

## Isolated RS-232C 1ch Micro Converter for USB2.0

### COM-1P(USB)H



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

This product is an isolated micro converter for converting the USB port of PC into RS-232C serial communications. This product is higher noise-resistant models with isolation between a PC and bus line as well as a surge protection circuit for communication ports.

This product has one channel RS-232C communication port. 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 boards to be used as OS-standard COM ports.

This product supports CONTEC-defined driver library "API-PAC(W32)" that provide local routines.

## Features

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

This product has one channel RS-232C-standard serial ports. Baud rates from 300 to 921,600 bps can be set by software. 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.

### Compatible to USB1.1/USB2.0 and not necessary to power this product externally as the bus power is used.

Compatible to USB1.1/USB2.0 and capable to achieve high speed transfer at Full Speed (12Mbps).  
Not necessary to power this product externally as the bus power of USB is used.

### Possibly used as Windows-standard COM ports, using the bundled 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. 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

Electric isolation is provided between channels and between PCs. This prevents electric noise between PCs and external circuits. As surge protection is provided on all signal lines, you can safely use the products in environments where you are concerned about surges causing incorrect operation or damage to the PC.

### Max. 127 converters can be installed as configured in the range COM1 - COM256.

Using a USB hub allows you to install up to 127 converters to a single PC.  
COM1 - COM256 can be set using the device manager.

### 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. As the device manager can be used to enable/disable the use of FIFO and set the FIFO trigger size, you can build an optimum system according to your use.

### 9-pin D-SUB connector (female type) can be connected directly to a device such as a modem.

Use of a 9-pin D-SUB connector (female type) allows you to connect it to a device such as a modem directly. It can also be connected to the cable of another 9-pin D-SUB connector (female type), if the gender changer is connected. (\*Installed before shipment)

### To suit your application, cables and connectors are available as optional

Straight cables (1.8m), cross cables (1.8m) and 9-pin D-SUB connectors (male or female type) for your own cables are available as optional.

### 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.

## Specification

### Specification

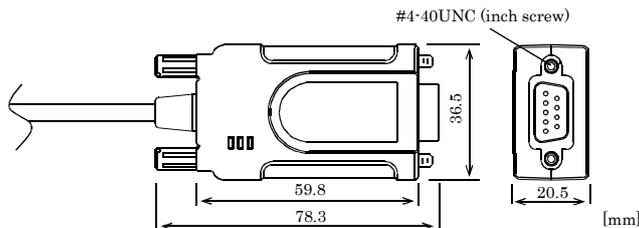
Item	Specification
Number of channels	1 channel
I/O specification	RS-232C
Isolated specification	Bus isolation
Dielectric strength	300VDC
Transfer method	Asynchronous serial transfer
Baud rate	300 - 921,600bps *1*2
Data length	7, 8 bit / 1, 2 stop bit
Parity check	Even, Odd, Non-parity
Loading LSI	FT232BL Mounting the FIFO memory as the common buffer of RS-422A/RS-485 communication and USB. Sending: 128byte / receiving: 384byte (by the view of PC)
Connecting distance	Within 15m
Connector specification	USB side : USB A connector RS-232C side : 9 pin D-SUB connector (female)
Operation guaranteed voltage	5V±5% *3
Power consumption	5VDC 280mA(Max.)
Operating condition	0 - 50°C, 10 - 90%RH(No condensation)
USB bus specification	USB Specification 1.1/2.0 standard
Power supply	Only bus power
USB transmission speed	12Mbps (full speed mode)
Cable length	1.8m
Physical dimension(mm)	78.3(W) x 20.5(D) x 36.5(H) 91.0(W) x 20.5(D) x 36.5(H) (When connecting gender changer)
Weight	130g 140g (When connecting gender changer)

- \*1 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.  
\*2 These items can be set by software.  
\*3 It doesn't correspond to Low-power Bus-powered Function (4.4V operation).

### Gender changer specification

Engagement	9 pin D-SUB male, thumb screw : UNC#4-40 (inch screw threads) x 2
Wiring	Straight over entire length
Physical dimension (mm)	18.0(W) x 12.5(D) x 31.0(H)
Weight	10g

## Physical Dimensions



## 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. You can add additional micro converters up to a maximum of 127 COM ports.

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). \* API-SIO(98/PC) is not used.

