RS-232C 4ch Serial I/O for PCI

COM-4CL-PCI

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

COM-4CL-PCI has four RS-232C communication ports.

With a 64byte built-in FIFO buffer for transmission and reception of each channel, the product supports a baud rate of up to 230,400bps. It also comes, which allows boards to be used as OS-standard COM ports.

Windows/Linux device driver is supported with this product.

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

* 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.

Features

Max. 230,400bps RS-232C Serial Communication

The COM ports of this product support up to 230,400 bps.

COM-4CL-PCI 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.

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 64-byte FIFO buffers for transmit and receive

Equipped with a buffer memory for transmitting 64 bytes and receiving 64 bytes for each channel. These are FIFO format, useful for high speed communications and to reduce the load to the CPU when transmitting/receiving.

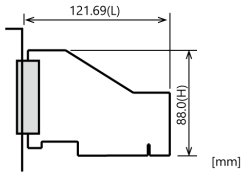
The control line for RS-232C can be controlled and monitored by software

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

Included Items

Product [COM-4CL-PCI] ...1
Distribution cable...1
Please read the following ... 1

Physical Dimensions



The standard outside dimension (L) is the distance from the end of the board to the outer surface of the slot cover.

Specifications

Function specification

Item	Specifications
Number of channels	4ch
Interface type	RS-232C
Transfer method	Asynchronous serial transfer
Baud rate	15 - 230,400bps *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	17154 or equivalent (Each channel has 64-byte receive and 64-byte transmit FIFO buffers.)
Connecting distance	15m(Typ.)
Interrupt requests	1 level use *3
I/O address	Any 2048-byte boundary
Power consumption	5VDC 120mA (Max.)
PCI Bus specification	PCI (32bit, 33MHz *4)
Dimension (mm)	121.69(L) x 88.0(H)
Weight	70g

*1 These items can be set by software.

*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.

*4 This board requires power supply at +5V from an expansion slot (it does not work on a machine with a +3.3V power supply alone).

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

Component Name

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/

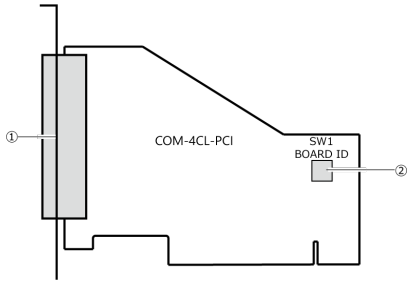
Optional Products

Product Name	Model type	Description
Connection Conversion Cable for Serial I/O (37P→9P×4)	PCE37/9PS	250mm
Connection Conversion Cable for RS-232C (37P→25P×4)	PCE37/25PS	250mm
RS-232C Straight Cable with D-Sub 25p	RSS-25M/F	1.8m
RS-232C Connector Conversion Straight Cable (25F→9M)	RSS-25F/9M	1.8m
COM-4ch Board Optional Cable for CCU-78F/25M	RSS-78M/37M	2m
Connection Conversion Unit for RS-232C (78p→25p×8)	CCU-78F/25M	*1

*1 RSS-78M/37M optional cable is required separately.

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

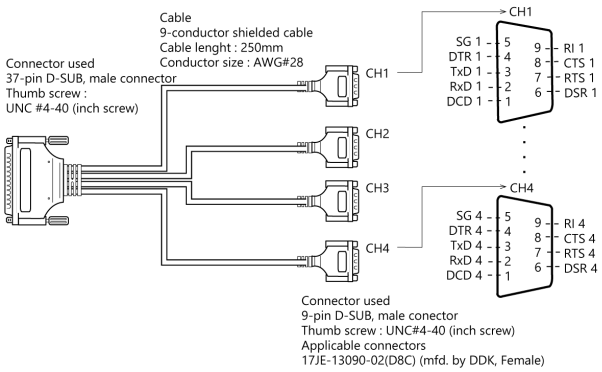
When using a COM-4CL-PCI, an alternative to connecting an external device directly to the connector

on the board is to use a connection conversion cable or connection conversion unit.

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.



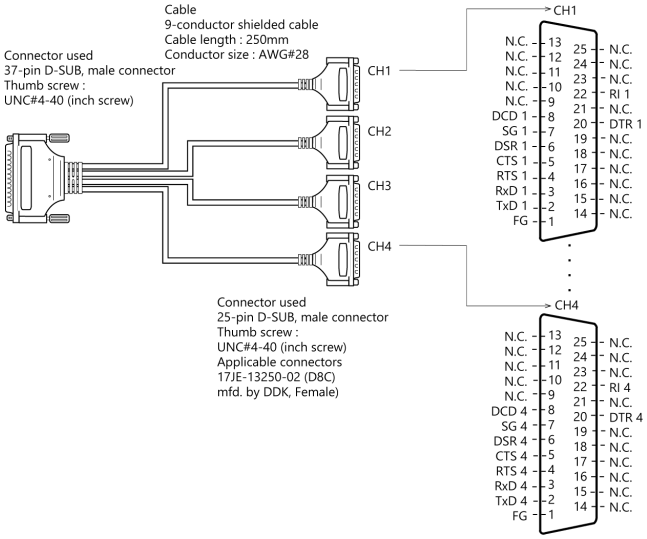
Connection conversion cable (Option)

Connection Conversion Cable for Serial I/O (37P→9P×4, 250mm) PCE37/9PS

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.

