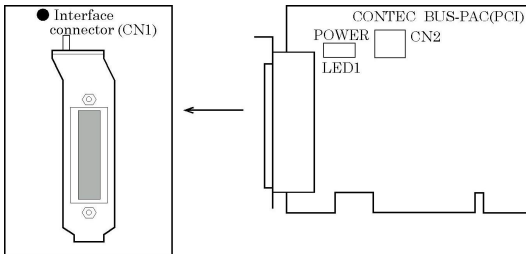


Figure 2.2. BUS-PAC(PCI) Installation

CN1 : Attaches to the connecting cable (included)

CN2 : Connects the ATX power supply control cable that came with the product. *

LED1 : Indicates when the power supply is on

* Enabled only when the ATX power is used to power the PC-MB14(PCI).

PC-MB14(PCI)

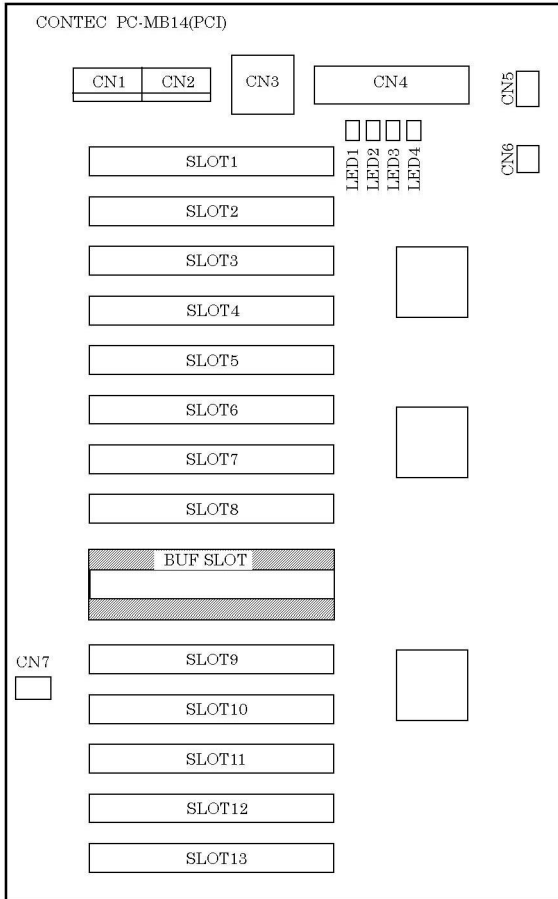


Figure 2.3. PC-MB14(PCI) Installation

- CN1, CN2 : Connect the PS/2 power supply connectors.
- CN3 : +3.3V power is needed when using the PS/2 power.
- CN4 : Connects the ATX power supply connector.

- CN5 : The power supply terminal for the power LED on the PC case in which the PC-MB14(PCI) is installed.
- CN6 : Connector between the power switch and ATX power supply specifications case for mounting PC-MB14(PCI).
- CN7 : Connects the ATX power supply control cable that came with the product.
- SLOT9 : User definable slots. These slots are one PCI bus level closer to the host than SLOT1 to 8 ,10 to 13.
- SLOT1 to 8, 10 to 13 : User definable slots. These slots are one PCI bus level farther from the host than SLOT9.
- BUF SLOT : This slot is reserved for the BUS-PAC(PCI) connection. Do not mount any other boards here.
- LED1 : DC+3.3V power supply indicator LED (lights when power is ON)
- LED2 : DC+5V power supply indicator LED (lights when power is ON)
- LED3 : DC+12V power supply indicator LED (lights when power is ON)
- LED4 : DC-12V power supply indicator LED (lights when power is ON)

Note!

The PCI bus expansion slots support a total of four interrupt pin signals (INTA, INTB, INTC, INTD).

The individual slots have different wiring for connection not to overload each IRQ line.

See the table below for the relationships among the PCI slot numbers, bus numbers, device numbers, and interrupt pins.

Table 2.1. PCI Expansion Slot Numbers, Bus Numbers, Device Numbers and Interrupt Pins

Slot No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Bus No. (*1)	5				4				2	3			
Device No.	4	5	6	7	4	5	6	7	6	4	5	6	7
INTA (*2)	A	D	C	B	D	C	B	A	C	B	A	D	C
INTB	B	A	D	C	A	D	C	B	D	C	B	A	D
INTC	C	B	A	D	B	A	D	C	A	D	C	B	A
INTD	D	C	B	A	C	B	A	D	B	A	D	C	B

*1: This assumes that the PC's PCI slot in which the BUS-PC(PCI) has been plugged has a bus number of 0 assigned.

