

CardBus-to-PCI Bus Expansion Chassis

**Full Size 7 Slots
NOTE-PAC(PCI)F7**

**Full Size 13 Slots
NOTE-PAC(PCI)F13**

User's Guide

Check Your Package

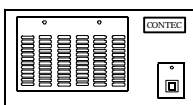
Thank you for purchasing the CONTEC product.

The product consists of the items listed below.

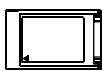
Check, with the following list, that your package is complete. If you discover damaged or missing items, contact your retailer.

Product Configuration List

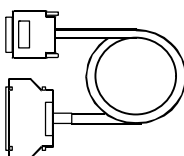
- Expansion unit ...1
[NOTE-PAC(PCI)F7 or NOTE-PAC(PCI)F13]
- PC Card [BUS-CARD(CB)] ... 1
- Power code ...1
- Connection cable[CB-CB68/96] ...1
- Slot cover NOTE-PAC(PCI)F7 ...7,
NOTE-PAC(PCI)F13 ...13
- Board fixed screw NOTE-PAC(PCI)F7 ...7,
NOTE-PAC(PCI)F13 ...13
- Bracket for rack-mounted ...2
- Bracket fixed screw for rack-mounted
NOTE-PAC(PCI)F7/F13 ...6
- Rubber pad ...4
- This User's Manual ...1



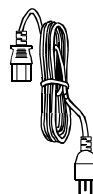
Expansion unit



BUS-CARD(CB)



CB-CB68/96



Power code



Slot cover



Board fixed screw



Bracket for rack-mounted



Bracket fixed screw
for rack-mounted



User's Manual

Copyright

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1. Before Using the Product

This chapter provides information you should know before using the product.

About the Unit

The NOTE-PAC(PCI)F7/F13 is a PCI bus expansion unit that extends a PC Card slot conforming to the CardBus PC Card Standard into 7 or 13 PCI bus slots.

The NOTE-PAC(PCI)F7/F13 operates under Windows Me, Windows 98SE, or Windows 98.

This unit does not support Windows XP and Windows 2000 because of their restrictions.

Features

- Capable of adding PCI buses (32-bit at 33 MHz, 5 V) to a notebook computer.
NOTE-PAC(PCI)F7 can add 7 slots.
NOTE-PAC(PCI)F13 can add 13 slots.
- Accepting long-size PCI bus boards
- Power supply controllable in response to the turning on/off of the PC's power supply
- Steel chassis suitable for use in fields
- Built-in cooling fan
- Rack-mountable with supplied brackets

Restrictions

The NOTE-PAC(PCI)F7/F13 has restrictions on the types of PCs and boards that can be used.

Be sure to check the following restrictions before use.

< Restrictions of PC >

- Your PC must have a PC Card slot conforming to the CardBus PC Card Standard.
- The NOTE-PAC(PCI)F7/F13 uses the PCI-to-PCI Bridge to extend the bus. The expansion unit does not work normally if the BIOS and CardBus controller on your PC do not detect the PCI-to-PCI Bridge and the PCI boards plugged on the expansion unit.
- For any information of the certified PCs and supported OSs, consult your retailer.

< Restrictions on transfer rate >

When the expansion unit accommodates a board that performs high-speed transfer such as bus mastering, the overall transfer rate may be lower than that of PCI bus slots in the main unit of a desktop PC.

This is caused by bus extension by the PCI-to-PCI Bridge.

The transfer rate may vary with the system configuration and the type of the PC.

< Restrictions of PCI board >

None of the following boards can be plugged into any expansion slot in the NOTE-PAC(PCI)F7/F13.

- Video display board (VGA board)
- Board that must boot from within the expansion unit
- Board for connecting a PCI bus expansion unit
- Board explicitly stated not to be used with the PCI-to-PCI Bridge
- Some boards, even PCI-compliant ones, may not work depending on their specifications

Customer Support

CONTEC provides the following support services for you to use CONTEC products more efficiently and comfortably.

Web Site <http://www.contec.co.jp/en/>

Latest product information

CONTEC provides up-to-date information on products.

