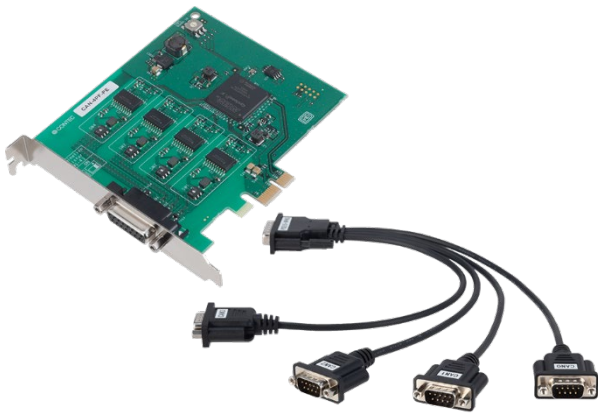


Isolated 4ch CAN FD Bus Controller Board
for PCI Express
CAN-4PF-PE



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

Features

CAN communication function

This product can extend 4-channel CAN communication functionality to the PC.

CAN-4PF-PE is compliant with CAN2.0B communication and CAN FD communication, supporting communication speeds of up to 5Mbps.

Each channel is controlled by an individual CAN controller, allowing each channel to communicate independently of the status of other channels.

Individuals transmit/receive buffer for each channel

This product is equipped with a transmitting FIFO buffer that can store up to 64 messages for each channel individually, and a transmitting FIFO buffer that can store up to 93 messages as a shared buffer for all channels.

Additionally, this product is equipped with a receiving FIFO buffer that can store up to 64 messages for each channel individually, and a receiving FIFO buffer that can store up to 170 messages as a shared buffer for all channels.

Therefore, even if the load on the CAN communication bus increases, it is possible to prevent messages from being missed.

Isolates each channel and between computers, and protects signal lines from surges

This product is electrical isolation between each channel and between the PC.

It can prevent electrical noise between the computer and external circuits and prevent interference between channels.

In addition, each signal line is surge protected, so it has excellent noise resistance.

Terminating resistor and distribution cable included

The terminating resistor of each channel can be enabled/disabled using the switch on the board.

Additionally, a distribution cable that converts CAN communication to a standard 9-pin D-SUB connector is included, making it easy to connect to existing CAN communication networks and CAN communication devices.

Provide device drivers compatible with Windows/Linux

Windows/Linux applications can be created by using the device driver API-TOOL provided on our website.

This product is a PCI Express bus-compliant interface board that extends CAN communication functionality to the PC.

CAN-4PF-PE is compliant with CAN2.0B communication and CAN FD communication, supporting communication speeds of up to 5Mbps.

This product is equipped with 4 channels of CAN communication ports on a single board, and each channel and the PC are electrically isolated.

Windows/Linux driver is supported with this product.

- * 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, 2025.

Specifications

Function specification

Item	Specification
Communication method	CAN2.0B, CAN FD
Communication speed	CAN2.0B : 1Mbps (Max) CAN FD : 5Mbps (Max) ^{*1}
Number of channels	4
CAN transceiver	ISOW1044 (T.I) or equivalent (ISO11898-2 (2016) compliant)
Recessive output voltage	2.0V - 3.0V for both CAN H and CAN L (TYP. : 2.5V)
Dominant output voltage	CAN H : 2.75V - 4.5V, CAN L : 0.5V - 2.25V
Transmission FIFO buffer	64 messages/ch
Shared transmission FIFO buffer	93 messages
Reception FIFO buffer	64 messages/ch
Shared reception FIFO buffer	170 messages
Terminating resistor	120Ω (enabled/disabled using the switch per channel)
Isolated specification	Channel-to-channel isolation, bus isolation
Isolated voltage	Between channels : 300VDC, Between bus : 1kVDC
Power consumption	3.3VDC 800mA(Max)
Bus specification	PCI Express Base Specification Rev.2.0 x1
Memory address	256Mbyte occupies 2 locations
Dimension(mm)	121.69(L) x 110.18(H)
Weight	70g
Connector	15-pin D-SUB female connector DALC-J15SAF-23L9E (JAE) or equivalent ^{*2}

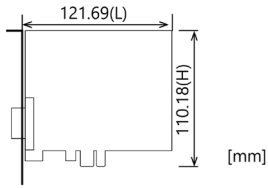
*1 Data transmission at high speed may not be performed normally depending on the environment including the type of status of connected cable and environment.

*2 Converts to 9-pin D-SUB male connectors for 4 channels using the included cable.

