

Expansion Unit / Bus Adapter

Expansion Unit / Bus Adapter

What is the expansion unit?

An expansion system is used to expand the number of available PCI bus slots of either CONTEC industrial computers (IPC series) 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

A wide variety of variations according to expansion systems are available.

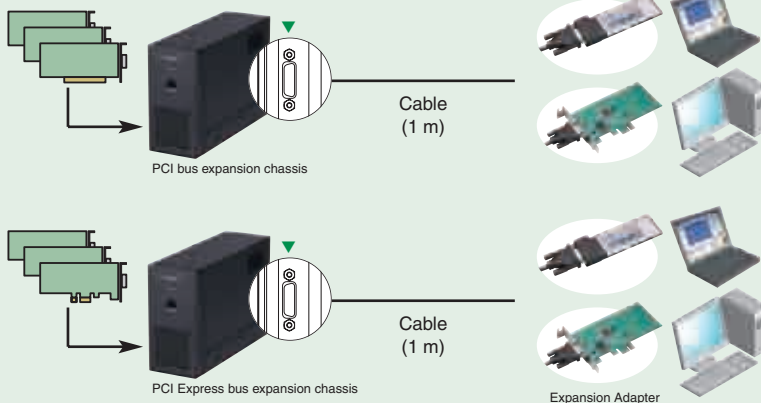
PCI Express Cable Type Expansion Bus Adapter & Chassis

L-03

PCI Express Cable Type:

PCI Express External Cabling 1.0 compliant, providing a high-speed data transfer (2.5 Gbps).

PCI bus slots or PCI Express bus slots can be added to PCs having PCI Express bus or ExpressCard slots. It allows you to construct a system without changing existing PCI add-on boards or PCI Express bus board and software. In addition, the expansion chassis power supply can be turned on & off with the host PC power supply.



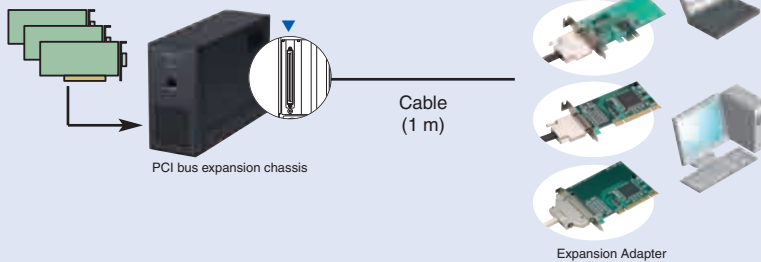
Bus Extension Type Expansion Adapter & Chassis

L-08

Bus Extension Type:

This bus extension externally expands PCI bus and transmit 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 into the PC and expansion chassis are connected with a 1 m-long connecting cable, and the distance between the expansion chassis and measurement targets depends on the specification of board to be inserted.

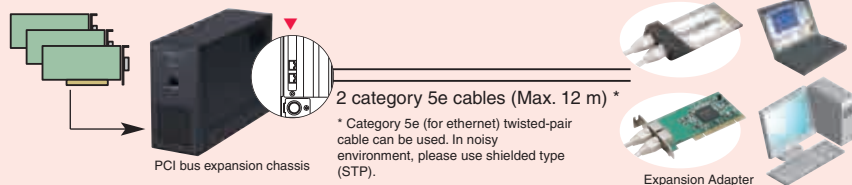


StarFabric-compliant Type Expansion Adapter & Chassis

L-13

StarFabric-compliant Type

With this style extension, you can conduct StarFabric-compliant high-speed serial transfer (2.5 Gbps). 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. In addition, the expansion chassis power supply can be turned on & off with the host PC power supply.



Expansion Unit / Bus Adapter

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Lineup

PCI Express
Cable Type

Expansion Adapter

Chassis

Bus Extension Type

Expansion Adapter

Chassis

StarFabric-
compliant

Expansion Adapter

Chassis

ISA Bus Unit

Bus Expansion
Adapter

Bus Converter
Adapter

Parts of Maintenance
Exchange

■ PCI Express Cable Type Expansion Bus Adapter & Chassis

● Expansion Adapter

Model	Type
EAD-CE-LPE	PCI Express
EAD-CE-EC	ExpressCard

● Expansion Chassis

Model	Bus type	Installation Type			Slots	Installable Board	
		Desktop	Rack mount	Wall mount		Long	Short
ECH-PE-CE-H2B	PCI Express bus	○	-	-	2	×	○
ECH-PE-CE-F2B	PCI Express bus	○	-	-	2	○	○
ECH-PCI-CE-H2B	PCI bus	○	-	-	2	×	○
ECH-PCI-CE-H2C	PCI bus	○	-	-	2	×	○
ECH-PCI-CE-H4B	PCI bus	○	-	-	4	×	○
ECH-PCI-CE-F2B	PCI bus	○	-	-	2	○	○
ECH-PCI-CE-F4B	PCI bus	○	-	-	4	○	○
ECH-PCI-CE-H4A	PCI bus	○	○	○	4	×	○
ECH-PCI-CE-H7A	PCI bus	○	○	○	7	×	○
ECH-PCI-CE-H13A	PCI bus	○	○	○	13	×	○

■ Bus Extension Type Expansion Adapter & Chassis

● Expansion Adapter

Model	Type
EAD-BE-LPE	PCI Express
EAD(LPCI)BE	PCI
EAD(PCI)BE	PCI (for Standard PCI slots)
EAD(CB)BE-N	Card Bus

● PCI Bus Expansion Chassis

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

■ StarFabric-compliant Type Expansion Adapter & Chassis

● Expansion Adapter

Model	Type
EAD-SF-LPE	PCI Express
EAD(LPCI)SF	PCI
EAD(CB)SF	Card Bus

● PCI Bus Expansion Chassis

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

■ ISA Bus Expansion Unit (Backplane included)

Model	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	×	×	○

*1: Installable depending on board sizes. Check your board size (actual size).
*2: Expansion bus adapter occupies 1 slot from available slot.

■ Bus Converter Adapter

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

■ Bus Expansion Adapter

Model	Type	backplane	Installable Unit of PCI Bus Expansion Adapter (FA-UNIT- * *)			
BUF(PCI)	PCI to PCI Bus (7 slots)	Included	F8DR	F8DR/M	F11RFV	M11RFV
BUF(PCI)13	PCI to PCI Bus (13 slots)	Included	F8DR	F8DR/M		

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

<For PCI bus 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 PCI Express bus expansion chassis>

- Board (x16 etc) requiring communication speeds of more than that of PCI Express (x1)
- Additional PCI bus expansion boards
- Please note that even when a board is compatible with PCI Express bus specifications, it may not operate due to specification limitations.

* For details, please check the manual or visit our website.

Pictograms

Expansion Adapter

PCI Express

Product is PCI Express standard compliant and can be used in the computer equipped with PCI Express bus expansion slot.

PCI

Product is PCI standard compliant and can be used in the computer equipped with PCI bus expansion slot.

Card Bus

Product supports CardBus that is a 32-bit PC card standard bus and can be used in the notebook computer equipped with a CardBus-compliant PC card slot.

Board Size

Low Profile

Product is PCI standard / Low Profile compliant. A bracket for standard-size PCI slots is provided.

Expansion Chassis

X Slot

Maximum number of boards that can be installed

XX Size

Maximum board size that can be installed

Built-in Power

Expansion chassis is equipped with built-in power supply.

AC adapter Includes

Includes AC adapter. The expansion chassis has no built-in power source.

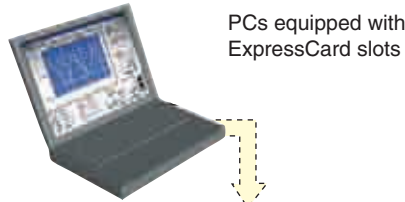
Expansion Unit / Bus Adapter

PCI Express Cable Type Selecting Optimal Expansion Adaptor and Expansion Chassis

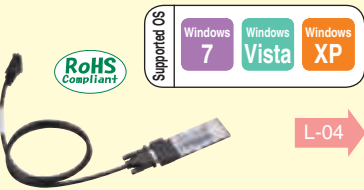
PCI Express External Cabling 1.0 compliant, providing a high-speed data transfer (2.5 Gbps). PCI bus slots or PCI Express bus slots can be added to PCs having PCI Express bus or ExpressCard slots. It allows you to construct a system without changing existing PCI add-on boards or PCI Express bus board and software. In addition, the expansion chassis power supply can be turned on & off with the host PC power supply.