CONTEC also provides product manuals and various technical documents in the PDF.

Free download

You can download updated driver software and differential files as well as sample programs available in several languages.

Note! For product information

Contact your retailer if you have any technical question about a CONTEC product or need its price, delivery time, or estimate information.

Limited Three-Year Warranty

CONTEC Interface boards 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.

Safety Precautions

Understand the following definitions and precautions to use the product safely.

Safety Information

This document provides safety information using the following symbols to prevent accidents resulting in injury or death and the destruction of equipment and resources. Understand the meanings of these labels to operate the equipment safely.

 DANGER	DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

Handling Precautions

DANGER

Do not use the product where it is exposed to flammable or corrosive gas. Doing so may result in an explosion, fire, electric shock, or failure.

CAUTION

- The PC Card [BUS-CARD(CB)] must be plugged into a PC Card slot conforming to the CardBus PC Card Standard on a PC.
- Do not impact or bend the PC Card [BUS-CARD(CB)].
Doing so may result in a malfunction, overheating, fault, or damage.
- Do not plug or unplug any board into or from an expansion slot with the PC or NOTE-PAC(PCI)F7/F13 powered.
Doing so may result in a malfunction, overheating, or fault.
Be sure to turn off the PC and NOTE-PAC(PCI)F7/F13 and unplug their power codes before plugging or unplugging any expansion board.
- Do not plug or unplug the PC Card [BUS-CARD(CB)] into or from the PC Card Slot with the PC or NOTE-PAC(PCI)F7/F13 powered.
- Do not plug or unplug the cable interconnecting the Card and the unit with the PC or NOTE-PAC(PCI)F7/F13 powered.
- The total current consumption by the boards installed in the expansion slots in the NOTE-PAC(PCI)F7/F13 must not exceed the maximum power capacity of its power supply.
Failure to supply ample power to expansion boards could result in a malfunction, overheating, or fault.
- The external supply voltage or drive current must not exceed the rating.

- Do not connect any signal other than specified to the on-board connector. Doing so may result in a malfunction, overheating, fault, or damage.
 - If a specific expansion slot is recommended for a board, plug the board into that slot. Failure to do so may result in a malfunction, overheating, fault, or damage.
 - When plugging or unplugging the power code, be sure to hold it by the plug itself.
 - Since the I/O expansion unit is a precision device, do not store or use it where it is subject to shock or vibration. Also avoid any place where the unit is exposed to direct sunlight, extremely high humidity, or much dust.
 - Do not use or store the unit where it is exposed to any chemical either directly or as vapor in the air.
 - The unit has ventilating slits to prevent it from overheating. Avoid using the unit with the ventilating slits blocked or in an ill-ventilated place.
 - Do not use the unit near equipment generating a strong magnetic field or noise. Doing so may result in a malfunction, overheating, fault, or damage in the unit, your PC, or both.
 - It is very dangerous to use the unit with water, liquid, or metal (conductive) chips left inside. Be careful not to let such foreign matters in the unit.
 - The specifications of this product are subject to change without notice for enhancement or quality improvement. Even when using the product continuously, be sure to read the manual and understand the contents.
 - Do not modify this product. CONTEC will bear no responsibility for any problems, etc., resulting from modifying the product.
 - Regardless of the foregoing statements, CONTEC is not liable for any damages whatsoever (including damages for loss of business profits) arising out of the use of or inability to use this CONTEC product or the information contained herein.
-

Environment

Use this product in the following environment. If used in an unauthorized environment, the board may overheat, malfunction, or cause a failure.

Operating temperature

0 to 50°C

Humidity

20 to 80%RH (No condensation)

Corrosive gases

None

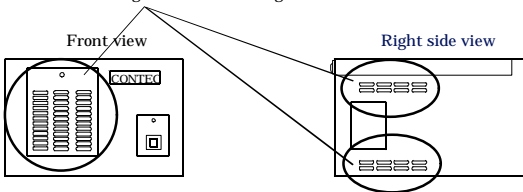
Floating dust particles

Not to be excessive

Inspection

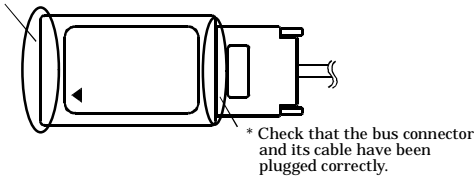
Inspect the product periodically as follows to use it safely.

