

Bus Expansion System

Expansion Unit / Bus Adapter

An expansion system is used to expand the number of available PCI bus slots of either CONTEC industrial computers or standard PCs. It is also useful in applications where the power consumption of add-on boards exceeds the power supply capacity of the host PC. An expansion system is used to join the expansion chassis and the host PC into one system.



Product Lineup

We provide wide array of models to meet your desired bus specifications.

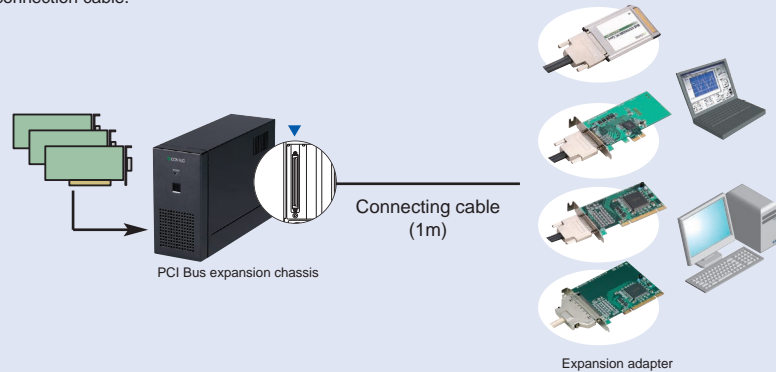
Bus Extension Type Expansion Adapter & Chassis

O-03

Standard Bus extension

This bus extension externally expands PCI bus and transmits signals directly between the expansion chassis and host PC. It is best suited for use in an environment where the measurement control is conducted in close proximity to the host PC.

* The expansion adapters to be inserted in the PC and expansion chassis are connected with a 1m-long connection cable.

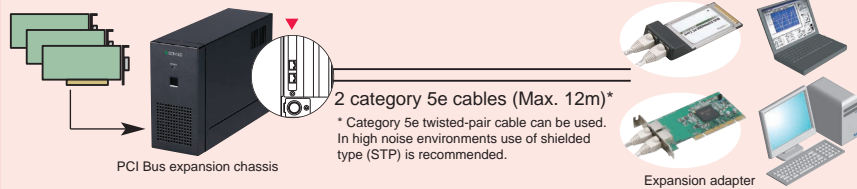


StarFabric-compliant Type Expansion Adapter & Chassis

O-07

StarFabric-compliant extension

With this style extension, you can conduct StarFabric-compliant high-speed serial transfer (2.5Gbps). The expansion adapters to be inserted into the PC and expansion chassis are connected using Category 5e cable creating easy wiring and installation. The included cable can be extended up to 12m, making it an optimal choice where measure / control is conducted at a distance from the host PC. PCI bus compliant, it allows you to construct a system without changing existing boards or software. The power supply of the expansion chassis can be controlled in synchronization with the host PC power supply.



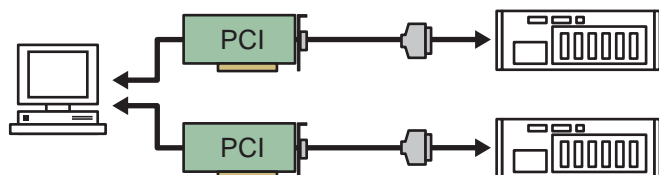
Caution:

Please note that the following expansion boards cannot be used inside an expansion chassis.

- Video boards
- Additional PCI bus expansion boards
- Boards with the disclaimer "Cannot be used with PCI-to-PCI Bridge"
- Please note that even when a board is compatible with PCI bus specifications, it may not operate due to specification limitations.

* For further details, please check the manual or visit our web site.

An expansion adapter is an adapter that connects a host PC to an expansion chassis for the purpose of extending high-speed signal transmission. It is not possible to link one expansion chassis to another expansion chassis due to resultant signal degradation. When using more than one expansion chassis, you must allocate an open slot to each chassis for a parallel connection.



Expansion Unit / Bus Adapter

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
- Serial Communication
- GPB Communication
- Remote I/O
- Expansion Unit / Bus Adapter**
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&IT
- Multi-Programmable Display
- Wireless LAN
- Remote Monitoring Solution
- Service & Products

O-02

- Lineup
- Bus Extension Type
- Expansion Adapter
- Expansion Chassis
- StarFabric-compliant Type
- Expansion Adapter
- Expansion Chassis

- ISA Bus Unit
- Bus Expansion Adapter
- Bus Converter Adapter
- Parts of Maintenance Exchange

Bus Extension Type Expansion Adapter & Chassis

Expansion Adapter

Name	Type
EAD-BE-LPE	PCI Express (for Low Profile PCI Bus slot)
EAD(LPCI)BE	PCI (for Low Profile PCI Bus slot)
EAD(PCI)BE	PCI
EAD(CB)BE-N	CardBus

PCI Bus Expansion Chassis

Name	Installation Type			Slots	Installable Board	
	Desktop	Rack Mount	Wall Mount		Long	Short
ECH(PCI)BE-H2B	○	—	—	2	x	○
ECH(PCI)BE-H4B	○	—	—	4	x	○
ECH(PCI)BE-F2B	○	—	—	2	○	○
ECH(PCI)BE-F4B	○	—	—	4	○	○
ECH(PCI)BE-H4A	○	○	○	4	x	○
ECH(PCI)BE-H7A	○	○	○	7	x	○
ECH(PCI)BE-H13A	○	○	○	13	x	○
ECH(PCI)BE-F7A	○	○	○	7	○	○
ECH(PCI)BE-F13A	○	○	○	13	○	○

StarFabric-compliant Type Expansion Adapter & Chassis

Expansion Adapter

Name	Type
EAD-SF-LPE	PCI Express (for Low Profile PCI Bus slot)
EAD(LPCI)SF	PCI (for Low Profile PCI Bus slot)
EAD(CB)SF	CardBus

PCI Bus Expansion Chassis

Name	Installation Type			Slots	Installable Board	
	Desktop	Rack Mount	Wall Mount		Long	Short
ECH(PCI)SF-H2B	○	—	—	2	x	○
ECH(PCI)SF-H4B	○	—	—	4	x	○
ECH(PCI)SF-F2B	○	—	—	2	○	○
ECH(PCI)SF-F4B	○	—	—	4	○	○
ECH(PCI)SF-H4A	○	○	○	4	x	○
ECH(PCI)SF-H7A	○	○	○	7	x	○
ECH(PCI)SF-H13A	○	○	○	13	x	○
ECH(PCI)SF-F7A	○	○	○	7	○	○
ECH(PCI)SF-F13A	○	○	○	13	○	○

ISA Bus Expansion Unit (Backplane included)

Name	Installation Type			Expansion Adapter	Drive Bay	Slots	Installable Board		
	Desktop	Rack Mount	Wall Mount				Full	Middle	Half
FA-PAC(PC)M4D	○	—	—	Option	None	4*2	x	x*1	○
FA-PAC(PC)F14DRV	○	○	—	Option	Standard	14*2	○	○	○

*1: Maximum board length is 220mm.
*2: Expansion bus adaptor occupies 1 slot from available slot.