CONTEC offers 18 different configurations based on the type of host PC, needed number and size of PCI slots.

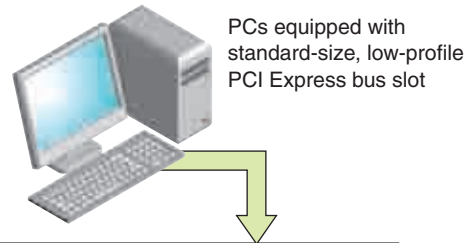
Expansion Adapter



Expansion adapter for PCI Express cable type (PC side) EAD-CE-EC



A dedicated connection cable (1 m) is included.
3 m extension is possible by using the following cable.
A dedicated connection cable (3 m)
CB-CE-3



Expansion adapter for PCI Express cable type (PC side) EAD-CE-LPE



A dedicated connection cable (1 m) is included.
Standard PCI bus bracket are included.



3 m extension is possible by using the following cable.
A dedicated connection cable (3 m)
CB-CE-3

Expansion Chassis

Stylish compact black chassis

PCI expansion chassis (Includes AC adapter)

ECH-PE-CE-H2B
2 Slots Short Size Includes AC adapter L-05

ECH-PE-CE-F2B
2 Slots Long Size Short Size Includes AC adapter L-05

PCI bus expansion chassis (Includes AC adapter)

ECH-PCI-CE-H2B
2 Slots Short Size Includes AC adapter L-06

ECH-PCI-CE-H2C
2 Slots Short Size Optional AC adapter L-07

ECH-PCI-CE-H4B
4 Slots Short Size Includes AC adapter L-06

ECH-PCI-CE-F2B
2 Slots Long Size Short Size Includes AC adapter L-06

ECH-PCI-CE-F4B
4 Slots Long Size Short Size Includes AC adapter L-06

Solid steel industrial chassis

PCI bus expansion chassis (Built-in power supply)

ECH-PCI-CE-H4A
4 Slots Short Size Built-in Power L-07

ECH-PCI-CE-H7A
7 Slots Short Size Built-in Power L-07

ECH-PCI-CE-H13A
13 Slots Short Size Built-in Power L-07

Short size: Short size PCI or PCI Express board can be installed.
Long size: Long size PCI or PCI Express board can be installed.

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Model	EAD-CE-LPE	EAD-CE-EC
Bus Type	PCI Express Base Specification Rev. 1.0a x1	ExpressCard Standard Release 1.1
Card Slot	-	-
Dimensions (mm)	121.69 (L) x 67.90 (H)	100 (L) x 34 (H)
Bus Clock	-	-
Power Consumption	3.3 VDC 50 mA (Max.)	3.3 VDC 50 mA (Max.)
Operating Conditions	0 - 50°C, 10 - 90 % RH (no condensation)	
Attached Cable	CB-CE-1 (cable length: 1 m)	

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

Expansion Unit / Bus Adapter

PCI Express

Low Profile



PCI Express Cable type
Expansion adapter for PCI Express bus slot (Host PC)
EAD-CE-LPE

- PCI bus (5 V/32 bit 33 MHz) or PCI Express (x1) bus slot can be added using PCI Express board on the host PC.
- Expansion chassis can be selected for each application.
- The power supply can be turned on & off with the host PC power supply.
- Low Profile PCI-compliant (includes bracket for use in standard PCI slot)



Express Card



PCI Express Cable type
Expansion adapter for PCI Express bus slot (Host PC)
EAD-CE-EC

- PCI bus (5 V/32 bit 33 MHz) or PCI Express (x1) bus slot can be added using ExpressCard slot on the notebook computer.
- Expansion chassis can be selected for each application.
- The power supply can be turned on & off with the host PC power supply.



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PCI Express
Cable Type

Expansion Adapter

Chassis

Bus Extension Type

Expansion Adapter

Chassis

StarFabric-
compliant

Expansion Adapter

Chassis

ISA Bus Unit

Bus Expansion
Adapter

Bus Converter
Adapter

Parts of Maintenance
Exchange

Model	EAD-CE-LPE	EAD-CE-EC	
Bus Type	PCI Express Base Specification Rev. 1.0a x1	ExpressCard Standard Release 1.1	
Card Slot	-		
Dimensions (mm)	121.69 (L) x 67.90 (H)	100 (L) x 34 (H)	
Bus Clock	-		
Power Consumption	3.3 VDC 50 mA (Max.)	3.3 VDC 50 mA (Max.)	
Operating Conditions	0 - 50°C, 10 - 90 % RH (no condensation)		
Attached Cable	CB-CE-1 (cable length: 1 m)		

Note:

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PCI Express Cable type
 PCI Express Expansion Chassis
(x2 Short size slots, AC Adapter)
ECH-PE-CE-H2B

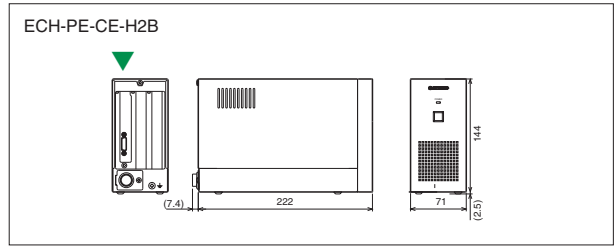
Planned
 2 Slots Short Size CE



- 2 short-size PCI Express boards can be installed.
- 1x PCI Express bus slot can be added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- The compact chassis design with a built-in cooling fan combines space-saving system configuration.

■Dimensions

(Unit: mm)



PCI Express Cable type
 PCI Express Expansion Chassis
(x2 Long size slots, AC Adapter)
ECH-PE-CE-F2B

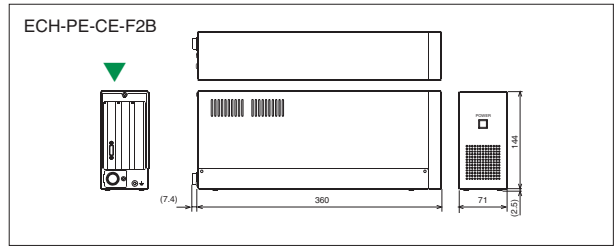
2 Slots Long Size Short Size



- 2 long-size PCI Express bus boards can be installed.
- 1x PCI Express bus slot can be added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- The compact chassis design with a built-in cooling fan combines space-saving system configuration.

■Dimensions

(Unit: mm)



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Lineup

- PCI Express Cable Type
- Expansion Adapter
- Chassis
- Bus Extension Type
- Expansion Adapter
- Chassis
- StarFabric-compliant
- Expansion Adapter
- Chassis
- ISA Bus Unit
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- Parts of Maintenance Exchange

Model	ECH-PE-CE-H2B	ECH-PE-CE-F2B
Bus Type	PCI Express Base Specification Rev.1.0a x1 *2	
Address Space	-	
Interrupt Level	-	
Bus Clock	-	
User Slots	2 (Short-size)	2 (Long-size)
Installable Board (mm)	176.5 (L) x 111.15 (H)	313.8 (L) x 111.15 (H)
Power Supply Capacity (Max.)	The output current shall not exceed the following values. +5 VDC 7 A (Max.) *3, +3.3 VDC 3 A (Max.) *3, +12 VDC 1.5 A (Max.), -12 VDC 0.3 A (Max.)	The output current shall not exceed the following values. +3.3 VDC 6 A (Max.) *4, +12 VDC 1.5 A (Max.), -12 VDC 0.3 A (Max.)
AC Input Voltage *1	100 - 240 VAC	
Overall Maximum Power Supply Capacity	60 W	
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)	
Dimensions (mm)	71.0 (W) x 144.0 (H) x 222.0 (L) (no rubber foot)	71.0 (W) x 144.0 (H) x 360.0 (L) (no rubber foot)
Weight of Chassis	1.2 kg	1.6 kg
Weight of AC Adapter	0.9 kg	

Note:
 *1: AC input voltage: 90 - 264 VAC.
 *2: x16 boards can also be installed. However, it must have the same functions as x1 board.
 *3: The sum of +5 VDC/+3.3 VDC must not exceed 35 W.
 *4: If you use 3.3 VDC, it must not exceed 3 A for each slot.

