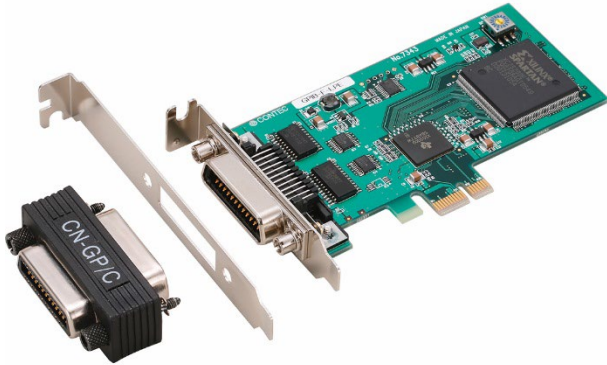## High-performance High-Speed GPIB Communication Board for PCI Express Low Profile
GPIB-F-LPE
High-Speed GPIB Communication Board for PCI Express Low Profile
GPIB-FL-LPE

* Specifications, color and design of the products are subject to change without notice.

This product is a PCI Express bus-compatible interface board with support for bus master operation and which complies with IEEE-488.1 and IEEE-488.2.   This product can be used in a PC to control communications with devices that support the GPIB interface and read GPIB bus line data.

The GPIB-F-LPE can also analyze the signal on the GPIB bus using the built-in memory
(GPIB bus analyzer function).

This product supports a low-profile size slot and, if replaced with the supplied bracket, supports a standard size slot, too.

Windows/LabVIEW device driver is supported with this product.

Model	Bus analyzer function
GPIB-F-LPE	○
GPIB-FL-LPE	None

* The contents in this document are subject to change without notice.
* Visit the CONTEC website to check the latest details in the document.
* The information in the data sheets is as of September, 2024

Features

- **Capable to communicate with GPIB communication which is compatible to IEEE-488.1/488.2 standards at 1.5 M byte/sec maximum**
Capable to communicate with any equipment which is compatible to IEEE-488.1/488.2 standards with transfer rate at 1.5 Mbyte/sec maximum. Capable to set this product to whether a master (controller) or a slave.

- **Supports bus master operation**
The bus master data transfer function enables large quantities of data to be transferred between the board and PC without loading the CPU.

- **Employs a buffer memory, 2 Kbytes for transmission and 2 Kbytes for reception**
Employs a buffer memory, 2 Kbytes dedicated to transmission and 2 Kbytes dedicated to reception, in order to reduce the load to the CPU when transmitting/receiving data.

- **Windows/LabVIEW compatible support software is offered**
The support software offered on the CONTEC website makes it possible to create applications of Windows/LabVIEW.   In addition, supplies a diagnostic program to confirm hardware operation and to perform a basic communication test with connected equipment.

- **Employs a high speed GPIB controller developed by CONTEC and provides steady-supply**
This product employs CONTEC's self-developed high speed GPIB controller (μPD7210 register-compatible), which provides users steady-supply with peace of mind.

- **Built-in GPIB bus analyzer function [only GPIB-F-LPE]**
The board features a bus analyzer function.   This not only allows the signals on the GPIB bus to analyzed, but also permits signal analysis to be performed while this product is performing GPIB communications.

- **Built-in SPAS event function (when slaving)**
In addition to the functions of the earlier GPIB controller (μPD7210), the product also supports the SPAS event generated when a serial poll occurs.   This gives users a high level of flexibility in constructing the system.

- **Support for both of Low Profile and standard size slots**
Support for both of Low Profile and standard size slots (interchangeable with a bundled bracket).

Specifications

Function specification

Item		GPIB-F-LPE	GPIB-FL-LPE
GPIB	The number of channels	1 channel Conforms to IEEE-488.1, 488.2(GPIB)standards	
	Transfer format	8-bit parallel, 3-wire handshake system	
	Transfer rate	1.5Mbyte/sec	
	Data buffer size	2Kbyte send, 2Kbyte receive	
	Signal logic	Negative logic L level : 0.8V or less, H level : 2.0V or more	
	Cable length between devices	4m or less *1	
	Total cable length	20m or less	
	Connectable number of devices	15 devices (Max.)	
	Analyzer buffer size	64K data points (1 data point : Control signals + DIO1 - 8)	-
Bus master section	DMA channels	2 channels	
	Transfer bus width	32-bit	
	Transfer data length	8 PCI Words length (Max.)	
	Transfer rate	80Mbyte/sec	
	Scatter/Gather function	64Mbyte/ch	
Common	I/O address	Any 128-byte boundary	
	Interrupt	1 level use	
	Consumed current	3.3VDC 600mA (Max.)	
	Bus specification	PCI Express Base Specification Rev. 1.0a x1	
	Physical dimensions (mm)	121.69(L) x 67.90(H)	
	Weight	80g	

*1   For details, see "Notes on GPIB cable connection".