Bus Expansion Adapter

Name	Type	Backplane	Installable Unit of PCI Bus Expansion Adapter (FA-UNIT-**)			
BUF(PCI)	PCI to PCI (7 slot)	Included	F8DR	F8DR/M	F11RFV	M11RFV
BUF(PCI)13	PCI to PCI (13 slot)	Included	F8DR	F8DR/M	—	—
BUF(PC)E	ISA to ISA	—	—	—	—	—

Bus Converter Adapter

Name	Type
BUF-CARD(PC)P	PC Card to ISA
PC-CARD(PC)H	ISA to PC Card

Pictograms

<p>Expansion adapter</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid #0070C0; padding: 5px; text-align: center;"> <p style="font-size: 24px; color: #0070C0; margin: 0;">PCI Express</p> <p style="font-size: 10px; margin: 0;">Product is PCI Express standard compliant and can be used in the computer equipped with PCI Express bus expansion slot.</p> </div> <div style="border: 1px solid #0070C0; padding: 5px; text-align: center;"> <p style="font-size: 24px; color: #0070C0; margin: 0;">PC</p> <p style="font-size: 10px; margin: 0;">Product is PCI standard compliant and can be used in the computer equipped with PCI bus expansion slot.</p> </div> </div> <div style="margin-top: 10px;"> <p style="font-weight: bold; margin: 0;">Board Size</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid #0070C0; padding: 5px; text-align: center;"> <p style="font-size: 12px; margin: 0;">Low Profile</p> <p style="font-size: 10px; margin: 0;">Product is PCI standard/Low Profile compliant. A bracket for standard-size PCI slots is provided.</p> </div> </div> </div>	<p>Expansion chassis</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid #0070C0; padding: 5px; text-align: center;"> <p style="font-size: 18px; color: #0070C0; margin: 0;">X Slot</p> <p style="font-size: 10px; margin: 0;">Maximum number of boards that can be installed</p> </div> <div style="border: 1px solid #0070C0; padding: 5px; text-align: center;"> <p style="font-size: 18px; color: #0070C0; margin: 0;">XX Size</p> <p style="font-size: 10px; margin: 0;">Maximum board size that can be installed</p> </div> </div> <div style="margin-top: 10px;"> <div style="border: 1px solid #0070C0; padding: 5px; text-align: center;"> <p style="font-size: 12px; color: #0070C0; margin: 0;">Built-in Power</p> <p style="font-size: 10px; margin: 0;">Expansion chassis is equipped with built-in power supply.</p> </div> <div style="border: 1px solid #0070C0; padding: 5px; text-align: center; margin-top: 5px;"> <p style="font-size: 12px; color: #0070C0; margin: 0;">AC Adapter</p> <p style="font-size: 10px; margin: 0;">Includes AC adapter. The expansion chassis has no built-in power source.</p> </div> </div>
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Expansion Unit / Bus Adapter

Bus Extension Type

Selecting Optimal Expansion Adapter and Expansion Chassis

Bus Extension is best suited for use in an environment where the control is conducted in close proximity to the PC unit.

If the expansion unit needs to be further away (up to 12m - max), select from the StarFabric-compliant system - list on [O-07](#)
 CONTEC offers 32 different configurations based on the type of host PC, needed number and lengths of PCI slots.

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
- Serial Communication
- GPIO Communication
- Remote I/O
- Expansion Unit / Bus Adapter**
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&EIT
- Multi-Programmable Display
- Wireless LAN
- Remote Monitoring Solution
- Service & Products

O-03

- Lineup
- Bus Extension Type**
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Expansion Adapter

PC equipped with CardBus-compliant card slot



Expansion adapter for CardBus slot (PC side) EAD(CB)BE



A dedicated B62 connection cable (1m) is included. [O-04](#)

PC equipped with standard PCI/Low Profile PCI slot



Expansion adapter for PCI Express -compliant Low Profile PCI bus slot (host PC) EAD-BE-LPE



A dedicated connection cable (1m) and standard PCI bus bracket are included. [O-04](#)

Expansion adapter for PCI -compliant Low Profile PCI bus slot (host PC) EAD(LPCI)BE



A dedicated connection cable (1m) and standard PCI bus bracket are included. [O-04](#)

Expansion adapter for PCI bus slot (host PC) EAD(PCI)BE




A dedicated connection cable (1m) is included. [O-04](#)

Expansion Chassis


Stylish compact black chassis

■ PCI expansion chassis (Includes AC adapter)




ECH(PCI)BE-H2B

2 Slots Short Size AC adapter [O-05](#)




ECH(PCI)BE-H4B

4 Slots Short Size AC adapter [O-05](#)



ECH(PCI)BE-F2B

2 Slots Long Size Short Size AC adapter [O-05](#)




ECH(PCI)BE-F4B

4 Slots Long Size Short Size AC adapter [O-05](#)


Solid steel industrial chassis

■ PCI bus expansion chassis (Built-in power supply)




ECH(PCI)BE-H4A

4 Slots Short Size Built-in Power [O-06](#)




ECH(PCI)BE-H7A

7 Slots Short Size Built-in Power Built-in Power [O-06](#)




ECH(PCI)BE-H13A

13 Slots Short Size Built-in Power Built-in Power [O-06](#)



ECH(PCI)BE-F7A

7 Slots Long Size Short Size Built-in Power [O-07](#)



ECH(PCI)BE-F13A

13 Slots Long Size Short Size Built-in Power [O-07](#)

Short size: A short-size PCI board can be installed
 Long size: A long-size PCI board can be installed

■ Note to customers using the CONTEC's conventional expansion units [FA-PAC(PCI) and NOTE-PAC(PC) Series]
 When replacing conventional expansion units with expansion chassis and adapters, please refer to the following table so that you can purchase a complete unit with the same specifications as those of the conventional models.

PCI bus expansion system	Expansion adapter	Expansion chassis
FA-PAC(PCI)H4	= EAD(PCI)BE	+ EAD(PCI)BE-H4A
FA-PAC(PCI)F7	= EAD(PCI)BE	+ EAD(PCI)BE-F7A
FA-PAC(PCI)F13	= EAD(PCI)BE	+ EAD(PCI)BE-F13A
CardBus to PCI bus expansion system		
NOTE-PAC(PCI)H2	= EAD(CB)BE-N	+ EAD(PCI)BE-H2B
NOTE-PAC(PCI)H4	= EAD(CB)BE-N	+ EAD(PCI)BE-H4A

Expansion Unit / Bus Adapter

PCI Express

Low Profile



Bus Extender
PCI Express bus slot Expansion Adapter (Host PC)

EAD-BE-LPE

- PCI bus (5V/32bit 33MHz) can be added using one PCI Express slot of the host PC.
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board
- The expansion chassis power supply can be turned on & off with the host PC power supply.
- Both Low Profile and Standard PCI slots are supported by using the included bracket.

PCI

Low Profile



Bus Extender
LPCI bus slot Expansion Adapter (Host PC)

EAD(LPCI)BE

- PCI bus (5V/32bit 33MHz) can be added using one Low Profile or Standard PCI slot of the host PC
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board
- The expansion chassis power supply can be turned on & off with the host PC power supply
- Both Low Profile and Standard PCI slots are supported by using the included bracket

PCI



Bus Extender
PCI bus slot Expansion Adapter (Host PC)

EAD(PCI)BE

- PCI bus (5V/32bit 33MHz) can be added using one PCI slot of the host PC
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board
- The expansion chassis power supply can be turned on & off with the host PC power supply

Card Bus



Bus Extender
CardBus slot expansion adapter (Host PC)

EAD(CB)BE-N

NEW

- PCI bus (5V/32bit 33MHz) can be added using one CardBus slot of the host PC
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board
- The expansion chassis power supply can be turned on & off with the host PC power supply
- Supported OS: Windows XP, Windows 2000, Windows Me, Windows98SE and Windows 98

SUPPORTED OS

Windows Vista	Windows XP	Windows 2000	● A dedicated device driver needs to be installed under Windows XP and Windows 2000.
Windows Me	Windows 98		● Windows NT4.0 and Windows 95 are not supported.

Model	EAD-BE-LPE	EAD(LPCI)BE	EAD(PCI)BE	EAD(CB)BE-N *2
Bus type	PCI Express Base Specification Rev.1.0a	PCI Local Bus Specification Rev2.3 (+5V / +3.3V)		-
Card slot	-			PC Card Standard CardBus
Dimensions (mm)	121.69(L) × 67.90(H)	121.69(L) × 63.41(H)	121.69(L) × 105.68(H)	TYPE II (85.6x54.0x5.0)
Bus Operating Clock	-	33MHz (Max.)		-
Power Consumption (Max.)	3.3VDC 300mA (Max.)	3.3VDC 200mA (Max.) <JP1 1-2 Short> 5VDC 200mA (Max.) <JP1 2-3 Short>		3.3VDC 200mA (Max.)
Operating Conditions	0~50°C, 10~90%RH (no condensation)			
Attached cable	CB-CB68/96 (cable length: 1m) *1		CB-BF96 (cable length: 1m) *1	CB-CB68/96 (cable length: 1m) *1

*1: Only the cable included with the unit can be used.

