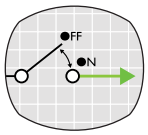
DIGITAL INPUT/ OUTPUT

DIGITAL I / O

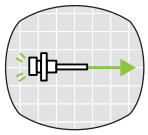
Interface boards that provide computers with digital signal I/O functions. They monitor the status (ON/OFF) of relays, operating switches and measurement devices as well as controlling (ON/OFF) lamps, 7-segment display units and relays.

These boards can also be used as an interface for conducting digital communication with controllers such as PLC or microcomputers.



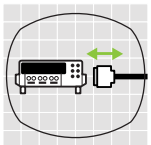
Application: Monitoring status of contact points and switches

Description: Inputs ON/OFF signals



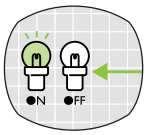
Application: Measurements of individual sensors

Description: Inputs BCD / binary data



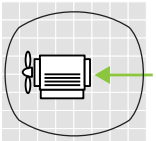
Application: Connecting with measurement devices / controllers

Description: Controls BCD / binary data



Application: Controlling Relays / lamps

Description: Outputs ON/OFF signals

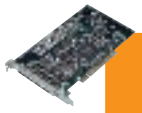


Application: Motor control

Description: Controls BCD / binary data

Product Lineup

You can choose from a variety of interface boards according to your desired bus, I/O points and I/O type.



PCI

12~24VDC	Opto-coupler isolation	Input	On -Board 12v Power Supply
		Output	On -Board 12v Power Supply
		Input Output	On -Board 12v Power Supply
			High-speed Opto-coupler
			Negative Common
24~48VDC			High Voltage
48VDC~ VAC	Relay contact	Output	Non Polarity
5VDC-TTL	Non-isolated	Input Output	
		Bi-direct	
	Opto-coupler isolation	Input Output	On -Board 12v Power Supply
	Pattern Input / Pattern generator		Bus Master Transfer
Parallel port		2ch	

Low Profile PCI

12~24VDC	Opto-coupler isolation	Input Output
5VDC-TTL	Non-isolated	Input Output

Card Bus

12~24VDC	Opto-coupler isolation	Input Output
3.3VDC-LVTTL	Non-isolated	Bi-direct

PCMCIA

12~24VDC	Opto-coupler isolation	Input Output
5VDC-TTL	Non-isolated	Bi-direct

USB

12~24VDC	Opto-coupler isolation	Input
		Output
		Input Output
12~48VDC		Output
Input: 12~24VDC Output: 12~48VDC		Input Output

ISA

Digital I/O

Product Locator

PI-□□□L (PCI)□	H-03
PI-32B (PCI)H	H-03
PO-□□□L (PCI)□	H-04
PO-32B (PCI)H	H-04
PIO-□□/□□L (PCI)□	H-05
PIO-□□/□□B (PCI)H	H-05
PIO-32/32F (PCI)	H-06
PIO-□□/□□RL (PCI)H	H-06
PIO-□□/□□H (PCI)H	H-07
RRY-□□□ (PCI)	H-08
PIO-16/16RY (PCI)	H-08
PIO-□□/□□T (PCI)	H-09
PIO-□□D (PCI)	H-09
PIO-16/16TB (PCI)	H-09
PIO-32DM (PCI)	H-10
PRN-2 (PCI)	H-10
PIO-16/16L (LPCI)H	H-11
PIO-16/16B (LPCI)H	H-11
PIO-16/16T (LPCI)H	H-11
PIO-16/16L (CB)H	H-12
PIO-48D (CB)H	H-12
PIO-16/16L (PM)	H-13
PIO-32D (PM) PIO-24W (PM)	H-13
DI-32 (USB)	H-14
DI-16 (USB) GY	H-14
DO-16 (USB) GY	H-15
DIO-8/8 (USB) GY	H-15
DO-32 (USB)	H-14
DIO-16/16 (USB)	H-14
ISA	H-17

Pictograms

Bus Specifications

PCI — Product is PCI standard-compliant and can be used in computer equipped with PCI bus expansion slot.

Low Profile PCI — Product is PCI standard / Low Profile-compliant. A bracket for standard-size PCI slot is provided.

USB 2.0 — Product is USB standard-compliant and can be used in computers having USB2.0 / 1.1 port[s]. They support USB2.0 high-speed mode (480Mbps).

Card Bus — Product supports CardBus / 32-bit PC card standard.

PCMCIA — Product supports 16-bit PC card standard.

Supported Connectors

100-pin 0.8mm Pitch | 68-pin 0.8mm Pitch | 37-pin D-SUB | 96-pin Half Pitc | 50-pin Mini-Ribbon

Indicate the number of pins and styles of connectors used for external connection.

Contec provides a wide variety of cables and accessories to suit your needs.