*2: This assumes that the PC's PCI slot in which the BUS-PC(PCI) has been plugged has an array of interrupt pins INTA, INTB, INTC, and INTD.

3. Setting Up

Setting Up the PC-MB14(PCI)

Mounting the PC-MB14(PCI)

Set the PC-MB14(PCI) in the PC case and fasten it with screws. The following section explains how to mount the PC-MB14(PCI) using the FA-UNIT-F8DR manufactured by CONTEC. Use the following information for setup when using a commercially available BABY AT case or an ATX specification-compliant case.

Note!

Be sure to disconnect the FA-UNIT-F8DR from the power outlet before performing this operation.

- (1) Remove the cover of the FA-UNIT-F8DR.
- (2) Insert the PC-MB14(PCI) board and affix with screws. The board should be oriented so that the CONTEC logo ('CONTEC PC-MB14(PCI)') is facing the slotted window.

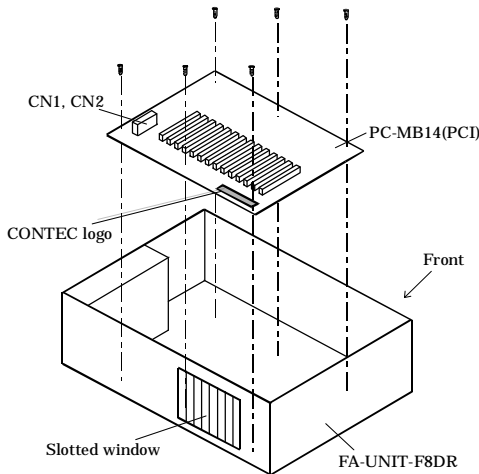


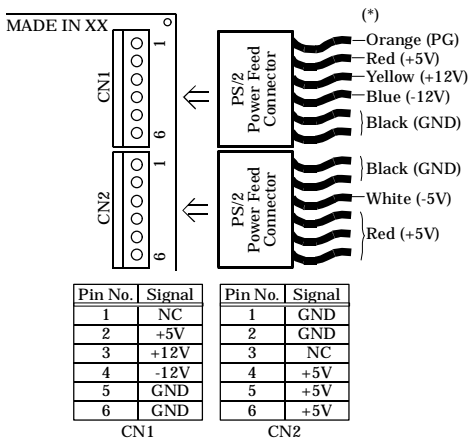
Figure 3.1. Motherboard Installation

Connecting the Power Supply Connectors (When Using PS/2 Power)

Connectors to be connected vary with the power you are using. Make connections according to the power you are using. The connection procedure for the PS/2 power is explained here.

PS/2 power supply connectors (CN1 and CN2)

Connect PS/2 power supply connectors to CN1 and CN2. Connector wiring is as shown below.



(*) Colors of the cables may be different from those of the actual cables.

Figure 3.2. Connecting CN1 and CN2

Power Supply Connections (for ATX Supply)

Different connectors are used depending on the type of power supply. Be sure to use the correct connection for the power supply you are using. The following example illustrates connections for use with an ATX power supply.

ATX power supply connector (CN4)

Connect the ATX power supply to connector CN4. The connector wiring is shown below.

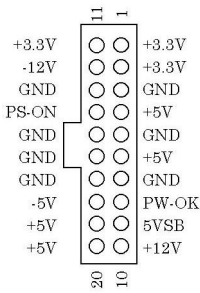


Figure 3.3. CN4 Connector Wiring

ATX power supply control cable connections (CN7)

Connect the ATX power supply control cable (included) to connector CN2 on the BUS-PAC(PCI) to be installed later. This will enable the PC-MB14(PCI) power to be interlocked with the personal computer power.

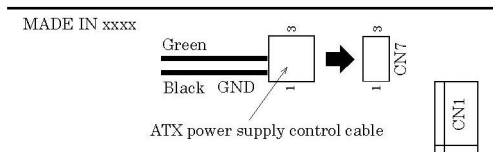


Figure 3.4. ATX Power Supply Control Cable Connection

ATX power switch connector (CN6)

Connector CN6 is used to connect the power switch from the ATX personal computer unit. The power switch is a momentary switch, toggling the ATX power supply between ON and SLEEP modes.

