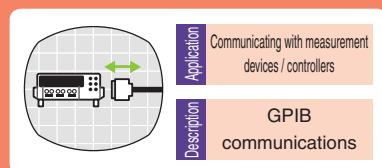


K

GPIB Communications

GPIB COMMUNICATIONS

Provide PCs with GPIB-compliant communication port(s). These can be used as the communication interface for measurement devices equipped with GPIB communication ports as well as various other controllers.



Pictograms

Bus Specifications

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.

USB 2.0

Product is USB standard compliant and can be used in the computer equipped with USB 2.0/1.1 ports. Supports USB 2.0 high-speed mode (480 Mbps).

Board Size

Low Profile

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

Software

Windows Driver

API-TOOL Drivers for Windows are provided.

The license-free driver software (both development and runtime) provides commands to interface boards or cards using Windows standard Win32API function (DLL).

Linux Driver

API-TOOL Drivers for Linux are provided.

The license-free driver software (both development and runtime) provides commands to interface boards or cards using module-style device drivers and the shared library.

ActiveX Component Package

ActiveX Component Package ACX-PAC(W32) is supported.

ACX-PAC(W32) is a program development support tool for Windows. Standard ActiveX Component for Windows (OCX) provides software parts specialized for add-on module control as well as measurement, such as screen displays, analyses and operations, and file operations. A collection of samples (application program) is included, so you can begin computer measurement right away without creating programs.

LabVIEW

Software for LabVIEW is supported.

API-GLV(W32) allows CONTEC's GPIB communication modules to be operated under National Instruments' LabVIEW.

Installation of this software allows program development with LabVIEW and operation of the resultant program, using our GPIB communication devices.

Points

XX byte/sec

Maximum transfer speed

FIFO Memory

You can transmit / receive data using the onboard FIFO memory. Since the communication is controlled by the board, high-speed communication can be achieved regardless of computer CPU speed.

Timer

Built-in application timer provides precise time monitoring in Windows.

Bus Analyzer

Onboard memory allows analysis of the status change of all lines on the GPIB cable. (Max. 64K data reception)

Bus Master

Bus master transfer allows the large volumes of data to be transferred between the computer and board with no additional load on the CPU.

Cable connection

GPIB standard limits the number of cables and cable length.

- (1) Up to 15 devices can be connected to a computer.
- (2) The maximum cable length that can be used to connect a set of devices within one bus system is either "2 m x number of devices" or 20 m, whichever is less (JIS C1901-1987). Cables between each device should be 4 m or less.

Options for GPIB

GPIB cable
PCN-T02 (2 m)

PCN-T04 (4 m)

Double Shielded

UL

The dedicated connection cable is of high electricity resistance and reliability that is compatible with GPIB.



RoHS Compliant

GPIB connector
CN-GP/C

The connector adapter is best to be equipped in high noisy environments such as on a PC Extension Slot or a cable from an adjoining board.