*2: This product can be used with the [ECH(PCI)BE-F7A, F13A, H7A, H13A] expansion chassis under Windows Vista only.
Other operating systems cannot support the combination of EAD(CB)BE-N and [ECH(PCI)BE-F7A, F13A, H7A, H13A].

Note:

Box-PCs

Panel-PCs

Flat Panel Displays

Silicon Disk Drives

Option

Box PCs & Panel PCs with Windows CE

Single Board Computer

Chassis / Backplane

Analog I/O

Digital I/O

Counter & Motion Controller

Serial Communication

GPIO Communication

Remote I/O

Expansion Unit / Bus Adapter

Software

Accessories & Cables

Distributed Monitor & Control Network: F&IT

Multi-Programmable Display

Wireless LAN

Remote Monitoring Solution

Service & Products

O-04

Lineup

Bus Extension Type

Expansion Adapter

Expansion Chassis

StarFabric-compliant Type

Expansion Adapter

Expansion Chassis

ISA Bus Unit

Bus Expansion Adapter

Bus Converter Adapter

Parts of Maintenance Exchange

As shown on the side of product's images, RoHS compliant is a CONTEC original marking for RoHS-compliant products.

Expansion Unit / Bus Adapter

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
- Serial Communication
- GPIB Communication
- Remote I/O
- Expansion Unit / Bus Adapter
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&IT
- Multi-Programmable Display
- Wireless LAN
- Remote Monitoring Solution
- Service & Products

Bus Extender PCI bus expansion chassis (x2 Short size slots, AC Adapter) **ECH(PCI)BE-H2B**

2 Slots **Short Size**



- 2x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan
- The compact chassis design combines space-saving system configuration with portability
- Including an AC adapter

Bus Extender PCI bus expansion chassis (x2 Long size slots, AC Adapter) **ECH(PCI)BE-F2B**

2 Slots **Short Size** **Long Size**



- 2x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan
- The compact chassis design combines space-saving system configuration with portability
- Including an AC adapter

Bus Extender PCI bus expansion chassis (x4 Short size slots, AC Adapter) **ECH(PCI)BE-H4B**

4 Slots **Short Size**



- 4x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan
- The compact chassis design combines space-saving system configuration with portability
- Including an AC adapter

Bus Extender PCI bus expansion chassis (x4 Long size slots, AC Adapter) **ECH(PCI)BE-F4B**

4 Slots **Short Size** **Long Size**



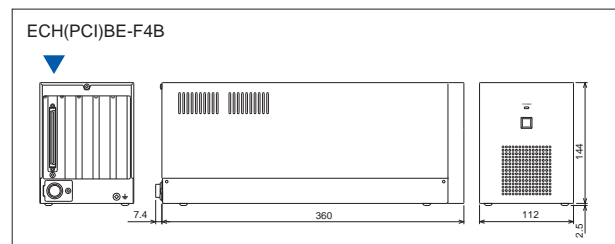
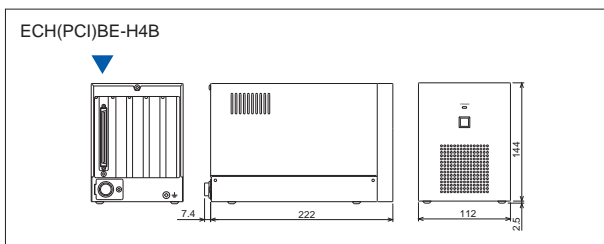
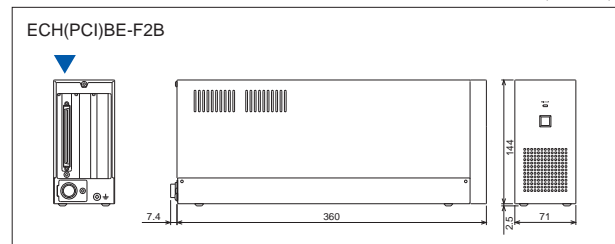
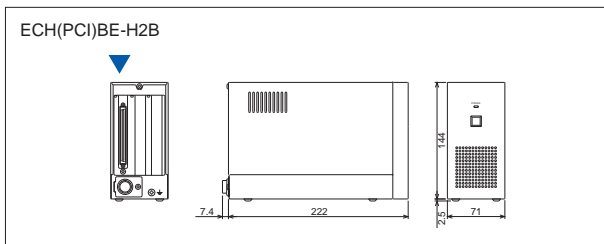
- 4x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan
- The compact chassis design combines space-saving system configuration with portability
- Including an AC adapter

Model	ECH(PCI)BE-H2B	ECH(PCI)BE-H4B	ECH(PCI)BE-F2B	ECH(PCI)BE-F4B
Bus type	PCI Local Bus Specification Rev2.3 (+5VDC)			
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing			
Interrupt Level	INTA-INTD			
Bus Clock	33MHz (Max.)			
User slots	2 (Short-size)	4 (Short-size)	2 (Long-size)	4 (Long-size)
Installable Board (mm)	176.5(L) × 107(H)		313.8(L) × 107(H)	
Power supply capacity (Max.)	Output current shall not exceed the following values. +5VDC: 7A, +3.3VDC: 3A, +12VDC: 1.5A, -12VDC: 0.3A			
AC input voltage	100 to 240VAC			
Overall maximum power supply capacity	60W			
Operating Conditions	0~50°C, 20~80%RH (no condensation)			
Dimensions (mm)	71.0(W) × 222.0(D) × 144.0(H)	112.0(W) × 222.0(D) × 144.0(H)	71.0(W) × 360.0(D) × 144.0(H)	112.0(W) × 360.0(D) × 144.0(H)
Weight of Chassis	1.2kg	1.5kg	1.6kg	2.0kg
Weight of AC Adapter	0.9kg			

Note:

■ Dimensions

(Unit:mm)



- Lineup
- Bus Extension Type
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Expansion Unit / Bus Adapter

Bus Extender
PCI bus Expansion Chassis
 (x4 Short size slots, On board Power)
ECH(PCI)BE-H4A

4 Slots **Short Size** **Built-in Power** **CE**



- 4x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

Bus Extender
PCI bus Expansion Chassis
 (x7 Short size slots, On board Power)
ECH(PCI)BE-H7A

7 Slots **Short Size** **Built-in Power** **CE**



- 7x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

Bus Extender
PCI bus Expansion Chassis
 (x13 Short size slots, On board Power)
ECH(PCI)BE-H13A

13 Slots **Short Size** **Built-in Power** **CE**



- 13x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

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- Option
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O-06

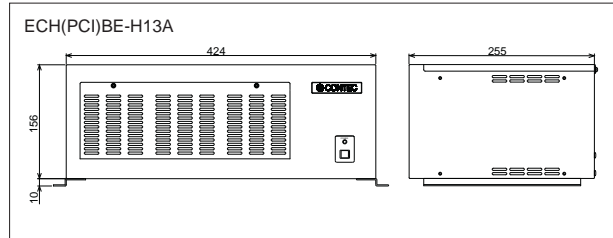
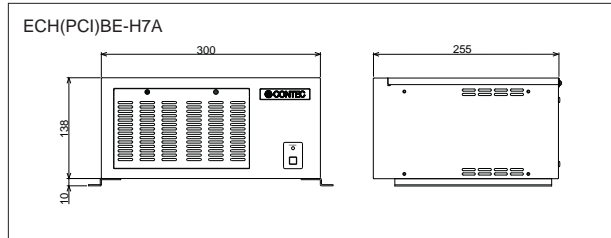
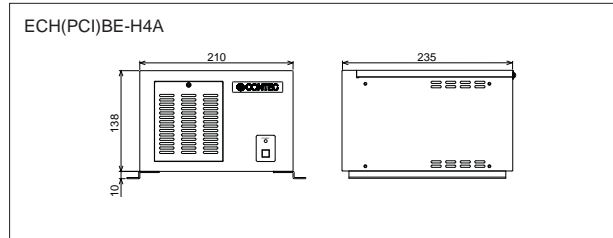
- Lineup
- Bus Extension Type
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- Expansion Chassis**
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- Bus Converter Adapter
- Parts of Maintenance Exchange