Cables equipped with connectors on both ends
Accessories (Terminal block, etc.) → O-07

Cables equipped with a connector on one end
Connector set → O-11

I/O Points

- **Digital input XXch** — Maximum number of input channels
- **Digital output XXch** — Maximum number of output channels
- **Digital I/O XX** — Maximum number of points (bits) that can be input / output
- **Counter XXch** — Maximum number of channels of counter signals that can be input

Support software

Windows Driver — API-TOOL Drivers for Windows are provided. This license-free driver software (both development and runtime) provides commands to interface boards using Windows standard Win32API functions (DLL).

Linux Diver — API-TOOL drivers for Linux are provided. This license-free driver software (both development and runtime) provides commands to interface boards using module-style device drivers and the shared library

LabVIEW — VI-DAQ a VI library for using Contec's boards with National Instruments' LabVIEW can be downloaded [no charge] from our Web site. With function format similar to that of LabVIEW's "Data Acquisition VI", VI-DAQ set-up is not complicated therefore simplifying device operation.

Points

- **Isolated** — I/O interface and internal logical circuits are insulated by Opto-couplers and relay contacts in order to prevent electrical interference with the PC. Requires additional power to drive external circuits.
- **Non-isolated** — I/O interface and internal logical circuits are not insulated. These respond at a higher speed than insulated devices.
- **Power On board** — A power source is integrated on the device in order to drive input circuit Opto-couplers and I/O circuits. These are useful when additional power sources aren't available.
- **Negative Common** — I/O interface supports a current sourcing circuit. It is called "negative common" because the common polarity is reverse to that of a current sinking circuit.
- **Non polarity** — I/O interface supports both current sinking circuit and current sourcing circuit.
- **High Voltage** — I/O interface supports high-voltage circuits [those exceeding 24VDC]. Some have an output interface that supports AC.
- **Hi-Speed Opto-coupler** — Uses a high-speed Opto-coupler that enables a response of 1µ to 5µsec.
- **Digital Filter** — Disables level (ON/OFF) changes that take place faster than the set value and prevents incorrect input due to noise and chattering.
- **Surge Protection** — Output interface is equipped with a Zener diode that prevents damage and / or malfunction due to a surge in voltage and incoming current.
- **Surge & Overcurrent Protection** — Output interface is equipped with both a Zener diode which prevents damage and / or malfunction due to a surge in voltage and incoming current and a policing switch which guards against damage due to any current overages.

Digital I/O

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Multi-Programmable Display
Remote Monitoring Solution
Service & Products

Lineup
PCI
Low Profile PCI
PC Card
USB
Compact PCI
ISA

PCI | 37-pin D-SUB | Input 32 | Isolated | Digital Filter | CE | Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital Input
PI-32L(PCI)H

- 32 opto-isolated for superb noise resistance (12 to 24VDC)
- Fast response time (within 200µsecs) / Power saving design
- All input signals can be used as interrupts
- Digital filter and interrupt trigger edge can be set via software

PCI | 37-pin D-SUB | Input 32 | Isolated | Power on Board | Digital Filter | CE | Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital Input with On-board 12V Power Supply
PI-32B(PCI)H

- On-board battery (12VDC 240mA) to drive the input circuit photocoupler
- Fast response time (within 200µsecs)
- All input signals can be used as interrupts
- Digital filter and interrupt trigger edge can be set via software

PCI | 96-pin Half Pitch | Input 64 | Isolated | Digital Filter | CE | Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital Input
PI-64L(PCI)H

- 64 opto-isolated for superb noise resistance (12 to 24VDC)
- Fast response time (within 200µsecs) / Power saving design
- All input signals can be used as interrupts
- Digital filter and interrupt trigger edge can be set via software

PCI | 100-pin 0.8mm Pitch | Input 128 | Isolated | Digital Filter | CE | Windows Driver | Linux Diver | LabVIEW

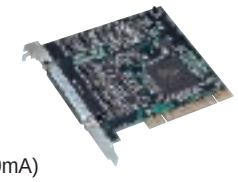
Opto-Isolated Digital Input
PI-128L(PCI)

- 128 inputs on a PCI short-size board
- Fast response time (within 200µsecs)/Power saving design
- 16 interrupts featuring Digital Filter Function
- Conversion cables (100-pin to 96-pin half pitch) available

