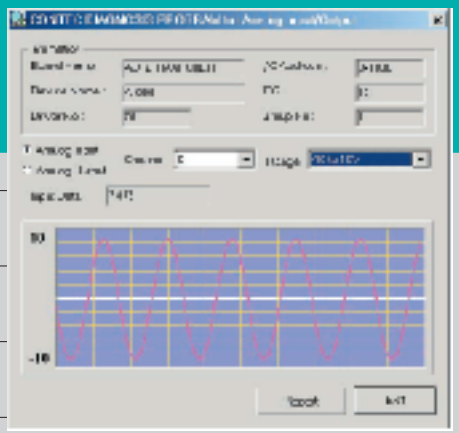
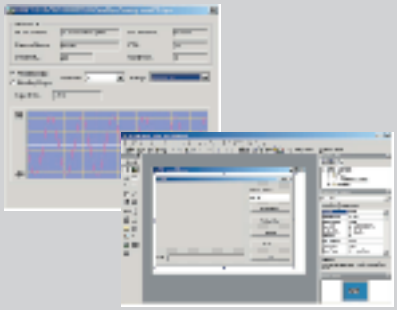
SOFTWARE



API Function Library API-PAC(W32)



API-PAC(W32) software library provides Win32 API function for Windows (DLL) commands for CONTEC I/O boards.

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++.

Active X Component - Base Package ACX-PAC(W32)BP

ActiveX provides graphs, lamps, switches and other visual interfaces that are helpful in the development of measurement systems when using CONTEC I/O boards.

These components are easily imported into a variety of measurement and control applications such as Visual Basic, Visual C/C++, Excel, Delphi and LabVIEW.

GPIB Driver Software for LabVIEW API-GPIV(W32) Ver.1.2

These drivers allow CONTEC GPIB boards to be used with National Instruments LabVIEW GPIB function software. Compatible operating systems include Windows Me / Windows 98SE / Windows 98 / Windows 95 / Windows XP / Winsows 2000 and Windows NT.

API-PAC(W32)

WINDOWS XP | WINDOWS 2000 | WINDOWS NT | WINDOWS Me | WINDOWS 98/95 | Linux

* 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.

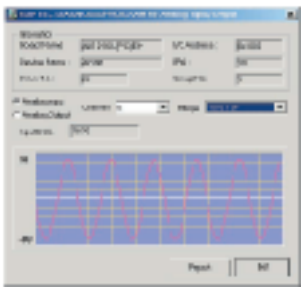
Diagnosis Program

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.

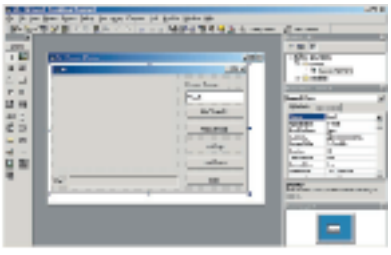
Board Auto Detect

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.



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							○	○	○
	API-FSIO(PCI)NT *3			○		○				
	API-FSIO(PCI) *3	○	○					○	○	
GPIB	API-GPIB(98/PC)NT	○	○	○	○	○	○			
	API-GPIB(98/PC)W95							○	○	○
	API-GPLV(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. *3: Cannot be used with PC card products

■Supported Languages

Visual C++	Ver.6.0, 5.0, 4.x, 2.0	Visual Basic	.NET 2003, 2002
Borland C++	Ver.5.0, 4.5x	Borland C++	Builder 6.0.5.0
Visual Basic	Ver.6.0, 5.0, 4.0	Borland Delphi	6.0, 4.0, 3.0
Visual C++	.NET 2003, 2002		

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.

■Suppported 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)	ASI12-16(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	AD12-8(PM)

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 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(CPCI)F *1 GP-IB(PCI)F *1 GP-IB(PCI)FL *1 GP-IB(PCI) GP-IB(PCI)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

- Up to 4 boards can be set in a group and up to 16 groups can be used at the same time
- 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)	

●PC Card

AD12-8(PM)

●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)

Digital I/O Driver

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

- Up to 4 boards can be set in a group and up to 16 groups can be used at the same time.
- Digital input/output can be performed from the specified ports.
- Hardware chattering can be prevented by using the digital filter.
- 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)

●PCI

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-16/16B(PCI)H	PIO-16/16B(PCI)	PIO-16/16RY(PCI)
PIO-32/32B(PCI)	PIO-32/32B(PCI)H	PIO-32/32L(PCI)H
PIO-32/32L(PCI)	PIO-32/32T(PCI)	PIO-32/32F(PCI)
PIO-64/64L(PCI)	RRY-16C(PCI)	RRY-32(PCI)
PIO-48D(PCI)	PIO-32DM(PCI)	