Model	ECH(PCI)BE-H4A	ECH(PCI)BE-H7A *5	ECH(PCI)BE-H13A *5
Bus type	PCI Local Bus Specification Rev2.3 (+5VDC)		
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing		
Interrupt Level	INTA-INTD		
Bus Clock	33MHz (Max.)		
User slots	4 (short-size)	7 (short-size)	13 (short-size)
Installable Board (mm)	176.5(L)x107(H)		
Power supply capacity (Max.)	+5VDC: 11.3A, +3.3VDC: 6A, +12VDC: 3A, -12VDC: 0.7A		+5VDC: 18A*2, +3.3VDC: 15A*2, +12VDC: 9A, -12VDC: 0.8A
AC input voltage	115/230VAC (switch selectable)		
Overall maximum power supply capacity *1	130W *3		0-30°C: 230W, 30-40°C: 205W, 40-50°C: 175W *4
Operating Conditions	0-50°C, 20-80%RH (no condensation)		
Dimensions (mm)	210.0(W)x235.0(D)x138.0(H)	300.0(W)x138.0(H)x255.0(L)	424.0(W)x156.0(H)x255.0(L)
Weight	3.5kg	5.0kg	7.5kg

Note: *1: AC input line voltage range: 90 - 132VAC and 180 - 250VAC. *2: The sum of +5VDC and +3.3VDC must not exceed 90W. *3: Condition with CE marking: 130W at 40°C. *4: Condition with CE marking: 175W at 50°C. *5: This product cannot be used with the expansion adapter [EAD(CB)BE].

■ Dimensions

(Unit:mm)



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Bus Extender
PCI bus Expansion Chassis
 (×7 Long size slots, On board Power)
ECH(PCI)BE-F7A

7 Slots **Long Size** **Short Size** **Built-in Power** **CE**



- 7x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

Bus Extender
PCI bus Expansion Chassis
 (×13 Long size slots, On board Power)
ECH(PCI)BE-F13A

13 Slots **Long Size** **Short Size** **Built-in Power** **CE**



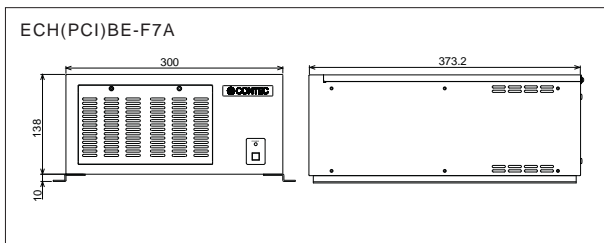
- 13x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

O-07

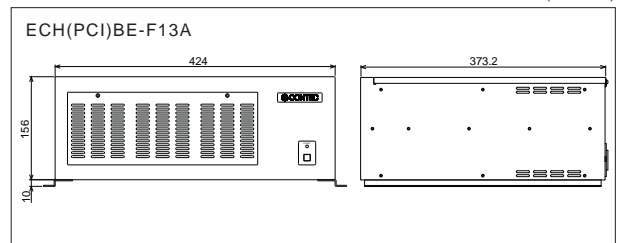
- Lineup
- Bus Extension Type
- Expansion Adapter
- Expansion Chassis
- StarFabric-compliant Type
- Expansion Adapter
- Expansion Chassis
- ISA Bus Unit
- Bus Expansion Adapter
- Bus Converter Adapter
- Parts of Maintenance Exchange

Model	ECH(PCI)BE-F7A *5	ECH(PCI)BE-F13A *5
Bus type	PCI Local Bus Specification Rev2.3 (+5VDC)	
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing	
Interrupt Level	INTA-INTD	
Bus Clock	33MHz (Max.)	
User slots	7 (Long-size)	13 (Long-size)
Installable Board (mm)	313.8(L)×107(H)	
Power supply capacity (Max.)	+5VDC: 11.3A, +3.3VDC: 6A, +12VDC: 3A, -12VDC: 0.7A	+5VDC: 18A*2, +3.3VDC: 15A*2, +12VDC: 9A, -12VDC: 0.8A*
AC input voltage	115/230VAC (switch selectable)	
Overall maximum power supply capacity *1	130W *3	0~30°C: 230W, 30~40°C: 205W, 40~50°C: 175W *4
Operating Conditions	0~50°C, 20~80%RH (no condensation)	
Dimensions (mm)	300.0(W)×138.0(H)×373.2(L)	424.0(W)×156.0(H)×373.2(L)
Weight	6.0kg	9.0kg
Note:	*1: AC input line voltage range: 90 - 132VAC and 180 - 250VAC. *2: The sum of +5VDC and +3.3VDC must not exceed 90W. *3: Condition with CE marking: 130W at 40°C. *4: Condition with CE marking: 175W at 50°C. *5: This product cannot be used with the expansion adapter [EAD(CB)BE].	

■ Dimensions



(Unit:mm)



Expansion Unit / Bus Adapter

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
- Serial Communication
- GPIO Communication
- Remote I/O
- Expansion Unit / Bus Adapter
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&EIT
- Multi-Programmable Display
- Wireless LAN
- Remote Monitoring Solution
- Service & Products

O-08


- Lineup
- Bus Extension Type
- Expansion Adapter
- Expansion Chassis
- StarFabric-compliant Type
- Expansion Adapter
- Expansion Chassis
- ISA Bus Unit
- Bus Expansion Adapter
- Bus Converter Adapter
- Parts of Maintenance Exchange

StarFabric-compliant Selecting Optimal Expansion Adapter and Expansion Chassis

A StarFabric-compliant system is best suited for measurement control when distance between host PC and chassis is required. When using an expansion chassis in close proximity to the host PC, select from the Bus Extension list on [O-03](#) CONTEC offers 23 different configurations based on the type of host PC, needed number and lengths of PCI slots.


Expansion Adapter

PC equipped with CardBus-compliant card slot



■ Expansion adapter for CardBus slot (PC side)
EAD(CB)SF


Supported OS: Windows XP, Windows 2000




2x (12m) Category 5e STP cables are included.

[O-09](#)

PC equipped with standard PCI/Low Profile PCI slot




■ Expansion adapter for PCI Express-compliant Low Profile PCI bus slot (host PC)
EAD-SF-LPE



2x (12m) Category 5e STP cables and standard PCI bus bracket included

[O-09](#)

■ Expansion adapter for PCI-compliant Low Profile PCI bus slot (host PC)
EAD(LPCI)SF








2x (12m) Category 5e STP cables and standard PCI bus bracket included

[O-09](#)

Expansion Chassis






Stylish compact black chassis

■ PCI expansion chassis (Includes AC adapter)

	ECH(PCI)SF-H2B	
2 Slots	Short Size	AC adapter
O-10		
	ECH(PCI)SF-H4B	AC adapter
4 Slots	Short Size	AC adapter
O-10		
	ECH(PCI)SF-F2B	AC adapter
2 Slots	Long Size	Short Size
O-10		
	ECH(PCI)SF-F4B	AC adapter
4 Slots	Long Size	Short Size
O-10		

Solid steel industrial chassis

■ PCI bus expansion chassis (Built-in power supply)

	ECH(PCI)SF-H4A	Built-in Power
4 Slots	Short Size	Built-in Power
O-11		
	ECH(PCI)SF-H7A	Built-in Power
7 Slots	Short Size	Built-in Power
O-11		
	ECH(PCI)SF-H13A	Built-in Power
13 Slots	Short Size	Built-in Power
O-11		
	ECH(PCI)SF-F7A	Built-in Power
7 Slots	Long Size	Short Size
O-12		
	ECH(PCI)SF-F13A	Built-in Power
13 Slots	Long Size	Short Size
O-12		

Short size: A short-size PCI board can be installed
Long size: A long-size PCI board can be installed

* Category 5e twisted-pair cable can be used.
In high noise environments, shielded cable (STP) is recommended.