Model		PI-32L(PCI)H	PI-32B(PCI)H	PI-64L(PCI)H	PI-128L(PCI)
Input channels		32		64	128
Output channels		-			
Input specifications	Type	Opto-Isolated (for high sink current output)			
	Signal Level	12~24VDC			
	Interrupts	32 interrupt signals combine to one interrupt request signal as INTA			16 interrupt signals combine to one interrupt request signal as INTA
	Resistance	4.7kΩ			
Output specifications	Type	-			
	Rating	-			
Response Time (Max.)		200µsec			
Internal Power		-	12VDC 240mA	-	
Wiring Distance		50m			
I/O Address		Any 32-byte boundary			
Power Consumption (Max.)		5VDC 200mA	5VDC 300mA (External), 5VDC 1200mA (On-board)	5VDC 250mA	5VDC 500mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 121.69(L) × 105.68(H)	PCI (32bit, 33MHz, 5V or 3.3V*1) / 176.41(L) × 105.68(H)		PCI (32bit, 33MHz, 5V) / 176.41(L) × 106.68(H)
Connector		37-pin female D-type DCL-J37SAF-20L9 [JAE] or equivalent		PCR-E96LMD [HONDA Tsushin Kogyo] or equivalent	HDRA-E100W1L-FDT1EC-SL [HONDA Tsushin Kogyo] or equivalent
Options	Software	-			
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A*2, EPD-37*2, CM-32(PC)E*2		EPD-96*3, DTP-64(PC)*3, EPD-37A*4, EPD-37*4, CM-32(PC)E*4, CM-64(PC)E*3, CCB-96*5	DTP-3(PC)*7, DTP-4(PC)*7, DTP-64(PC)*6, EPD-37A*7, EPD-37*7, EPD-96*6, CM-64(PC)E*6, CCB-96*6
	Cables / Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M		PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS, CN5-H96F	PCA100P, PCB100/96PS, PCB100WS
Note:		*1: +5V power must be supplied from PCI bus slot. *3: Requires use of optional cable PCB96P or PCB96PS. *5: Requires use of optional cable PCB96P or PCB96PS and 37-pin D-SUB. *7: Requires use of optional cable PCB100WS.		*2: Requires use of optional cable PCB37P or PCB37PS. *4: Requires use of optional cable PCB96W or PCB96WS. *6: Requires use of optional cable PCB100/96PS.	

Digital I/O

PCI | 37-pin D-SUB | Output 32 | Isolated | Surge & Overcurrent Protection | CE | Windows Driver | Linux Diver | LabVIEW



Opto-Isolated Digital Output
PO-32L(PCI)H

- 32 opto-isolated open collector output (35VDC, 100mA)
- Fast response time (within 200µsecs.)
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

PCI | 37-pin D-SUB | Output 32 | Isolated | Power on Board | Surge & Overcurrent Protection | CE | Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital Output with On-board 12V Power Supply
PO-32B(PCI)H

- On-board battery (12VDC 240mA) to drive the output circuit photocoupler
- Fast response time (within 200µsecs.)
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

PCI | 96-pin Half Pitch | Output 64 | Isolated | Surge & Overcurrent Protection | CE | Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital Output
PO-64L(PCI)H

- 64 opto-isolated open collector output (35VDC, 100mA)
- Fast response time (within 200µsecs.)
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

PCI | 100-pin 0.8mm Pitch | Output 128 | Isolated | Surge & Overcurrent Protection | CE | Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital Output
PO-128L(PCI)

- 128 outputs on a PCI short-size board
- Fast response time (within 200µsecs.)
- Output transistor has built-in circuit protection (voltage surge, overcurrent)
- Conversion cables (100 to 96-pin half pitch) available

Model		PO-32L(PCI)H	PO-32B(PCI)H	PO-64L(PCI)H	PO-128L(PCI)
Input channels		-			
Output channels		32		64	128
Input specifications	Type	-			
	Signal Level	12~24VDC			
	Interrupts	-			
	Resistance	-			
Output specifications	Type	Opto-Isolated Open Collector (Current sinking type)			
	Rating	35VDC 100mA			
Response Time (Max.)		200µsec			
Internal Power		-	12VDC 240mA	-	
Wiring Distance		50m			
I/O Address		Any 32-byte boundary			
Power Consumption (Max.)		5VDC 200mA	5VDC 300mA (External), 5VDC 1200mA (On-board)	5VDC 250mA	5VDC 500mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 121.69(L) × 105.68(H)	PCI (32bit, 33MHz, 5V or 3.3V*1) / 176.41(L) × 105.68(H)		PCI (32bit, 33MHz, 5V) / 176.41(L) × 106.68(H)
Connector		37-pin female D-type DCL-J37SAF-20L9 [JAE] or equivalent		PCR-E96LMD [HONDA Tsushin Kogyo] or equivalent	HDRA-E100W1L-FDT1EC-SL [HONDA Tsushin Kogyo] or equivalent
Options	Software	-			
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A*2, EPD-37*2, CM-32(PC)E*2		EPD-96*3, DTP-64(PC)*3, EPD-37A*4, EPD-37*4, CM-32(PC)E*4, CM-64(PC)E*3, CCB-96*5	DTP-3(PC)*7, DTP-4(PC)*7, DTP-64(PC)*6, EPD-37A*7, EPD-37*7, EPD-96*6, CM-64(PC)E*6, CCB-96*6
	Cables / Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M		PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS, CN5-H96F	PCA100P, PCB100/96PS, PCB100WS

Note:
*1: +5V power must be supplied from PCI bus slot.
*2: Requires use of optional cable PCB37P or PCB37PS.
*3: Requires use of optional cable PCB96P or PCB96PS.
*4: Requires use of optional cable PCB96W or PCB96WS.
*5: Requires use of optional cable PCB96P or PCB96PS and 37-pin D-SUB.
*6: Requires use of optional cable PCB100/96PS.
*7: Requires use of optional cable PCB100WS.