< Operating environment >

OS Windows Vista, XP, Server 2003, 2000

## Cable & Connector

### Cable (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 Straight Cable (25F→9M, 1.8m)  
: RSS-25F/9M

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

### Connector (Option)

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

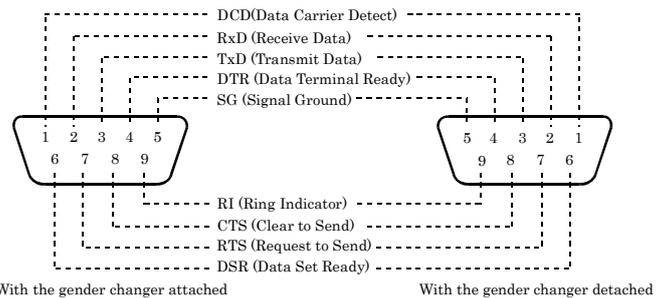
D-SUB 9 pin Female Connector Set (5 Pieces)  
: CN5-D9F

## Packing List

Micro converter [COM-1P(USB)H + gender changer...1] \*1  
First step guide ...1  
COM Setup Disk(CD-ROM \*2) ...1

- \*1 The converter is packed with the gender changer attached.  
\*2 The CD-ROM contains the driver software and User's Guide.

## Interface connectors



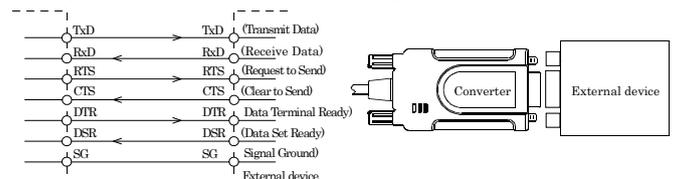
### Directly Connecting the Product

The RS-232C interface of this product uses a 9 pin D-SUB (female) connector.

You can connect the product directly to a device such as a modem if it has a D-SUB 9 pin (male) connector. For connection to such a device, detach the gender changer.

Note, however, that the product cannot cross-connect directly such as COM port on a PC to a device even though the device has a 9 pin D-SUB (male) connector.

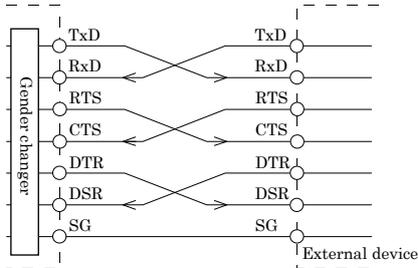
### Example Connection to a Modem (Cableless)



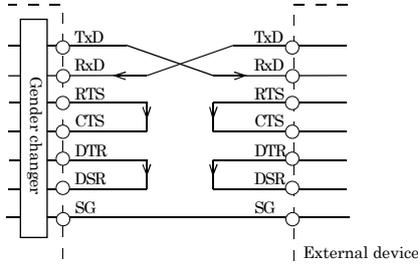
## Connecting the Product with a Cable

Use a cable when you use the gender changer to connect the product to the 9 pin D-SUB (female) RS-232C interface of the external device or when a straight connection cannot be made. The cable to be used may be different depending on the device to connect the product to. Check the specifications of the external device, then prepare the straight type or cross (reverse) type of cable depending on the cable type (specifications). If signal conductors in the connectors require treatment, treat them according to the specifications.

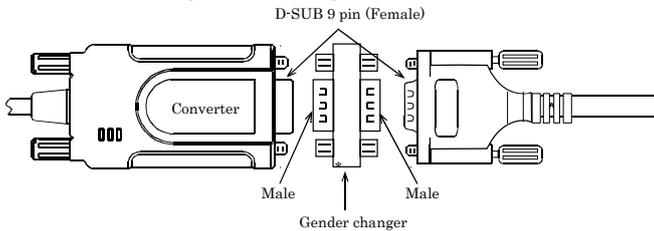
### Example Connection to a PC (gender changer + cross cable)



### Example Connection to a device



### Example use of gender changer



### ⚠ CAUTION

Connection with conductors wired incorrectly can result in failures in the product and external device.

## Gender changer

The interface connector of this product is a 9 pin D-SUB (female) connector.

The product is shipped with the gender changer attached to the interface connector. When connecting the product with a screw-locked (female) cable, leave the gender changer attached to the connector.

When connecting the product to a device having a 9 pin D-SUB (male) connector using a straight cable, remove the gender changer and connect the product directly to the device.