

RS-232C Isolated Serial I/O Board for PCI Express 4ch **COM-4PC-PE**



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

Features

Max. 921,600bps RS-232C Serial Communication

The COM ports of this product support up to 921,600 bps. COM-4PC-PE has four RS-232C-standard serial ports.

Possibly used as Windows, Linux-standard COM ports

Combining the product with our device driver COM-DRV makes it possible to use the product in the same manner as the COM ports of a PC.

This product supports communication using DCB structures in the Win32 API and Linux-standard system calls.

In addition, supplies a diagnostic program to confirm hardware operation and to perform a communication test with equipment.

Isolation between channels and between PCs, surge protection for all signal lines

The channels are electrically isolated from each other and from the PC.

As isolation is provided between channels as well as isolation of the bus, this prevents electrical noise between channels as well as between the PC and external circuits. As surge protection is provided on all signal lines, you can safely use the boards in environments where you are concerned about surges causing incorrect operation or damage to the PC.

Up to 16 boards can be installed

Up to 16 boards of the same model can be mounted on a single PC.

Each channel is equipped with separate 128-byte FIFO buffers for transmit and receive

Equipped with a buffer memory for transmitting 128 bytes and receiving 128 bytes for each channel. These are FIFO format, useful for high speed communications and to reduce the load to the CPU when transmitting/receiving.

The control line for RS-232C can be controlled and monitored by software

The control lines for RTS, CTS, DTR and DSR can be controlled and monitored using software.

This product is a PCI Express bus-supported board designed for extending RS-232C compatible serial communication functionality on your PC.

COM-4PC-PE has four RS-232C communication ports.

Higher noise-resistant models with isolation between channels and between PC and bus line as well as a surge protection circuit for communication ports.

With a 128byte built-in FIFO buffer for transmission and reception of each channel, the product supports a baud rate of up to 921,600bps.

Windows/Linux device driver is supported with this product.

- * 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 April, 2024

Specifications

Function specification

Item	Specifications
Number of channels	4 channels
Interface type	RS-232C
Isolation	Channel Isolation/Bus Isolation
Isolation voltage	Channel Isolation: 500VDC, Bus Isolation: 1000VDC
Transfer method	Asynchronous serial transfer
Baud rate	2 - 921,600bps *1 *2
Data length	5, 6, 7, 8 bits 1, 1.5, 2 stop bits *1
Parity check	Even, Odd, Non-parity *1
Controller chip	162850 or equivalent (Each channel has 128-byte receive and 128-byte transmit FIFO buffers.)
Connecting distance	15m(Typ.)
Interrupt requests	1 level use *3
I/O address	Any 32-byte boundary
Power consumption	3.3VDC 1600mA (Max.)
PCI Bus specification	PCI Express Base Specification Rev. 1.0a x 1
Dimension (mm)	169.33(L) x 110.18(H)
Weight	120g

*1 These items can be set by software.
In our device driver COM-DRV(WDM) the range is 15 - 921,600 bps.

*2 Data transmission at high speed may not be performed normally depending on the environment including the type of status of connected material of cable and environment.

*3 The interrupt signals from individual channels are arranged into a single interrupt signal and connected to the PCI Express bus.

Installation Environment Requirements

Item	Specifications
Operating ambient temperature	0 - 50°C
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

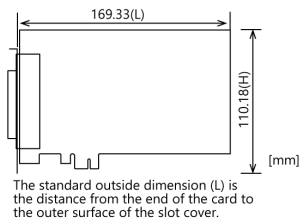
Physical Dimensions

Name	Contents	How to get
Windows Version Serial communication driver COM-DRV(WDM)	Software that makes it possible to use the product in the same manner as the COM ports of a PC running Windows. This software supports communication using DCB structures in the standard OS Win32 API, and the SerialPort class in the .NET Framework and the pySerial module in Python. Various sample programs such as C# and Visual Basic, .NET, Visual C++, Python etc. and diagnostic program useful for checking operation is provided.	Download from the CONTEC website *1
Linux Version Serial communication driver COM-DRV(LNX)	Software that makes it possible to use the product in the same manner as the COM ports of a PC running Linux. This software conforms to Linux-standard tty drivers, and the pySerial module in Python. The software includes various sample programs such as gcc (C, C++) and Python programs.	Download from the CONTEC website *1

*1 Download the files from the following URL.

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

Physical Dimensions



Included Items

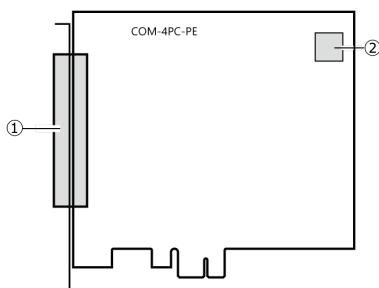
Product [COM-4PC-PE] ... 1
Please read the following ... 1

Optional Products

Product Name	Model type	Description
Connection Conversion Cable for Serial I/O (37P→9P×4)	PCE37/9PS	
Connection Conversion Cable for RS-232C (37P→25P×4)	PCE37/25PS	

Visit the CONTEC website for the latest optional products.