●PC Card

PIO-24W(PM)	PIO-32D(PM)	PIO-16/16L(PM)

●ISA

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)

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-4(LPCI)H COM-2(PCI)H
COM-4(PCI)H COM-8(PCI)H
COM-2P(PCI)H COM-4P(PCI)H
COM-2PD(PCI)H COM-4PD(PCI)H

●PC Card

COM-1(PM) COM-1D(PM)
COM-2(PM) COM-4(CB)H

●PC on board Port

RS-232C Port *2

●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(PCI)F *1
GP-IB(PCI)FL *1 GP-IB(PCI)
GP-IB(PCI)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 higher.

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

●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(PCI)
SMC-4P(PCI)

●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)

●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)	ADI16-4C(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

ADA16-32/2(CB)F GP-IB(CB)F

●ISA

GP-IB(PC)L

COM-4FS(PCI) Driver

API-FSIO(PCI)NT, API-FSIO(PCI)

- The communication conditions inherent in each synchronous system can be separated from the application and be set by the utility.
- Multi-thread samples are provided (C++).
- Class samples of encapsulated API are provided (C++).

■Supported Board

●PCI

COM-4FS(PCI)

■Specifications

●Supported Language

Visual C++ Ver.4.2, 5.0, 6.0
Visual Basic (32bit) Ver.4.0, 5.0, 6.0

●Maximum number of boards that can be supported

4 boards (Serial I/O: 16 channels, Digital I/O: I/O 16 points each)

●Send/receive data length (Software setting)

<When using it with 4 channels>
Maximum 508 bytes
<When using it with 2 channels>
Maximum 1020 bytes
<When using it either for send or receive with maximum 2 channels>
Maximum 1976 bytes

●Supported Computers

*Systems must be equipped with open PCI slot and be capable of having a full-size board installed.

●Protocol (Set for every 2 channels)

ASYNC (Asynchronous)
BOP (Bit Oriented Protocol)
COP (Character Oriented Protocol)

●Asynchronous (ASYNC) Specifications

Communication speed	100~115,200bps
Character length	5, 6, 7, 8 Bit
Stop bit	1, 1.5, 2 Bit
Parity	even, odd, non-parity

●Receive conditions

Fixed length reception	1~1976byte
Terminator code reception	Terminator code + BCC can be received. Only the control codes such as ACK, NAK, and EOT can be received

●Time keeping at transmission 10~300,000ms (unit: 10ms)

●Reception by terminator code

Conditions for completing the reception by terminator code

Start cord <omissible> (1)	Text data	End cord (1)	Data length after an end cord (BBC) Length <omissible>(0~8)

Conditions for completing the reception by control code (ACK, NAK, Other control codes)

Data of an application (1)	x Max. 8 characters
Control code <omissible> (1)	

* Codes are dependent to users.
* The number in () is the character length.

●Bit Oriented Protocol (BOP) Specifications

Communication speed	100~384,000bps (Maximum 115,200bps when using RS-232C)
Character length	7, 8 Bit
Code type	NRZ, NRZI, FM1, FM0
Idle state	Flag transmission or Mark state
Time keeping at transmission	10~300,000ms (unit: 10ms)
Send synchronous clock	Internal clock, ST2 signal, DPLL
Receive synchronous clock	ST2 signal, RT signal, DPLL

Data frame

Flag sequence F	Data of an application address, control, information	Frame check sequence (FCS)	Flag sequence F
(01111110)	(1 to Maximum data length)	(16bit)	(01111110)

●Character Oriented Protocol (COP) Specifications

Communication speed	100~9,600bps
Character length	8 Bit
Code type	NRZ, NRZI
Time keeping at transmission	10~300,000ms (unit: 10ms)
Send synchronous clock	Internal clock, ST2 signal, DPLL
Receive synchronous clock	ST2 signal, RT signal, DPLL
Leading PAD Code	Code: 00H~FFH, Number: 1~9
Trailing PAD Code	Code: 00H~FFH, Number: 1~9
Synchronous Code	Code: 00H~FFH (Up to 2 characters can be set) Number: 1~9
BCC check	CRC-CCITT, CRC-16
BCC range	Start/End code can be set up to 2 characters
Transparent mode	In-use, Not in-use and Transparent modes can be set.