* SLEEP mode indicates that the main ATX power unit is on, with only the 5VSB power (+5V power supply in standby mode) being supplied.

Note!

Do not switch the PC-MB14(PCI) power supply between ON and SLEEP settings while the personal computer power is on. This will cause bus adapter recognition to be cancelled. Always restart the personal computer after switching between ON and SLEEP settings.

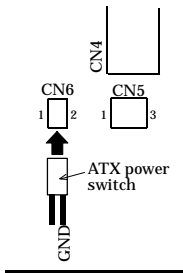


Figure 3.5. Power Switch Connections

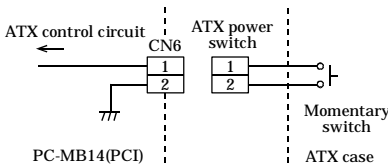


Figure 3.6. Power Switch Circuit Diagram

Other Connectors

Terminal block (CN3)

Supply power from CN3 when +3.3V power supply is needed.

The input current specifications are as listed below.

Table 3.1. CN3 Specifications

Voltage	+3.3VDC
Max. current	15A

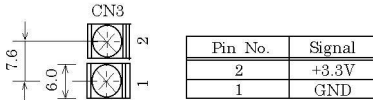


Figure 3.7. CN3 Wiring

Power supply terminal for the external LED (CN5)

CN5 is the power supply terminal for the power LED in the PC case. How to connect the terminal to the power LED of the FA-UNIT-F8DR is shown below. Use this information for your reference if you are using a case designed for another PC.

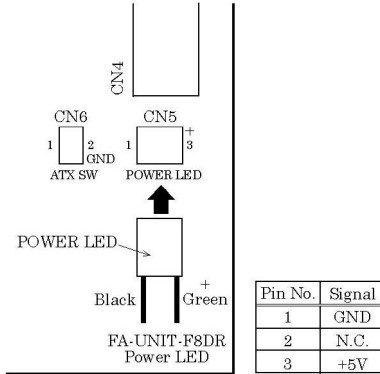


Figure 3.8. External LED Power Feed Pin

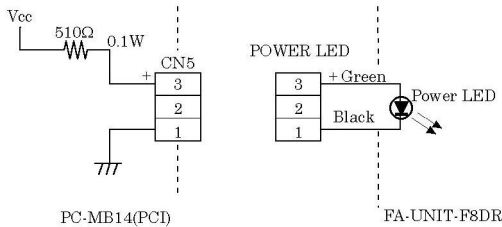


Figure 3.9. External LED Power Feed Circuit

Setting Up the BUS-PC(PCI)

BUS-PC(PCI) Installation

Mount the BUS-PC(PCI) in the PC.

- (1) Turn off the power to the personal computer and all peripheral devices, and remove AC power cables from the power outlet.
- (2) Remove the cover from the personal computer. For instructions on removing the cover, refer to the User's Manual provided with the personal computer.
- (3) Remove the screws from the cover on the PCI bus slot where you will install the board, then remove the slot cover.
- (4) Insert the board into the PCI bus slot.
- (5) After the board is in place, pull it lightly to ensure that it does not slip out.
- (6) Use the screws removed in step (3) to affix the board.
- (7) Replace the cover on the personal computer.

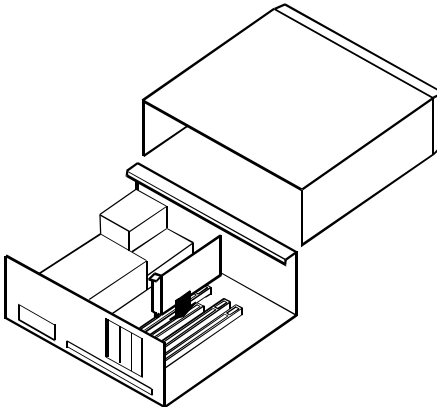


Figure 3.10. Board Installation

Notes!

- *For instructions on installation, see the description of 'Installation Methods' in the User's Manual provided with the personal computer you are using.*
- *Before installing any board, be sure to disconnect the personal computer from the power outlet.*
- *When installing any board, be sure to remove all metal, jewelry, etc. from your hands and wrists.*

Setting Up the BUS-PAC(PCI)

BUS-PAC(PCI) Installation

Mount the BUS-PAC(PCI) on the PC-MB14(PCI) which has been fastened to the PC case.

Notes!