Global Portal : www.contec.com

Expansion Unit / Bus Adapter

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
- Serial Communication
- GPIB Communication
- Remote I/O
- Expansion Unit / Bus Adapter**
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&IT
- Multi-Programmable Display
- Wireless LAN
- Remote Monitoring Solution
- Service & Products

PCI Express

Low Profile

StarFabric-compliant
PCI Express bus slot Expansion Adapter (Host PC)
EAD-SF-LPE



- PCI bus (5V/32bit 33MHz) can be added using one PCI Express slot of the host PC
- 12m PCI bus expansion and high-speed serial transfer (2.5Gbps) are supported
- PCI-bus compatibility helps users to use PCI bus boards in expansion units without changing existing software
- Uses noise resistant Category 5e STP cable - easy wiring and installation
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board
- The expansion chassis power supply can be turned on & off with the host PC power supply
- Both Low Profile and Standard PCI slots are supported by using the included bracket

PCI

Low Profile



StarFabric-compliant
LPCI bus slot Expansion Adapter (Host PC)
EAD(LPCI)SF



- PCI bus (5V/32bit 33MHz) can be added using one Low Profile or Standard PCI slot of the host PC
- 12m PCI bus expansion and high-speed serial transfer (2.5Gbps) are supported
- PCI bus-compliant, eliminating any need to change PCI add-on boards or software
- Uses noise resistant Cat 5e STP cable - easy wiring and installation
- The expansion chassis power supply can be turned on & off with the host PC power supply
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board
- Both Low Profile and Standard PCI slots are supported by using the included bracket

Card Bus



StarFabric-compliant
CardBus slot Expansion Adapter (Host PC)
EAD(CB)SF



- PCI expansion (5V/32bit 33MHz) using CardBus slot of the note PC
- 12m PCI bus expansion and high-speed serial transfer (2.5Gbps) are supported
- Uses noise resistant Cat 5e STP cable - easy wiring and installation
- The expansion chassis power supply can be turned on & off with the host PC power supply
- Expansion chassis can be selected to meet the required number of PCI bus slot and size of add-on board

O-09

- Lineup
- Bus Extension Type
- Expansion Adapter
- Expansion Chassis
- StarFabric-compliant Type
- Expansion Adapter**
- Expansion Chassis
- ISA Bus Unit
- Bus Expansion Adapter
- Bus Converter Adapter
- Parts of Maintenance Exchange

SUPERFLEXIOS Windows XP Windows 2000 ● A dedicated device driver needs to be installed under Windows XP and Windows 2000.

Model	EAD-SF-LPE	EAD(LPCI)SF	EAD(CB)SF *2
Bus / Size (mm)	PCI Express Base Specification Rev.1.0a / 121.69(L)×67.90(H)	PCI Local Bus Specification Rev2.2 (+5V / +3.3V) / 121.69(L)×63.41(H)	PC Card Standard CardBus-compliant / TYPE II (119.0×54.0×19.0)
Power Consumption (Max.)	3.3VDC 700mA (Max.)	3.3VDC 450mA (Max.) <JP1 1-2 Short>, 5VDC 350mA (Max.) <JP1 2-3 Short>	3.3VDC 450mA (Max.)
Operating Conditions	0-50°C, 10-90%RH (no condensation)		0-50°C, 20-90%RH (no condensation)
Attached cable *1	2x Category 5e STP cables (12m)		

Note: *1: Category 5e twisted-pair cable can be used. In noisy environments shielded cable (STP) is recommended. *2: This product cannot be used with the expansion chassis [ECH(PCI)SF-F7A, F13A].

Expansion Unit / Bus Adapter

StarFabric-compliant PCI bus Expansion Chassis (x2 Short size slots, AC Adapter) **ECH(PCI)SF-H2B**

2 Slots Short Size



- 2x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan
- The compact chassis design combines space-saving system configuration with portability
- Including an AC adapter

StarFabric-compliant PCI bus Expansion Chassis (x2 Long size slots, AC Adapter) **ECH(PCI)SF-F2B**

2 Slots Short Size Long Size



- 2x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan
- The compact chassis design combines space-saving system configuration with portability
- Including an AC adapter

StarFabric-compliant PCI bus Expansion Chassis (x4 Short size slots, AC Adapter) **ECH(PCI)SF-H4B**

4 Slots Short Size



- 4x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan
- The compact chassis design combines space-saving system configuration with portability
- Including an AC adapter

StarFabric-compliant PCI bus Expansion Chassis (x4 Long size slots, AC Adapter) **ECH(PCI)SF-F4B**

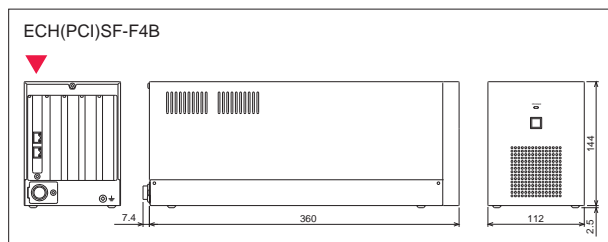
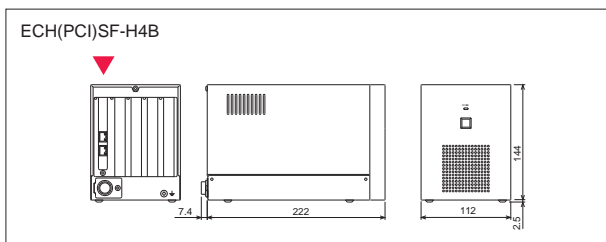
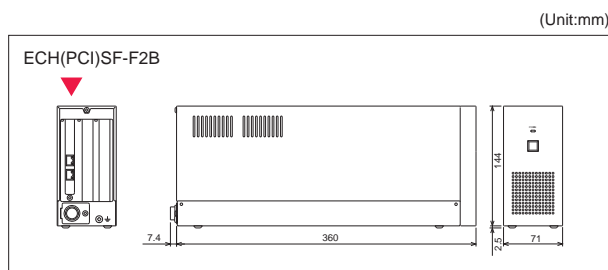
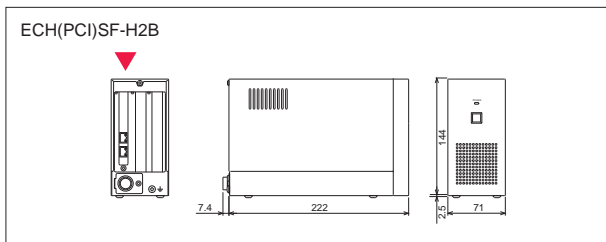
4 Slots Short Size Long Size



- 4x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply
- Equipped with a built-in cooling fan
- The compact chassis design combines space-saving system configuration with portability
- Including an AC adapter

Model	ECH(PCI)SF-H2B	ECH(PCI)SF-H4B	ECH(PCI)SF-F2B	ECH(PCI)SF-F4B
Bus type	PCI Local Bus Specification Rev2.2 (+5VDC)			
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing			
Interrupt Level	INTA-INTD			
Bus Clock	33MHz (Max.)			
User slots	2 (Short-size)	4 (Short-size)	2 (Long-size)	4 (Long-size)
Installable Board (mm)	176.5(L) x 107(H)		313.8(L) x 107(H)	
Power supply capacity (Max.)	The output current shall not exceed the following values. +5VDC: 7A, +3.3VDC: 3A, +12VDC: 1.5A, -12VDC: 0.3A			
AC input voltage	100 to 240VAC			
Overall maximum power supply capacity	60W			
Operating Conditions	0~50°C, 20~80%RH (no condensation)			
Dimensions (mm)	71.0(W) x 222.0(D) x 144.0(H)	112.0(W) x 222.0(D) x 144.0(H)	71.0(W) x 360.0(D) x 144.0(H)	112.0(W) x 360.0(D) x 144.0(H)
Weight of Chassis	1.2kg	1.5kg	1.6kg	2.0kg
Weight of AC Adapter	0.9kg			