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
Kylix2

■Kernel (Operations Checked) / Distribution

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

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 basic functions including I/O, interrupt and trigger monitoring via timer.
- Equipped with user interrupt processing source code that can be built into the driver for execution.

■Supported Boards

●PCI

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

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)E	AD16-16(PCI)E
ADA16-8/2(LPCI)L	AD16-16(LPCI)L	DA16-4(LPCI)L
AD12-64(PCI)	AD12-16(PCI)	ADI12-16(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

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 (Kylix) sample programs
- HTML function reference
- Includes driver and source code of shared libraries

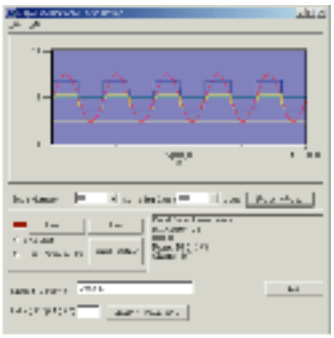
■Supported Boards

CONTEC PCI / ISA / Compact PCI bus instrument and control interface boards.
* Applicable only to boards with which I/O port map is disclosed.

ACX-PAC(W32)BP Ver.2.0

WINDOWS 2000 WINDOWS NT WINDOWS Me WINDOWS 98/95

CONTEC'S ActiveX Component is an easy to configure visual user interface. Working seamlessly with third party software, it links to Windows OLE development applications and requires virtually no maintenance.

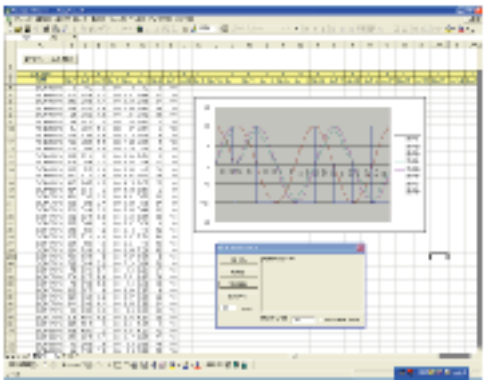


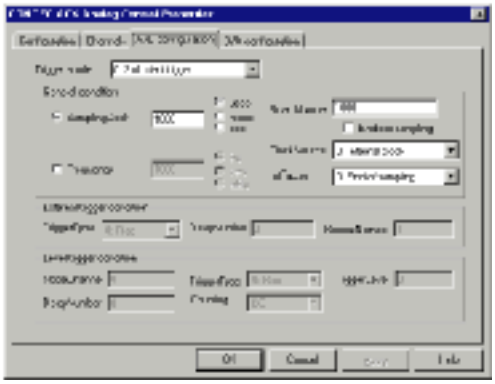
1.Visualized User Interface

ActiveX Components are easy to configure using simple property sheets and are easy to program from Visual Basic/C++ using high-level properties and methods.

2.Windows Standardized Data

ActiveX Components are easily imported into Windows OLE-enabled development applications, such as Excel.
ActiveX Components can easily interface with third-party software that supports ActiveX controls allowing you to perform system monitoring, measurements, controls or other functions.





■Boards Supported by ActiveX

ActiveX Analog Control

●PCI

AD12-16(PCI)E, AD12-16U(PCI)E, AD16-16(PCI)E, ADI12-16(PCI), AD12-16(PCI), D12-64(PCI), DA12-4(PCI), DA12-16(PCI)

●PC Card

AD12-8(PM)

●ISA

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

ActiveX Digital Control

●PCI

PIO-16/16L(PCI), PIO-16/16T(PCI), PIO-16/16TB(PCI), PIO-32/32B(PCI), PIO-32/32B(PCI)H, PIO-32/32L(PCI), PIO-32/32T(PCI), PIO-32/32F(PCI), PIO-48D(PCI), RRY-16C(PCI), PI-64L(PCI), PO-64L(PCI), RRY-32(PCI)

●Compact PCI

PI-64L(CPCI), PO-64L(CPCI), PIO-32/32L(CPCI)

●PC Card

PIO-24W(PM)

●ISA

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

ActiveX GPIB Control

●PCI GP-IB(PCI)
●PC Card GP-IB(PM)
●ISA GP-IB(PC), GP-IB(PC)F

■Supported Operating Systems

Windows 2000 Professional
Windows NT Workstation 4.0 + Service Pack3 & up
Windows Me
Windows 98 Second Edition, Windows 98, Windows 95

■Supported Programming Languages

Microsoft Visual Basic 6.0 / 5.0 / 4.0,
Visual C++ 6.0 / 5.0 / 4.x / 2.0
Excel 2000, 97