- Before you begin installation, be sure to disconnect the PC case power plug from the wall outlet.
- Be sure to install the BUS-PAC(PCI) board in the 'BUF SLOT' labeled "BUFFER BOARD ONLY."

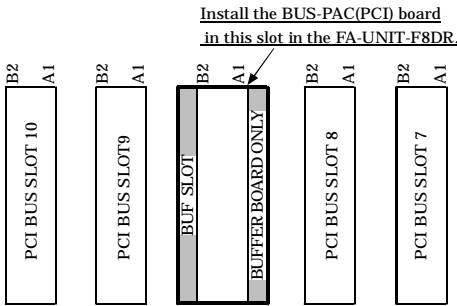


Figure 3.11. BUS-PAC(PCI) Installation

Connecting CN2

Connect the ATX power control cable if the PC-MB14(PCI) is powered with the ATX power. For more information, see the section on mounting the PC-MB14(PCI).

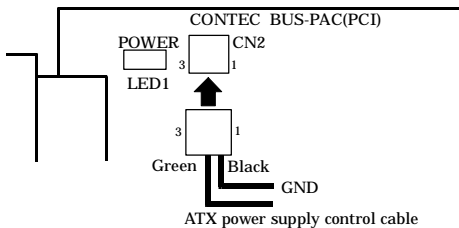


Figure 3.12. CN2 Connection Diagram

Connecting the BUS-PC(PCI) Board to the BUS-PAC(PCI) Board

After both boards are installed properly, use the included connecting cable to connect the BUS-PC(PCI) board to the BUS-PAC(PCI) board. The connecting cable is a 96pin shielded cable with identical connectors on both ends.

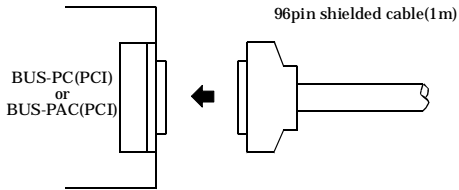


Figure 3.13. Cable Connections

Starting the System (with other than the ATX Power)

Turning the System Power ON

- (1) Be sure that the power plug for the PC case mounted with the PC-MB14(PCI) is connected to a wall outlet.
- (2) Turn the FA-UNIT-F8DR power switch ON.
- (3) Be sure that the PC-MB14(PCI) power LED is lit.
- (4) Be sure that the PC power plug is connected to a wall outlet.
- (5) Turn the personal computer power ON.
- (6) Check the front panel of the personal computer to see that the power indicator LED is ON.

Note!

Be sure to switch on the power to the PC-MB14(PCI) before the personal computer.

If the power is not turned on in this sequence, the bus adapter will not be recognized by the personal computer.

Turning the System Power OFF

- (1) Turn the personal computer power OFF.
- (2) Turn the FA-UNIT-F8DR power OFF.

Note!

Do not turn the PC-MB14(PCI) power ON or OFF while the personal computer is ON. This will terminate recognition of the bus adapter. If the PC-MB14(PCI) power is turned ON or OFF, you will need to restart the personal computer.

Starting the System (with the ATX Power Supply)

If the PC-MB14(PCI) is powered by the ATX, that power can be interlocked or non-interlocked with the power supplied to the PC or both can be used in parallel, depending on how you connect the connector.

Be sure that the ATX power supply connector is connected to CN4.

Interlocking with the PC Power

Be sure that CN7 on the PC-MB14(PCI) and CN2 on the BUS-PAC(PCI) are connected with the ATX power control cable.

Leave CN6 on the PC-MB14(PCI) unconnected.

Turning the system power supply ON

- (1) Turn the main ATX power supply ON.
- (2) Turn the PC power ON.
- (3) The ATX power is turned ON interlocked with the PC power.
- (4) Be sure that the power LED is lit on the PC-MB14(PCI).

Turning the system power OFF

- (1) Turn the PC power OFF.
- (2) The ATX proceeds to sleep interlocked with the PC power.
- (3) To turn the ATX power completely OFF, turn the main power OFF.

Not interlocking with the PC Power

Be sure that CN6 on the PC-MB14(PCI) and the power switch on the ATX specification-compliant case are connected. Leave CN7 on the PC-MB14(PCI) unconnected.

Turning the system power ON

- (1) Turn the main ATX power ON.
- (2) Using the power switch connected to CN6 on the PC-MB14(PCI), turn the ATX power ON.
- (3) Be sure that the power LED is lit on the PC-MB14(PCI).
- (4) Turn the PC power ON.
- (5) Be sure that the power LED is lit on the PC.

