RS-232C Serial I/O Card
for CardBus 4ch

COM-4(CB)H

This product is a CardBus-supported PC Card designed for extending RS-232C compatible serial communication functionality on your PC.
This product has four RS-232C communication ports.
With a 128byte built-in FIFO buffer for transmission and reception of each channel, the product supports a baud rate of up to 921,600bps.
It also comes with a Windows/Linux 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.

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

Features

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

This product has four RS-232C-standard serial ports.
Baud rates from 2 to 921,600bps can be set. When using the bundled "Standard COM Driver Software" and "Driver library API-PAC(W32)", baud rates from 15 to 921,600bps can be set.

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

Comes with a driver software that allows the boards to be used under Windows / Linux 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. Under Linux, OS-standard tty driver's standard-function can be used. In addition, supplies a diagnostic program to confirm hardware operation and to perform a communication test with equipment.

Max. 2 PC Cards can be installed as configured in the range COM1 - COM256.

When the bundled standard COM driver is used, up to two cards can be installed to a single PC.
(For Windows 8, 7, Server 2008, Vista, XP, Server 2003 and 2000)
COM1 - COM256 can be set using the device manager.

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

Employed a buffer memory 128-byte dedicated to transmission and 128-byte for each channel.
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.

The boards 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.

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.

Driver library API-PAC(W32) is supported.

API-PAC(W32) is library software based on Win32 API routines (DLL), which provides local routines specific to CONTEC.
You can create high-speed application software taking advantage of the CONTEC hardware using various programming languages that support Win32 API functions, such as Visual Basic and Visual C++.

Specification

Item	Specification
Number of channels	4ch
I/O specification	RS-232C
Transfer method	Asynchronous serial transfer
Baud rate	2 - 921,600bps *1 *2
Data length	5, 6, 7, 8 bits 1, 1.5, 2 stop bits *1
Parity check	Even, Odd, Non-parity *1
Loading LSI	162850 or equivalent (Each channel has 128-byte receive and 128-byte transmit FIFO buffers.)
Connecting distance	15m(Typ.)
Interrupt requests	One channel used *3
I/O address	32 port boundary
Power consumption	3.3VDC 200mA (Max.)
Operating condition	0 - 50°C, 10 - 90%RH(No condensation)
Length of supplied cable	250mm
Card slot specifications	PC Card Standard CardBus
Card size	TYPE II
Weight	30g(150g including cable)

*1   These items can be set by software.
     Baud rate is 15 - 921,600bps in "Standard COM driver software COM Setup Disk" or "driver library API-SIO within API-PAC(W32)" of the bundled CD-ROM.
*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 all channels are connected as a single interrupt signal on the CardBus.

Support Software

Standard COM Driver Software COM Setup Disk (Bundled)

The purpose of this software is to allow the CONTEC serial communication boards (cards) to be used under Windows or Linux in the same way as the standard COM ports on the PC. By installing additional boards (cards), you can use COM ports in the range COM1 - COM256.
The boards can be used for all types of serial communications such as for remote access service (RAS) and uninterruptible power supply (UPS) applications.
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).
Under Linux, the serial ports are compatible with the operating system's standard tty driver. The standard routines including open( ), close( ), read( ), write( ) are supported.

< Operating environment >
OS   Windows 8, 7, Vista, XP, NT, Me, 98, Linux etc.

You can download the updated version from the CONTEC's Web site (http://www.contec.com/comdrv/). For more details on the supported OS, applicable language and new information, please visit the CONTEC's Web site.

⚠ CAUTION
   You can use up to two CardBus products   (for Windows 8, 7, Server 2008, Vista, XP, Server 2003 and 2000).

Driver Library API-PAC(W32) (Available for downloading (free of charge) from the CONTEC web site.)

API-PAC(W32) is the library software that provides the commands for CONTEC hardware products in the form of Windows standard Win32 API functions (DLL). It makes it easy to create high-speed application software taking advantage of the CONTEC hardware using various programming languages that support Win32 API functions, such as Visual Basic and Visual C++.
It can also be used by the installed diagnosis program to check hardware operations.
For more details and how to download API-PAC(W32), visit http://www.contec.co.jp/apipac/.