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

Expansion Unit / Bus Adapter

PCI Express Cable type
PCI bus expansion chassis

2 Slots **Short Size**

(x2 Short size slots, AC Adapter)
ECH-PCI-CE-H2B



- 2 short-size PCI bus boards can be installed.
- A PCI bus (5 V/32 bit 33 MHz) is added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- The compact chassis design with a built-in cooling fan combines space-saving system configuration.

PCI Express Cable type
PCI bus expansion chassis

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

(x2 Long size slots, AC Adapter)
ECH-PCI-CE-F2B



- 2 long-size PCI bus boards can be installed.
- A PCI bus (5 V/32 bit 33 MHz) slot can be added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- The compact chassis design with a built-in cooling fan combines space-saving system configuration.

PCI Express Cable type
PCI bus expansion chassis

4 Slots **Short Size**

(x4 Short size slots, AC Adapter)
ECH-PCI-CE-H4B



- 4 short-size PCI bus boards can be installed.
- A PCI bus (5 V/32 bit 33 MHz) slot can be added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- The compact chassis design with a built-in cooling fan combines space-saving system configuration.

PCI Express Cable type
PCI bus expansion chassis

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

(x4 Long size slots, AC Adapter)
ECH-PCI-CE-F4B



- 4 long-size PCI bus boards can be installed.
- A PCI bus (5 V/32 bit 33 MHz) slot can be added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- The compact chassis design with a built-in cooling fan combines space-saving system configuration.

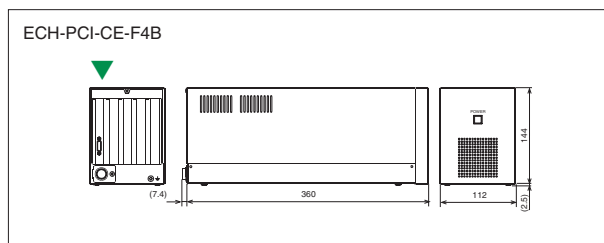
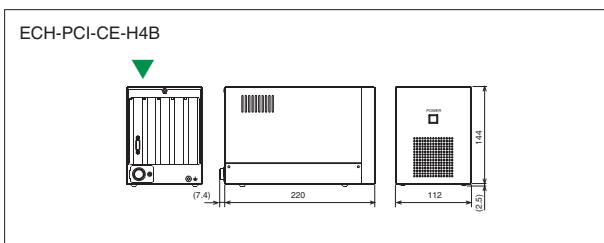
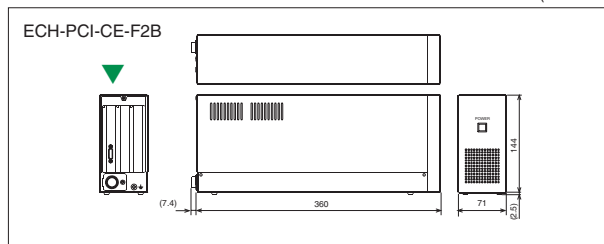
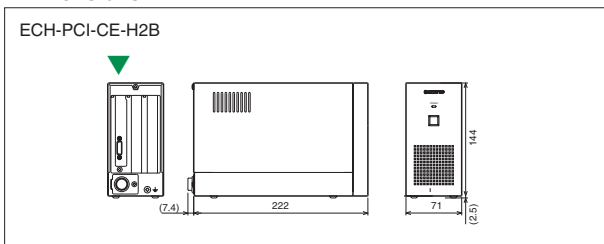
Model	ECH-PCI-CE-H2B	ECH-PCI-CE-F2B	ECH-PCI-CE-H4B	ECH-PCI-CE-F4B
Bus Type	PCI Local Bus Specification Rev2.3 (+5 VDC)			
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing			
Interrupt Level	INTA - INTD			
Bus Clock	33 MHz (Max.)			
User Slots	2 (Short-size)	2 (Long-size)	4 (Short-size)	4 (Long-size)
Installable Board (mm)	176.5 (L) x 107 (H)	313.8 (L) x 107 (H)	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. +5 VDC 7 A (Max.) **, +3.3 VDC 3 A (Max.) **, +12 VDC 1.5 A (Max.), -12 VDC 0.3 A (Max.)			
AC Input Voltage *1	100 - 240 VAC			
Overall Maximum Power Supply Capacity	60 W			
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)			
Dimensions (mm)	71.0 (W) x 144.0 (H) x 222.0 (L) (no rubber foot)	71.0 (W) x 144.0 (H) x 360.0 (L) (no rubber foot)	112.0 (W) x 144.0 (H) x 222.0 (L) (no rubber foot)	112.0 (W) x 144.0 (H) x 360.0 (L) (no rubber foot)
Weight of Chassis	1.2 kg	1.6 kg	1.5 kg	2.0 kg
Weight of AC Adapter	0.9 kg			

Note: *1: AC input voltage: 90 - 264 VAC. *2: The sum of +5 VDC/3.3 VDC must not exceed 35 W.

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

■Dimensions

(Unit: mm)



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PCI Express Cable type
PCI bus expansion chassis
(x4 Short size slots, On board Power)
ECH-PCI-CE-H4A

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



- 4 short-size PCI bus boards can be installed.
- A PCI bus (5 V/32 bit 33 MHz) slot can be added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- Steel chassis equipped with a built-in cooling fan.



PCI Express Cable type
PCI bus expansion chassis
(x7 Short size slots, On board Power)
ECH-PCI-CE-H7A

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



- 7 short-size PCI bus boards can be installed.
- A PCI bus (5 V/32 bit 33 MHz) slot can be added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- Steel chassis equipped with a built-in cooling fan is employed.



PCI Express Cable type
PCI bus expansion chassis
(x13 Short size slots, On board Power)
ECH-PCI-CE-H13A

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



- 13 short-size PCI bus boards can be installed.
- A PCI bus (5 V/32 bit 33 MHz) slot can be added to the PC.
- The power supply can be turned on & off with the host PC power supply.
- Steel chassis equipped with a built-in cooling fan is employed.



PCI Express Cable type
PCI bus expansion chassis
(x2 Short size slots, AC Adapter)
ECH-PCI-CE-H2C

2 Slots **Short Size**



- 2 short-size PCI bus boards can be installed.
- A PCI bus (5 V/32 bit 33 MHz) slot can be added to the PC.
- Cable connection with the Multi-Function Resource-Saving PC BX100n series can be adopted to allow integrated or separate use.