Turning the system power OFF

- (1) Turn the PC power OFF.
- (2) Using the power switch on the PC case, put the ATX to sleep.
- (3) To turn the ATX power completely OFF, turn the main power OFF.

Using Both in Parallel

Be sure that CN7 on the PC-MB14(PCI) is connected with CN2 on the BUS-PAC(PCI) and that CN6 on the PC-MB14(PCI) is connected with the power switch on the ATX specification-compliant PC case.

The ATX can be turned ON or put to sleep by turning the PC power ON/OFF or by using the switch on the PC case.

Note!

Do not turn the PC-MB14(PCI) ON or put it to sleep if the PC power is turned ON. Doing so would defeat the capacity to recognize the bus adapter. To turn the PC-MB14(PCI) ON or to put it to sleep, you must also restart the PC.

Precautionary Information

- Frame grounding of the personal computer and one or more PC-MB14(PCI) units should follow the heavy lines in the illustration below.
- When adding more expansion slots using the BUF(PCI)13, mount the BUS-PC(PCI) in the expansion slot in the PC. Additional installation from an installed expansion slot is not possible.

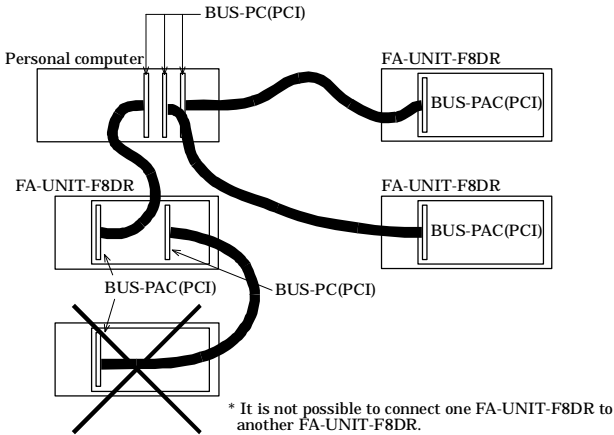


Figure 3.14. Example of Expansion Using Three Sets of BUF(PCI)13

4. Specification

Table 4.1. System Specifications

Item	Specification
Bus compatibility	32bit PCI bus Rev 2.1 (+5V Type)
Address space	32bit memory addressing, I/O addressing
Interrupt level	INTA~INTD (PCI specification spec. 2.1)
Bus operation clock	33MHz (Max.)
Connecting cable (included)	96pin shielded cable, 1m

Table 4.2. BUS-PC(PCI) Board Specifications

Item	Specification
Current consumption *1	+5VDC 700mA (Max.) *2 *3 +5VDC 300mA (Typ.) *3
Operating conditions	0 to 50°C, 30 to 90% humidity (no condensation)
External dimensions	122.0 x 107.0 x 18.5 mm
Weight	100g

*1: The BUF(PCI)13 card will not be recognized if the personal computer power is turned ON before the PC-MB14(PCI) power.

*2: Represents current consumption when only the personal computer power is on, and PC-MB14(PCI) unit power is off.

*3: Power is fed from personal computer.

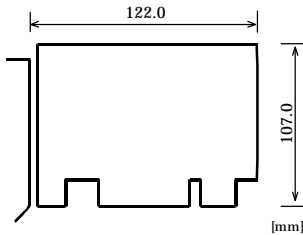


Table 4.3. BUS-PAC(PCI) Specifications

Item	
Current consumption *1	+5VDC 1500mA (Max.) *2 *3 +5VDC 900mA (Typ.) *3
Operating conditions	0 to 50°C, 30 to 90% humidity (no condensation)
External dimensions	122.0 x 107.0 x 18.5 mm
Weight	100g

*1 : BUS-PAC(PCI) specifications represent the total value of BUS-PAC(PCI) and PC-MB14(PCI) current consumption.

*2 : Represents current consumption when only the FA-UNIT-F8DR unit power is on, and personal computer power is off.

*3 : Power supplied from personal computer case.