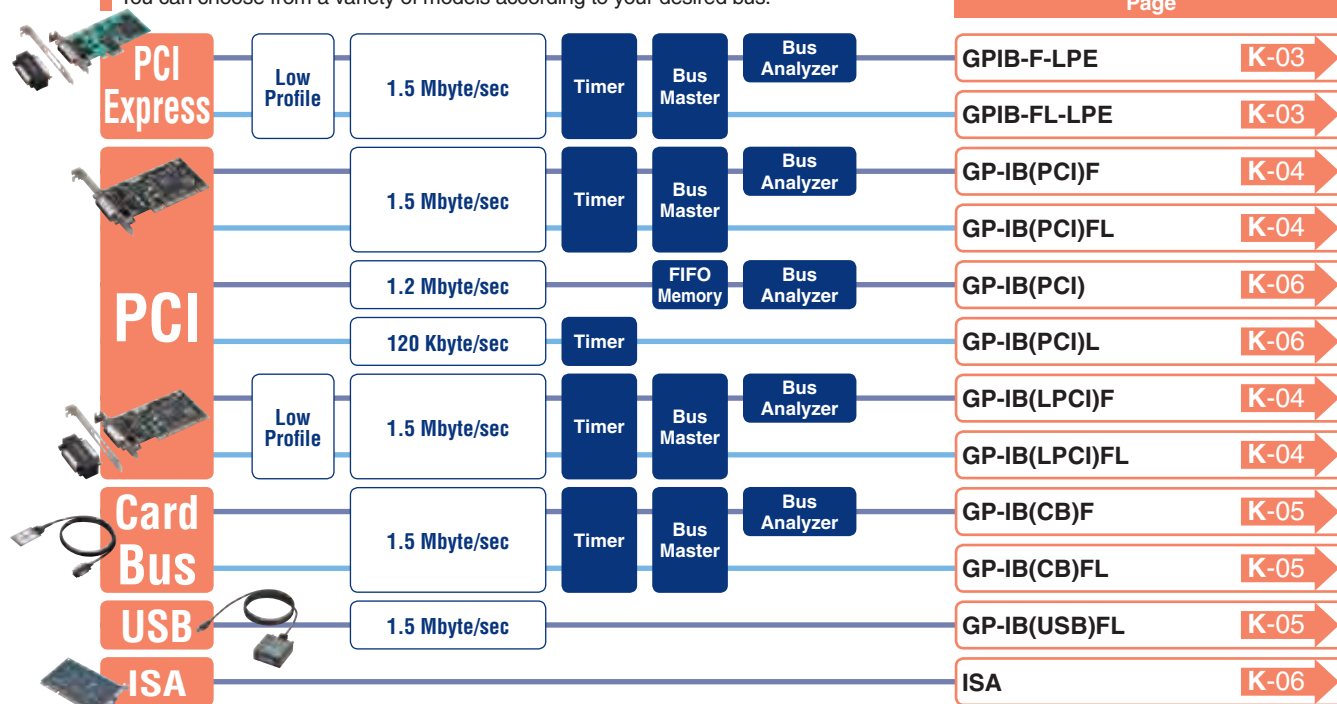


RoHS Compliant

GPIB Communications

Product Lineup

You can choose from a variety of models according to your desired bus.



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Counter & Motion
Controller

Serial
Communications

GPIB
Communications

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Remote I/O

Wireless LAN
FLEXLAN
Image Distribution Unit
FlexNetViewer

Solutions /
Services

Features of GPIB F Series - High-functionality / High speed

CONTEC's new series of GPIB communication boards are IEEE-488.2 compliant and feature bus master high-speed data transmission and GPIB bus analysis. The major features and functions of this series include:

- PCI Express : GPIB-F-LPE, GPIB-FL-LPE
- Compact PCI : GP-IB(CPCI)F
- PCI : GP-IB(LPCI)F, GP-IB(LPCI)FL, GP-IB(PCI)F, GP-IB(PCI)FL
- CardBus : GP-IB(CB)F, GP-IB(CB)FL
- USB : GP-IB(USB)FL

1. 1.5 Mbyte/sec - Maximum transfer speed

CONTEC's GPIB F Series devices can communicate at a maximum transfer speed of 1.5 Mbyte/sec.

2. Bus master transfer [Exclusive of GP-IB(USB)FL]

Bus master transfer allows the large volumes of data to be transferred between the computer and board with no additional load on the CPU.

3. 2 Kbyte FIFO for both transmission and reception

2 Kbyte FIFO is provided for handling transmissions and receptions, furthering high-speed transmission of both small and large size data.

4. GPIB bus analyzer

[Exclusive of GP-IB(PCI/LPCI/CB/USB)FL, GPIB-FL-LPE]

Onboard memory allows analysis of the status change of all lines on the GPIB cable. (Max. 64K data reception) This can be used to confirm the point where the error occurred, or to view data on the line. This function is available through Analyzer utility (Analyzer.exe).



5. High-precision timer [Exclusive of GP-IB(USB)FL]

A high-precision application timer is built-in enabling precise time monitoring under Windows.

6. Reliable, long-term availability

These boards feature a high-speed GPIB controller (compatible with μPD7210 & up) developed by CONTEC assuring reliable long-term availability.