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PCI | 37-pin D-SUB | Input 16 | Output 16 | Isolated | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O
PIO-16/16L(PCI)H

- 16 opto-isolated input , 16 opto-insolated open collector output
- Fast response time (within 200µsecs.) / Power saving design
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

PCI | 37-pin D-SUB | Input 16 | Output 16 | Isolated | Digital Filter | Power on Board
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O with On-board 12V Power Supply
PIO-16/16B(PCI)H

- On-board battery (12VDC 240mA) to drive the input/output circuit photocoupler
- Fast response time (within 200µsecs.)
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

PCI | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O
PIO-32/32L(PCI)H

- 32 opto-isolated input , 32 points opto-insolated open collector output
- Fast response time (within 200µsecs.) / Power saving design
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

PCI | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | Digital Filter | Power on Board | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O with On-board 12V Power Supply
PIO-32/32B(PCI)H

- On-board battery (12VDC 240mA) to drive the input/output circuit photocoupler
- Digital filter and interrupt trigger edge can be set via software

Model		PIO-16/16L(PCI)H	PIO-16/16B(PCI)H	PIO-32/32L(PCI)H	PIO-32/32B(PCI)H
Input channels		16		32	
Output channels		16		32	
Input specifications	Type	Opto-Isolated (for high sink current output)			
	Signal Level	12~24VDC			
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA		32 interrupt signals combine to one interrupt request signal as INTA	4 interrupt signals combine to one interrupt request signal as INTA
	Resistance	4.7kΩ			
Output specifications	Type	Opto-Isolated Open Collector (Current sinking type)			
	Rating	35VDC 100mA			
Response Time (Max.)		200µsec			1msec
Internal Power		-	12VDC 240mA	-	12VDC 240mA
Wiring Distance		50m			
I/O Address		Any 32-byte boundary			
Power Consumption (Max.)		5VDC 200mA	5VDC 300mA (External), 5VDC 1200mA (On-board)	5VDC 250mA	5VDC 300mA (External), 5VDC 1300mA (On-board)
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 121.69(L) × 105.68(H)	PCI (32bit, 33MHz, 5V or 3.3V*1) / 176.41(L) × 105.68(H)		PCI (32bit, 33MHz, 5V) / 176.41(L) × 106.68(H)
Connector		37-pin female D-type DCL-J37SAF-20L9 [JAE] or equivalent		PCR-E96LMD [HONDA Tsushin Kogyo] or equivalent	
Options	Software	-			
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A*2, EPD-37*2, CM-32(PC)E*2		EPD-96*3, DTP-64(PC)*3, EPD-37A*4, EPD-37*4, CM-32(PC)E*4, CM-64(PC)E*3, CCB-96*5	DTP-3(PC)*4, DTP-4(PC)*4, DTP-64(PC)*3, EPD-96*3, CM-32(PC)*4, CM-32(PC)E*4, CM-64(PC)E*3, CCB-96*3
	Cables / Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M		PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS, CN5-H96F	
Note:		*1: +5V power must be supplied from PCI bus slot. *3: Requires use of optional cable PCB96P or PCB96PS. *5: Requires use of optional cable PCB96P or PCB96PS and 37-pin D-SUB.		*2: Requires use of optional cable PCB37P or PCB37PS. *4: Requires use of optional cable PCB96W or PCB96WS.	

Digital I/O

PCI | 100-pin 0.8mm Pitch | Input 64 | Output 64 | Isolated | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O
PIO-64/64L(PCI)

- 128 inputs on a PCI short-size board
- Fast response time (within 200µsecs.) / Power saving design
- 16 interrupts featuring Digital Filter Function
- Output transistor has built-in circuit protection (voltage surge, overcurrent)
- Conversion cables (100 to 96-pin half pitch) available

PCI | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | Hi-Speed Photocoupler | Digital Filter | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated High-speed Digital I/O
PIO-32/32F(PCI)

- Features High-speed photo coupler with 5µsecs (max) response time
- Digital filter and interrupt trigger edge can be set via software
- Connector pin assignment compatible with PIO-32/32L(PC) and PIO-32/32L(PCI)

PCI | 37-pin D-SUB | Input 16 | Output 16 | Isolated | Negative Common | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Diver | LabVIEW

Negative-Common Opto-Isolated Digital I/O
PIO-16/16RL(PCI)H

- 16 opto-isolated input (for high sink current output), 16 opto-insolated output (Current sinking type)
- Fast response time (within 200µsecs.)
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