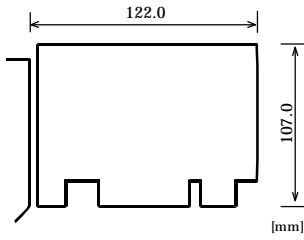


Table 4.4. PC-MB14(PCI) Specifications

Item	Specification
User definable slots	13 slots
Current consumption	[The total value of BUS-PAC(PCI) and PC-MB14(PCI) current consumption is listed under BUS-PAC(PCI) specifications.]
Operating conditions	0 to 50°C, 30 to 90% humidity (no condensation)
External dimensions	311.15 x 185.0 x 20.0 mm
Weight	500g

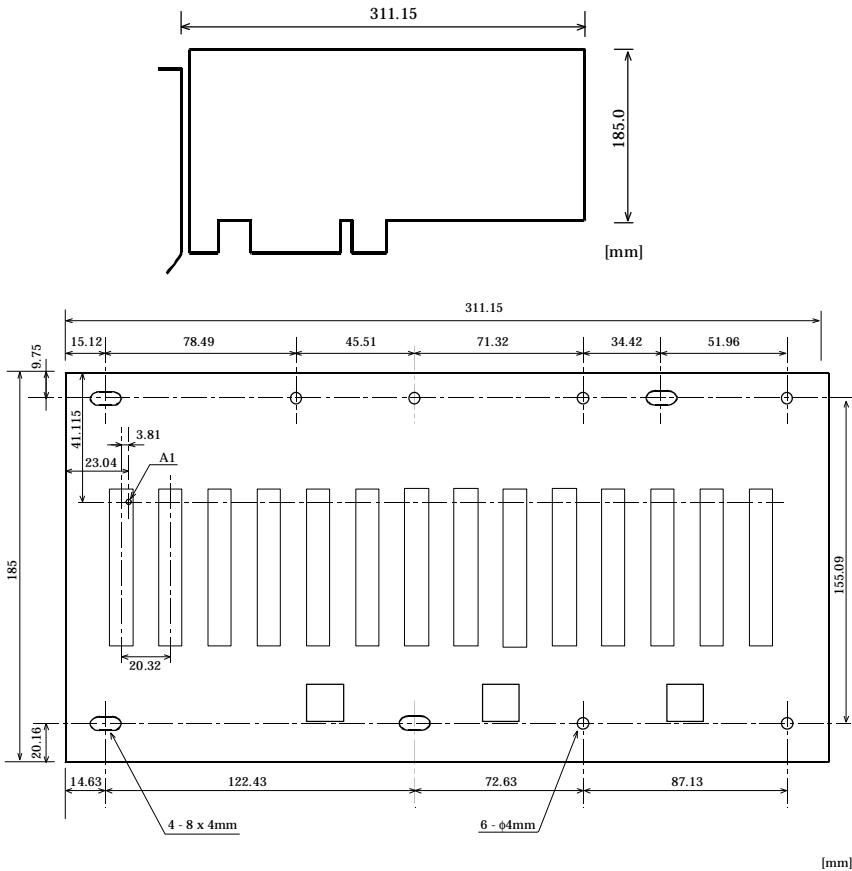


Figure 4.1. PC-MB14(PCI) Board Dimensions

System Block Diagram

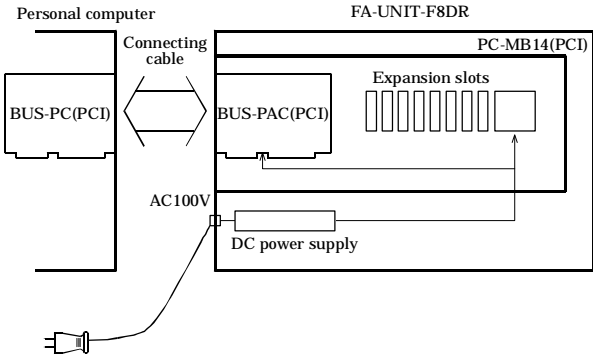


Figure 4.2. System Block Diagram

Expansion Bus Signals

The signals of the PCI bus expansion slot which has been added using the BUF(PCI)13 are subject to the restrictions listed in the table below. For information about the function of each signal line, see PCI bus standards. I/O directions indicate input (I) and output (O) seen from the installed board.

The 'master' and 'target' columns indicate the status of the installed board.