7. Diagnosis program

System configuration support is provided by a diagnosis program. This program can conduct hardware operation checks (interrupt / I/O Address) and basic communication tests (between PC & external devices).

8. Additional Function

Line monitoring

Able to read total control line (IFC, ATN, SRQ, REN, EOI, DAV, NRFD, NDAC) status as well as latch data.

Also capable of reading data line (DIO1 - DIO8) status.

[GP-IB (PCI/LPCI/CB/USB) FL, GPIB-FL-LPE can monitor control line only.]

K-02

Lineup
Accessories & Cables

High-Performance
F series

PCI Express

PCI

PC Card

USB

Standard

PCI

ISA

Media Converter

GPIB Communications High-Performance F series

Please see page M-01 for software.

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Wireless LAN FLEXLAN
Image Distribution Unit FlexNetViewer
Solutions / Services

PCI Express

Low Profile

F
series

1.5
Mbyte/sec

Timer

Bus Master

Windows Driver

Linux Driver

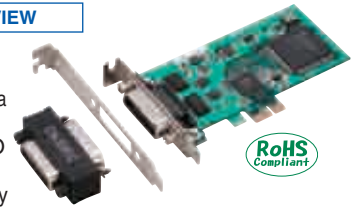
ActiveX Component Package

LabVIEW

Low-Cost High Performance IEEE488.2/GPIB

GPIB-FL-LPE

- Bus Master provides high-speed transfer of bulk data without applying any additional load on the CPU.
 - 2 Kbyte I/O (transmission and reception) FIFO
 - Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability
 - CN-GP/C (GPIB connector adapter) included
 - Low Profile PCI-compliant (includes bracket for use in standard PCI slot)
- 



PCI Express

Low Profile

F
series

1.5
Mbyte/sec

Timer

Bus Analyzer

Bus Master



Windows Driver

Linux Driver

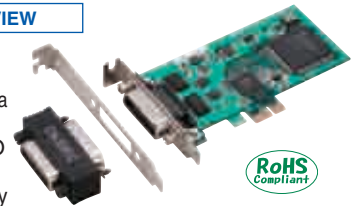
ActiveX Component Package

LabVIEW

High Performance IEEE488.2/GPIB

GPIB-F-LPE

- Bus Master provides high-speed transfer of bulk data without applying any additional load on the CPU.
 - 2 Kbyte I/O (transmission and reception) FIFO
 - GPIB Bus Analyzer function
 - Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability
 - CN-GP/C (GPIB connector adapter) included
 - Low Profile PCI-compliant (includes bracket for use in standard PCI slot)
- 
- 



K-03

Lineup
Accessories & Cables
High-Performance F series
PCI Express
PCI
PC Card
USB
Standard
PCI
ISA
Media Converter

Model	GPIB-FL-LPE	GPIB-F-LPE	
Interface Type	IEEE-488.1, IEEE-488.2		
Number of Channels	1		
Speed	1.5 Mbyte/sec (Max.)		
Data Type	8 parallel lines, 3 handshake lines		
Signal Logic	Negative Logic: <Low Level> 0.8 V or less, <High level> 2.0 V or more		
Interrupts	1		
Guaranteed Operating Voltage	-		
I/O Address	Any of 128-byte boundary		
Wiring Distance* ¹	4 m (Max.)		
Total Cable length* ¹	20 m (Max.)		
Connectable Devices* ¹	15		
Power Consumption (Max.)	3.3 VDC 600 mA		
Bus / Dimensions (mm)	PCI Express Base Specification Rev. 1.0a x1 / 121.69 (L) x 67.90 (H)		
Included Cable length	-		
Connector	24-pin Ribbon Connector, IEEE-488 receptacle		
Options	Software	ACX-PAC(W32)	
	Accessories	CN-GP/C * ²	
	Cables / Connectors	PCN-T02, PCN-T04	

Note: * 1 : For more detailed information, please see page K-01. * 2 : CN-GP/C is standardly included with GPIB-FL-LPE and GPIB-F-LPE.