■ Dimensions



Box-PCs

Panel-PCs

Flat Panel Displays

Silicon Disk Drives

Option

Box PCs & Panel PCs with Windows CE

Single Board Computer

Chassis / Backplane

Analogue I/O

Digital I/O

Counter & Motion Controller

Serial Communication

GPIO Communication

Remote I/O

Expansion Unit / Bus Adapter

Software

Accessories & Cables

Distributed Monitor & Control Network: F&EIT

Multi-Programmable Display

Wireless LAN

Remote Monitoring Solution

Service & Products

O-10

Lineup

Bus Extension Type

Expansion Adapter

Expansion Chassis

StarFabric-compliant Type

Expansion Adapter

Expansion Chassis

ISA Bus Unit

Bus Expansion Adapter

Bus Converter Adapter

Parts of Maintenance Exchange

Expansion Unit / Bus Adapter

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
- Serial Communication
- GPB Communication
- Remote I/O
- Expansion Unit / Bus Adapter**
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&IT
- Multi-Programmable Display
- Wireless LAN
- Remote Monitoring Solution
- Service & Products

StarFabric-compliant PCI bus Expansion Chassis (x4 Short size slots, On board Power) **ECH(PCI)SF-H4A**

4 Slots **Short Size** **Built-in Power** **CE**



- 4x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

StarFabric-compliant PCI bus Expansion Chassis (x7 Short size slots, On board Power) **ECH(PCI)SF-H7A**

7 Slots **Short Size** **Built-in Power** **CE**



- 7x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

StarFabric-compliant PCI bus Expansion Chassis (x13 Short size slots, On board Power) **ECH(PCI)SF-H13A**

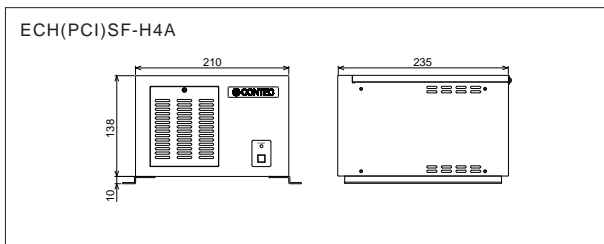
13 Slots **Short Size** **Built-in Power** **CE**



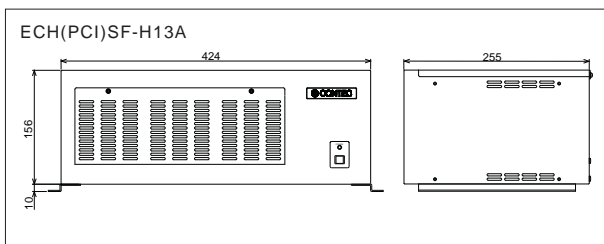
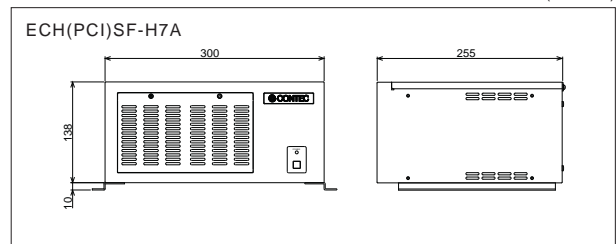
- 13x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

Model	ECH(PCI)SF-H4A	ECH(PCI)SF-H7A *5	ECH(PCI)SF-H13A *5
Bus type	PCI Local Bus Specification Rev2.3 (+5VDC)		
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing		
Interrupt Level	INTA-INTD		
Bus Clock	33MHz (Max.)		
User slots	4 (short-size)	7 (short-size)	13 (short-size)
Installable Board (mm)	176.5(L)x107(H)		
Power supply capacity (Max.)	+5VDC: 11.3A, +3.3VDC: 6A, +12VDC: 3A, -12VDC: 0.7A		+5VDC: 18A*2, +3.3VDC: 15A*2, +12VDC: 9A, -12VDC: 0.8A
AC input voltage	115/230VAC (switch selectable)		
Overall maximum power supply capacity *1	130W *3		0~30°C: 230W, 30~40°C: 205W, 40~50°C: 175W *4
Operating Conditions	0~50°C, 20~80%RH (no condensation)		
Dimensions (mm)	210.0(W)x235.0(D)x138.0(H)	300.0(W)x138.0(H)x255.0(L)	424.0(W)x156.0(H)x255.0(L)
Weight	3.5kg	5.0kg	7.5kg
Note:	*1: AC input line voltage range: 90 - 132VAC and 180 - 250VAC. *2: The sum of +5VDC and +3.3VDC must not exceed 90W. *3: Condition with CE marking: 130W at 40°C. *4: Condition with CE marking: 175W at 50°C. *5: This product cannot be used with the expansion adapter [EAD(CB)BE].		

■ Dimensions



(Unit:mm)



Expansion Unit / Bus Adapter

StarFabric-compliant
PCI bus Expansion Chassis
(x7 Long size slots, On board Power)
ECH(PCI)SF-F7A



- 7x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

StarFabric-compliant
PCI bus Expansion Chassis
(x13 Long size slots, On board Power)
ECH(PCI)SF-F13A



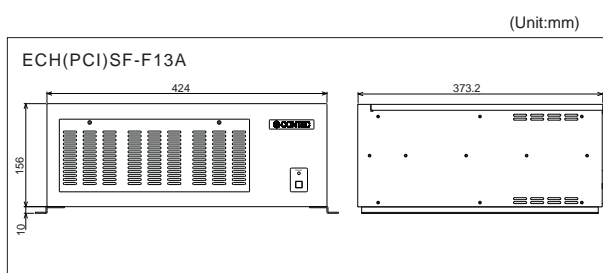
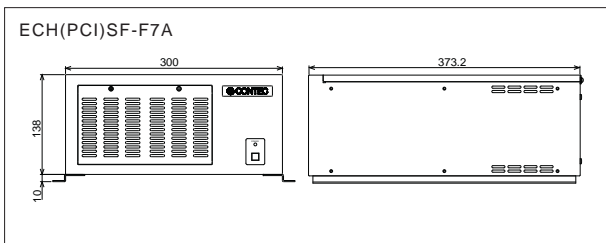
- 13x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5V/32bit)
- The chassis power supply can be turned on & off with the host PC power supply

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
- Serial Communication
- GPIB Communication
- Remote I/O
- Expansion Unit / Bus Adapter**
- Software
- Accessories & Cables
- Distributed Monitor & Control Network: F&IT
- Multi-Programmable Display
- Wireless LAN
- Remote Monitoring Solution
- Service & Products

Model	ECH(PCI)SF-F7A *5	ECH(PCI)SF-F13A *5
Bus type	PCI Local Bus Specification Rev2.3 (+5VDC)	
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing	
Interrupt Level	INTA-INTD	
Bus Clock	33MHz (Max.)	
User slots	7 (Long-size)	13 (Long-size)
Installable Board (mm)	313.8(L)x107(H)	
Power supply capacity (Max.)	+5VDC: 11.3A, +3.3VDC: 6A, +12VDC: 3A, -12VDC: 0.7A	+5VDC: 18A*2, +3.3VDC: 15A*2, +12VDC: 9A, -12VDC: 0.8A
AC input voltage	115/230VAC (switch selectable)	
Overall maximum power supply capacity *1	130W *3	0~30°C: 230W, 30~40°C: 205W, 40~50°C: 175W *4
Operating Conditions	0~50°C, 20~80%RH (no condensation)	
Dimensions (mm)	300.0(W)x138.0(H)x373.2(L)	424.0(W)x156.0(H)x373.2(L)
Weight	6.0kg	9.0kg

Note: *1: AC input line voltage range: 90 - 132VAC and 180 - 250VAC. *2: The sum of +5VDC and +3.3VDC must not exceed 90W. *3: Condition with CE marking: 130W at 40°C. *4: Condition with CE marking: 175W at 50°C. *5: This product cannot be used with the expansion adapter [EAD(CB)BE].