* Ventilating slits must neither be blocked nor have dust or foreign matters adhering.



The illustration above is of the NOTE-PAC(PCI)F13 but the check points are the same as with the NOTE-PAC(PCI)F7.

* The gold-plated leads of the bus connector have no stain or corrosion.



Storage

When storing this product, keep it in its original packing form.

- (1) Put the PC Card in the storage bag.
- (2) Wrap it in the packing material, then put it in the box.
- (3) Store the package at room temperature at a place free from direct sunlight, moisture, shock, vibration, magnetism, and static electricity.

2. Setup

This chapter explains how to set up the board.

What is Setup?

Setup means a series of steps to take before the product can be used.

Taking the following steps in this chapter sets up the NOTE-PAC(PCI)F7/F13.

Step 1 Preparation

Step 2 Installing the Expansion Board

Step 3 Connecting the Connection Cable

Step 4 Connecting the Power Cable

Step 5 Plugging the PC Card

Step 6 Setup and Check

If setup fails to be performed correctly, consult your local retailer.

Step 1 Preparation

Configuration image



The photo is of the NOTE-PAC(PCI)F13.

Figure 2.1. Configuration image

Items to be prepared

- PC
- NOTE-PAC(PCI)F7/F13
 - Main Unit ... (a), Power supply Cable ... (b), Connection Cable[CB-CB68/96] ... (c),
PC Card[BUS-CARD(CB)] ... (d)
- PCI board to be installed

NOTE-PAC(PCI)F7/F13



The photo is of the NOTE-PAC(PCI)F13 but the check points are the same as with the NOTE-PAC(PCI)F7.

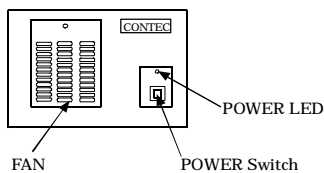
Getting ready with your PC

The PC Card [BUS-CARD(CB)] is conforming to the CardBus PC Card Standard. Make sure that your PC has a TYPE II PC Card slot conforming to the CardBus PC Card Standard.

Names of major parts

NOTE-PAC(PCI)F7

Front view



Back view

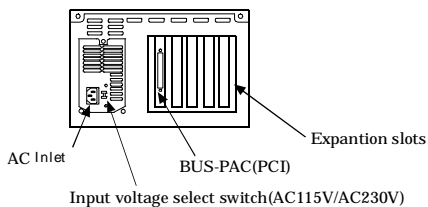
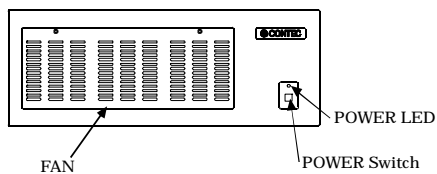


Figure 2.2. Names of major parts < NOTE-PAC(PCI)F7 >

NOTE-PAC(PCI)F13

Front view



Back view

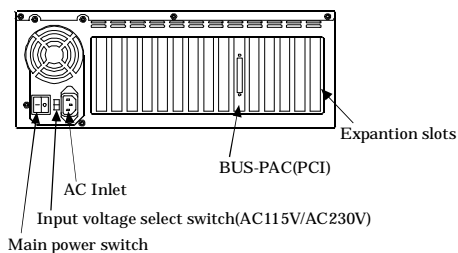


Figure 2.3. Names of major parts < NOTE-PAC(PCI)F13 >

Step 2 Installing the Expansion Board



CAUTION

Before installing an expansion board on the NOTE-PAC(PCI)F7/F13, be sure to turn off your PC and NOTE-PAC(PCI)F7/F13 and unplug the power codes from wall outlets.

Follow the procedure below to install the expansion board on the NOTE-PAC(PCI)F7/F13.