PCI | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | Negative Common | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Diver | LabVIEW

Negative-Common Opto-Isolated Digital I/O
PIO-32/32RL(PCI)H

- 32 opto-isolated input (for high sink current output), 32 opto-insolated output (Current sinking type)
- Fast response time (within 200µsecs.)
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

Model		PIO-64/64L(PCI)	PIO-32/32F(PCI)	PIO-16/16RL(PC)H	PIO-32/32RL(PC)H
Input channels		64	32	16	32
Output channels		64	32	16	32
Input specifications	Type	Opto-Isolated (for high sink current output)		Opto-Isolated (for high source current output)	
	Signal Level	12~24VDC			
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	4 interrupt signals combine to one interrupt request signal as INTA	16 interrupt signals combine to one interrupt request signal as INTA	32 interrupt signals combine to one interrupt request signal as INTA
	Resistance	4.7kΩ	2.2kΩ	4.7kΩ	
Output specifications	Type	Opto-Isolated Open Collector (Current sinking type)		Opto-Isolated Open Collector (Current sourcing type)	
	Rating	35VDC 100mA	35VDC 50mA	35VDC 100mA	
Response Time (Max.)		200µsec	5µsec	200µsec	
Internal Power		-			
Wiring Distance		50m			
I/O Address		Any 32-byte boundary			
Power Consumption (Max.)		5VDC 500mA		5VDC 150mA	5VDC 200mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V) / 176.41(L) × 106.68(H)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 121.69(L) × 105.68(H)	PCI (32bit, 33MHz, 5V or 3.3V*1) / 176.41(L) × 105.68(H)
Connector		HDRA-E100W1L-FDT1EC-SL [HONDA Tsushin Kogyo] or equivalent	PCR-E96LMD [HONDA Tsushin Kogyo] or equivalent	37-pin female D-type DCL-J37SAF-20L9 [JAE] or equivalent	PCR-E96LMD [HONDA Tsushin Kogyo] or equivalent
Options	Software	-			
	Accessories	DTP-3(PC)*3, DTP-4(PC)*3, DTP-64(PC)*2, EPD-37A*3, EPD-37*3, EPD-96*2, CM-64(PC)E*2, CCB-96*2	DTP-3(PC)*4, DTP-4(PC)*4, DTP-64(PC)*5, EPD-96*5, CM-32(PC)*4, CM-32(PC)E*4, CM-64(PC)E*5	DTP-3(PC), DTP-4(PC), EPD-37A*6, EPD-37*6	EPD-96*5, DTP-64(PC)*5, EPD-37A*4, EPD-37*4, CCB-96*7
	Cables / Connectors	PCA100P, PCB100/96PS, PCB100WS	PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS, CN5-H96F	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M	PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS, CN5-H96F

Note:
*1: +5V power must be supplied from PCI bus slot.
*2: Requires use of optional cable PCB100/96PS.
*3: Requires use of optional cable PCB100WS.
*4: Requires use of optional cable PCB96W or PCB96WS.
*5: Requires use of optional cable PCB96P or PCB96PS.
*6: Requires use of optional cable PCB37P or PCB37PS.
*7: Requires use of optional cable PCB96P or PCB96PS and 37-pin D-SUB.

Digital I/O

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Box PCs
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Options
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Counters & Motor Controls
Communication
GPIB
Remote I/O
Bus Expansion System
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Remote Monitoring Solution
Service & Products

Lineup
PCI
Low Profile PCI
PC Card
USB
Compact PCI
ISA

PCI | 37-pin D-SUB | Input 16 | Output 16 | Isolated | High Voltage | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O
PIO-16/16H(PCI)H

- Supports high voltage (24 to 48VDC) input/output.
- Due to its 16-point common configuration, each common supports different external power source.
- Speedier response time of 200µsec or less is achieved.
- All the input signal points can be used as interrupt input.
- Equipped with a built-in output transistor protection circuit (surge voltage, excess voltage)

PCI | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | High Voltage | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O
PIO-32/32H(PCI)H

- Supports high voltage (24 to 48VDC) input/output.
- Due to its 16-point common configuration, each common supports different external power source.
- Speedier response time of 200µsec or less is achieved.
- All the input signal points can be used as interrupt input.
- Equipped with a built-in output transistor protection circuit (surge voltage, excess voltage)