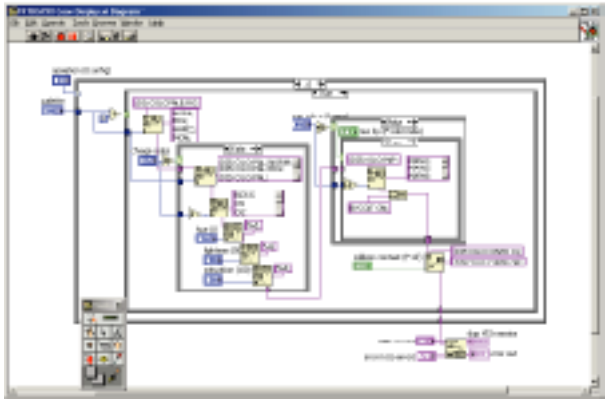
API-GPLV(W32)

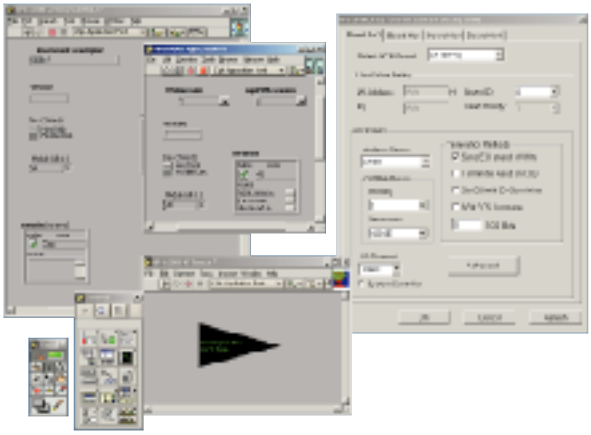
WINDOWS XP WINDOWS 2000 WINDOWS NT WINDOWS Me WINDOWS 98/95

Free from our website

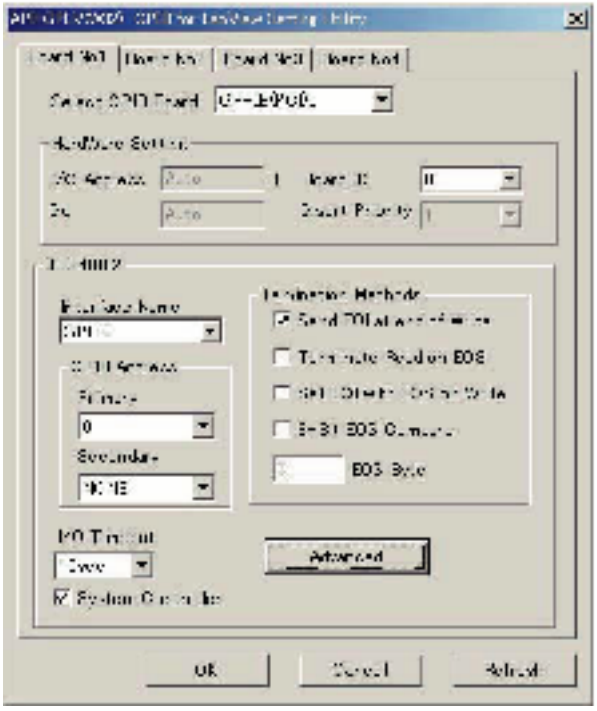
When API-GPLV(W32) drivers are used, CONTEC's GPIB communication boards can be operated with National Instruments LabVIEW software. Installation of this software makes it possible to do program development and to run completed GPIB communication programs in LabVIEW. Moreover, since it is written in the API function style of National Instruments Corporation., API-GPLV(W32) can also be used by other software.

Example of a CONTEC board operating under LabVIEW





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.

■Supported Operating Systems

Windows XP Professional / Home
Windows 2000 Professional
Windows NT Workstation 4.0 + Service Pack3 & up
Windows Me
Windows 98 Second Edition, Windows 98, Windows 95

■Supported Programming Languages

National Instruments
LabVIEW 6i / 5.1 / 5.0

Microsoft
Visual Basic 6.0 / 5.0 / 4.0
Visual C++ 6.0 / 5.0 / 4.x / 2.0

Borland
C++ Builder 5.0
Delphi 5.0 / 4.0

■Boards Supported

PCI GP-IB(PCI), GP-IB(PCI)L
ISA GP-IB(PC)L
PC Card GP-IB(PM)

[Software] GPIB Driver Software for LabVIEW