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LabVIEW

API-PAC

## Support Software for LabVIEW

National Instrument's LabVIEW is one of the most widely used software programs in the measurement field. CONTEC provides and recommends the use of the following support software enabling CONTEC add-on modules to operate under LabVIEW. Using these drivers will allow you use CONTEC's wide array of data acquisition products while you configure a LabVIEW-based measurement system at a lower cost.

### ● When using CONTEC's digital, analog and counter add-on modules under LabVIEW

↓  
VI-DAQ - LabVIEW-compliant data acquisition VI library

### ● When using CONTEC's GPIO communication modules under LabVIEW

↓  
API-GPLV(W32) - LabVIEW-compliant GPIO driver

### ● When using CONTEC's serial communication modules under LabVIEW

↓  
COM-DRV(W32) - Standard COM driver

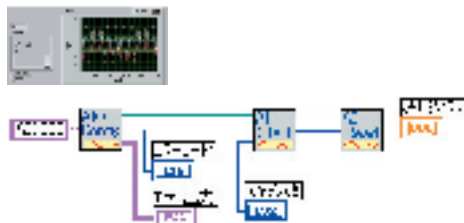
## When using LabVIEW-compliant VI-DAQ

VI-DAQ is a VI library which allows you to use CONTEC's wide variety of analog, digital and counter input devices with National Instrument's LabVIEW. Provided in a function form similar to that of LabVIEW Data Acquisition VI, it facilitates the use of each device without requiring complicated set-up.



### User-friendly interface

VI-DAQ is set-up with a function format similar to that of LabVIEW Data Acquisition VI, and, unlike similar software provided as a driver, does not require complicated setup. VI-DAQ enables simple and fast development and implementation of a system using CONTEC modules.



### VI functions provided according to the application and the stage

Frequently-used functions are provided as 'Basic VI' whereas special functions such as condition setting are provided as 'Expansion VI'. This enables simple set-up with Basic VI and allows Expansion VI to be used as required by the application and the stage.

### Practical samples provided to meet the desired application

A wide variety of simple and easy-to-understand samples utilizing VI are provided. For example for analog input application-specific samples such as "Easy input", "Using trigger" and "Consecutive sampling" are available. You can check the actual operation and make changes where needed providing assistance with system development.

### Library not dependent on hardware

You can use the same VI for different devices such as PCI boards, PC cards or USB modules.

#### ■ Supported OS

Windows XP, Windows 2000, Windows Me/98SE/98

#### ■ Supported LabVIEW versions

National Instruments LabVIEW 7.1 / 7.0 / 6.1 / 6i

For further details concerning LabVIEW-compliant data acquisition VI library VI-DAQ, visit:

<http://www.contec.com/vidaq/index.html>

For further details and free downloading of LabVIEW-compliant GPIO driver software API-GPLV(W32), visit:

<http://www.contec.com/gplv/>

## When using LabVIEW-compliant API-GPLV(W32)

API-GPLV(W32) allows CONTEC's GPIO communication modules to be operated under National Instrument's LabVIEW. Installation of this software allows you to develop and operate programs with LabVIEW using our GPIO communication devices.

This driver is set-up similar to National Instrument's API function and can also be used on other programming languages such as Microsoft's Visual Basic.

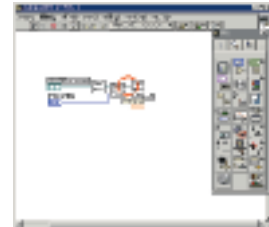


### Configuration Program



The board's hardware and its parameters (IEEE488.2) can be set up using the attached utility. The diagnostic utility for performing simple operation checks is also included.

### LabVIEW GPIO device library



GPIO device library provided with LabVIEW GPIO can be used.