Model		PIO-16/16H(PCI)H	PIO-32/32H(PCI)H
Input channels		16	32
Output channels		16	32
Input specifications	Type	Opto-Isolated (for high sink current output)	
	Signal Level	24~48VDC (±10%)	
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	32 interrupt signals combine to one interrupt request signal as INTA
	Resistance	15kΩ	
Output specifications	Type	Opto-Isolated Open Collector (Current sinking type)	
	Rating	60VDC 100mA	
Response Time (Max.)		200µsec	
Internal Power		-	
Wiring Distance		50m	
I/O Address		Any 32-byte boundary	
Power Consumption (Max.)		5VDC 150mA	5VDC 200mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 121.69(L) × 105.68(H)	PCI (32bit, 33MHz, 5V or 3.3V*1) / 176.41(L) × 105.68(H)
Connector		37-pin female D-type DCL-J37SAF-20L9 [JAE] or equivalent	PCR-E96LMD [HONDA Tsushin Kogyo] or equivalent
Options	Software	-	
	Accessories	EPD-37A*2, EPD-37*2	EPD-96*3, DTP-64(PC)*3, EPD-37A*4, EPD-37*4, CCB-96*5
	Cables / Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M	PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS, CN5-H96F

Note:
*1: +5V power must be supplied from PCI bus slot.
*2: Requires use of optional cable PCB37P or PCB37PS.
*3: Requires use of optional cable PCB96P or PCB96PS.
*4: Requires use of optional cable PCB96W or PCB96WS.
*5: Requires use of optional cable PCB96P or PCB96PS and 37-pin D-SUB.

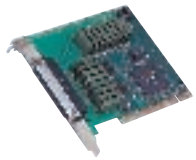
Digital I/O

PCI | 37-pin D-SUB | Input 16 | Output 16 | Isolated | High Voltage | Digital Filter | Non polarity | CE
Windows Driver | Linux Diver | LabVIEW

High-voltage Non-polar Opto-Isolated I/O
PIO-16/16RY(PCI)

- 16 semiconductor relay output
- Input/output supports both current sink and current source output
- Supports high-voltage input range - 12 to 48VDC / output - 120VAC/VDC
- All input signals can be used as interrupts
- Digital filtering function to prevent input error caused by noise and/or chattering

PCI | 37-pin D-SUB | Output 16 | Isolated | High Voltage | Non polarity | CE
Windows Driver | Linux Diver | LabVIEW



Reed Relay Output Board
RRY-16C(PCI)

- 16 independent reed relay outputs
- Output ratings can handle up to 125VAC/30VDC - 2A / channel

PCI | 37-pin D-SUB | Output 32 | Isolated | High Voltage | Non polarity | CE
Windows Driver | Linux Diver | LabVIEW

Reed Relay Output Board
RRY-32(PCI)

- 32 reed relay outputs
- Output ratings can handle up to 100VAC/VDC and 500mA per channel, 1A per common (max) for total of 8 points and 10VA (10W)
- Connector pin assignment is compatible with RRY-32(PC)

Model		PIO-16/16RY(PCI)	RRY-16C(PCI)	RRY-32(PCI)
Input channels		16	-	
Output channels		16		32
Input specifications	Type	Opto-Isolated (for high sink/source current output)	-	
	Signal Level	12~24VDC, 24~48VDC Each point can be set.	-	
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	-	
	Resistance	3kΩ<12~24VDC>, 6kΩ<24~48VDC>	-	
Output specifications	Type	Semiconductor Relay	Reed Relay Contact (1-make contact)	
	Rating	120VAC/VDC 100mA	-	
	Maximum Power	-	125V(AC), 30V(DC)	100V(AC), 100V(DC)
	Maximum Switching Current	-	2A (Max.)	0.5A
	Contact Resistance	-	30mΩ or less	100mΩ or less
	Life Expectancy	-	Min. 20 million times (Swithing Freq. 180 times/min)	Min. 200 million times
Response Time (Max.)		Input: 200μsec Output: 1.0msec	7msec	1msec
Internal Power		-		
Wiring Distance		50m		
I/O Address		Any 32-byte boundary	Occupies 4 ports	
Power Consumption (Max.)		5VDC 400mA	5VDC 700mA	5VDC 1200mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 176.41(L) × 105.68(H)	PCI (32bit, 33MHz, 5V) / 121.69(L) × 106.68(H)	PCI (32bit, 33MHz, 5V) / 176.41(L) × 106.68(H)
Connector		37-pin female D-type DCL-J37SAF-20L9 [JAE] or equivalent		
Options	Software	-		
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A*2, EPD-37*2, CM-32(PC)E*2	DTP-3(PC), DTP-4(PC), EPD-37A*2, EPD-37*2	
	Cables / Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M		
Note:		*1: +5V power must be supplied from PCI bus slot.	*2: Requires use of optional cable PCB37P or PCB37PS.	