Use separately purchased 25-pin D-SUB or equivalent cables to connect from the four individual connectors.



Connection conversion cable (Option)

Connection Conversion Cable for RS-232C (37P→25P×4, 250mm) PCE37/25PS

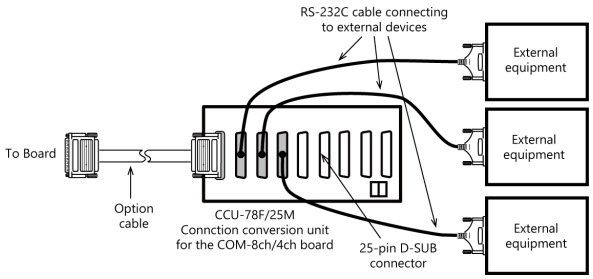
Using the 25-pin D-SUB Connector Conversion Units

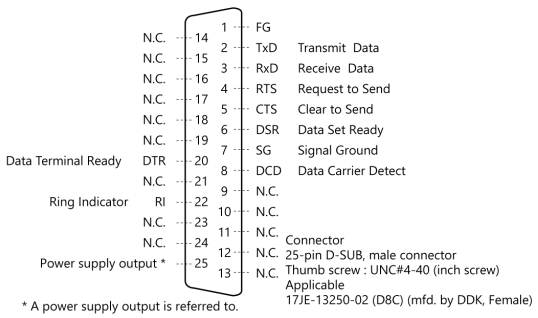
Use a CCU-78F/25M connection conversion unit (purchased separately) to connect to external devices after dividing into four 25-pin D-SUB male connector channels.

This method has the following features.

- The unit can be fitted to a DIN rail using a separately purchased ADP-1 DIN rail adapter.
- The unit can be fitted to a wall or similar using screws.
- By connecting an external power supply, the unit can output a power supply from the 25-pin D-SUB connector.

Use a separately purchased 25-pin D-SUB connector cable to connect from the four individual connectors.





* A power supply output is referred to.

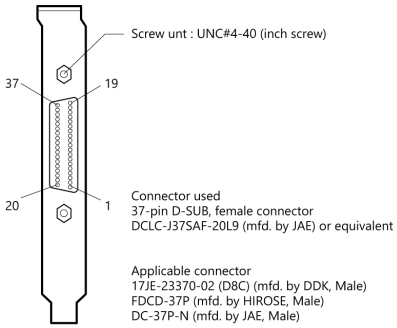
Connection conversion cable & connection conversion unit (Option)

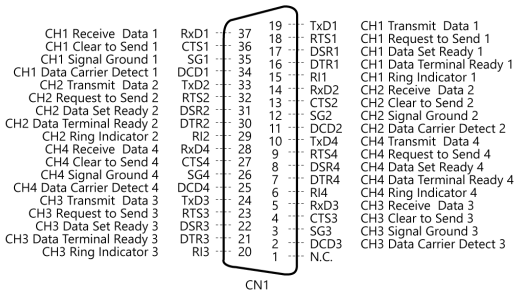
Connection Conversion Unit for RS-232C (78p→25p×8)	CCU-78F/25M
COM-4ch Board Optional Cable for CCU-78F/25M (2m)	RSS-78M/37M

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



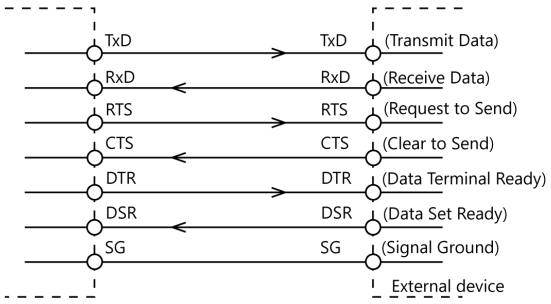


Types of Cable and Example Connections

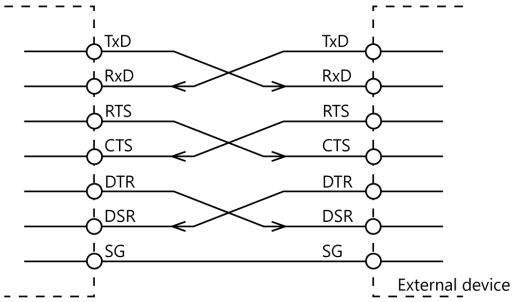
When using an RS-232C interface, different cables are required depending on the type of device to which you are connecting (computer or modem, etc.). Check the requirements of the external device and select either a straight-through or crossed (null modem) cable as appropriate. If special treatment

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