Dimensions



- Lineup
- Bus Extension Type
- Expansion Adapter
- Expansion Chassis
- StarFabric-compliant Type
- Expansion Adapter
- Expansion Chassis**
- ISA Bus Unit
- Bus Expansion Adapter
- Bus Converter Adapter
- Parts of Maintenance Exchange

Expansion Unit / Bus Adapter

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
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- GPIB Communication
- Remote I/O
- Expansion Unit / Bus Adapter
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- Accessories & Cables
- Distributed Monitor & Control Network: F&IT
- Multi-Programmable Display
- Wireless LAN
- Remote Monitoring Solution
- Service & Products

4-slots ISA bus Chassis (x4 Middle size slots) **FA-PAC(PC)M4D**

4 Slots Middle Size Half Size Built-in Power CE



- 4-slots ISA bus passive backplane
- The FA-PAC series are AT bus chassis that can be used for port expansion of a PC

14-slots ISA bus Chassis (x10 Full, x4 Half size slots) **FA-PAC(PC)F14DRV**

14 Slots Full Size Middle Size Half Size Built-in Power CE



- 14-slots ISA bus passive backplane
- The FA-PAC series are AT bus chassis that can be used for port expansion of a PC

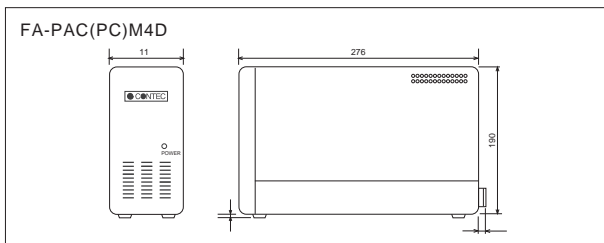
O-13

- Lineup
- Bus Extension Type
- Expansion Adapter
- Expansion Chassis
- StarFabric-compliant Type
- Expansion Adapter
- Expansion Chassis
- ISA Bus Unit
- Bus Expansion Adapter
- Bus Converter Adapter
- Parts of Maintenance Exchange

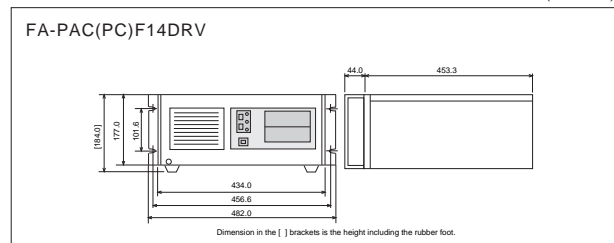
Model	FA-PAC(PC)M4D	FA-PAC(PC)F14DRV
User slots	4 (Middle size) *1	14 (x10 Full, x4 Half size) *1
Installable Board (mm)	220(L) x 122(H) Max.	Full size: 340.5(L) x 122(H), Half size: 220(L) x 122(H) Max.
Power supply capacity (Max.)	+5V 8.0A, -5V 0.3A, +12V 1.5A, -12V 1.0A *2	+5V 23.0A, -5V 0.1A, +12V 15.0A, -12V 0.5A
AC input voltage	85 to 250VAC (50 to 60Hz)	90 to 132VAC, 180 to 264VAC (50 to 60Hz)
Input current	1.5A	7A(115VAC) / 4A(230VAC)
Rackmount	-	EIA 19-inch
FAN	1 (front)	-
Drive bay	-	2x 5-inch bay, 1x 3.5-inch bay (shadow bay)
Weight	4.5kg	14.0kg

Note: *1: These products can be used for both CPU unit and I/O expansion unit. To use the products as I/O expansion unit, 1 slot is used for I/O bus adapter. I/O bus adapter are purchased separately. *2: Total maximum output electricity is 50W.

■ Dimensions

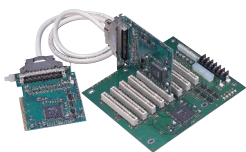


(Unit:mm)



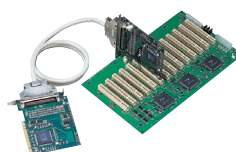
Expansion Unit / Bus Adapter

PCI to PCI Bus Expansion System (7 Slots) **BUF(PCI)**



- External backplane expansion slots function as regular PCI slots
 - Using ATX power supply, Chassis power supply can be turned on & off with the host PC power supply.
- * It cannot be used in PC-9800 series.

PCI to PCI Bus Expansion System (13 Slots) **BUF(PCI)13**



- External backplane expansion slots function as regular PCI slots
 - Using ATX power supply, Chassis power supply can be turned on & off with the host PC power supply.
- * It cannot be used in PC-9800 series.

Box-PCs

Panel-PCs

Flat Panel Displays

Silicon Disk Drives

Option

Box PCs & Panel PCs with Windows CE

Single Board Computer

Chassis / Backplane

Analog I/O

Digital I/O

Counter & Motion Controller

Serial Communication

GPIB Communication

Remote I/O

Expansion Unit / Bus Adapter

Software

Accessories & Cables

Distributed Monitor & Control Network: F&IT

Multi-Programmable Display

Wireless LAN

Remote Monitoring Solution

Service & Products

O-14

Lineup

Bus Extension Type

Expansion Adapter

Expansion Chassis

StarFabric-compliant Type

Expansion Adapter

Expansion Chassis

ISA Bus Unit

Bus Expansion Adapter

Bus Converter Adapter

Parts of Maintenance Exchange

Model	BUF(PCI)	BUF(PCI)13
Bus type	32-bit PCI bus Rev2.1 (+5V)	
Address space	I/O: 32-bit addressing, Memory: 32-bit addressing	
User slots	7	13
Interrupt Level	INTA-INTD	
DMA	-	
Accessible I/O space	-	
Accessible Memory	-	
Bus Clock	33MHz (Max.)	
Power Consumption (Max.)	BUS-PC(PCI) (PC side): +5VDC 700mA (Max.) / +5VDC 300mA (typ) BUS-PAC(PCI) (Extension side): +5VDC 700mA(Max.) / +5VDC 500mA (typ)	BUS-PC(PCI) (PC side): +5VDC 700mA (Max.) / +5VDC 300mA (typ) BUS-PAC(PCI) (Extension side): +5VDC 1500mA (Max.) / +5VDC 900mA (typ)
Operating Conditions	0~50°C, 30~90%RH(no condensation)	
Dimensions (mm)	BUS-PC(PCI) (PC side): 122.0(L)x107.0(H)x18.5(D) BUS-PAC(PCI) (Extension side): 122.0(L)x107.0(H)x18.5(D) PC-MB8(PCI) (Back plane): 220.0(L)x185.0(H)x20.0(D)	BUS-PC(PCI) (PC side): 122.0(L)x107.0(H)x18.5(D) BUS-PAC(PCI) (Extension side): 122.0(L)x107.0(H)x18.5(D) PC-MB8(PCI) (Back plane): 311.5.0(L)x185.0(H)x20.0(D)
Attached cable	96-pin shielded cable, 1m *1	

Note:

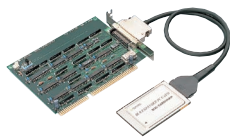
*1: Only the Attached cable can be used.

*2: This product provides I/O access to ISA bus board. It is subject to software and hardware restrictions. Please contact General Information for details.

Expansion Unit / Bus Adapter

- Box-PCs
- Panel-PCs
- Flat Panel Displays
- Silicon Disk Drives
- Option
- Box PCs & Panel PCs with Windows CE
- Single Board Computer
- Chassis / Backplane
- Analog I/O
- Digital I/O
- Counter & Motion Controller
- Serial Communication
- GPIB Communication
- Remote I/O
- Expansion Unit / Bus Adapter**
- Software
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PCMCIA to ISA Bus Conversion System BUF-CARD(PC)P



- Standard ISA slots can be connected from a PC Card (PCMCIA) slot of host PC.
- Supported OS: Windows XP/2000/98/95/3.1, MS-DOS

ISA to ISA Bus Expansion System BUF(PC)E



- Standard ISA slots can be connected from a ISA slot of host PC.