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Remote Monitoring Solution
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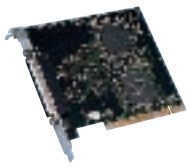
PCI | 37-pin D-SUB | Input 16 | Output 16 | Non-isolated | Digital Filter | CE
Windows Driver | Linux Diver | LabVIEW



TTL-Level Digital I/O
PIO-16/16T(PCI)

- 16 TTL-level input, 16 open collector output (40mA sink current max.)
- Digital filter and interrupt trigger edge can be set via software
- Connector pin assignment compatible with PIO-16/16T(PC)H

PCI | 37-pin D-SUB | Input 16 | Output 16 | Isolated | Power on Board | Hi-Speed Photocoupler | Digital Filter | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated TTL Digital I/O with On-board 5V Power Supply
PIO-16/16TB(PCI)

- 16 opto-isolated TTL digital input, 16 opto-isolated TTL digital output
- Features high-speed photo coupler 1µsec (max) response time
- Connector pin assignment compatible with PIO-16/16TB(PC)

PCI | 96-pin Half Pitch | Input 32 | Output 32 | Non-isolated | Digital Filter | CE
Windows Driver | Linux Diver | LabVIEW

TTL-Level Digital I/O
PIO-32/32T(PCI)

- 32 TTL-level input, 32 open collector output
- Digital filter and interrupt trigger edge can be set via software.
- Connector pin assignment compatible with PIO-32/32T(PC)H

PCI | 96-pin Half Pitch | Bi-direct 48 | Non-isolated | CE
Windows Driver | Linux Diver | LabVIEW

High Current Drive Bi-Directional Digital I/O
PIO-48D(PCI)

- 48 TTL current drive bi-directional digital I/O / Emulates i8255 PPI mode 0
- All 48 input signals can be used as interrupts

Model		PIO-16/16T(PCI)	PIO-16/16TB(PCI)	PIO-32/32T(PCI)	PIO-48D(PCI)
Input channels		16		32	-
Output channels		16		32	-
I/O channels		-			48
Input specifications	Type	TTL level (negative logic)	Opto-Isolated TTL (negative logic)	TTL level (negative logic)	TTL level (positive logic)
	Signal Level	5VDC			
	Interrupts	4 interrupt signals combine to one interrupt request signal as INTA			48 interrupt signals combine to one interrupt request signal as INTA
	Resistance	Pull-up:10k Ω	1.1kΩ	Pull-up: 10kΩ	
Output specifications	Type	Open Collector (negative logic)	Opto-Isolated TTL (Negative Logic)	Open Collector (negative logic)	TTL level (positive logic)
	Rating	30VDC 40mA	5VDC 6.4mA	30VDC 40mA	5VDC I_{OL}=24mA, I_{OH}=-15mA
Response Time (Max.)		200nsec	1µsec	200nsec	
Internal Power		-	5VDC 400mA	-	
Wiring Distance		1.5m	5m	1.5m	
I/O Address		Any 32-byte boundary			
Power Consumption (Max.)		5VDC 400mA	5VDC 500mA (External), 5VDC 1150mA (On-board)	5VDC 500mA	5VDC 600mA
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V) / 121.69(L) × 106.68(H)	PCI (32bit, 33MHz, 5V) / 176.41(L) × 106.68(H)	PCI (32bit, 33MHz, 5V) / 121.69(L) × 106.68(H)	PCI (32bit, 33MHz, 5V) / 176.41(L) × 106.68(H)
Connector		37-pin female D-type DCL-J37SAF-20L9 [JAE] or equivalent		PCR-E96LMD [HONDA Tsushin Kogyo] or equivalent	
Options	Software	-			
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A*1, EPD-37*1, CM-32(PC)E*1		DTP-3(PC)*2, DTP-4(PC)*2, DTP-64(PC)*3, EPD-96*3, CM-32(PC)E*2, CM-64(PC)E*3, CCB-96*3	DTP-64(PC)*3, EPD-96*3
	Cables / Connectors	PCA37P-1.5, PCB37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P, CN5-D37M	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M	PCA96P-1.5, PCB96P-1.5, PCB96W-1.5, PCA96PS-0.5/1.5, PCB96PS-0.5/1.5, PCB96WS-1.5P, CN5-H96F	CN1: PCA96PS-0.5P/1.5P, PCB96PS-0.5P/1.5P, PCA96P-0.5/1.5, PCB96P-0.5/1.5,CN5-H96F CN2, 3: PCA50J-1.5, DT/F4
Note:		*1: Requires use of optional cable PCB37P or PCB37PS. *3: Requires use of optional cable PCB96P or PCB96PS.		*2: Requires use of optional cable PCB96W or PCB96WS.	

Digital I/O

PCI | 96-pin Half Pitch | Bi-direct 32 | Non-isolated | Bus Master | CE
Windows Driver | Linux Driver

FEATURES
★ 32 signals(configurable as 32 input signals, 16 I/O signalsor 32 output signals)
★ Stores digital signals at a sampling rate of 20 MHz - capable of detecting patterns (pattern input) and being used as a 20 MHz digital pattern generator (pattern output)
● Equipped with sync signal control connection. By using a sync signal cable, multiple boards can operate in sync with one another.