- (1) Unplug the AC adapter and connection cable [CB-CB68/96] from the NOTE-PAC(PCI)F7/F13 main unit.
- (2) Remove three screws from the top of the rear panel, then remove the unit cover by sliding it to the rear side (in the order of arrows 1 and 2).



The photo is of the NOTE-PAC(PCI)F13.

Figure 2.4. Installing the Expansion Board

- (3) Plug the expansion board into a PCI slot and fasten the bracket with the attached screw. Apply slot covers to unused slots and fasten them with screws.
- (4) Put the unit cover back in place and fasten it with the removed screws.

Step 3 Connecting the Connection Cable

Connecting the connection cable to the PC Card

Connect the PC Card connector at one end of the connection cable [CB-CB68/96] to the PC Card [BUS-CARD(CB)]. Connect them together with the connector's flat side and PC Card's front surface face up as shown in Figure 2.5 below.

⚠ CAUTION

When connecting the connection cable with the PC Card, align their mating connectors and plug them straight into each other. Applying excessive force to the cable-side connector of the PC Card may break or make it loose.

Do not plug or unplug them with the PC powered.

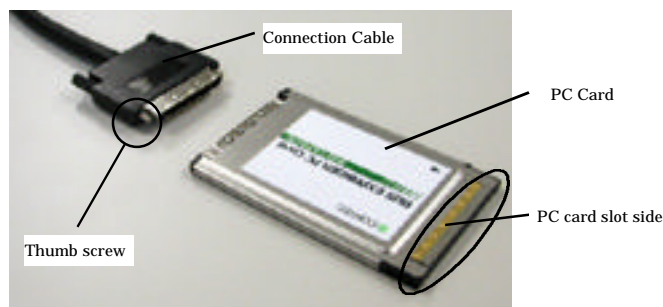


Figure 2.5. Connecting the connection cable to the PC Card

Connecting the connection cable to the NOTE-PAC(PCI)F7/F13

Connect the 96-pin connector at the other end of the connection cable [CB-CB68/96] to the interface connector of the NOTE-PAC(PCI)F7/F13. See “Names of Major Parts” in this chapter to confirm the location of the interface connector.



The photo is of the NOTE-PAC(PCI)F13.

Figure 2.6. Connecting the connection cable to the NOTE-PAC(PCI)F7/F13

⚠ CAUTION

Do not plug the connection cable into any other connector as doing so can cause a fault.

Step 4 Connecting the Power Cable

- (1) Connect the power code to the NOTE-PAC(PCI)F7/F13 main unit.



The photo is of the NOTE-PAC(PCI)F13.

Figure 2.7. Connecting the Power Cable

- (2) Plug the power code into a wall outlet.

Step 5 Plugging the PC Card

Make sure that the PC is off and that the power code for the NOTE-PAC(PCI)F7/F13 is already connected, then plug the PC Card into the PC Card slot in the PC.

Check the direction of the arrow mark ▼ on the PC Card and fit it well into the PC Card slot as shown in Figure 2.8.

Although the PC Card has an accidental insertion preventive groove, inserting the PC Card forcibly can break the slot and the Card. Note also that the PC Card slot on some PCs requires that the PC Card be inserted with the front side face down. Make sure before inserting the PC Card.

For notes on unplugging the PC Card, refer to the manual for your PC.

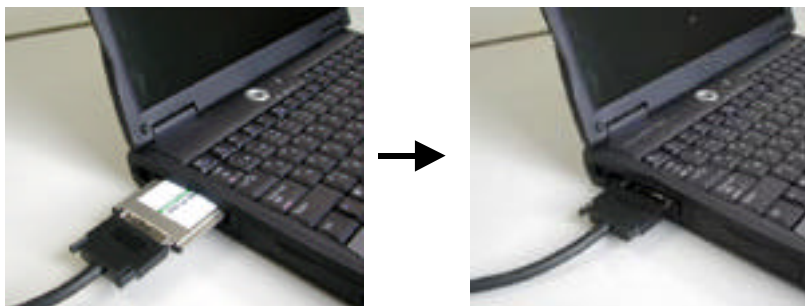


Figure 2.8. Plugging the PC Card



CAUTION

Take the following precautions not to break the PC Card or not to cause its connector to break or come loose.

