Basic Knowledge

1. What is an expansion unit?

An expansion unit is used to expand the number of PCI bus slots of a PC or CONTEC industrial computer (IPC Series). It is also useful in situations where the power consumption of add-on board exceeds the power supply capacity of the host PC. An expansion adapter is used to connect the expansion chassis and the PC into one system.
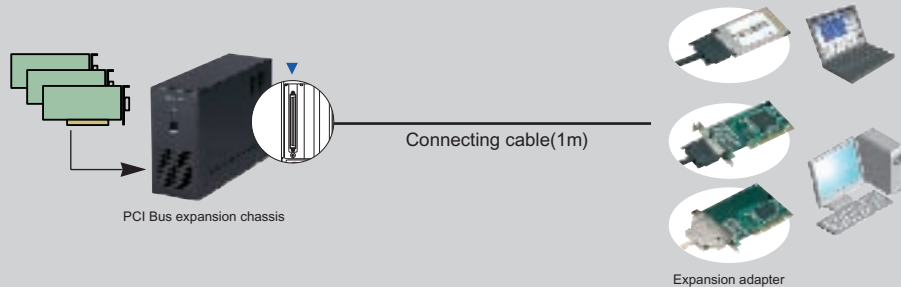
Expansion adapter   +   Expansion chassis   =   Expansion unit

2. Expansion types   The following expansion types are available to meet varying needs.

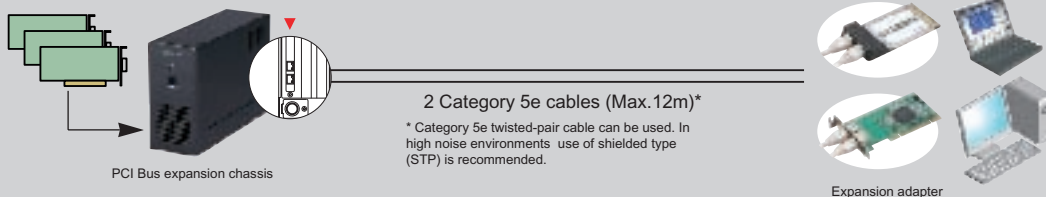#### ■ Standard Bus extension   Please refer to J-04.

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.

Connecting cable(1m)

PCI Bus expansion chassis

Expansion adapter

■ StarFabric-compliant extension   Please refer to J-08.

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.

2 Category 5e cables (Max.12m)*

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

PCI Bus expansion chassis

Expansion adapter

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 compliant 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.

PCI

PCI

H-03

BUS EXPANSION SYSTEM

Product Lineup / Basic Knowledge

Bus Extension Expansion Adapters & Chassis

StarFabric-compliant Expansion Adapter & Chassis

Bus Expansion Adapter & Converter Adapter