

RS-232C 8ch Serial I/O Board  
for PCI Express Low Profile Size

**COM-8C-LPE**



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

**Features**

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

The < COM-8C-LPE > has eight 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. 16 boards can be installed as configured in the range COM1 - COM256.**

Up to 16 boards can be mounted on a single PC. 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.

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

The < COM-8C-LPE > has eight 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.

**Support for Low Profile size slot / standard size slot (bundled with bracket)**

Bundled with each bracket for Low Profile size slot / standard size slot. Exchanges it for the standard size bracket when mounting on the standard size slot.

**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++.

**Packing List**

- Board [COM-8C-LPE] ... 1
- First step guide ... 1
- CD-ROM \*1 [COM Setup Disk] ... 1
- Standard size bracket ... 1

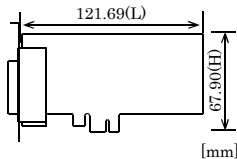
\*1 The CD-ROM contains the driver software and User's Guide.

## Specification

Item	Specification
Number of channels	8ch
Interface type	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
Controller chip	162850or equivalent (Each channel has 128-byte receive and 128-byte transmit FIFO buffers.)
Connecting distance	15m(Typ.)
Interrupt requests	1 level use *3
I/O address	Any 32-byte boundary
Power consumption (Max.)	3.3VDC 350mA
Operating condition	0 to 50°C, 10 to 90%RH (No condensation)
Bus specification	PCI Express Base Specification Rev. 1.0a x 1
Dimension (mm)	121.69(L)×67.90(H)
Interface connector	68 pin 0.8mm pitch connector HDRA-E68LFD+ [HONDA TSUSHIN KOGYO CO., LTD.] or equivalent to it
Weight	60g

- \*1 These items can be set by software.  
For the "Driver Library API-PAC(W32)" and the "Standard COM Driver Software COM Setup Disk" on the supplied CD-ROM, the range is 15 - 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 The interrupt signals from all channels are connected as a single interrupt signal on the PCI Express bus.

## Board Dimensions



The standard outside dimension (L) is the distance from the end of the board to the outer surface of the slot cover.

## 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 8.1, 8, 7, Vista 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

The maximum number of COM ports able to be used depends on the configuration of your OS.  
This product is not supported Windows Me, 98, 95, NT. COM-8C-LPE does not support the Windows OS before Windows Vista.

### 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/C++.

It can also be used by the installed diagnosis program to check hardware operations.

CONTEC provides download services (at <http://www.contec.com/>) to supply the updated drivers and differential files.

For details, visit the CONTEC's Web site.

### < 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.).

## Optional Cables and Connectors

### Cable (Option)

Connection Conversion Cable for Serial I/O  
(64M→9M x 8, 1000mm)

: PCE68-9PS

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

## External Connection

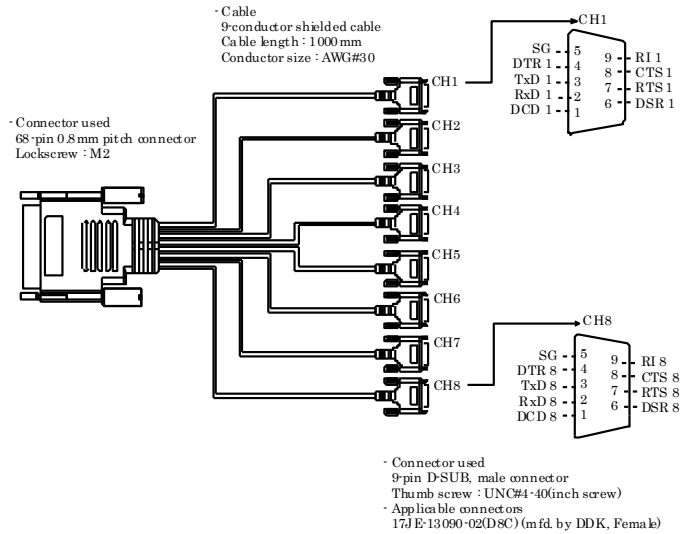
In addition to connecting directly to the connector on the board, you can also connect external devices via a distribution cable.

Connecting directly to the port connector.  
Using a distribution cable

### Using the 9-pin D-SUB Connector Conversion Cables

Use a PCE68-9PS connection conversion cable (purchased separately) to connect to external devices after dividing into eight 9-pin D-SUB male connector channels.  
Use cable suitable for use with 9-pin D-SUB connectors (the commercial product) with the eight divided connectors.

#### < Specification of PCE68-9PS >



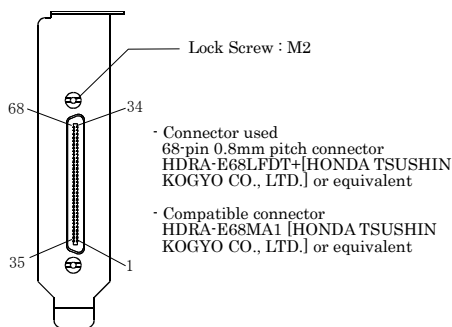
#### < Connection conversion cable (Option) >

Connection Conversion Cable (68M→9M x 8, 1000mm)  
: PCE68-9PS

### Connecting it directly from the on-board connector

If connecting an external device directly from the connector on the board, use the equivalent connector for creating your own cables.

#### < Pin Assignment >

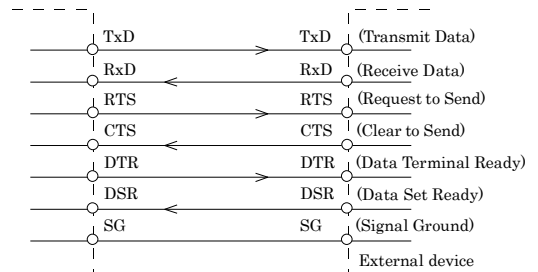


Pin No.	Signal name	Pin No.	Signal name	Pin No.	Signal name
68	RxD2	46	DTR6	23	DTR3
67	CTS2	45	DSR6	22	DCD3
66	RI2	44	TxD6	21	RTS3
65	RTS2	43	GND	20	RI3
64	DCD2	42	TxD8	19	CTS3
63	DTR2	41	DSR8	18	RxD3
62	DSR2	40	DTR8	17	RxD5
61	TxD2	39	DCD8	16	CTS5
60	GND	38	RTS8	15	RI5
59	TxD4	37	RI8	14	RTS5
58	DSR4	36	CTS8	13	DCD5
57	DTR4	35	RxD8	12	DTR5
56	DCD4	34	RxD1	11	DSR5
55	RTS4	33	CTS1	10	TxD5
54	RI4	32	RI1	9	GND
53	CTS4	31	RTS1	8	TxD7
52	RxD4	30	DCD1	7	DSR7
51	RxD6	29	DTR1	6	DTR7
50	CTS6	28	DSR1	5	DCD7
49	RI6	27	TxD1	4	RTS7
48	RTS6	26	GND	3	RI7
47	DCD6	25	TxD3	2	CTS7
		24	DSR3	1	RxD7

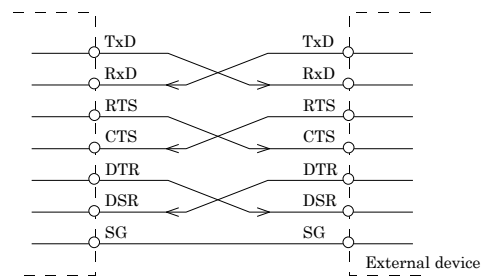
## Types of Cable and Example Connections

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