Installation Environment Requirements

Item	Specifications
Operating ambient temperature	0 - +50°C
Operating ambient humidity	10 - 90%RH (No condensation)
Floating dust particles	Not to be excessive
Corrosive gases	None
Standard	VCCI Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA

Physical Dimensions



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

Support Software

Name	Contents	How to get
Windows Version CAN Communication Driver software API-CAN(WDM)	The Windows device driver is provided as a form of Windows API functions. Various sample programs such as C# and Visual Basic .NET, Visual C++ etc. and diagnostic program useful for checking operation is provided.	Download from the CONTEC website
Linux Version CAN Communication Driver software API-CAN(LNX)	This is the Linux device driver, which is provided as a shared library. The software includes various sample programs such as gcc (C, C++) and Python programs, as well as a configuration tool to configure the device settings.	

Download the files from the following URL
<https://www.contec.com/download/>

Included Items

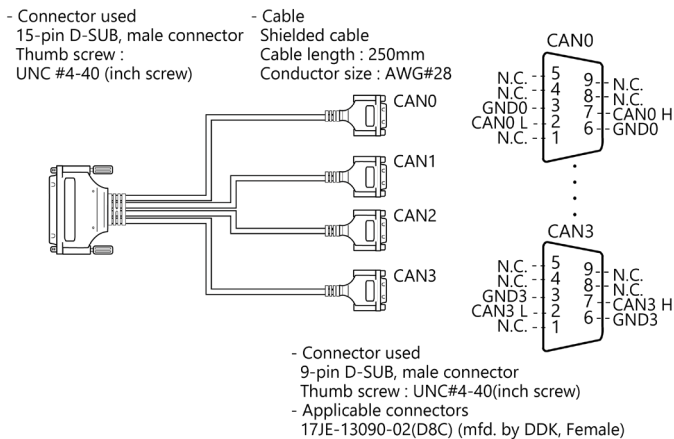
- Product ...1
- Please read the following...1
- Distribution cable...1

Connecting to an External Device

Use the included distribution cable to connect this product to external devices.

In addition, in CAN communication, the signal voltages of CAN L and CAN H are defined with GND as a reference.

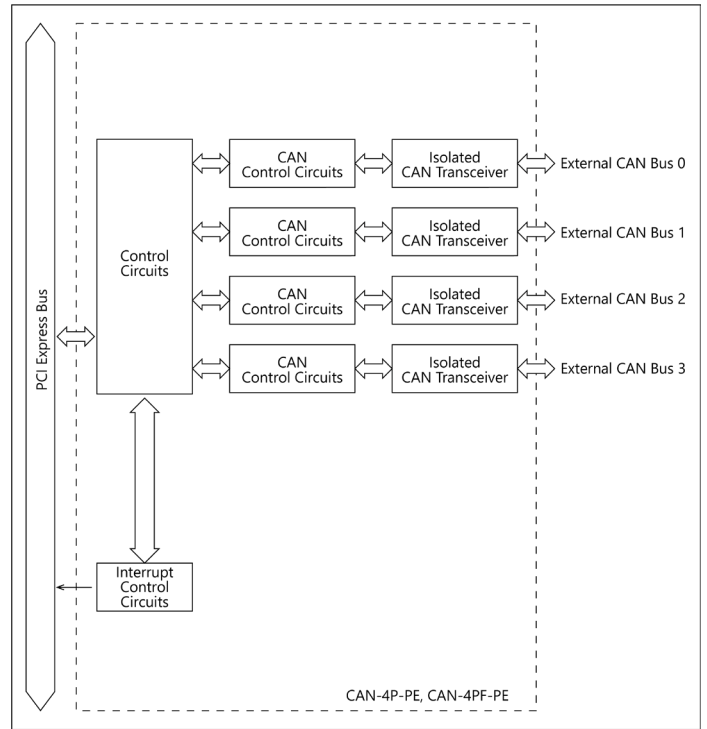
To unify the reference potential within the CAN communication bus, it is essential to connect not only CAN L and CAN H but also GND.



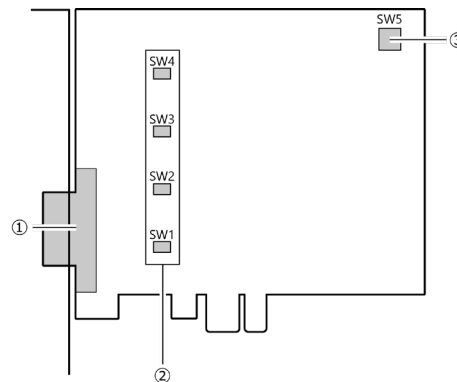
Signal	Content
CAN* L	The CAN L signal of the corresponding channel is connected.
CAN* H	The CAN H signal of the corresponding channel is connected.
GND*	The GND signal of the corresponding channel is connected.
N.C.	This pin is not connected anywhere.

* is the channel number (0 - 3).

Block Diagram



Component Name



No.	Name
1	Interface Connector
2	Terminating Resistor Setting Switch (SW1 - SW4)
3	Board ID Setting Switch (SW5)