Installation Environment Requirements

Item	Specification
Operating ambient temperature	0 - 50℃
Operating ambient humidity	10 - 90%RH (No condensation)
Floating dust particles	Not to be excessive
Corrosive gases	None
Standard	VCCI Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA

Physical Dimensions

121.69(L)

67.90(H)

[mm]
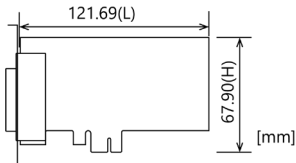
The standard outside dimension (L) is the distance from the end of the card to the outer surface of the slot cover.

Support Software

Name	Contents	How to get
Windows version GPIB Communication Driver API-GPIB(98/PC)	It is the driver software, and which supplies command in the form of standard Win32 API function (DLL). In addition, sample programs such as Visual Basic and Visual C++ are included, and you can verify the operation of hardware by using Diagnostic programs.	Download from the CONTEC website
Windows version LabVIEW GPIB Communication Drive API-GPLV(W32)	API-GPLV(W32) is a driver created according to the National Instruments Corporation's GPIB function style. The driver is software to control the CONTEC GPIB board using a LabVIEW-based GPIB system or existing application program.	Download from the CONTEC website

Download the files accordingly from the following URL.

https://www.contec.com/download/

Optional Products

Product Name	Model type	Description
GPIB cable	PCN-T02	2m
	PCN-T04	4m
GPIB connector adapter	CN-GP/C *1	*2

*1   The GPIB connector adapter [CN-GP/C] is bundled with this product as a standard feature.

*2   Effective if this product interferes with the main unit of the target device when plugging this product into the device.

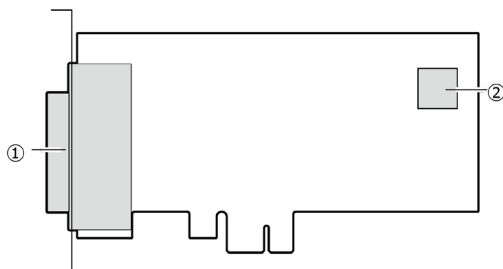Visit the CONTEC website for the latest optional products.

Included Items

Product...1
Please read the following...1
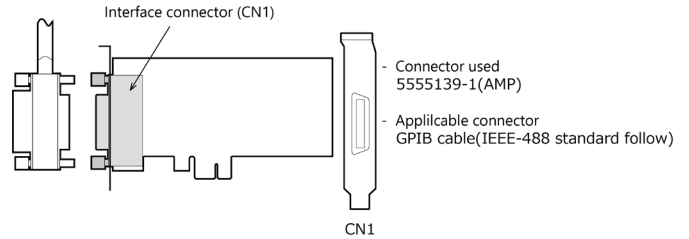GPIB connector adapter [CN-GP/C]...1
Standard-sized bracket...1
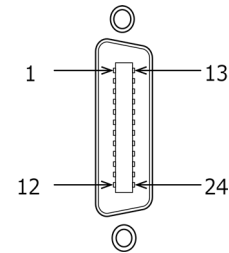
Nomenclature of Product Components

No.	Name
1	Interface Connector
2	Board ID Setting Switch

Connecting an Interface Connector

Interface connector (CN1)

- Connector used 5555139-1(AMP)
- Applilcable connector GPIB cable(IEEE-488 standard follow)

CN1

Layout on the Interface Connector(CN1)

1   13
12   24

Compatible connector (cable): GPIB cable (IEEE-488 standard follow)

Pin number	Signal name	Pin number	Signal name
1	DIO1 Data bus	13	DIO5 Data bus
2	DIO2 Data bus	14	DIO6 Data bus
3	DIO3 Data bus	15	DIO7 Data bus
4	DIO4 Data bus	16	DIO8 Data bus
5	EOI (End or Identify)	17	REN (Remote Enable)
6	DAV (Data Valid)	18	GND (Grand)
7	NRFD (Not Ready for Data)	19	GND (Grand)
8	NDAC (Not Data Accepted)	20	GND (Grand)
9	IFC (Interface Clear)	21	GND (Grand)
10	SRQ (Service Request)	22	GND (Grand)
11	ATN (Attention)	23	GND (Grand)
12	GND (Shield)	24	Logic GND