

RS-232C 4 port
Serial I/O Unit for USB
COM-4CX-USB



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

Features

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

This product has 4 port RS-232C-standard COM ports. Baud rates from 300 to 921,600bps can be set for each port. When data is transferred at the high speed, it may not be transferred normally, depending on the use environment such as the external device and cable length used.

Possibly used as Windows-standard COM ports, using the bundled driver library

Comes with a driver software that allows the boards to be used under Windows in the same way as COM ports on the PC. It supports to use under Windows-standard Win32 API communication function, Visual Basic MSComm or .NET Framework 2.0 SerialPort class.

Each channel is equipped with separate 128-byte / 384-byte FIFO buffers for transmit and receive.

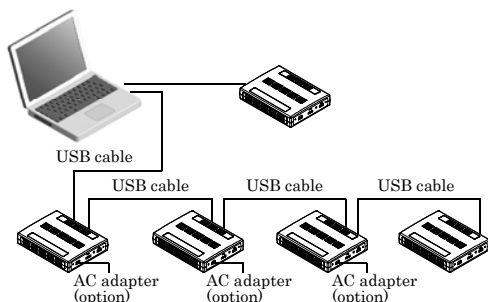
These are FIFO format, useful for high speed communications and to reduce the load to the CPU when transmitting/receiving.

Compatible to USB1.1/USB2.0

Compatible to USB1.1/USB2.0 and capable to achieve high speed transfer at Full Speed (12 Mbps).

USB HUB function

This product has the USB HUB function. Max. 4 COM-4CX-USB can be used in 1 USB port of PC. *1 When you use 4 or more COM-4CX-USB, you can do by connecting COM-4CX-USB to the another USB port of PC side. *2 Also, you can connect the CONTEC's USB device other than COM-4CX-USB to the USB port of COM-4CX-USB. *3*4



- *1 This product cannot be stacked up for installation.
- *2 When you use the USB port included on the COM-4CX-USB, use 5VDC power supply for self-power. For more details on the connection with 5VDC power supply, refer to chapter2 - step3, "Connection with 5VDC Power Supply for Self-power".
- *3 Do not connect the device other than that of CONTEC's USB to the USB port included on the COM-4CX-USB. Otherwise, this may cause a failure or malfunction.
- *4 When connecting multiple units with USB HUB function and set up them, do one at a time and complete setup of the previous unit before starting to do the next unit.

Specification

Item	Specification
I/O	
Number of ports	4 port
Interface type	RS-232C
Transfer method	Asynchronous serial transfer
Baud rate	300 - 921,600bps *1 *2 *7
Data length	7, 8 bits 1, 2 stop bits *1
Parity check	Even, Odd, Non-parity *1
Controller chip	XR21V1414 or equivalent (Mounting the FIFO memory as the common buffer of RS-232C communication and USB. Each channel has 384-byte receive and 128-byte transmit FIFO buffers.)
USB section	
Bus specification	USB Specification 2.0/1.1 standard
USB transfer rate	12Mbps (Full-speed) *3
Power supply	Either self-power or bus-power can be used. *4
Common section	
Number of terminals used at the same time	63 terminals (Max.) *5
Current consumption (Max.)	5VDC 200mA
Operating temperature *6	0 - 50°C, 10 - 90%RH(No condensation)
Connecting distance	15m (Typ.)
Dimension (mm)	180(W) x 140(D) x 34(H) (No protrusions)
Weight	300g (Not including the USB cable, attachment)
Connector	9-pin D-SUB connector, DELC-J9PAF-20L9 [mfd. by JAE, M(male) type] equivalent
Attached cable	USB cable 1.8m

- *1 These items can be set by software. For the "Standard COM Driver Software COM Setup Disk" on the supplied CD-ROM, the range is 300 - 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 This depends on the PC environment used (OS and USB host controller).
- *4 If using a bus-power hub, use self-power for the COM-4CX-USB.
- *5 As a USB hub is also counted as one device, you cannot just connect 63 USB unit.
- *6 To suppress the heating, ensure that there are spaces for ventilation (about 5cm) around this product.
- *7 It becomes 230,400bps or less when using it for three or above simultaneous ports.