Table 4.5. Restrictions on Expansion Slot Signals
[32bit PCI Bus Rev 2.1 (+5V Type)] < 1 / 2 >

Pin No.	Signal name	Input/Output		Note	Pin No.	Signal name	Input/Output		Note
		Master	Target				Master	Target	
A01	TRST*	---	---	*1	B01	-12V	---	---	*2
A02	+12V	---	---	*2	B02	TCK	---	---	*1
A03	TMS	---	---	*1	B03	Ground	---	---	
A04	TDI	---	---	*1	B04	TDO	---	---	*1
A05	+5V	---	---	*2	B05	+5V	---	---	*2
A06	INTA*	O	O		B06	+5V	---	---	*2
A07	INTC*	O	O		B07	INTB*	O	O	
A08	+5V	---	---	*2	B08	INTD*	O	O	
A09	Reserved	---	---	*1	B09	PRSNT1*			*3 (fixed LOW)
A10	+5V(I/O)	---	---	*2	B10	Reserved	---	---	*1
A11	Reserved	---	---	*1	B11	PRSNT2*			*3(OPEN)
A12	Ground	---	---		B12	Ground	---	---	
A13	Ground	---	---		B13	Ground	---	---	
A14	Reserved	---	---	*1	B14	Reserved	---	---	*1
A15	RST*	I	I		B15	Ground	---	---	
A16	+5V(I/O)	---	---	*2	B16	CLK	I	I	
A17	GNT*	I	---		B17	Ground	---	---	
A18	Ground	---	---		B18	REQ*	O	---	
A19	Reserved	---	---	*1	B19	+5V(I/O)	---	---	*2
A20	AD[30]	I/O	I/O		B20	AD[31]	I/O	I/O	
A21	+3.3V	---	---	*2	B21	AD[29]	I/O	I/O	
A22	AD[28]	I/O	I/O		B22	Ground	---	---	
A23	AD[26]	I/O	I/O		B23	AD[27]	I/O	I/O	
A24	Ground	---	---		B24	AD[25]	I/O	I/O	
A25	AD[24]	I/O	I/O		B25	+3.3V	---	---	*2

Table 4.5. Restrictions on Expansion Slot Signals
[32bit PCI Bus Rev 2.1 (+5V Type)] < 2 / 2 >

Pin No.	Signal name	Input/Output		Note	Pin No.	Signal name	Input/Output		Note
		Master	Target				Master	Target	
A26	IDSEL	I	I		B26	C/BE[3]*	O	I	
A27	+3.3V	---	---	*2	B27	AD[23]	I/O	I/O	
A28	AD[22]	I/O	I/O		B28	Ground	---	---	
A29	AD[20]	I/O	I/O		B29	AD[21]	I/O	I/O	
A30	Ground	---	---		B30	AD[19]	I/O	I/O	
A31	AD[18]	I/O	I/O		B31	+3.3V	---	---	*2
A32	AD[16]	---	---		B32	AD[17]	I/O	I/O	
A33	+3.3V	---	---	*2	B33	C/BE[2]*	O	I	
A34	FRAME*	O	I		B34	Ground	---	---	
A35	Ground	---	---		B35	IRDY*	O	I	
A36	TRDY*	I	O		B36	+3.3V	---	---	*2
A37	Ground	---	---		B37	DEVSEL*	I	O	
A38	STOP*	I	O		B38	Ground	---	---	
A39	+3.3V	---	---	*2	B39	LOCK*	O	I	
A40	SDONE	---	---	*1	B40	PERR*	I/O	O	
A41	SBO*	---	---	*1	B41	+3.3V	---	---	*2
A42	Ground	---	---		B42	SERR*	O	O	
A43	PAR	I/O	I/O		B43	+3.3V	---	---	*2
A44	AD[15]	I/O	I/O		B44	C/BE[1]*	O	I	
A45	+3.3V	---	---	*2	B45	AD[14]	I/O	I/O	
A46	AD[13]	I/O	I/O		B46	Ground	---	---	
A47	AD[11]	I/O	I/O		B47	AD[12]	I/O	I/O	
A48	Ground	---	---		B48	AD[10]	I/O	I/O	
A49	AD[09]	I/O	I/O		B49	Ground	---	---	
A50	CONNECTOR	---	---	5 Volt Key	B50	CONNECTOR	---	---	5 Volt Key
A51	KEY	---	---	5 Volt Key	B51	KEY	---	---	5 Volt Key
A52	C/BE[0]*	O	I		B52	AD[08]	I/O	I/O	
A53	+3.3V	---	---	*2	B53	AD[07]	I/O	I/O	
A54	AD[06]	I/O	I/O		B54	+3.3V	---	---	*2
A55	AD[04]	I/O	I/O		B55	AD[05]	I/O	I/O	
A56	Ground	---	---		B56	AD[03]	I/O	I/O	
A57	AD[02]	I/O	I/O		B57	Ground	---	---	
A58	AD[00]	I/O	I/O		B58	AD[01]	I/O	I/O	
A59	+5V(I/O)	---	---	*2	B59	+5V(I/O)	---	---	*2
A60	REQ64*	---	---	*3 (fixed HI)	B60	ACK64*	---	---	*3 (fixed HI)
A61	+5V	---	---	*2	B61	+5V	---	---	*2
A62	+5V	---	---		B62	+5V	---	---	*2

An asterisk (*) after a signal name denotes an active-low signal.