Attention: Direct I/O access from user applications is not supported. Please use the included Driver library.

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

Please see page M-01 for software.

High-Performance F series **GPIB Communications**

Windows Driver

Linux Driver

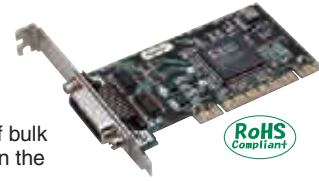
ActiveX Component Package

LabVIEW

Low-Cost High Performance IEEE488.2/GPIB

GP-IB(PCI)FL

- Bus Master provides high-speed transfer of bulk data without applying any additional load on the CPU.
- 2 Kbyte I/O (transmission and reception) FIFO
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability

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Remote I/O

Wireless LAN
FLEXLAN
Image Distribution Unit
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Services

Windows Driver

Linux Driver

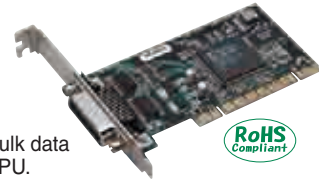
ActiveX Component Package

LabVIEW

High Performance IEEE488.2/GPIB

GP-IB(PCI)F

- Bus Master provides high-speed transfer of bulk data without applying any additional load on the CPU.
- 2 Kbyte I/O (transmission and reception) FIFO
- GPIB Bus Analyzer function
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability



Windows Driver

Linux Driver

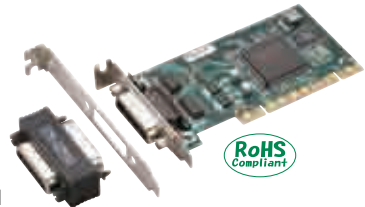
ActiveX Component Package

LabVIEW

Low-Cost High Performance IEEE488.2/GPIB

GP-IB(LPCI)FL

- Bus Master provides high-speed transfer of bulk data without applying any additional load on the CPU.
- 2 Kbyte I/O (transmission and reception) FIFO
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability
- CN-GP/C (GPIB connector adapter) included
- Low Profile PCI-compliant (includes bracket for use in standard PCI slot)



Windows Driver

Linux Driver

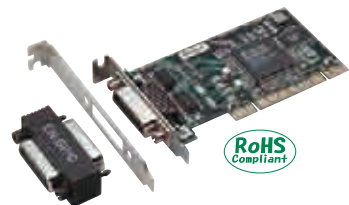
ActiveX Component Package

LabVIEW

High Performance IEEE488.2/GPIB

GP-IB(LPCI)F

- Bus Master provides high-speed transfer of bulk data without applying any additional load on the CPU.
- 2 Kbyte I/O (transmission and reception) FIFO
- GPIB Bus Analyzer function
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability
- CN-GP/C (GPIB connector adapter) included
- Low Profile PCI-compliant (includes bracket for use in standard PCI slot)

**K-04**

Lineup

Accessories & Cables

High-Performance
F series

PCI Express

PCI

PC Card

USB

Standard

PCI

ISA

Media Converter

Model	GP-IB(PCI)FL	GP-IB(PCI)F	GP-IB(LPCI)FL	GP-IB(LPCI)F
Interface Type	IEEE-488.1, IEEE-488.2			
Number of Channels	1			
Speed	1.5 Mbyte/sec (Max.)			
Data Type	8 parallel lines, 3 handshake lines			
Signal Logic	Negative Logic: <Low Level> 0.8 V or less, <High level> 2.0 V or more			
Interrupts	1			
Guaranteed Operating Voltage	-			
I/O Address	Any 128-byte boundary			
Wiring Distance*1	4 m (Max.)			
Total Cable length*1	20 m (Max.)			
Connectable Devices*1	15			
Power Consumption (Max.)	5 VDC 400 mA			
Bus / Dimensions (mm)	PCI (32 bit, 33 MHz, Universal key shapes supported *2) / 121.69 (L) x 63.41 (H)			
Included Cable length	-			
Connector	24-pin Ribbon Connector, IEEE-488 receptacle			
Options	Software	ACX-PAC(W32)		
	Accessories	CN-GP/C *3		
	Cables / Connectors	PCN-T02, PCN-T04		

Note:

* 1 : For more detailed information, please see page K-01. * 2 : +5 V power must be supplied from PCI bus slot.