Component Name



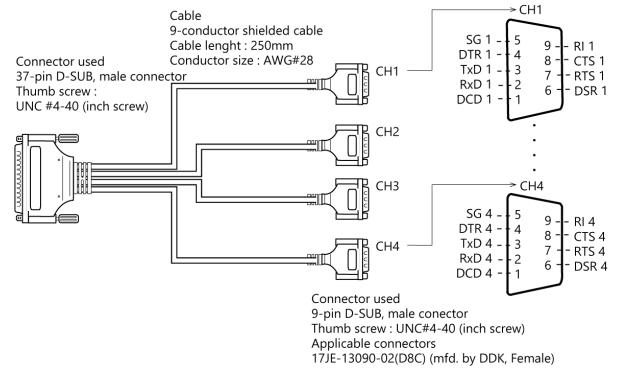
No.	Name
1	Interface Connector (CN1)
2	Board ID Setting Switch (SW1)

Connecting to an External Device

Using the 9-pin D-SUB Connector Conversion Cables

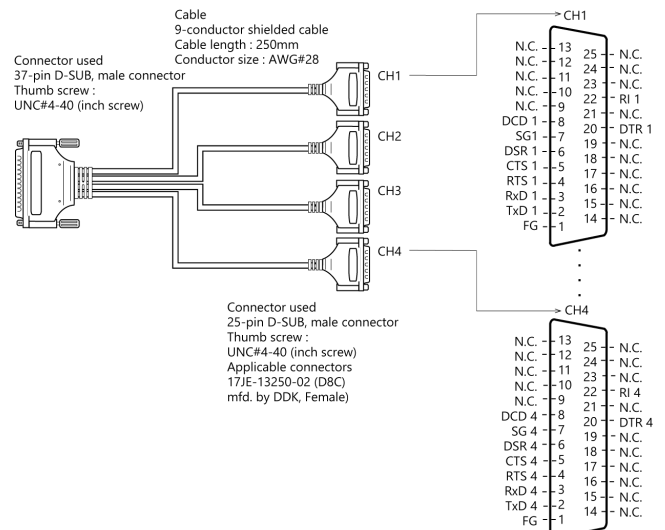
Use a PCE37/9PS connection conversion cable (purchased separately) to connect to external devices after dividing into four 9-pin D-SUB male connector channels.

Use separately purchased 9-pin D-SUB or equivalent cables to connect from the four individual connectors.



Using the 25-pin D-SUB Connector Conversion Cables

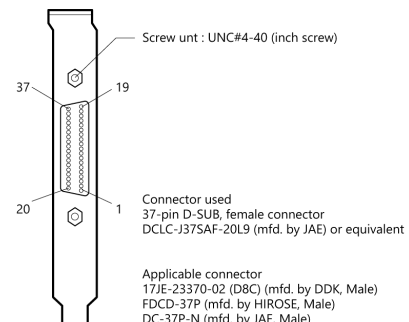
Use a PCE37/25PS connection conversion cable (purchased separately) to connect to external devices after dividing into four 25-pin D-SUB male connector channels.

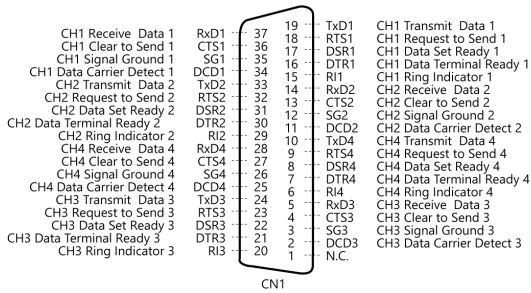


Connecting it directly from the on-board connector

If connecting an external device directly from the connector on the board, make your own cable and connect it.

Pin Assignment

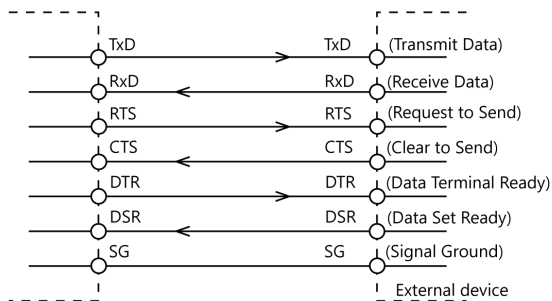




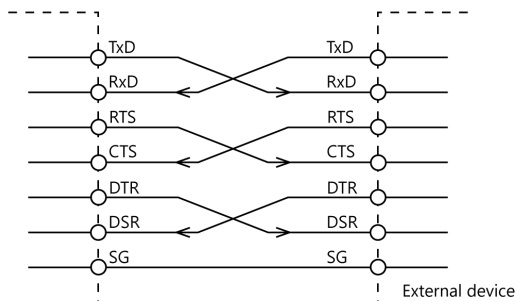
Types of Cable and Example Connections

When using an RS-232C interface, different cables are required depending on the type of device to which you are connecting (computer or modem, etc.). Check the requirements of the external device and select either a straight-through or crossed (null modem) cable as appropriate. If special treatment of the signal lines in the connector is required, ensure that this is done in accordance with the specifications.

Example Connection to a Modem (Straight cable)



Example Connection to a PC (Cross cable)



Example Connection to a Device