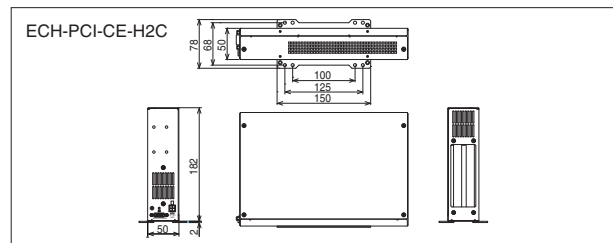
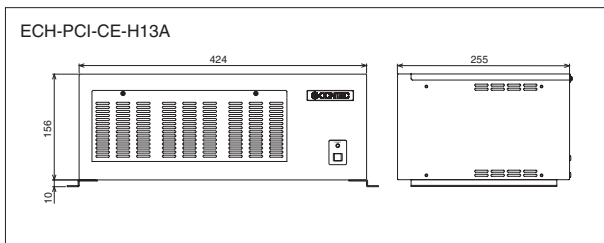
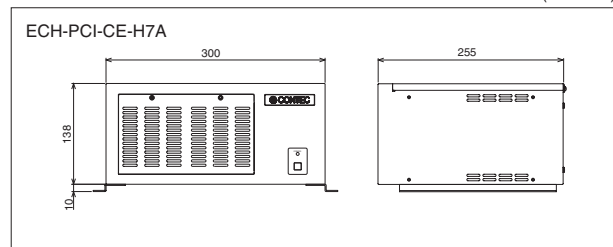
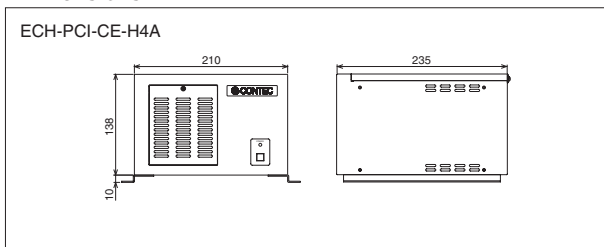
Model	ECH-PCI-CE-H4A	ECH-PCI-CE-H7A	ECH-PCI-CE-H13A	ECH-PCI-CE-H2C ^{*7}
Bus Type	PCI Local Bus Specification Rev2.3 (+5 VDC)			
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing			
Interrupt Level	INTA - INTD			
Bus Clock	33 MHz (Max.)			
User Slots	4 (Short-size)	7 (Short-size)	13 (Short-size)	2 (Short-size)
Installable Board (mm)	176.5 (L) x 107 (H)			
Power Supply Capacity (Max.)	The output current shall not exceed the following values. +5 VDC: 11.3 A (Max.), +3.3 VDC: 6 A (Max.), +12 VDC: 3 A (Max.), -12 VDC: 0.7 A (Max.)		The output current shall not exceed the following values. +5 VDC: 18 A (Max.) ^{*2} , +3.3 VDC: 15 A (Max.) ^{*2} , +12 VDC: 9 A (Max.), -12 VDC: 0.8 A (Max.)	The output current shall not exceed the following values. +5 VDC: 5 A (Max.) ^{*5} , +3.3 VDC: 2 A (Max.) ^{*5} , +12 VDC: 1 A (Max.), -12 VDC: 0.3 A (Max.)
AC Input Voltage	115/230 VAC (switch selectable) ^{*1}			12 - 24 VDC ^{*6}
Overall Maximum Power Supply Capacity	130 W ^{*3}		0 - 30°C: 230 W, 30 - 40°C: 205 W, 40 - 50°C: 175 W ^{*4}	48 W
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)			
Dimensions (mm)	210.0 (W) x 138.0 (H) x 235.0 (L) (no fittings)	300.0 (W) x 138.0 (H) x 255.0 (L) (no fittings)	424.0 (W) x 156.0 (H) x 255.0 (L) (no fittings)	270.0 (W) x 182.0 (H) x 50.0 (L) (no rubber foot)
Weight of Chassis	3.5 kg	5.0 kg	7.5 kg	3.5 kg

Note: ^{*1}: AC input line voltage range: 90 - 132 VAC and 180 - 250 VAC. ^{*2}: The sum of +5 VDC and +3.3 VDC must not exceed 90 W. ^{*3}: Condition with CE marking: 130 W at 40°C. ^{*4}: Condition with CE marking: 175 W at 50°C. ^{*5}: The sum of +5 VDC/+3.3 VDC must not exceed 35 W. ^{*6}: DC input line voltage range: 10.8 - 31.2 VDC. ^{*7}: For power supply of ECH-PCI-CE-H2C, use IPC-ACAP12-04. For details, please see D-02.

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

■Dimensions

(Unit: mm)



Expansion Unit / Bus Adapter

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CONTEC

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Lineup

PCI Express
Cable Type

Expansion Adapter

Chassis

Bus Extension Type

Expansion Adapter

Chassis

StarFabric-
compliant

Expansion Adapter

Chassis

ISA Bus Unit

Bus Expansion
Adapter

Bus Converter
Adapter


Parts of Maintenance
Exchange

Bus Extension Type Selecting Optimal Expansion Adaptor and Expansion Chassis

Bus extension type 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 12 m), select from the StarFabric-compliant type. CONTEC offers 32 different configurations based on the type of host PC, needed number and lengths of PCI slots. L-13


Expansion Adapter

PC equipped with CardBus-compliant card slot




Expansion adapter for CardBus slot (Host PC) EAD(CB)BE-N

Supported OS: Windows 7, Vista, XP, Windows 2000, Me, 98




A dedicated connection cable (1 m) is included. L-09

PC equipped with 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 (1 m) is included. L-09


Standard PCI bus bracket are included.

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



A dedicated connection cable (1 m) is included. L-09

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



A dedicated connection cable (1 m) is included. L-09

Expansion Chassis

Stylish compact black chassis

PCI bus expansion chassis (Includes AC adapter)

ECH(PCI)BE-H2B
2 Slots Short Size Includes AC adapter L-10

ECH(PCI)BE-H4B
4 Slots Short Size Includes AC adapter L-10

ECH(PCI)BE-F2B
2 Slots Long Size Short Size Includes AC adapter L-10

ECH(PCI)BE-F4B
4 Slots Long Size Short Size Includes AC adapter L-10

Solid steel industrial chassis

PCI bus expansion chassis (Built-in power supply)

ECH(PCI)BE-H4A
4 Slots Short Size Built-in Power L-11

ECH(PCI)BE-H7A
7 Slots Short Size Built-in Power L-11

ECH(PCI)BE-H13A
13 Slots Short Size Built-in Power L-11

ECH(PCI)BE-F7A
7 Slots Long Size Short Size Built-in Power L-12

ECH(PCI)BE-F13A
13 Slots Long Size Short Size Built-in Power L-12

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

For customers using the previous model expansion unit [FA-PAC(PCI) series, NOTE-PAC(PCI) series]

When replacing conventional expansion unit with expansion chassis and adapters, please refer to the following list to purchase the appropriate combination. It allows system configuration using the same specifications as the previous models.

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

Expansion Unit / Bus Adapter

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- Image Distribution Unit FlexNetViewer
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L-09

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

PCI Express



Bus Extender
PCI Express bus slot
Expansion Adapter (Host PC)
EAD-BE-LPE

- PCI bus (5 V/32 bit 33 MHz) 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



Bus Extender
LPCI bus slot Expansion
Adapter (Host PC)
EAD(LPCI)BE

- PCI bus (5 V/32 bit 33 MHz) 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.

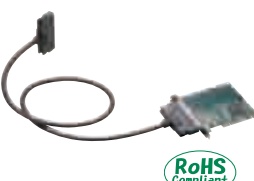


PCI



Bus Extender
PCI bus slot Expansion
Adapter (Host PC)
EAD(PCI)BE

- PCI bus (5 V/32 bit 33 MHz) 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.

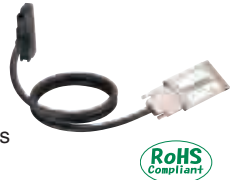


Card Bus



Bus Extender
CardBus slot expansion
adapter (Host PC)
EAD(CB)BE-N

- PCI bus (5 V/32 bit 33 MHz) 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 7, Windows Vista, Windows XP, Windows 2000, Windows Me, Windows 98SE, Windows 98



Supported OS

Windows 7	Windows Vista	Windows XP
Windows 2000	Windows Me	Windows 98

- A dedicated device driver needs to be installed under Windows XP and Windows 2000. The device driver of the latest version is available in our website.
- 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 (+ 5 V / +3.3 V)		-
Card Slot	-			PC Card Standard CardBus
Dimensions (mm)	121.69 (L) x 67.90 (H)	121.69 (L) x 63.41 (H)	121.69 (L) x 105.68 (H)	TYPE II (85.6 x 54.0 x 5.0)
Bus Clock	-	33 MHz (Max.)	33 MHz (Max.)	-
Power Consumption	3.3 VDC 300 mA (Max.)	3.3 VDC 200 mA (Max.) <JP1 1-2 Short>, 5 VDC 200 mA (Max.) <JP1 2-3 Short>		3.3 VDC 200 mA (Max.)
Operating Conditions	0 - 50°C, 10 - 90 % RH (no condensation)			
Attached Cable	CB-CB68/96 (cable length: 1 m) *1		CB-BF96 (cable length: 1 m) *1	CB-CB68/96 (cable length: 1 m) *1

*1: Only the attached cable can be used.
 *2: This product is not compatible with the expansion chassis [ECH(PCI)BE-F7A, F13A, H7A, H13A].