- Do not insert the PC Card in reserve or by a procedure other than specified.
- Do not insert the PC card while holding the connection cable or its connector.
- Do not move the PC with the connection cable connector plugged.
- Do not apply excessive force to the connector of the PC Card, for example, by forcing the connection cable connector off the PC Card.
- Do not place anything on the connection cable connector.

Notes on use of two or more PC Cards

If your PC has a stack of two TYPE II PC Card slots, two [BUS-CARD(CB)] PC Cards cannot be used simultaneously in both slots. This is due to the shape of the cable connector.

The PC Card [BUS-CARD(CB)] can be used along with another PC Card which does not use any external connector, such as a memory card.

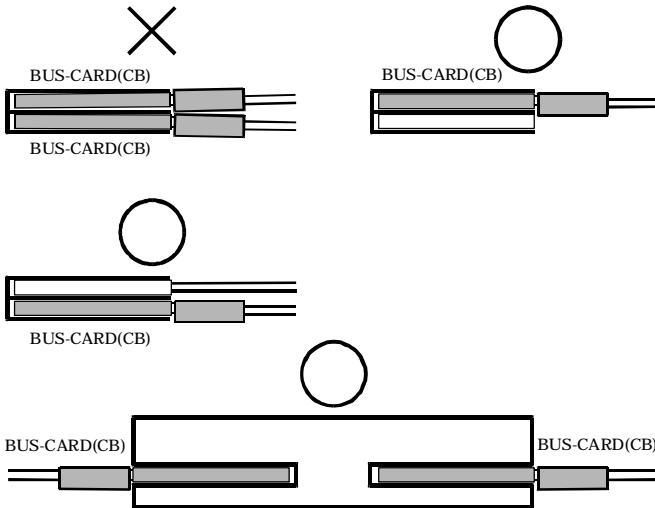


Figure 2.9. Notes on use of two or more PC Cards

Step 6 Setup and Check

Starting the system

The NOTE-PAC(PCI)F7/F13 is turned on and off in sync with the PC's power supply.

When the PC detects the PC Card [BUS-CARD(CB)], the NOTE-PAC(PCI)F7/F13 is turned on.

Turning on the system

- (1) Plug the power code of the NOTE-PAC(PCI)F7/F13 into a wall outlet.
You do not need to press the POWER switch on the front panel.
- (2) The power supply of a PC is turned ON.
- (3) When the PC Card is detected by the OS, the NOTE-PAC(PCI)F7/F13 is turned on.
- (4) Make sure that the POWER LED on the NOTE-PAC(PCI)F7/F13 is on.

Turning off the system

- (1) The power supply of a PC is turned OFF.
- (2) The NOTE-PAC(PCI)F7/F13 is turned off in synchronization with the PC's power supply.

(*1) Pressing the POWER switch on the front panel of the NOTE-PAC(PCI)F7/F13 turns on the NOTE-PAC(PCI)F7/F13 or puts it to sleep.

Use the switch, for example, to turn on only the NOTE-PAC(PCI)F7/F13.



CAUTION

- Do not turn on or off the NOTE-PAC(PCI)F7/F13 with the PC main unit powered.
Doing so cancels the detection of the bus adapter. When turning the NOTE-PAC(PCI)F7/F13 on back, restart the PC main unit.
 - Do not plug or unplug the PC card with the PC main unit powered.
-

Setting up the hardware in Windows

At startup of Windows, the PC Card [BUS-CARD(CB)] and the PCI-to-PCI Bridge used by the NOTE-PAC(PCI)F7/F13 are detected in sequence and identified automatically by the Windows standard driver.

After that, the PCI boards installed on the NOTE-PAC(PCI)F7/F13 are detected in sequence.

For setting up and checking the boards used on the expansion unit, refer to their respective manuals.

Checking the hardware in Windows

You can use Device Manager to check whether the NOTE-PAC(PCI)F7/F13 has been identified in Windows. Device Manager shows “PCI standard PCI-to-PCI bridge” and “DEC 21152 PCI to PCI bridge” under “System devices”.