### ■ Supported Operating Systems

Windows XP Professional, Windows XP HomeEdition, Windows 2000 Professional, Windows NTWorkstation 4.0 + SP3以降, Windows Me/98SE/98/95

### ■ Supported Programming Languages

**National Instruments** LabVIEW 7.1 / 7.0 / 6.1 / 6i / 5.1 / 5.0  
**Microsoft** Visual Basic 6.0 / 5.0 / 4.0, Visual C++ 6.0 / 5.0 / 4.x / 2.0, Visual Basic .NET 2003 / 2002, Visual C++ .NET 2003 / 2002, Visual C# .NET 2003 / 2002  
**Borland** C++ Builder 6.0 / 5.0, Delphi 6.0 / 5.0 / 4.0

### ■ Boards Supported

**CompactPCI**  
 GP-IB (CPCI) F8\*1  
**PCI**  
 GP-IB (LPCI) F\*1, GP-IB (PCI) F\*1, GP-IB (PCI) FL\*1, GP-IB (PCI), GP-IB (PCI) L  
**ISA**  
 GP-IB (PC) L  
**PC Card**  
 GP-IB (CB) F\*1, GP-IB (PM)

\*1: The required OS is Windows 98, Windows 2000 or above.  
 \*: Cannot be used simultaneously with National Instruments drivers for CPiB communication boards.  
 \*: Not compatible with CONTEC driver library for GPIO communication boards/cards API-GPIB(98/PC).  
 \*: A program using this software can not be executed simultaneously with a program using API-GPIB (98/PC) on the same hardware.

## API-PAC(W32)



\* Provided free of charge

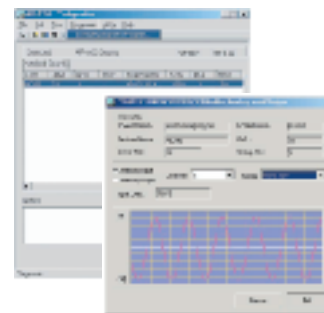
### What is API-PAC(W32)?

This software provides commands for CONTEC I/O boards by using the Win32 API function for Windows (DLL) format, .

Useful in the development of high-speed applications that utilize the special features of CONTEC boards, these drivers provide convenient and uniformly integrated functions in a variety of programming languages such as Visual Basic and Visual C/C++.

### SETUP PROGRAM INCLUDED FOR EASY INSTALLATION IN WINDOWS® XP / 2000 / NT / Me / 98 / 95

The API-PAC setup program can be used to install the library of DLL commands in Windows XP/2000/NT/Me/98/95 simply by selecting the CONTEC board that will be used. The API functions of each board chosen in the series then become usable.



### Features of API-PAC(W32)

- 1. Unified API**  
This unified DLL classifies boards by their I/O communication method (RS-232, Analog, Digital). It enables programming of high-appropriation applications that can continue to be used (with no reprogramming) when the I/O hardware is changed by using the board re-registration feature.
- 2. Data Collection in the Foreground/Background**  
Event-driven control functions are supported. Data collection can be performed in the foreground while continuing on in the background (in the inactive window or as an icon on Windows) as required.
- 3. Logical Device Access**  
Programming can be produced for each logical device without having to access I/O ports and boards.
- 4. Intuitive function names**  
Each API is named according to their function for easier use while programming.

### Diagnosis Program

A diagnosis program is included with each API function library for easy to find information on the status of the I/O board and installed software. It can determine whether or not the setup and driver software are functioning normally.

The diagnostic program can be executed from the "API-TOOL Configuration" screen.

#### Example - Using API function library for analog I/O



The board being diagnosed is chosen from the API-TOOL configuration

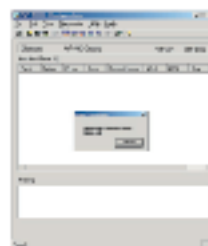


A diagnostic program is performed and the results are displayed.

A diagnostic report can also be sent to a text file.

### Board Auto Detect

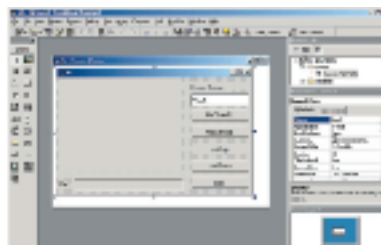
Any CONTEC board (ISA\*1 / PCI / CardBus) that has been installed in the program's device manager is capable of being automatically detected using "API-TOOL Configuration Ver.4.10" or later.



\*1 ISA boards cannot be detected when using Windows NT4.0/3.51.

### Sample Programs

API-PAC(W32) includes a number of sample programs for each of the driver libraries using the various compatible programming languages. These not only show how to use the functions, but demonstrate the performance of the boards helping in their application development.



