N Series for USB
RS-232C 4ch Serial I/O Unit
COM-4CN-USB

This product is a USB2.0-compliant product designed for extending four channels of RS-232C compatible serial communication functionality on your PC.

This product supports a baud rate of up to 921,600bps and has separate 128-byte / 384-byte buffer memory for transmit and receive.

It also comes with a Windows driver, which allows products to be used as OS-standard COM ports.

* 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 January, 2023.

* 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 channel RS-232C-standard serial ports. Baud rates from 300 to 921,600bps can be set for each port. When using the bundled "Standard COM Driver Software", baud rates from 300 to 921,600bps can be set. 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 driver library
Comes with a driver software that allows the products to be used under Windows in the same way as COM ports on the PC.
Under Windows, the product supports the OS-standard Win32 API communication function as well as Visual Basic MSComm.

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).

Compact Design
Compact design, 188.0(W) × 78.0(D) × 30.5(H), features flexibility in installation.

Run by USB buspower
Not necessary to power this product externally as the bus power of USB is used.

Diverse installations such as screw fastening, magnet (option), DIN rail are possible
Installation on the floor / wall /ceiling is possible by screw fastening, magnet (option), rubber feet, etc.
In addition, DIN rail mounting mechanism is equipped as standard with the product, making it easy to install the product within the panel or the device.

Specifications

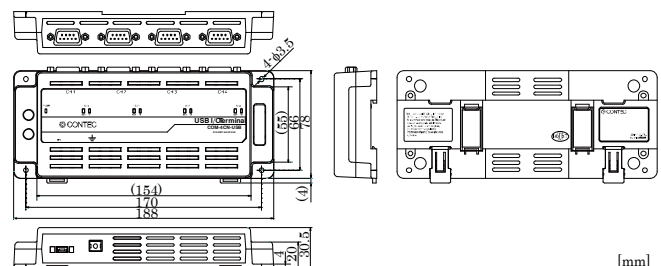| Item		Specifications
I/O		
	Number of channels	4ch
	Interface type	RS-232C
	Transfer method	Asynchronous serial transfer
	Baud rate	300 - 921,600bps *1 *2 *5
	Data length	7, 8 bits 1, 2 stop bits *1
	Parity check	Even, Odd, Non-parity *1
	Controller chip	XR21V1414 or equivalent (Mounting the FIFO memory 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	Bus Power
Common section		
	Current consumption (Max.)	5VDC 105mA
	Operating temperature *4	-20 - 60°C, 10 - 90%RH(No condensation)
	Connecting distance	15m (Typ.)
	Dimension (mm)	188.0(W) x 78.0(D) x 30.5(H) (No protrusions)
	Weight	230g (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
	Standard	VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA

*1 These items can be set by software.
For the "Standard COM Driver Software COM Setup Disk" on the bundled disk, 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 To suppress the heating, ensure that there are spaces for ventilation (about 5cm) around this product.

Physical Dimensions

[mm]

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Included Items

Product [COM-4CN-USB] …1
External toothed lock screw
    (M4 x 5, Use for earth terminal)…1
Rubber feet…4
USB cable (1.8m) …1
USB cable attachment on the main product's side
    (For Mini B connector side) …1
Please read the following … 1