You can check the NOTE-PAC(PCI)F7/F13 currently being used by the number of entries of “PCI standard PCI-to-PCI bridge” and “DEC 21152 PCI to PCI bridge”.

Three entries: NOTE-PAC(PCI)F7

Five entries: NOTE-PAC(PCI)F13

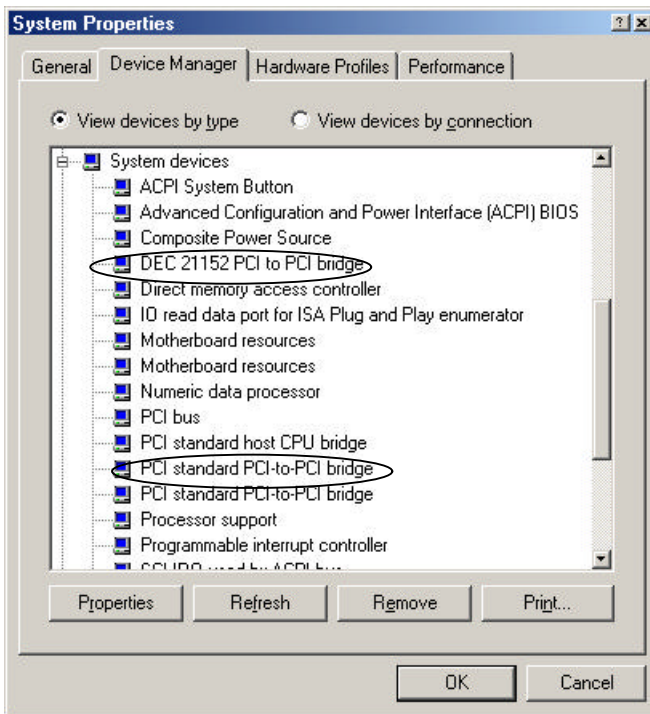
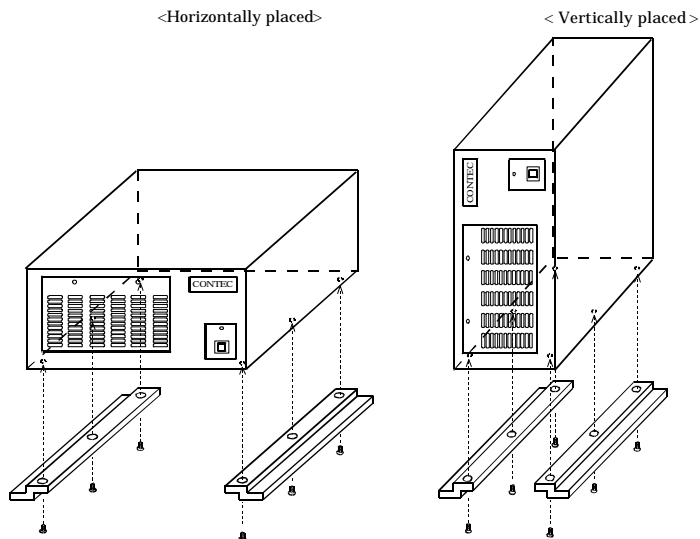


Figure 2.10. Sample screen shot of Device Manager

Attaching Rack Mount Brackets

The NOTE-PAC(PCI)F7/F13 can be rack mounted using the attached brackets. The brackets can be used in two ways as illustrated below. Rack-mount the NOTE-PAC(PCI)F7/F13 using the brackets by the appropriate method suitable for the operating environment.



The photo is of the NOTE-PAC(PCI)F13 but the check points are the same as with the NOTE-PAC(PCI)F7.

Figure 2.11. Attaching the Rack Mount Brackets

Setup Troubleshooting

Please confirm followings when NOTE-PAC(PCI) does not work.

Symptoms and Actions

The unit won't be turned on.

- a. Make sure that the power code has been connected correctly.
- b. Make sure that the power supplies of the PC and NOTE-PAC(PCI)F7/F13 are on.
- c. Make sure that you have followed the procedure in Chapter 2.
- d. Even though the unit is still not turned on, check whether it is turned on with no board installed. If the unit is turned on with no board installed, check the total current consumption by the installed boards. The total current consumption must not exceed the power capacity of the NOTE-PAC(PCI)F7/F13.