Support Software

Standard COM Driver Software COM Setup Disk (Bundled)

Under Windows, this software allows you to use the serial ports on the converter as if they were standard COM ports on the PC. By connecting additional units, you can use COM ports in the range COM1 - COM256. Under Windows, the serial ports can be accessed using the standard Win32 API communication routines (CreateFile(), WriteFile(), ReadFile(), and SetCommState(), etc.) The serial ports are also compatible with the Visual Basic communication control (MSComm). Supports the communication class of .NET Framework 2.0 (SerialPort class).

< Operating environment >

OS Windows 7, Server 2008, Vista, Server 2003, XP

You can download the updated version from the CONTEC's Web site (<http://www.contec.com/downloaddir.html>).

For more details on the supported OS, applicable language and new information, please visit the CONTEC's Web site.

⚠ CAUTION

- The maximum number of COM ports able to be used depends on the configuration of your OS.
- ServicePack 1 or later is necessary to use it by Windows 2008 Server or Windows Vista.
- ServicePack 3 or later is necessary to use it by Windows 2003 Server or Windows XP.
- It is recognized as another COM port when replacing the universal serial bus port and putting on the USB hub and substituting it.
- API-SIO(98/PC) is not used.

Cable & Connector (Option)

RS-232C Straight Cable with D-SUB 9 pin (1.8m) : RSS-9M/F

RS-232C Cross Cable with D-SUB 9 pin (1.8m) : RSC-9F

RS-232C Connection Conversion Straight Cable (25M 9F, 1.8m)
: RSS-25M/9F

RS-232C Connection Conversion Cross Cable (25F 9F, 1.8m)
: RSC-25F/9F

D-SUB 9 pin Male Connector Set (5 Pieces) : CN5-D9M

D-SUB 9 pin Female Connector Set (5 Pieces) : CN5-D9F

Accessories

USB I/O Unit Bracket for X Series : BRK-USB-X

AC adapter (input: 90 - 264VAC, output: 5VDC 2.0A)
: POA200-20-2

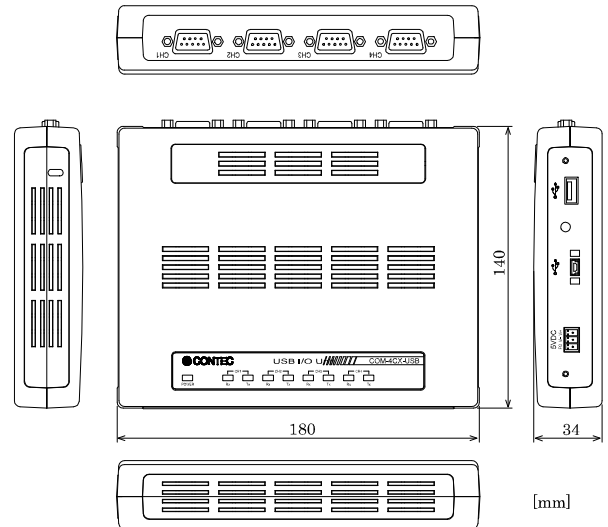
* Check the CONTEC's Web site for more information on these options.

Packing List

- Unit [COM-4CX-USB] ...1
- USB cable (1.8m) ...1
- USB cable attachment on the main unit's side (For Mini B connector side) ...1
- Clamps for prevention of cable on the main unit's side ...1
- CD-ROM *1 [COM Setup Disk] ...1
- Power connector MC1,5/3-ST-3,5 ...1
- First step guide ... 1
- Ferrite core ...1

*1 The CD-ROM contains the driver software and User's Guide.

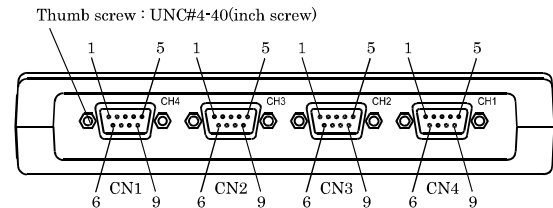
Physical Dimensions



Using the Connectors

Connecting to a Connector

To connect an external device to this product, plug the cable from the device into the interface connector of unit shown below.