Note:

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

Expansion Unit / Bus Adapter

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



- 2x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5 V/32 bit)
- 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 AC adapter



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



- 2x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5 V/32 bit)
- 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.
- Including AC adapter



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



- 4x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5 V/32 bit)
- 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 AC adapter



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



- 4x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5 V/32 bit)
- 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.
- Including AC adapter



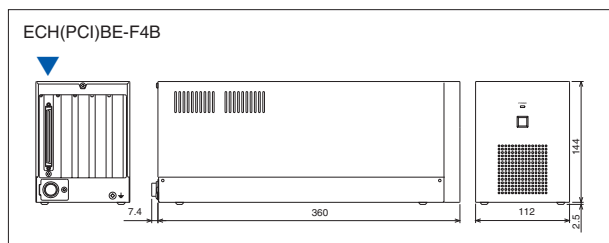
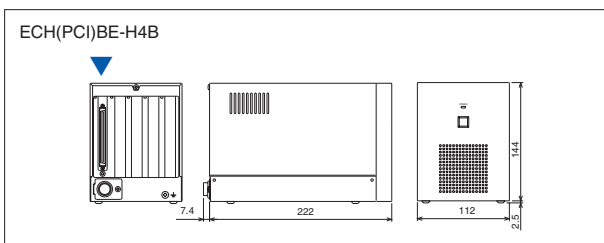
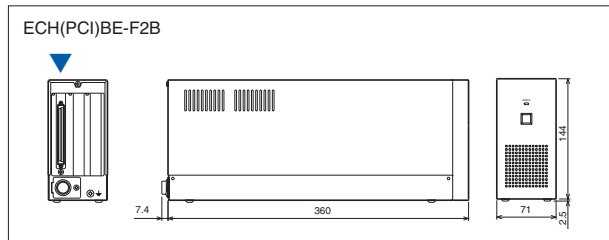
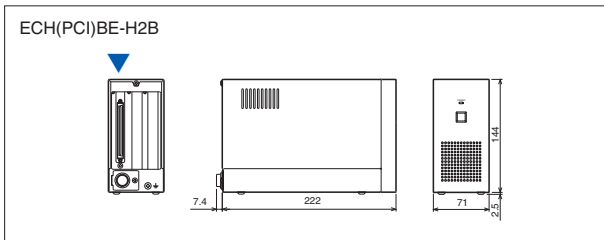
Model	ECH (PCI) BE-H2B	ECH (PCI) BE-H4B	ECH (PCI) BE-F2B	ECH (PCI) BE-F4B
Bus Type	PCI Local Bus Specification Rev2.3 (+5 VDC)			
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing			
Interrupt Level	INTA - INTD			
Bus Clock	33 MHz (Max.)			
User Slots	2 (Short-size)	4 (Short-size)	2 (Long-size)	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. +5 VDC: 7 A, +3.3 VDC: 3 A, +12 VDC: 1.5 A, -12 VDC: 0.3 A			
AC Input Voltage	100 - 240 VAC			
Overall Maximum Power Supply Capacity	60 W			
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)			
Dimensions (mm)	71.0 (W) x 222.0 (D) x 144.0 (H) (no rubber foot)	112.0 (W) x 222.0 (D) x 144.0 (H) (no rubber foot)	71.0 (W) x 360.0 (D) x 144.0 (H) (no rubber foot)	112.0 (W) x 360.0 (D) x 144.0 (H) (no rubber foot)
Weight of Chassis	1.2 kg	1.5 kg	1.6 kg	2.0 kg
Weight of AC Adapter	0.9 kg			

Note:

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

■ Dimensions

(Unit: mm)



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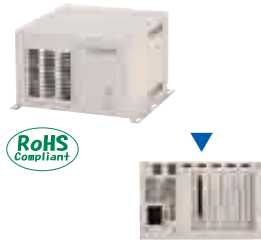
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- Lineup
- PCI Express
- Cable Type
- Expansion Adapter
- Chassis
- Bus Extension Type
- Expansion Adapter
- Chassis
- StarFabric-
- compliant
- Expansion Adapter
- Chassis
- ISA Bus Unit
- Bus Expansion
- Adapter
- Bus Converter
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- Parts of Maintenance
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Expansion Unit / Bus Adapter

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- Image Distribution Unit FlexNetViewer
- Solutions / Services

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



- 4x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5 V/ 32 bit)
- 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



- 7x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5 V/ 32 bit)
- 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



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



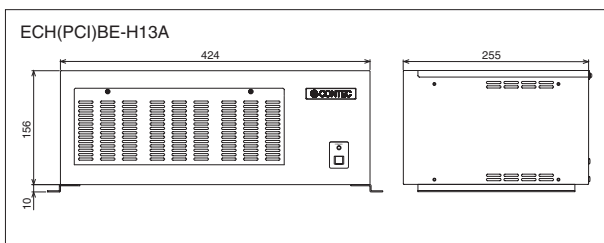
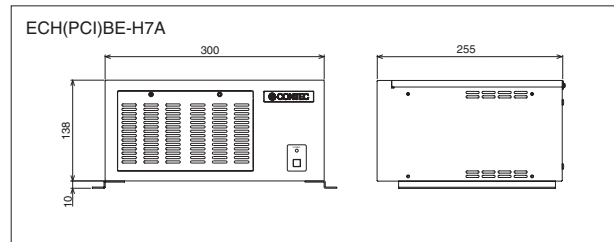
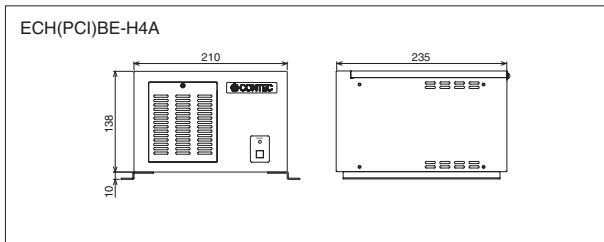
Model	ECH(PCI)BE-H4A	ECH(PCI)BE-H7A *5	ECH(PCI)BE-H13A *5
Bus Type	PCI Local Bus Specification Rev2.3 (+5 VDC)		
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing		
Interrupt Level	INTA - INTD		
Bus Clock	33 MHz (Max.)		
User Slots	4 (Short-size)	7 (Short-size)	13 (Short-size)
Installable Board (mm)	176.5 (L) x 107 (H)		
Power Supply Capacity (Max.)	+5 VDC: 11.3 A, +3.3 VDC: 6 A, +12 VDC: 3 A, -12 VDC: 0.7 A		+5 VDC: 18 A *2, +3.3 VDC: 15 A *2, +12 VDC: 9 A, -12 VDC: 0.8 A
AC Input Voltage	115/230 VAC (switch selectable)		
Overall Maximum Power Supply Capacity*1	130 W *3		0 - 30°C: 230 W, 30 - 40°C: 205 W, 40 - 50°C: 175 W *4
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)		
Dimensions (mm)	210.0 (W) x 235.0 (D) x 138.0 (H) (no fittings)	300.0 (W) x 138.0 (H) x 255.0 (L) (no fittings)	424.0 (W) x 156.0 (H) x 255.0 (L) (no fittings)
Weight	3.5 kg	5.0 kg	7.5 kg

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

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

■ Dimensions

(Unit: mm)



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

Expansion Unit / Bus Adapter

Bus Extender
PCI bus expansion chassis
(x7 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 (5 V/ 32 bit)
- The chassis power supply can be turned on & off with the host PC power supply.



Bus Extender
PCI bus expansion chassis
(x13 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 (5 V/ 32 bit)
- The chassis power supply can be turned on & off with the host PC power supply.