No PCI board on the NOTE-PAC(PCI)F7/F13 is detected.

- e. Make sure that the PC Card [BUS-CARD(CB)] has been installed correctly.
- f. Make sure that the Connection cable [CB-CB68/96] has been installed correctly.
- g. Make sure that the POWER LED on the NOTE-PAC(PCI)F7/F13 is turned on.



The photo is of the NOTE-PAC(PCI)F13 but the check points are the same as with the NOTE-PAC(PCI)F7.

3. About Hardware

Hardware specification

Table 3.1. Specification < NOTE-PAC(PCI)F7/F13 >

Item	Specification	
	NOTE-PAC(PCI)F7	NOTE-PAC(PCI)F13
Compatible bus	PCI Local Bus Specification Rev2.2 (+5V type)	
Address space	32-bit memory address, I/O address	
Interrupt level	INTA to INTD	
Bus operating clock	33MHz (Max.)	
Attached connection cable	CB-CB68/96 (Cable length 1m)	
Number of user-available slots	7 slots (long size)	13 slots (long size)
Acceptable board sizes (mm)	313.8(L) × 107(H)	313.8(L) × 107(H)
Power supply		
Expansion slot supplied power (The output current must not exceed the value on the right.)	+5VDC 11.3A (Max.)	+5VDC 18A (Max.) *2
	+3.3VDC 6A (Max.)	+3.3VDC 15A (Max.) *2
	+12VDC 3A (Max.)	+12VDC 9A (Max.)
	-12VDC 0.7A (Max.)	-12VDC 1A (Max.)
Maximum total power capacity	130W	230W
AC input line voltage *1	115/230VAC (switch-selectable)	115/230VAC (switch-selectable)
AC line frequency	50 to 60Hz	
AC power input current	3A(115VAC)/1.5A(230VAC)	6A(115VAC)/4A(230VAC)
Outside dimensions (mm)	300.0(W) × 138.0(H) × 373.2(L) (without fittings)	424.0(W) × 156.0(H) × 372.0(L) (without fittings)
Weight	5.0 kg	9.5 kg

*1: AC power input voltage range: 90 to 132 VAC/180 to 250 VAC

*2: The sum of +5 VDC and +3.3 VDC must not exceed 90 W.

Outside dimensions of acceptable board (Max.)

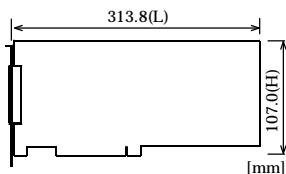


Table 3.2. Specification < BUS-CARD(CB) >

Item	Specification
Compatible PC card slot	PC Card Standard-compliant CardBus
External dimensions (mm)	TYPE II (85.6 × 54.0 × 5.0)
Power consumption	3.3VDC 200mA (Max.) *3
Nominal Weight	50g

*3: Power is supplied from the PC's main unit.