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LabVIEW

API-PAC

# Software

## Website for driver library: <http://www.contec.com/apipac/>

A library of drivers "API-TOOL Developer's Site" can be found through CONTEC's global portal. There you can download the latest versions of each driver library along with sample program sets.



### ■ Software Upgrades

- Downloads of the latest driver library software are provided free of charge.

### Included with PCI Boards and PC Cards

CONTEC's driver library **API-PAC(W32)** along with sample programs, is included when purchasing PCI boards and PC card products.

- The library to be used varies depending on the I/O product purchased.

### ■ API-PAC(W32) Specifications

#### ■ Supported Operating Systems

Library Name	Corresponding Operating Systems								
	Windows XP Professional, Home Edition	Windows 2000 Professional	Windows NT Server *1		Windows NT Workstation		Windows Me	Windows 98	Windows 95
			4.0	3.51	4.0	3.51			
Serial Communication	API-SIO(98/PC)NT	○	○	○	○	○	○	○	○
	API-SIO(98/PC)W95								
GPIB	API-GPIB(98/PC)NT	○	○	○	○	○	○	○	○
	API-GPIB(98/PC)W95								
	API-GLV(W32)	○	○	○		○		○	○
Analog I/O	API-AIO(WDM)	○	○					○	○
	API-AIO(98/PC)NT	○	○	○	○	○			
	API-AIO(98/PC)W95							○	○
Digital I/O	API-DIO(98/PC)NT	○	○	○	○	○			
	API-DIO(98/PC)W95							○	○
Counter	API-CNT(98/PC)NT	○	○	○	○	○			
	API-CNT(98/PC)W95							○	○
Motor Control	API-SMC(98/PC)NT	○	○	○	○	○			
	API-SMC(98/PC)W95							○	○
Timer	API-TIMER(W32)	○	○	○	○*2	○	○*2	○	○

\*1: Only program execution is possible \*2: ActiveX control cannot be used.

#### ■ Supported Languages

Visual C++	Ver.6.0, 5.0, 4.x, 2.0	Visual C#.NET 2003, 2002
Borland C++	Ver.5.0, 4.5x	Visual Basic.NET 2003, 2002
Visual Basic	Ver.6.0, 5.0, 4.0 (32bit only)	Borland C++ Builder 6.0.5.0
Visual C++.NET	2003, 2002	Borland Delphi 6.0, 4.0, 3.0

## Windows Environment

### High-performance Analog I/O API Function Library API-AIO(WDM)

API-AIO(WDM) has been added as an analog I/O library for easier operation and higher performance. It provides additional support for application development when using analog I/O boards and cards that have enhanced user interfaces and hardware functions.

- Functions are grouped according to their application
- Programming can focus on application groups - functions don't need to be considered individually.
- Once analog I/O board setup parameters are programmed as a default, they can be used without further setting of parameters.

#### ■ Supported Board

- PCI Bus board
 

ADA16-32/2(PCI)F	AD12-16U(PCI)EH	AD16-16U(PCI)EH	AD12-16(PCI)E	AD12-16U(PCI)E	AD16-16(PCI)E
ADA16-8/2(LPCI)L	AD16-16(LPCI)L	DA16-4(LPCI)L	AD12-64(PCI)	AD12-16(PCI)	AD12-16(PCI)
ADI16-4C(PCI)	ADI16-4L(PCI)	DA12-16(PCI)	DA12-4(PCI)	DA12-8(PCI)	DAI16-4C(PCI)
- PC Card
 

ADA16-32/2(CB)F	ADA16-8/2(CB)L	AD12-8(PM)
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## GPIB Communication Driver for LabVIEW

### API-GPLV(W32)

This newly added driver for CONTEC's GPIB boards is compatible with National Instrument's LabVIEW. By using this software, the programs that are used with CONTEC's GPIB communication boards / cards can be developed in LabVIEW, for use with CONTEC's boards.