< Operating environment >
OS   Windows 7, Vista, XP, Server 2003 etc.
Adaptation language Visual C++ .NET, Visual C# .NET, Visual Basic .NET, Visual C++, Visual Basic, Delphi, C++Builder, etc..

⚠ CAUTION
   This library provides local routines that are specific to CONTEC (SioOpen( ), SioWrite( ), SioRead( ), SioStatus( ), etc.). These are not compatible with the standard Win32 API communication routines (CreateFile( ) and WriteFile( ), etc.).
   You can use up to one CardBus products.

Cable & Connector

Cable(Option)

RS-232C Straight Cable with D-SUB9P (1.8m) : RSS-9M/F
RS-232C Cross Cable with D-SUB9P (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

Connector (Option)

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

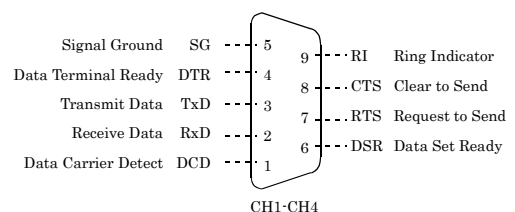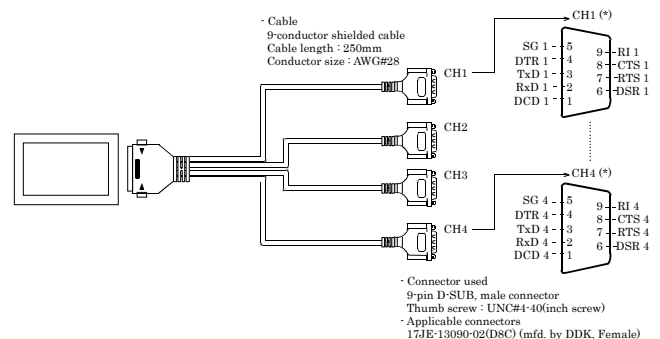*   Check the CONTEC's Web site for more information on these options.

Packing List

- PC Card [COM-4(CB)H] …1
- Connection Cable [PCE32/9P4S] …1
- PC Card attachment(CARD-AT1) …1set
- First step guide …1
- COM Setup Disk(CD-ROM *1) …1

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

Cable & Connector

Use the interface connectors on the connection cable to connect to the external devices.

Interface connector

· Cable
9·conductor shielded cable
Cable length : 250mm
Conductor size : AWG#28

· Connector used
9-pin D-SUB, male connector
Thumb screw : UNC#4-40(inch screw)
· Applicable connectors
17JE-13090-02(D8C) (mfd. by DDK, Female)

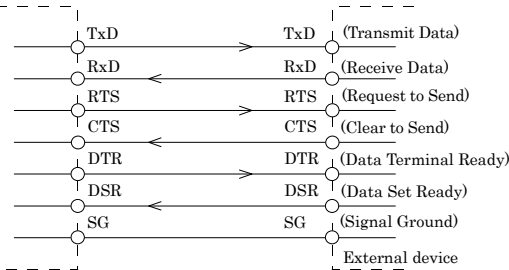|			
Signal Ground	SG	5	
		9	RI Ring Indicator
Data Terminal Ready	DTR	4	
		8	CTS Clear to Send
Transmit Data	TxD	3	
		7	RTS Request to Send
Receive Data	RxD	2	
		6	DSR Data Set Ready
Data Carrier Detect	DCD	1	

CH1-CH4

Cable (Option)

RS-232C Straight Cable with D-SUB9P (1.8m) : RSS-9M/F

RS-232C Cross Cable with D-SUB9P (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)
                                         : RSC-25F/9F

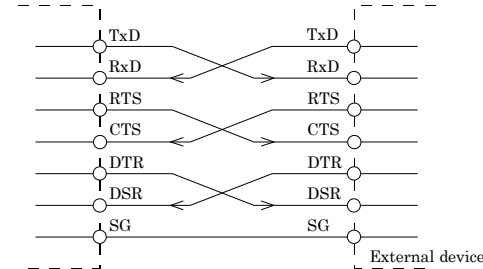D-SUB9P Female Connector Set (5 Pieces)   : CN5-D9F

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