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 products, 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 (SerialPort class).
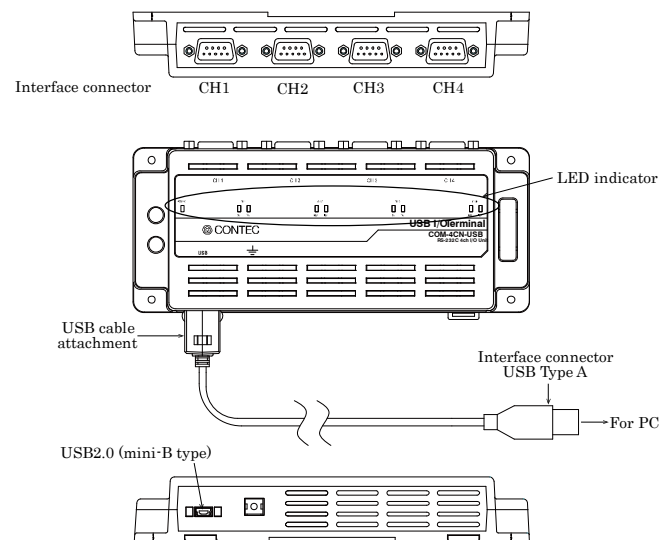
For more details on the supported OS, applicable language and new information, please visit the CONTEC's Web site.
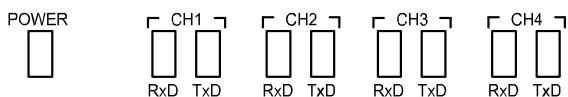
Optional Products

Magnets for installation (For piece Set)   : CPS-MAG01-4

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

Name of each parts

Interface connector   CH1   CH2   CH3   CH4

LED indicator

USB cable attachment

USB2.0 (mini-B type)

Interface connector
USB Type A

→ For PC

LED indecator

POWER   CH1   CH2   CH3   CH4

RxD TxD   RxD TxD   RxD TxD   RxD TxD

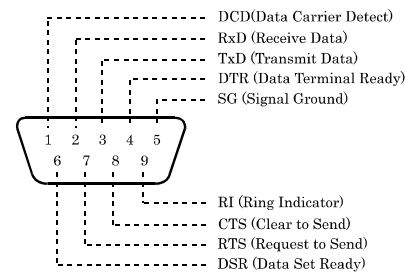| LED	Meaning	Status
POWER (Green)	Power status	OFF: Power has not been supplied. ON: Power has been supplied.
RxD (Yellow)	Reception status	OFF: It indicates receiving data by the RS-232C in standby ON: It indicates receiving data by the RS-232C.
TxD (Green)	Transmission status	OFF: It indicates sending by the RS-232C in standby. ON: It indicates sending data by the RS-232C.

Connection Method

Interface Connector
Use the interface connectors of the product to connect with external devices.

Thumb screw: UNC#4-40(inch screw)

CH4   CH3   CH2   CH1
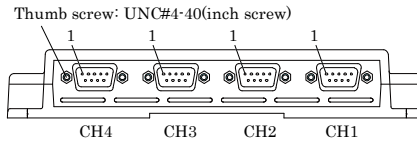
- Connector used
  DELC-J9PAF-20L9E equivalent [mfd. by JAE,Male]
- Applicable connectors
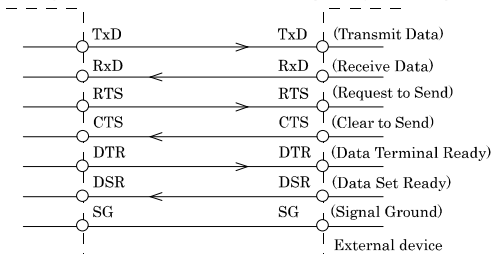 17JE-13090-02(D8C) [mfd. by DDK, Female]

Connector Pin Assignment
Pin Assignments of COM-4CN-USB Interface Connector

DCD(Data Carrier Detect)
RxD (Receive Data)
TxD (Transmit Data)
DTR (Data Terminal Ready)
SG (Signal Ground)

1 2 3 4 5
6 7 8 9

RI (Ring Indicator)
CTS (Clear to Send)
RTS (Request to Send)
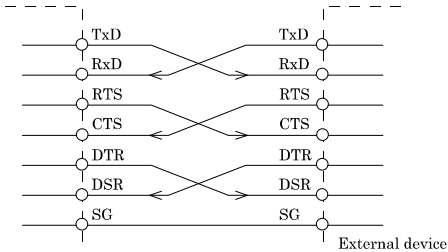DSR (Data Set Ready)

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