#### ■ Support Languages

National Instruments	LabVIEW 7.1 / 7.0 / 6.1 / 6i / 5.1 / 5.0
Microsoft	Visual Basic 6.0 / 5.0 / 4.0 Visual C++ 6.0 / 5.0 / 4.x / 2.0 Visual Basic.NET 2003 / 2002 Visual C++.NET 2003 / 2002
Borland	C++ Builder 6.0 / 5.0 Delphi 6.0 / 5.0 / 4.0

#### ■ Supported Boards

• Compact PCI	GP-IB(CPCI)F *1
• PCI	GP-IB(LPCI)F *1 GP-IB(PC)F *1 GP-IB(PC)FL *1 GP-IB(PC) GP-IB(PC)L
• PC Card	GP-IB(CB)F *1 GP-IB(PM)
• ISA	GP-IB(PC)L

\*1: Cannot be used with Windows 98 only for Windows 2000 or above.

## Analog I/O Driver

### API-AIO(98/PC)NT, API-AIO(98/PC)W95

- A maximum of 64 channels are controllable.
- Analog input / output can be performed from specified channels.
- Analog input can be performed at arbitrary fixed intervals using the internal sampling clock on the board or an external sampling clock signal.
- In addition to software control, the start and stop of input sampling can be controlled by the analog signal level or by an external TTL level signal.
- Multiple interrupt conditions can be monitored simultaneously, including completion of analog input sampling, buffer memory usage status and error detection.
- Commands for the digital I/O counter are supported in those boards that have a digital I/O counter function.
- A "Demo-board" function is provided in order to monitor application operations even when no board is installed.

#### ■ Supported Boards

##### ● PCI

AD12-16U(PCI)EH	AD16-16U(PCI)EH	AD12-16(PCI)E
AD12-16U(PCI)E	AD16-16(PCI)E	ADI12-16(PCI)
AD12-64(PCI)	AD12-16(PCI)	ADI16-4C(PCI)
ADI16-4L(PCI)	DA12-16(PCI)	DA12-4(PCI)
DA12-8(PCI)	DAI16-4C(PCI)	

##### ● ISA

AD12-16(PC)EH	AD12-16U(PC)EH	AD16-16(PC)EH
AD16-16U(PC)EH	AD12-16(PC)E	AD12-16U(PC)E
AD16-16(PC)E	AD16-16U(PC)E	AD12-16(PC)
AD12-8LT(PC)	AD12-16LG(PC)	ADI12-16(PC)
ADI12-8CL(PC)H	DA12-8L(PC)	DA12-4(PC)
DA12-6LC(PC)	DAI12-8C(PC)	DAI12-4C(PC)

##### ● PC Card

AD12-8(PM)

## Digital I/O Driver

### API-DIO(98/PC)NT, API-DIO(98/PC)W95

- A maximum of 64 channels are controllable.
- Hardware chattering can be prevented by using the digital filter.
- Digital input/output can be performed from the specified ports.
- Specific bit digital input/output can be achieved using the hardware function.

#### ■ Supported Boards

##### ● Compact PCI

PI-64L(CPCI)	PO-64L(CPCI)	PIO-32/32L(CPCI)
PIO-16/16L(LPCI)H	PIO-16/16B(LPCI)H	PIO-16/16T(LPCI)H
PI-128L(PCI)	PO-128L(PCI)	PI-64L(PCI)H
PO-64L(PCI)H	PI-32L(PCI)	PO-32L(PCI)H
PI-64L(PCI)	PO-64L(PCI)	PI-32L(PCI)
PI-32B(PCI)H	PI-32B(PCI)	PO-32L(PCI)
PO-32B(PCI)H	PO-32B(PCI)	PIO-16/16L(PCI)H
PIO-16/16L(PCI)	PIO-16/16T(PCI)	PIO-16/16TB(PCI)
PIO-16/16H(PCI)H	PIO-16/16RL(PCI)H	PIO-16/16B(PCI)H
PIO-16/16B(PCI)	PIO-16/16RY(PCI)	PIO-32/32B(PCI)H
PIO-32/32B(PCI)	PIO-32/32L(PCI)H	PIO-32/32L(PCI)
PIO-32/32T(PCI)	PIO-32/32F(PCI)	PIO-32/32H(PCI)H
PIO-32/32RL(PCI)H	PIO-64/64L(PCI)	RRY-16C(PCI)
RRY-32(PCI)	PIO-48D(PCI)	PIO-32DM(PCI)