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Industrial PC VPC

BTO PCs Solution-ePC

Analogue I/O

Digital I/O

Counter & Motion Controller

Serial Communications

GPB Communications

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Software

Accessories & Cables

Remote I/O

Wireless LAN FLEXLAN

Image Distribution Unit FlexNetViewer

Solutions / Services

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Lineup

PCI Express Cable Type

Expansion Adapter

Chassis

Bus Extension Type

Expansion Adapter

Chassis

StarFabric-compliant

Expansion Adapter

Chassis

ISA Bus Unit

Bus Expansion Adapter

Bus Converter Adapter

Parts of Maintenance Exchange

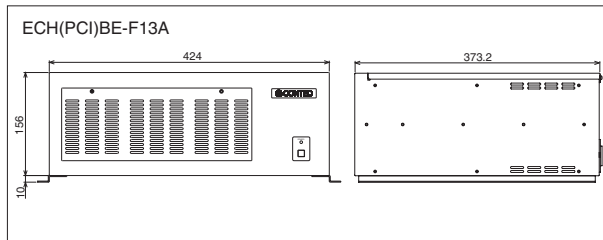
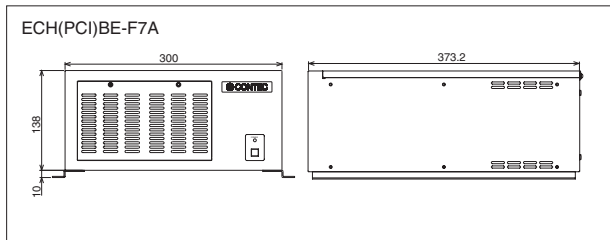
Model	ECH(PCI)BE-F7A *5	ECH(PCI)BE-F13A *5
Bus Type	PCI Local Bus Specification Rev2.3 (+5 VDC)	
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing	
Interrupt Level	INTA - INTD	
Bus Clock	33 MHz (Max.)	
User Slots	7 (Long-size)	13 (Long-size)
Installable Board (mm)	313.8 (L) x 107 (H)	
Power Supply Capacity (Max.)	+5 VDC: 11.3 A, +3.3 VDC: 6 A, +12 VDC: 3 A, -12 VDC: 0.7 A	+5 VDC 18 A *2, +3.3 VDC: 15 A *2, +12 VDC: 9 A, -12 VDC: 0.8 A
AC Input Voltage	115/230 VAC (switch selectable)	
Overall Maximum Power Supply Capacity*1	130 W *3	0 - 30°C: 230W, 30 - 40°C: 205 W, 40 - 50°C: 175 W *4
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)	
Dimensions (mm)	300.0 (W) x 138.0 (H) x 373.2 (L) (no fittings)	424.0 (W) x 156.0 (H) x 373.2 (L) (no fittings)
Weight	6.0 kg	9.0 kg

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

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

Dimensions

(Unit: mm)



Expansion Unit / Bus Adapter

StarFabric-compliant Selecting Optimal Expansion Adaptor and Expansion Chassis

StarFabric-compliant method is optimal when measurement control is performed in a place distant from the PC (up to 12 m). When using an expansion chassis in close proximity to the host PC, **L-08** select from the bus extension types. CONTEC offers 23 different configurations based on the type of host PC, needed number and lengths of PCI slots.

■ Expansion Adapter



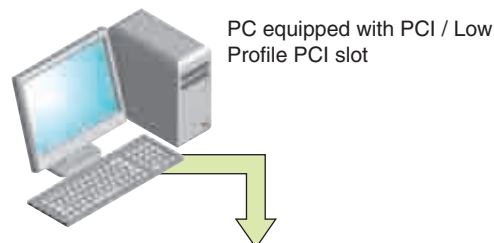
PC equipped with CardBus-compliant card slot

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



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

L-14



PC equipped with PCI / Low Profile PCI slot

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



2 Category 5e STP cables (12 m) are included *
Standard PCI bus brackets are included.

L-14

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



2 Category 5e STP cables (12 m) are included *
Standard PCI bus brackets are included.

L-14

■ Expansion Chassis

Stylish compact black chassis

■ PCI bus expansion chassis (Includes AC adapter)



ECH(PCI)SF-H2B

2 Slots Short Size Includes AC adapter

L-15



ECH(PCI)SF-H4B

4 Slots Short Size Includes AC adapter

L-15



ECH(PCI)SF-F2B

2 Slots Long Size Short Size Includes AC adapter

L-15



ECH(PCI)SF-F4B

4 Slots Long Size Short Size Includes AC adapter

L-15

Solid steel industrial chassis

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



ECH(PCI)SF-H4A

4 Slots Short Size Built-in Power

L-16



ECH(PCI)SF-H7A

7 Slots Short Size Built-in Power

L-16



ECH(PCI)SF-H13A

13 Slots Short Size Built-in Power

L-16



ECH(PCI)SF-F7A

7 Slots Long Size Short Size Built-in Power

L-17



ECH(PCI)SF-F13A

13 Slots Long Size Short Size Built-in Power

L-17

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

* Category 5e (for gigabit Ethernet) twist pair cable can be used. In noisy environment, please use shielded type (STP).

This may not operate properly depending on combinations of expansion adapter/chassis, installation board/PC.

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Expansion Unit / Bus Adapter

PCI Express

Low Profile

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

EAD-SF-LPE

- PCI bus (5 V/32 bit 33 MHz) can be added using one PCI Express slot of the host PC.
- 12 m PCI bus expansion and high-speed serial transfer (2.5 Gbps) are supported.
- PCI-bus compatibility helps users to use PCI 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 slots 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.



RoHS Compliant

PCI

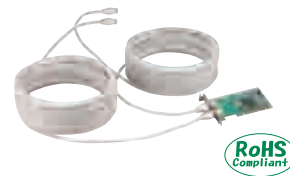
Low Profile



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

EAD(LPCI)SF

- PCI bus (5 V/32 bit 33 MHz) can be added using one PCI slot of the host PC.
- 12 m PCI bus expansion and high-speed serial transfer (2.5 Gbps) are supported.
- PCI-bus compatibility helps users to use PCI add-on 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.



RoHS Compliant

Card Bus



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

EAD(CB)SF

- PCI bus (5 V/32 bit 33 MHz) can be added using CardBus slot of the notebook computer
- 12 m PCI bus expansion and high-speed serial transfer (2.5 Gbps) are supported.
- PCI-bus compatibility helps users to use PCI add-on 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.



RoHS Compliant

Supported OS



● Dedicated device driver must be installed. The device driver of the latest version is available in our website.

Model	EAD-SF-LPE	EAD(LPCI)SF	EAD(CB)SF *2
Bus / Dimensions (mm)	PCI Express Base Specification Rev. 1.0a / 121.69 (L) x 67.90 (H)	PCI Local Bus Specification Rev.2.2 (+5 V/+3.3) / 121.69 (L) x 63.41 (H)	PC Card Standard-compliant CardBus / TYPE II (119.0 x 54.0 x 19.0)
Power Consumption	3.3 VDC 700 mA (Max.)	3.3 VDC 450 mA (JP1 1-2 short) 5 VDC 350 mA (JP1 2-3 short)	3.3 VDC 450 mA (Max.)
Operating Conditions	0 - 50°C, 10 - 90% RH (no condensation)		0 - 50°C, 20 - 90%RH (no condensation)
Attached Cable *1	Category 5e STP cable 12 m x2		

Note:

*1: Category 5e (for gigabit Ethernet) twist pair cable can be used. In any environment where there are a lot of noises, please use a shield type (STP).
*2: This product is not compatible with the expansion chassis [ECH(PCI)SF-F7A, F13A].