* 3 : CN-GP/C is standardly included with GP-IB(LPCI)FL and GP-IB(LPCI)F.

Attention: Direct I/O access from user applications is not supported. Please use the included Driver library.

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

GPIB Communications High-Performance F series

Please see page M-01 for software.

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CommunicationsExpansion Unit /
Bus Adapter

Software

Accessories &
Cables

Remote I/O

Wireless LAN
FLEXLANImage Distribution Unit
FlexNetViewerSolutions /
ServicesCard
BusF
series1.5
Mbyte/sec

Timer

Bus
Master

CE

Windows Driver

Linux Driver

ActiveX Component Package

LabVIEW

Connection cable included



Low-Cost High Performance

IEEE488.2/GPIB

GP-IB(CB)FL

- IEEE-488.1 / IEEE-488.2-compliant
- 1.5 Mbyte/sec transmission speed (max)
- Bus Master provides high-speed transfer of bulk data without applying any additional load on the CPU.
- 2 Kbyte I/O (transmission and reception) FIFO
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability

Card
BusF
series1.5
Mbyte/sec

Timer

Bus
AnalyzerBus
Master

CE

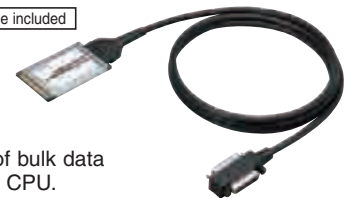
Windows Driver

Linux Driver

ActiveX Component Package

LabVIEW

Connection cable included



High Performance IEEE488.2/GPIB

GP-IB(CB)F

- IEEE-488.1 / IEEE-488.2-compliant
- 1.5 Mbyte/sec transmission speed (max)
- Bus Master provides high-speed transfer of bulk data without applying any additional load on the CPU.
- 2 Kbyte I/O (transmission and reception) FIFO
- GPIB Bus Analyzer function
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability

USB
2.0F
series1.5
Mbyte/sec

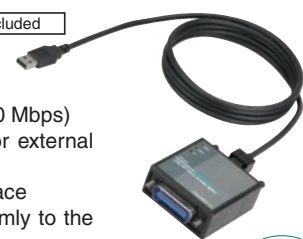
CE

Windows Driver

ActiveX Component Package

LabVIEW

USB cable included



Low-Cost High Performance

IEEE488.2/GPIB

GP-IB(USB)FL

- USB2.0/USB1.1-compliant, high-speed (480 Mbps)
- USB bus-powered to eliminate the need for external power
- Direct GPIB communication via GPIB interface
- USB cable (GPIB side) can be attached firmly to the main unit by using a USB cable attachment.
- LED display enables GPIB communication monitoring. (Listener mode, SRQ)
- SPAS event function in Slave mode

K-05

Lineup
Accessories & CablesHigh-Performance
F Series

PCI Express

PCI

PC Card

USB

Standard

PCI

ISA

Media Converter

Model	GP-IB(CB)FL	GP-IB(CB)F	GP-IB(USB)FL	
Interface Type	IEEE-488.1, IEEE-488.2			
Number of Channels	1			
Speed	1.5 Mbyte/sec (Max.)			
Data Type	8 parallel lines, 3 handshake lines			
Signal Logic	Negative Logic: <Low Level> 0.8 V or less, <High level> 2.0 V or more			
Interrupts	1		-	
Guaranteed Operating Voltage	-			
I/O Address	Any 128-byte boundary		-	
Wiring Distance*1	4 m (Max.)			
Total Cable length*1	20 m (Max.)*2			
Connectable Devices*1	15			
Power Consumption (Max.)	3.3 VDC 400 mA		5 VDC 450 mA	
Bus / Dimensions (mm)	PC Card Standard / TYPE II		USB Specification 1.1 / 2.0 / 62 (W) x 64 (D) x 24 (H)	
Included Cable length	2.0 m		1.8 m	
Connector	24-pin Ribbon Connector, IEEE-488 receptacle		24-pin Ribbon Connector, IEEE-488 plug	
Options	Software	ACX-PAC(W32)		
	Accessories	CN-GP/C		
	Cables / Connectors	PCN-T02, PCN-T04		