##### ● PC Card

PIO-16/16L(CB)H	PIO-48D(CB)H	PIO-24W(PM)
PIO-32D(PM)	PIO-16/16L(PM)	
PI-64L(PC)	PI-64T(PC)	PO-64L(PC)
PO-64T(PC)	PIO-32/32L(PC)	PIO-32/32RL(PC)
PIO-32/32T(PC)	PI-32L(PC)H	PI-32L(PC)V
PI-32B(PC)	PI-32B(PC)H	PI-32TB(PC)
PI-32T(PC)H	PI-32RL(PC)	PO-32L(PC)H
PO-32L(PC)V	PO-32B(PC)	PO-32B(PC)H
PO-32TB(PC)	PO-32T(PC)H	PO-32RL(PC)
RRY-32(PC)	PRY-32(PC)	PIO-16/16TB(PC)
PIO-16/16T(PC)H	PIO-16/16RL(PC)	PIO-16/16L(PC)H
PIO-16/16L(PC)V	PIO-16/16B(PC)	PIO-16/16B(PC)H
PIO-48W(PC)	PIO-48D(PC)	PIO-48C(PC)
PIO-96W(PC)	PIO-144W(PC)	PIO-120D(PC)

##### ● ISA

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## Serial Communication Driver API-SIO(98/PC)NT, API-SIO(98/PC)W95

- A maximum of 256 channels are controllable\*1.
- Timer surveillance of the completion of both transmission and reception can be performed.
- Reception buffer size can be set independently for each channel (256-65535 bytes).
- The flow control of XON/XOFF signals can be utilized so that when the available reception buffer is reduced to a pre-set level, an XOFF code will be sent to the other end requesting a temporary suspension of transmission.

### Supported Boards

#### PCI

COM-1(LPCI)H	COM-2(LPCI)H	COM-1(PM)	COM-1D(PM)
COM-4(LPCI)H	COM-2(PC)H	COM-2(PM)	
COM-4(PC)H	COM-8(PC)H		
COM-2P(PC)H	COM-4P(PC)H		
COM-2PD(PC)H	COM-4PD(PC)H		

#### PC on board Port

RS-232C Port \*2

#### PC Card

COM-1(CB)H	COM-2(CB)H	COM-2(PC)F	COM-4M(PC)
COM-4(CB)H	COM-1PD(CB)H	COM-2PD(PC)H	COM-2S(PC)

#### ISA

COM-2(PC)F	COM-4M(PC)
COM-2PD(PC)H	COM-2S(PC)

\*1: The number of channels available will vary depending on the combination of boards.

\*2: Cannot be used under Windows XP/2000.

## GPIB Communication Driver API-GPIB(98/PC)NT, API-GPIB(98/PC)W95

- A maximum of 4 boards are controllable
- IEEE-488-compliant
- Supports IEEE-488.2-compliant commands
- Allows easy software setting of master mode, slave mode, and interrupt level
- 3-line handshaking for reliable data transfer between devices with different rates
- Supports Bus Master, DMA and FIFO functions
- GP-IB(PCI) and GP-IB(PC)F can read lines such as IFC and SQR. (Note: GP-IB(PC) cannot do this)
- The status of data and signals flowing on the line can be monitored via attached GPIB ANALYZER.

### Supported Boards

#### Compact PCI

GP-IB(CPCI)F \*1

#### PCI

GP-IB(LPCI)F *1	GP-IB(PC)F *1
GP-IB(PC)FL *1	GP-IB(PC)
GP-IB(PC)L	

#### PC Card

GP-IB(CB)F \*1  
GP-IB(PM)

#### ISA

GP-IB(PC) GP-IB(PC)F GP-IB(PC)L

\*1: It can be used on Windows98, Windows2000 or above.