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

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StarFabric-compliant PCI bus expansion chassis (x2 Short size slots, AC Adapter) ECH (PCI) SF-H2B



- 2x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5 V/32 bit)
- 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 AC adapter



StarFabric-compliant PCI bus expansion chassis (x2 Long size slots, AC Adapter) ECH (PCI) SF-F2B



- 2x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5 V/32 bit)
- 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.
- Including AC adapter

StarFabric-compliant PCI bus expansion chassis (x4 Short size slots, AC Adapter) ECH (PCI) SF-H4B



- 4x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5 V/32 bit)
- 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 AC adapter



StarFabric-compliant PCI bus expansion chassis (x4 Long size slots, AC Adapter) ECH (PCI) SF-F4B



- 4x PCI expansion slots
- Length accommodates long-size PCI add-on boards (5 V/32 bit)
- 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.
- Including AC adapter

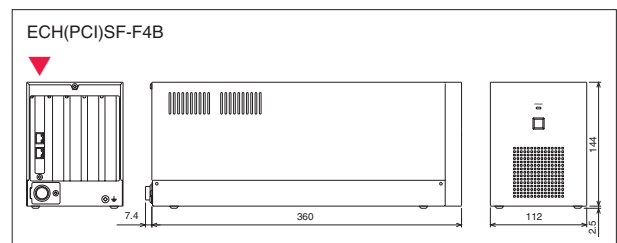
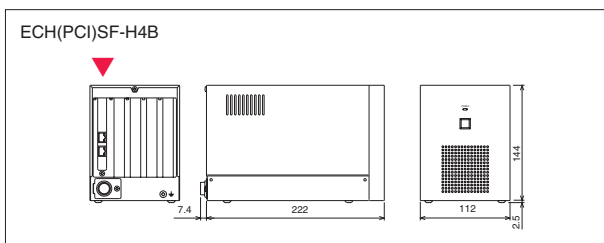
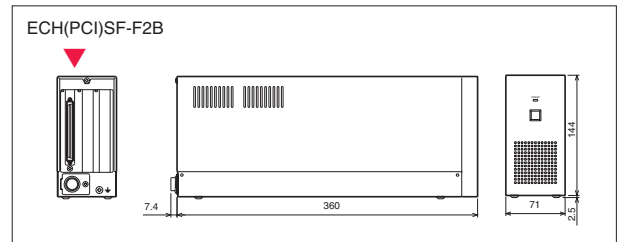
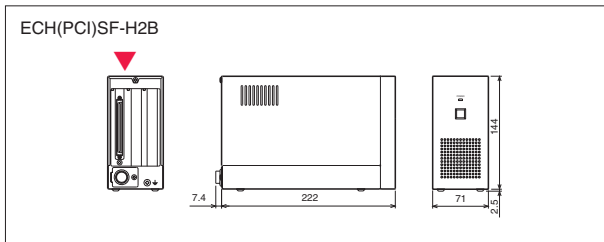


Model	ECH(PCI)SF-H2B	ECH(PCI)SF-H4B	ECH(PCI)SF-F2B	ECH(PCI)SF-F4B
Bus Type	PCI Local Bus Specification Rev2.2 (+5 V)			
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing			
Interrupt Level	INTA - INTD			
Bus Clock	33 MHz (Max.)			
User Slots	2 (Short-size)	4 (Short-size)	2 (Long-size)	4 (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. +5 VDC: 7 A, +3.3 VDC: 3 A, +12 VDC: 1.5 A, -12 VDC: 0.3 A			
AC Input Voltage	100 - 240 VAC			
Overall Maximum Power Supply Capacity	60 W			
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)			
Dimensions (mm)	71.0 (W) x 222.0 (D) x 144.0 (H) (no rubber foot)	112.0 (W) x 222.0 (D) x 144.0 (H) (no rubber foot)	71.0 (W) x 360.0 (D) x 144.0 (H) (no rubber foot)	112.0 (W) x 360.0 (D) x 144.0 (H) (no rubber foot)
Weight of Chassis	1.2 kg	1.5 kg	1.6 kg	2.0 kg
Weight of AC Adapter	0.9 kg			

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

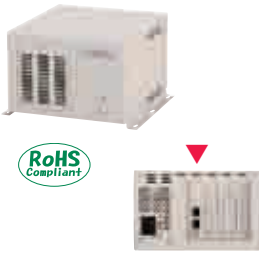
■ Dimensions

(Unit: mm)



Expansion Unit / Bus Adapter

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



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



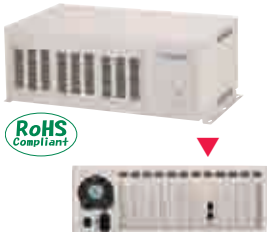
StarFabric-compliant
PCI bus Expansion Chassis
(x7 Short size slots, On board Power)
ECH(PCI)SF-H7A



- 7x PCI expansion slots
- Length accommodates short-size PCI add-on boards (5 V/ 32 bit)
- 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



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



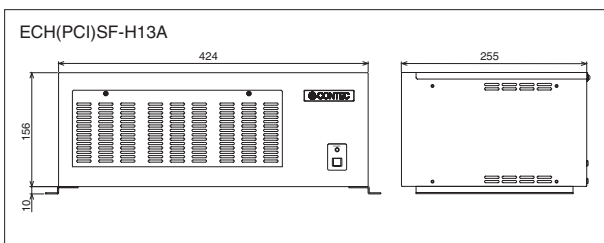
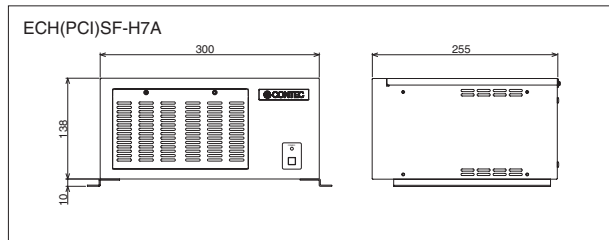
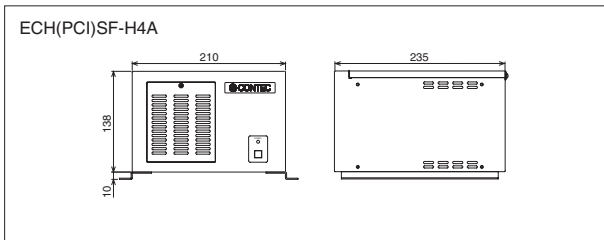
Model	ECH(PCI)SF-H4A	ECH(PCI)SF-H7A *5	ECH(PCI)SF-H13A *5
Bus Type	PCI Local Bus Specification Rev2.2 (+5 V)		
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing		
Interrupt Level	INTA - INTD		
Bus Clock	33 MHz (Max.)		
User Slots	4 (Short-size)	7 (Short-size)	13 (Short-size)
Installable Board (mm)	176.5 (L) x 107 (H)		
Power Supply Capacity (Max.)	+5 VDC: 11.3 A, +3.3 VDC: 6 A, +12 VDC: 3 A, -12 VDC: 0.7 A		+5 VDC: 18 A*2, +3.3 VDC: 15 A*2, +12 VDC: 9 A, -12 VDC: 0.8 A
AC Input Voltage	115/230 VAC (switch selectable)		
Overall Maximum Power Supply Capacity *1	130 W *3		0 - 30°C: 230 W, 30 - 40°C: 205 W, 40 - 50°C: 175 W *4
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)		
Dimensions (mm)	210.0 (W) x 235.0 (D) x 138.0 (H) (no fittings)	300.0 (W) x 138.0 (H) x 255.0 (L) (no fittings)	424.0 (W) x 156.0 (H) x 255.0 (L) (no fittings)
Weight	3.5 kg	5.0 kg	7.5 kg

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

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

Dimensions

(Unit: mm)



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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 (5 V/ 32 bit)
- 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 (5 V/ 32 bit)
- The chassis power supply can be turned on & off with the host PC power supply.