*1: These signals are unconnected (OPEN), and are independent from the personal computer.

*2: This signal is independent of the PC and is dependent on the power specifications of the PC-MB14(PCI).

*3: These signals are independent from the personal computer, and are used for internal buffer board operation.

Troubleshooting

If your BUF(PCI)13 is not operating properly, check the following.

If the Power is not ON

- (1) Check that the power cable is connected properly.
- (2) Check that the personal computer and PC-MB14(PCI) power is turned on.
- (3) Check that the procedures in Chapter "Setting Up" of this manual have been followed.
- (4) If the power is still not on, check whether the PC-MB14(PCI) power will turn on with no boards installed. If the power does turn on in the case, check whether the total current consumption of the installed boards exceeds the supply capacity of the PC-MB14(PCI).
- (5) If the ATX power is used, be sure that designated cables are connected to CN6 and CN7 on the PC-MB14(PCI).

If the BUF(PCI)13 Connector is not Recognized

- (1) Check that the BUS-PC(PCI) connector and BUS-PAC(PCI) board are properly installed.
- (2) Check that the expansion bus cable is connected properly.
- (3) Check that the PC-MB14(PCI) power is turned on before the personal computer is turned on.
- (4) Contact the personal computer manufacturer to determine whether the computer PCI BIOS supports PCI-to-PCI Bridge.

If the BUF(PCI)13 does not function properly, even if it has been checked thoroughly, fill out the questionnaire that comes with the product and then either fax to CONTEC Information Center or e-mail it to us.

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CONTEC Group

- JAPAN** : Headquarters
CONTEC Co., LTD.
3-9-31, Himesato, Nishiyodogawa-ku, Osaka 555-0025, Japan
Tel : +81 (6) 6477-5219 Fax : +81 (6) 6477-1692
E-mail : intsales@osaka.contec.co.jp
- U.S.A.** : CONTEC MICROELECTRONICS U.S.A. INC.
744 South Hillview Drive, Milpitas, CA 95035 U.S.A.
Tel : +1 (408) 719-8200 Fax : +1 (408) 719-6750
E-mail : tech_support@contecusa.com
- EUROPE** : CONTEC MICROELECTRONICS EUROPE B.V.
Binnenweg 4, 2132 CT, Hoofddorp, The Netherlands
Tel : +31 (23) 567-3030 Fax : +31 (23) 567-3035
E-mail : tech_support@conteceu.nl
- KOREA** : HYOJIN CONTEC Co., LTD.
Ki-im Bldg. #399, Shindolim-Dong, Kuro-ku, Seoul, Korea
Tel : +82 (2) 2636-4277/8 Fax : +82 (2) 2636-4279
E-mail : product@conteck.com
- CHINA** : INTERNATIONAL CONTEC TECHNOLOGY CO., LTD.
B-8F, Hua Tong Building, No. B19, Che Gong Zhuang West Road,
Hai Dian District, Beijing 100044, China
Tel : +86(10)8801-8228 Fax : +86 (10)8801-8209
E-mail : ict@ict.com.cn
- SHANGHAI CONTEC MICROELECTRONICS CORP.**
No. 481 Gui Ping Road, Cao He Jing Hi-Tech Park Shanghai, 200233, China
Tel : +86 (21) 6485-1907 Fax : +86 (21) 6485-0330
E-mail : contec@contec.com.cn
- SHENYANG CONTEC MICROELECTRONICS Co., LTD.**
No. 169, Qingnian Street, Shenhe District, Shenyang 110015, China
Tel : +86 (24) 2392-9771 Fax : +86 (24) 2392-9773
- TAIWAN** : MACROMATE CORP.
8F, Universal Center, No.179, Ta-Tung Rd., Sec.1 Hsi-Chih, Taipei Hsien, Taiwan,
R.O.C
Tel : +886 (2) 2647-9353 Fax : +886 (2) 2647-9373
E-mail : intl@macromate.com.tw