## Counter Input Driver API-CNT(98/PC)NT, API-CNT(98/PC)W95

- A maximum of 16 boards are controllable
- The current count value can be read for a specified channel
- The current value of the status register can be read for a specified channel
- A preset value can be set for a specified channel
- Timer can wait for a pre-specified period
- An event message can be generated when a time-up, timer halt, or count match occurs
- Output width of a one-shot pulse can be specified when a counter match occurs

### Supported Boards

#### PCI

CNT24-4(PC)	CNT24-4D(PC)
CNT32-8M(PC)	

#### PC Card

CNT32-4MT(CB)

#### ISA

CNT24-4(PC)

## Motor Controller Control Driver API-SMC(98/PC)NT, API-SMC(98/PC)W95

- A maximum of 16 boards are controllable.
- The positioning of the stepping motor and servomotor can easily be set and controlled in Windows®
- Setup Utility allows initial board values to be easily set with the setup wizard.
- Diagnostic Utility distinguishes between software and hardware problems to help achieve smooth application development and debug
- Basic motor operations, such as PTP motion and JOGGING, are easily setup and performed
- A variety of modes are provided for a move to origin
- Bank Motion allows easy setup and high-speed control when controlling the motor with an already designed operating pattern
- A variety of event functions are available
- The ability to synchronize the control of multiple axis allows continuous interpolation along N axis

### Supported Board

#### PCI

SMC-2P(PC)  
SMC-4P(PC)

#### ISA

SMC-3(PC)



## Timer Control Driver

### API-TIMER(W32)

API-TIMER(W32) is a device driver (API function) that, when using CONTEC boards, provides precise timer function in a Windows environment.

- Even when there is no board, this driver can be used as an interval timer that exhibits higher precision than the Visual Basic timer control.
- Function execution time can be measured with micro second accuracy.
- Using the wait function, program processing can be suspended for a specified length of time.
- With the attached ActiveX Control "CONTEC ACX Timer Control", you can use the timer function without relying on API function.

#### Supported Boards

##### Compact PCI

GP-IB(CPCI)F

##### PCI

PIO-16/16L(LPCI)H	PIO-16/16B(LPCI)H	PIO-16/16T(LPCI)H	PI-128L(PCI)
PO-128L(PCI)	PIO-64/64L(PCI)	PI-64L(PCI)H	PO-64L(PCI)H
PIO-32/32L(PCI)H	PI-32L(PCI)H	PI-32B(PCI)H	PO-32L(PCI)H
PO-32B(PCI)H	PIO-16/16L(PCI)H	PIO-16/16B(PCI)H	PIO-48D(PCI)
PIO-16/16B(PCI)	PI-32L(PCI)	PI-32B(PCI)	PO-32L(PCI)
PO-32B(PCI)	PIO-32DM(PCI)	PIO-16/16RY(PCI)	ADA16-32/2(PCI)F
AD12-16U(PCI)EH	AD16-16U(PCI)EH	ADA16-8/2(LPCI)L	AD16-16(LPCI)L
AD12-64(PCI)	AD12-16(PCI)	AD16-4C(PCI)	ADI16-4L(PCI)
DA12-16(PCI)	DA16-4(LPCI)L	DA12-4(PCI)	DA12-8(PCI)
DAI16-4C(PCI)	GP-IB(LPCI)F	GP-IB(PCI)F	GP-IB(PCI)FL
GP-IB(PCI)L	CNT24-4D(PCI)	CNT32-8M(PCI)	

##### PC Card

PIO-16/16L(CB)H	PIO-48D(CB)H	ADA16-32/2(CB)F	ADA16-8/2(CB)L
GP-IB(CB)F	CNT32-4MT(CB)		

##### ISA

GP-IB(PC)L

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# Software

## Linux

This Linux-compliant software provides a group of functions for controlling CONTEC hardware by means of module drivers and a shared library.

- With the Help file, the description of each function can be checked on the screen while working on the program development.
- Using the sample programs compliant with each supported language, the usage of each function as well as the operation of the board can be checked for improved development efficiency.
- With Configuration, you can output a setup file that facilitates the transfer to execution environment as well as the driver startup and stop script.
- The attached user interrupt source code can be built into the drivers for execution.

### ■ Supported Languages

gcc  
Kylinx2

### ■ Kernel (Operations Checked) / Distribution

2.4.21 / RedHat Linux Professional Workstation	2.2.16 / RedHat Linux 7.0
2.4.20 / RedHat Linux 9	2.2.14 / RedHat Linux 6.2
2.4.18 / RedHat Linux 8.0	2.4.18 / TurboLinux 8
2.4.18 / RedHat Linux 7.3	2.4.5 / TurboLinux 7.0
2.4.7 / RedHat Linux 7.2	2.2.13 / TurboLinux 6.0
2.4.2 / RedHat Linux 7.1	

## Digital I/O Driver

### API-DIO(LNX)

- Provides a group of functions for controlling CONTEC digital I/O boards through module drivers and a shared library.
- Equipped with user interrupt processing source code that can be built into the driver for execution.
- Equipped with basic functions including I/O, interrupt and trigger monitoring via timer.

