RS-232C 2ch Serial I/O for PCI
COM-2CL-PCI

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

COM-2CL-PCI has two 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.

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

Features

Max. 230,400bps RS-232C Serial Communication
The COM ports of this product support up to 230,400 bps.
COM-2CL-PCI has two 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 product use the same easy-to-use 9-pin D-SUB connectors as are used on a PC
Using the most versatile general-purpose 9-pin D-SUB connector for RS-232C, the product allows you to use commercial cables which support the RS-232C standard.
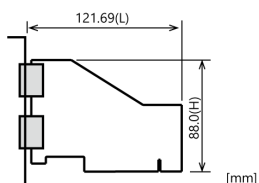
The control line for RS-232C can be controlled and monitored by software
The control lines for RTS, CTS, DTR and DSR can be controlled and monitored using software.

Included Items

Product [COM-2CL-PCI] ...1
Please read the following ... 1

Physical Dimensions

121.69(L)
88.0(H)
[mm]

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	2ch
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	17152 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 1024-byte boundary
Power consumption	5VDC 100mA (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℃
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

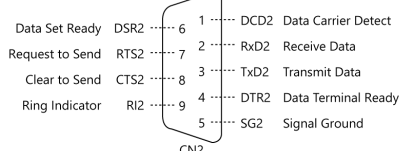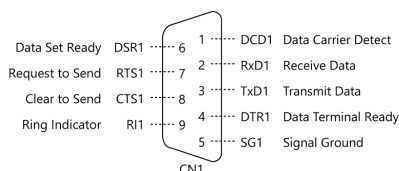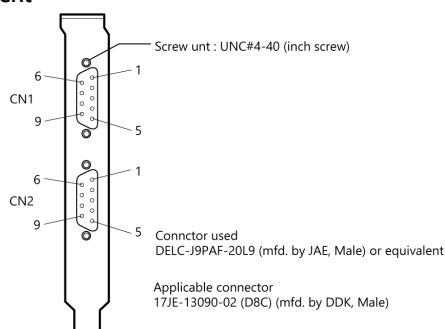| Name	Contents	How to get
Windows Version Serial communication driver COM-DRV(WDM)	Software that makes it possible to use the product in the same manner as the COM ports of a PC running Windows. This software supports communication using DCB structures in the standard OS Win32 API, and the SerialPort 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/

Component Name

COM-2CL-PCI

①

SW1
BOARD ID

②
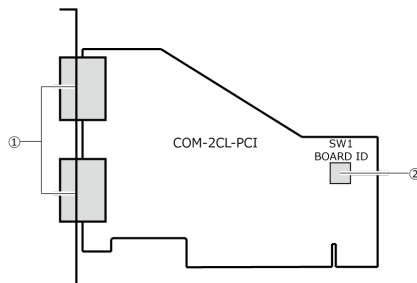
No.	Name
1	Interface Connector (CN1, CN2)
2	Board ID Setting Switch (SW1)

Connecting to an External Device

Connecting directly to the port connector

If connecting an external device directly from the connector on the board, use a cable purchased separately.

Pin Assignment

Screw unt : UNC#4-40 (inch screw)

CN1

CN2

Connctor used
DELC-J9PAF-20L9 (mfd. by JAE, Male) or equivalent

Applicable connector
17JE-13090-02 (D8C) (mfd. by DDK, Male)

Data Set Ready	DSR1	6		
			1	DCD1 Data Carrier Detect
Request to Send	RTS1	7		
			2	RxD1 Receive Data
Clear to Send	CTS1	8		
			3	TxD1 Transmit Data
Ring Indicator	RI1	9		
			4	DTR1 Data Terminal Ready
			5	SG1 Signal Ground

CN1

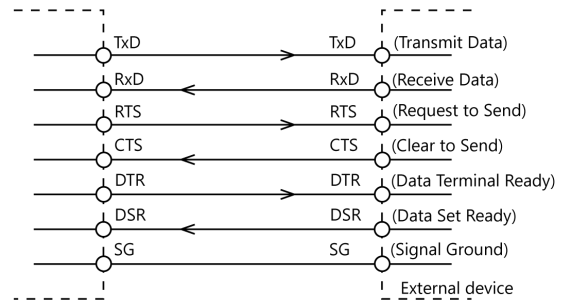|				
Data Set Ready	DSR2	6		
			1	DCD2 Data Carrier Detect
Request to Send	RTS2	7		
			2	RxD2 Receive Data
Clear to Send	CTS2	8		
			3	TxD2 Transmit Data
Ring Indicator	RI2	9		
			4	DTR2 Data Terminal Ready
			5	SG2 Signal Ground

CN2
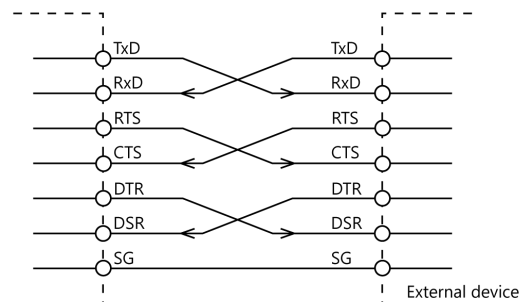
Types of Cable and Example Connections

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)

TxD — TxD (Transmit Data)
RxD ← RxD (Receive Data)
RTS → RTS (Request to Send)
CTS — CTS (Clear to Send)
DTR → DTR (Data Terminal Ready)
DSR ← DSR (Data Set Ready)
SG — SG (Signal Ground)

External device

Example Connection to a PC (Cross cable)

TxD — TxD
RxD — RxD
RTS — RTS
CTS — CTS
DTR — DTR
DSR — DSR
SG — SG

External device

Example Connection to a Device

TxD — TxD
RxD — RxD
RTS — RTS
CTS — CTS
DTR — DTR
DSR — DSR
SG — SG

External device