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- Lineup
- PCI Express Cable Type
- Expansion Adapter
- Chassis
- Bus Extension Type
- Expansion Adapter
- Chassis
- StarFabric-compliant
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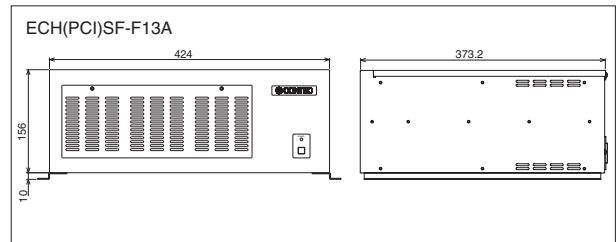
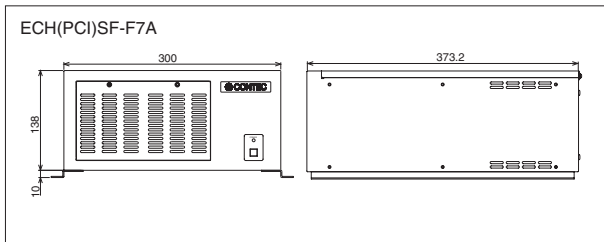
Model	ECH(PCI)SF-F7A *5	ECH(PCI)SF-F13A *5
Bus Type	PCI Local Bus Specification Rev2.2 (+5 V)	
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing	
Interrupt Level	INTA - INTD	
Bus Clock	33 MHz (Max.)	
User Slots	7 (Long-size)	13 (Long-size)
Installable Board (mm)	313.8 (L) x 107 (H)	
Power Supply Capacity (Max.)	+5 VDC: 11.3 A, +3.3 VDC: 6 A, +12 VDC: 3 A, -12 VDC: 0.7 A	+5 VDC: 18 A*, +3.3 VDC: 15 A*, +12 VDC: 9 A, -12VDC: 0.8 A
AC Input Voltage	115/230 VAC (switch selectable)	
Overall Maximum Power Supply Capacity *1	130 W *3	0 - 30°C: 230 W, 30 - 40°C: 205 W, 40 - 50°C: 175 W *4
Operating Conditions	0 - 50°C, 20 - 80 % RH (no condensation)	
Dimensions (mm)	300.0 (W) x 138.0 (H) x 373.2 (L) (no fittings)	424.0 (W) x 156.0 (H) x 373.2 (L) (no fittings)
Weight	6.0 kg	9.0 kg

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

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

■ Dimensions

(Unit: mm)



Expansion Unit / Bus Adapter

Desktop
ISA Bus Unit
(x4 Middle size slots)
FA-PAC(PC)M4D



- 4-slots ISA bus passive backplane. Including an AC adapter
- This can be used as small size ISA bus expansion unit together with an optional bus adapter.
- This can also be used as small size CPU unit together with an ISA bus CPU board

Model	FA-PAC (PC) M4D
User Slots	4 (Middle size) *1
Installable Board (mm)	220 (L) x 122 (H) Max.
Power Supply Capacity	+5 V 8.0 A, -5 V 0.3 A, +12 V 1.5 A, -12 V 1.0 A*2
AC Input Voltage	85 - 250 VAC (50 - 60 Hz)
Input Current	1.5 A
Rack Mount	-
FAN	1 (front)
Drive Bay	-
Weight	4.5 kg

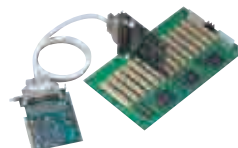
Note: *1: These products can be used for both CPU unit and I/O expansion unit. To use the products as I/O expansion unit, 1 slot is used for I/O bus adapter. I/O bus adapter are purchased separately. *2: Total maximum output electricity is 50 W.

PCI to PCI Bus
Expansion Adapter Set (7 Slot)
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 Adapter Set (13 Slot)
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.

Model	BUF (PCI)	BUF (PCI) 13
Bus Type	32-bit PCI bus Rev2.1 (+5V)	
Address Space	Memory: 32-bit addressing, I/O: 32-bit addressing	
User Slots	7 Slots	13 Slots
Interrupt Level	INTA - INTD	
DMA	-	
Accessible I/O space	-	
Accessible Memory	-	
Bus Clock	33 MHz (Max.)	
Power Consumption	BUS-PC(PCI) (PC side): +5 VDC 700 mA (Max.)/+5 VDC 300 mA (Typ.) BUS-PAC(PCI) (Extension side): +5 VDC 700 mA (Max.)/+5 VDC 500 mA (Typ.)	BUS-PC(PCI) (PC side): +5 VDC 700 mA (Max.)/+5 VDC 300 mA (Typ.) BUS-PAC(PCI) (Extension side): 5 VDC 1500 mA (Max.)/5 VDC 900 mA (Typ.)
Operating Conditions	0 - 50°C, 30 - 90 % RH (no condensation)	
Dimensions (mm)	BUS-PC(PCI) (PC side): 122.0 (L) x 107.0 (H) x 18.5 (D), BUS-PAC(PCI) (Extension side): 122.0 (L) x 107.0 (H) x 18.5 (D), PC-MB8(PCI) (Mother board): 220.0 (L) x 185.0 (H) x 20.0 (D)	BUS-PC(PCI) (PC side): 122.0 (L) x 107.0 (H) x 18.5 (D), BUS-PAC(PCI) (Extension side): 122.0 (L) x 107.0 (H) x 18.5 (D), PC-MB14(PCI) (Mother board): 311.15 (L) x 185.0 (H) x 20.0 (D)
Attached Cable	96-pin shielded cable, 1 m*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 visit our website for details.

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Bus Extension Type

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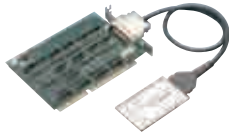
ISA Bus Unit

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Bus Converter
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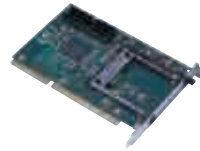
PCMCIA to ISA Bus Bus Converter Adapter BUF-CARD(PC)P



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



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/JEIDA 4.2 or late
- Maximum 2pcs. can be mounted simultaneously on the same system.

Model	BUF-CARD(PC)P *1	PC-CARD(PC)H	
Bus Type	PCMCIA 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: 1.2 A Max.)	
I/O Address	-	2 port (X3E0h, X3E1)	
DMA	Not supported	-	
Bus Clock	-	-	
Data Bus Width	8-bit (16-bit not available)	-	
Accessible I/O space	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	-	
Accessible Memory	Not supported	-	
Interrupt Level	One of IRQ 3, 5, 7, 9 to 12 or 15	-	
Power Consumption	BUS-CARD(PM)P (PC side): +5 VDC 100 mA, BUS-CARD(PC) (Extension side): +5 VDC 500 mA	5 VDC 150 mA (without PC Card)	
Operating Conditions	0 - 50°C, 20 - 90 % RH (no condensation)	Temperature: 0 - 50°C, Humidity: 0 - 90 %RH (no condensation)	
Dimensions (mm)	BUS-CARD(PM)P (PC side): 54.0 (L) x 85.6 (H) x 5.0 (D) BUS-CARD(PC) (Extension side): 160.0 (L) x 122.0 (H) x 18.5 (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, 1 m *2	-	
Bus / Size (mm)	-	ISA / 160 (L) x 107 (H)	

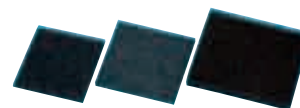
Note: *1: There might be boards that cannot be used in some conditions. Please visit our website for details. *2: Only the Attached cable can be used.

Expansion Unit / Bus Adapter

Parts of Maintenance Exchange

	Model	Chassis
AC power supply	POW300	FA-PAC(PC)F14DRV, FA-PAC(PC)F14DR, FA-UNIT-F6DR, 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 **
	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)SF-H7A, ECH(PC)BE-H13A, 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



about
CONTEC

BOX
Computers
Panel
Computers
Flat Panel
Displays

Options

Industrial PC
VPC

BTO PCs
Solution-ePC

Analog I/O

Digital I/O

Counter & Motion
Controller

Serial
Communications

GPB
Communications

Expansion Unit /
Bus Adapter

Software

Accessories &
Cables

Remote I/O

Wireless LAN
FLEXLAN

Image Distribution Unit
FlexNetViewer

Solutions /
Services

L-20

Lineup

PCI Express
Cable Type

Expansion Adapter

Chassis

Bus Extension Type

Expansion Adapter

Chassis

StarFabric-
compliant

Expansion Adapter

Chassis

ISA Bus Unit

Bus Expansion
Adapter

Bus Converter
Adapter

Parts of Maintenance
Exchange