### ■ Supported Boards

#### ● PCI

PIO-16/16L(LPCI)H	PIO-16/16B(LPCI)H	PIO-16/16T(LPCI)H
PIO-16/16H(PCI)H	PIO-16/16RL(PCI)H	PIO-64/64L(PCI)
PIO-32/32L(PCI)H	PIO-32/32L(PCI)	PIO-32/32T(PCI)
PIO-32/32F(PCI)	PIO-32/32H(PCI)H	PIO-32/32RL(PCI)H
PIO-32/32B(PCI)H	PIO-16/16L(PCI)	PIO-16/16RY(PCI)
PIO-16/16L(PCI)	PIO-16/16T(PCI)	PIO-16/16TB(PCI)
PIO-16/16B(PCI)H	PIO-16/16B(PCI)	PIO-48D(PCI)

PIO-32DM(PCI)	PI-128L(PCI)	PI-64L(PCI)H
PI-32L(PCI)H	PI-64L(PCI)	PI-32L(PCI)
PI-32B(PCI)H	PI-32B(PCI)	PO-128L(PCI)
PO-64L(PCI)H	PO-32L(PCI)H	PO-64L(PCI)
PO-32L(PCI)	PO-32B(PCI)H	PO-32B(PCI)
RRY-16C(PCI)	RRY-32(PCI)	

#### ● PC Card

PIO-16/16L(CB)H    PIO-48D(CB)H

## Analog I/O Driver

### API-AIO(LNX)

- Provides a group of functions for controlling CONTEC analog I/O boards through module drivers and a shared library.
- Provides basic analog I/O functions.
- Programming can focus on application groups, individual functions don't need to be considered.
- Once analog I/O board setup parameters are programmed as a default, they can be used without further setting of parameters
- Allows the output of a setup file that facilitates the transfer to execution environment as well as driver startup and stop script.

### ■ Supported Boards

#### ● PCI

ADA16-32/2(PCI)F	AD12-16U(PCI)EH	AD16-16U(PCI)EH
AD12-16(PCI)E	AD12-16U(PCI)EH	AD16-16(PCI)E
ADA16-8/2(LPCI)L	AD16-16(LPCI)L	DA16-4(LPCI)L
AD12-64(PCI)	AD12-16(PCI)	AD112-16(PCI)

AD116-4C(PCI)	AD116-4L(PCI)	DA12-16(PCI)
DA12-4(PCI)	DA12-8(PCI)	DA16-4C(PCI)

#### ● PC Card

ADA16-32/2(CB)F    ADA16-8/2(CB)L

## GPIB Communication Driver

### API-GPIB(LNX)

- Provides a group of functions for controlling CONTEC GPIB boards through module drivers and a shared library.
- IEEE-488 compliant
- The selection of Master Mode or Slave Mode, etc. can be set up via software simply.

### ■ Supported Boards

#### ● PCI

GP-IB(PCI)F	GP-IB(LPCI)F	GP-IB(CPCI)F
GP-IB(PCI)FL		

#### ● PC Card

GP-IB(CB)F

## Counter Input Driver

### API-CNT(LNX)

- Provides a group of functions for controlling CONTEC counter boards through module drivers and a shared library.
- Equipped with basic functions including mode setting, count value acquisition, count identity interrupt and timer interrupt.

### ■ Supported Boards

#### ● PCI

CNT24-4(PCI)    CNT24-4D(PCI)

## General I/O Driver

### IO-LIB(LNX)

- Capable of accessing a desired I/O port address at 1/2/4 bytes
- Capable of acquiring resource information of PCI / Compact PCI bus (Plug and Play-compliant)
- Capable of interrupt event processing
- Complete with console and X-Window (Kylinx) sample programs
- HTML function reference
- Includes driver and source code of shared libraries

### ■ Supported Boards

CONTEC PCI / ISA / Compact PCI bus instrument and control interface boards.

\* Applicable only to boards with which I/O port map is disclosed.