Note:

* 1 : For more detailed information, please see page K-01. * 2 : Including cables

Attention: Direct I/O access from user applications is not supported. Please use the included Driver library or the optional software.

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

Please see page M-01 for software.

Standard **GPIB Communications**
**IEEE488.2 / GPIB
GP-IB(PCI)**

- 1 MB I/O FIFO provided to attain 1.2 MB/sec communication rate (max.).
- IEEE-488.1 / IEEE-488.2-compliant
- GPIB Bus Analyzer function can monitor bus line data. [API-PAC(W32) required]
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability

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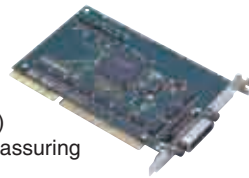
Remote I/O

Wireless LAN
FLEXLANImage Distribution Unit
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Services
**IEEE488.2 / GPIB
GP-IB(PCI)L**

- IEEE-488.1 / IEEE-488.2-compliant
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability
- GPIB control timer enables high-precision time management.
- Monitors GPIB bus line such as IFC (latch function provided), SRQ, and ATN


**IEEE-488.2 / GPIB
GP-IB(PC)L**


- IEEE-488.1/488.2-compliant GPIB communication to attain 400 KB/sec communication rate with DMA (max.)
- Equipped with GPIB controller developed by CONTEC assuring reliable long-term availability
- Timer function for applications to attain high-precision time monitoring in Windows environment
- GPIB bus line reading function enables each processing by the line change from an application (with a latch function).



Realtime OS : INtime supports GP-IB(PCI) and GP-IB(PCI)L. Please see page M-20 for INtime.

K-06Lineup
Accessories & CablesHigh-Performance
F series

PCI Express

PCI

PC Card

USB

Standard

PCI

ISA

Media Converter

Model	GP-IB(PCI)	GP-IB(PCI)L	GP-IB(PC)L
Interface Type	IEEE-488.1, IEEE-488.2		
Number of Channels	1		
Speed	1.2 Mbyte/sec (Max.)	120 Kbyte/sec (Max.)	<DMA mode> 400 Kbyte/sec (Max.)
Data Type	8 parallel lines, 3 handshake lines		
Signal Logic	Negative Logic: <Low Level> 0.8 V or less, <High level> 2.0 V or more		
DMA Channels	-	-	CH1 - CH3 (software selectable)
Controller Chip	-	-	CONTEC original
Interrupts	1	-	1 (software selectable)
Guaranteed Operating Voltage	-		
I/O Address	Any 16-byte boundary	Any 32-byte boundary	-
Wiring Distance*1	4 m (Max.)		
Total Cable length*1	20 m (Max.)		
Connectable Devices*1	15		
Power Consumption (Max.)	5 VDC 970 mA	5 VDC 500 mA	5 VDC 350 mA
Bus / Dimensions (mm)	PCI (32 bit, 33 MHz, 5 V) / 121.69 (L) x 106.68 (H)		ISA AT Bus / 163.0 (L) x 107.0 (H)
Included Cable length	-		
Connector	24-pin Ribbon Connector, IEEE-488 receptacle		
Options	Software	ACX-PAC(W32)	
	Accessories	CN-GP/C	
	Cables / Connectors	PCN-T02, PCN-T04	

Note: * 1 : For more detailed information, please see page K-01.

Attention: Direct I/O access from user applications is not supported. Please use the included Driver library or the optional software. [GP-IB(PCI), GP-IB(PCI)L]
Direct I/O access from user applications is not supported. Please use the software to control this board. [GP-IB(PC)L]