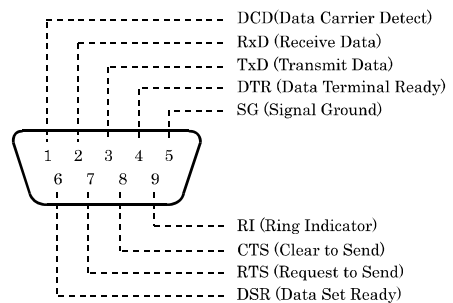


- Connector used
DELIC-J9PAF-20L9E equivalent (mfd. by JAE, Male)

- Applicable connectors
17JE-13090-02(D8C) (mfd. by DDK, Female)
CN5-D9F (mfd. by CONTEC, Female) (Five connector set)

Connector Pin Assignment

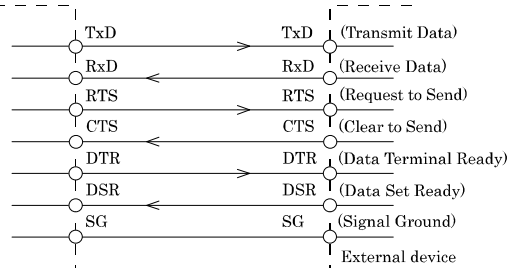
Pin Assignments of COM-4CX-USB Interface Connector



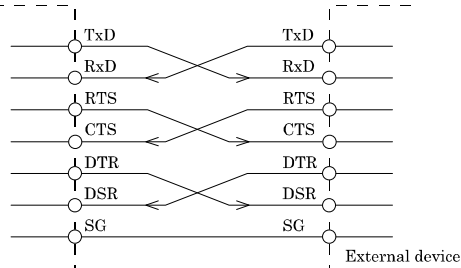
Types of Cable and Example Connections

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.

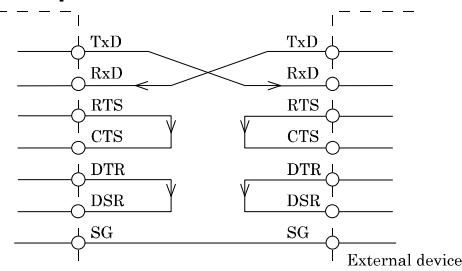
Example Connection to a Modem (Straight cable)



Example Connection to a PC (Cross cable)



Example Connection to a Device

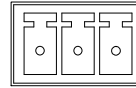


Connection with 5VDC Power Supply for Self-power

If you want to use an external power supply, connect with 5VDC power supply by using +5VDC input pin. Enabling the USB bus power is also possible without using the external power supply. When using the bus power hub, be sure to use the power from the external power supply.

5VDC

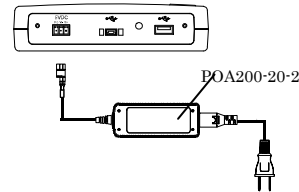
FG Vi- Vi+



Vi+ Power supply (5V)
Vi- Power supply (GND)
FG Frame ground

When using the attached AC adapter [POA200-20-2], please connect directly to the input terminals.

When the accompanying power connector (MC1,5/3-ST-3,5, suitable cable: AWG28 - 16) is used to supply power to this unit, strip the end of the suitable cable and insert it to the power connector before firmly securing it using a screw.



Beside the AC adapter, a power supply for installation on a DIN rail is also available (as an option). Use the appropriate power supply depending on the operating environment and application. When a power supply for installation on a DIN rail is used, connect the unit using the accompanying power connector MC1,5/3-ST-3,5.

⚠ CAUTION

- Connect 5VDC power supply to the main unit. Next, connect the USB cable to the PC. Do not turn it on or off when using. If you remove, USB cable is first and then 5VDC power supply.
- When the USB module is not used, leave the AC adapter unplugged.
- Continuously using the AC adapter heated affects its life.
- Use the AC adapter not in a closed place but in a well-ventilated place not to be heated.
- Do not remove the power connector [MC1,5/3-ST-3,5] attached to the AC adapter.