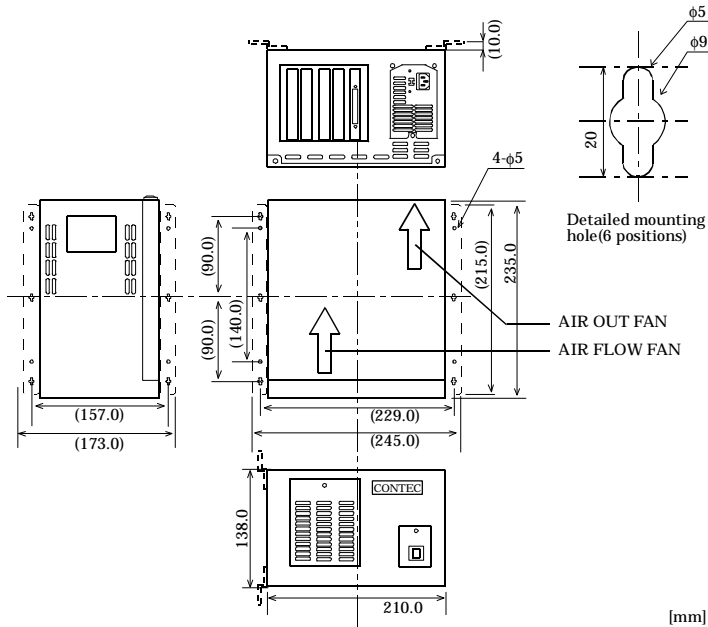
Table 3.3. Environmental specification

Item	Specification
Operating temperature	0 to 50°C
Operating humidity	20 to 80%RH(No condensation)
Storage temperature	0 to 60°C
Storage humidity	10 to 90%RH(No condensation)
Floating dust particles	Not to be excessive
Corrosive gases	None

CAUTION

The power supply and cooling fan in the NOTE-PAC(PCI)F7/F13 are consumables, requiring replacement after use for a certain period of time. Although each of the parts should be replaced after use for the following period of time in principle, the life may be shortened depending on the operating environment. Keep in mind that the lives of the parts may be extremely shortened if they are used where it is either exposed to must dirt, metal chips or particles, or dust or affected by oil or corrosive gas.

- Power supply :
About 5 years (in an office environment kept at a temperature of 25°C and a humidity of 60%)
 - Fan :
About 5 years (in an office environment kept at a temperature of 25°C and a humidity of 60%)
 - Fan filter :
About 1 year (in an office environment kept at a temperature of 25°C and a humidity of 60%)
-



The parenthesized dimensions are measured with the rack mount brackets attached.

Figure 3.1. Outside Dimensions < NOTE-PAC(PCI)F7 >



CAUTION

- When using this unit, keep it at least 20mm away from any object such as the wall for cooling purposes.
- Attaching rubber pads to the unit makes it 7mm taller.

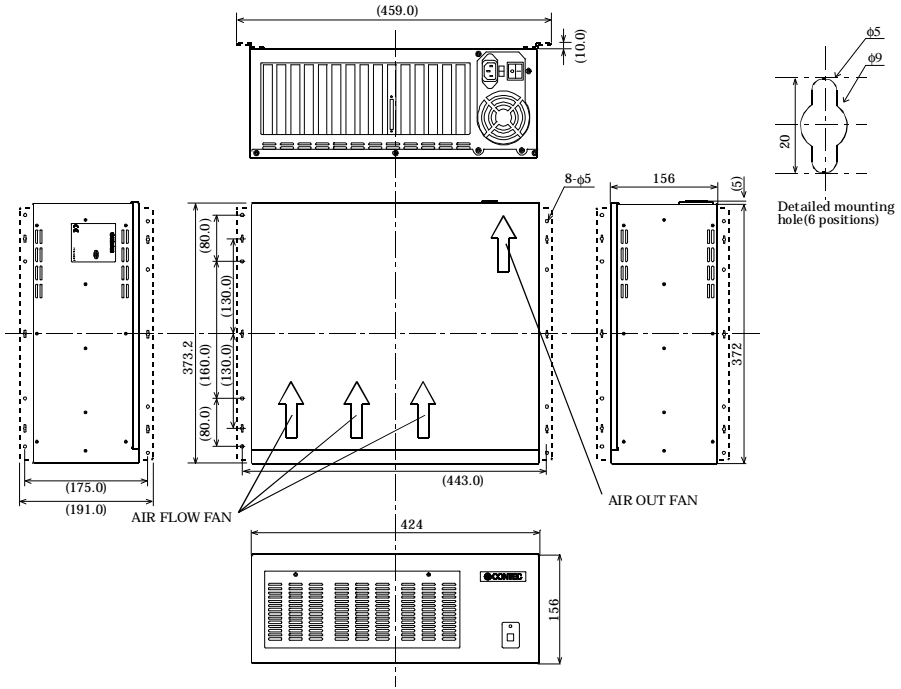


Figure 3.2. Outside Dimensions < NOTE-PAC(PCI)F13 >

⚠ CAUTION

- When using this unit, keep it at least 20mm away from any object such as the wall for cooling purposes.
- Attaching rubber pads to the unit makes it 8mm taller.

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