ISA to PCMCIA Expansion Board PC-CARD(PC)H



- Compatible with PC card Type I, Type II, and Type III based on PCMCIA 2.1 / J EIDA 4.2 or later
- Maximum 2pcs. can be mounted simultaneously on the same system.

O-15

- Lineup
- Bus Extension Type
- Expansion Adapter
- Expansion Chassis
- StarFabric-compliant Type
- Expansion Adapter
- Expansion Chassis
- ISA Bus Unit
- Bus Expansion Adapter
- Bus Converter Adapter
- Parts of Maintenance Exchange

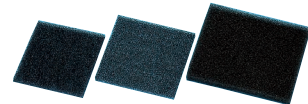
Model	BUF-CARD(PC)P *1	BUF(PC)E	BUF-CARD(PC)H
Bus type	PCMCIA to ISA Bus expansion	ISA to ISA Bus Expansion	-
Card slot	JEIDA Ver.4.1 / PCMCIA Rel.2.0 (TYPE II)	-	-
Card type	-	-	PC Card: JEIDA 4.2 / PCMCIA 2.0 or later TYPE I, II, III (Power consumption 1.2A Max.)
I/O Address	-	-	2 ports (X3E0h, X3E1)
DMA	Not supported	-	-
Bus Clock	-	8MHz	-
Data Bus width	8-bit (16-bit not available)	-	-
Accessible I/O space	I/O: 32 consecutive ports can be selected as following: 220-23F,240-25F,260-27F,280-29F,2A0-2BF,2C0-2DF,2E0-2FF,300-31F,320-33F,340-35F,360-37F,380-39F,3A0-3BF,3C0-3DF,3E0-3FF	0000H - FFFFH (unrelated to expansion bus adapters)	-
Accessible Memory	Not supported	080000H - 09FFFFH (DIP switch selectable) 0C0000H - 0DFFFFH (DIP switch selectable) 000000H - FEFFFFH (DIP switch selectable)	-
Interrupt Level	One of IRQ 3~7, 9~12, 14 or 15 (jumper selectable)	IRQ 3-7, 9-12, 14, 15 (rotary SW selectable)	-
Power Consumption (Max.)	BUS-CARD(PM)P (PC side): +5VDC 100mA BUS-CARD(PC) (Extension side): +5VDC 500mA	BUS-PC(PC)E (PC side): +5VDC 300mA BUS-PAC(PC)E (Extension side): +5VDC 500mA	+5VDC 150mA (without PC Card)
Operating Conditions	0~50°C, 20~90%RH (no condensation)	0~50°C, 30~90%RH (no condensation)	0~50°C, 0~90%RH (no condensation)
Dimensions (mm)	BUS-PC(PCI) (PC side): 54.0(L) × 85.6(H) × 5.0(D) BUS-PAC(PCI) (Extension side): 160.0(L) × 122.0(H) × 18.5(D)	Both PC & Extension side: 160.0(L) × 122.0(H) × 22.0(D)	-
Applicable Models	AT-compliant PC equipped with a card slot compatible with a JEIDA 4.1 / PCMCIA 2.0 or later Type II card (should be compatible with Card Service Release 2.0 or later)	-	-
Attached cable	32-pin shielded cable, 1m *2	96-pin shielded cable, 1m *2	-
Bus / Size (mm)	-	-	ISA / 160(L) × 107(H)
Note:	*1: There might be boards that cannot be used in some conditions. Please contact General Information for details. *2: Only the Attached cable can be used.		

Expansion Unit / Bus Adapter

Parts of Maintenance Exchange

	Model	Chassis
AC power supply	POW300	FA-PAC(PC)F14DRV, FA-PAC(PC)F14DR, FA-UNIT-F8DR/M, FA-UNIT-F8DR
	POW301	FA-PAC(PC)H12RF
	POW100	FA-UNIT-F11RFV, FA-UNIT-F6RFV, FA-UNIT-M11RFV, FA-UNIT-M6RFV
	POW300X	FA-UNIT-F14BE, FA-UNIT-F14ME, FA-UNIT-F11BE, FA-UNIT-F11ME, FA-UNIT-M11BE, FA-UNIT-M11ME, FA-UNIT-M6BE, FA-UNIT-M4BE, FA-UNIT-F6BE/2U
	POW250X	FA-PAC(PC)F13, ECH(PC)BE-F13A, ECH(PC)SF-F13A, ECH(PC)BE-H13A, ECH(PC)SF-H13A
	POW251X	FA-UNIT-H4BE
	POW150X	FA-PAC(PC)F7, FA-PAC(PC)H4, ECH(PC)BE-H4A, ECH(PC)BE-F7A, ECH(PC)SF-H4A, ECH(PC)SF-F7A, ECH(PC)BE-H7A, ECH(PC)SF-H7A
FAN	FAN1238	FA-PAC(PC)F14DRV, FA-UNIT-F8DR/M, FA-UNIT-F8DR, FA-UNIT-**RFV series *1
	FAN0925	FA-PAC(PC)F14DR, FA-PAC(PC)H12RF, FA-UNIT-F6DR, FA-PAC(PC)F13, FA-PAC(PC)F7, FA-PAC(PC)H4, ECH(PC)BE-H4A, ECH(PC)BE-F7A, ECH(PC)BE-F13A, ECH(PC)SF-H4A, ECH(PC)SF-F7A, ECH(PC)SF-F13A, ECH(PC)BE-H7A, ECH(PC)BE-H13A, ECH(PC)SF-H7A, ECH(PC)SF-H13A
	FAN0820	FA-PAC(PC)M4D, FA-PAC(PC)H5DR
FAN (with a sensor)	FAN1225S	FA-UNIT-F14BE, FA-UNIT-F14ME, FA-UNIT-F11BE, FA-UNIT-F11ME, FA-UNIT-M11BE, FA-UNIT-M11ME, FA-UNIT-M6BE, FA-UNIT-M4BE
	FAN0925S	FA-UNIT-H4BE
	FAN0825S	FA-UNIT-F14ME, FA-UNIT-F11ME, FA-UNIT-M11ME, FA-UNIT-F6BE/2U
Filter (10 pcs)	FLT120	FA-PAC(PC)F14DRV, FA-UNIT-F8DR
	FLT121	FA-UNIT-F14BE, FA-UNIT-F14ME, FA-UNIT-F11BE, FA-UNIT-F11ME, FA-UNIT-M11BE, FA-UNIT-M11ME, FA-UNIT-M6BE, FA-UNIT-M4BE, FA-UNIT-F8DR/M
	FLT90	FA-UNIT-F6DR, FA-PAC(PC)H4, ECH(PC)BE-H4A, ECH(PC)SF-H4A
	FLT91	FA-PAC(PC)F7, ECH(PC)BE-F7A, ECH(PC)SF-F7A, ECH(PC)BE-H7A, ECH(PC)SF-H7A
	FLT92	FA-PAC(PC)F13, ECH(PC)BE-F13A, ECH(PC)SF-F13A, ECH(PC)BE-H13A, ECH(PC)SF-H13A
	FLT93	FA-UNIT-H4BE
	FLT80	FA-PAC(PC)M4D, FA-PAC(PC)H5DR
	FLT81	FA-UNIT-F6BE/2U

*1: Optional parts



Box-PCs

Panel-PCs

Flat Panel Displays

Silicon Disk Drives

Option

Box PCs & Panel PCs with Windows CE

Single Board Computer

Chassis / Backplane

Analogue I/O

Digital I/O

Counter & Motion Controller

Serial Communication

GPIO Communication

Remote I/O

Expansion Unit / Bus Adapter

Software

Accessories & Cables

Distributed Monitor & Control Network: F&IT

Multi-Programmable Display

Wireless LAN

Remote Monitoring Solution

Service & Products

Lineup

Bus Extension Type

Expansion Adapter

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ISA Bus Unit

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Parts of Maintenance Exchange