High Speed Bi-Directional Digital I/O

PIO-32DM(PCI)

API-PAC(W32) [API Function Library]

SPECIFICATIONS

Number of channels	32ch (16 input signals, 16 I/O signals or 32 output signals - software selectable)
I/O Circuit	
Signal level	5VDC
Internal power	-
Input specifications	
Type	TTL level (positive logic)
Interrupt	Errors and various factors, one interrupt request line as INTA
Resistance	10kΩ
Output specifications	
Type	TTL level (positive logic)
Rating	5VDC 24mA
Response time	50nsec (max)

Wiring distance	1.5m (max)
I/O address	Occupies 2 : any 32- and 64-byte boundary
Power consumption	5VDC 700mA (max)
Bus / Dimensions (mm)	PCI (32bit, 33MHz, 5V) / 176.41(L) × 106.68(H)
Connector	Sync. Section: PS-10PE-D4L1-B1 [JAE] or equivalent × 2 Digital Section: PCR-96LMD [HONDA] or equivalent
Options	
Software	-
Accessories	EPD-96 *1, DTP-64(PC)*1
Cables / Connectors	PCA96PS-0.5/1.5, PCB96PS-0.5/1.5, PCA96P-1.5, PCB96P-1.5, CN5-H96F

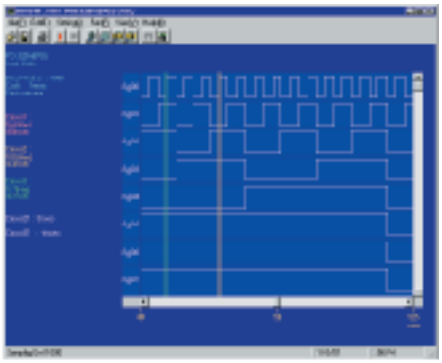
*1: Requires use of optional cable PCB96P or PCB96PS

Functions

Bus Master Transfer
Utilizing Bus Master, the data transfer rate between the PC and CONTEC's PIO-32/32DM(PC)board is 80MB / sec. (133MB /sec. -max) without putting additional burden on the host computer's CPU.

Synchronization Control
The board is equipped with a synchronization control connector to allow easy inter-board synchronization.
16 boards (max) can be interconnected (including the master).

Pattern Input / Output
The PIO-32DM(PCI) stores digital signals at a sampling rate of 20 MHz and is capable of detecting patterns (pattern input). It can also be used as a 20 MHz digital pattern generator (pattern output).



PCI | CE

FEATURES
★ Provides 2 interface channels IEEE 1284 / Centronics - compliant
★ Supports 5 modes of IEEE-1284 (Compatibility, Nibble, Byte, EPP, ECP) user selectable dependant on OS and device
● Up to 16 PRN-2(PCI) boards can be used at the same time under Windows NT 4.0, and Only one board can be used under Windows XP/2000/Me/98/95

Parallel Port Extension

PRN-2(PCI)

LPT Driver for Windows© XP/NT/Me/98/95

SPECIFICATIONS

Channels	2ch
Communication standard	IEEE-1284
Communication mode	Compatibility, Nibble, Byte, EPP, ECP
Hardware Specifications	TTL level (+5V)
Controller	ST78C236CJ44(EXAR) or equivalent
Reference clock	24MHz (Reference clock of on-chip LSI)
Wiring distance	5m max
Interrupts	1 level
I/O address	16 ports (control port) + (8 ports + 4 ports) × 2
Supply voltage	5VDC (±5%)
Power consumption	5VDC 150mA (max)
Dimensions (mm)	121.69(L) × 106.68(H)

Connector	DHA-RP36-R13AN [DDK] or equivalent
Options	
Software	-
Accessories	-
Cables / Connector	PRN-CB105

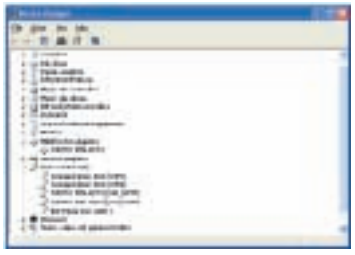
PRN-CB105 (5m)

Support Software

PRN-DRV(W32)
LPT driver software for PRN-2(PCI)

PRN-2(PCI) drivers for Windows© PRN-DRV(W32) is a utility software that displays the LPT numbers assigned to the individual channels on CONTEC's PRN-2(PCI).

For latest driver versions, please visit our web site.



* Transfer mode is dependant on device type and operating system (refer to the following table,)

Device Type	OS	IEEE 1284				
		Compatibility	Nibble	Byte	EEP	ECP
IBM PC/AT Compatible NEC-PC98-NX	Windows XP/2000/Me/98/95	○	○	○	○	○
	Windows NT 4.0	○	○	×	×	×
NEC PC-9800 series	Windows 2000/Me/98/95	×	×	×	×	×
	Windows NT 4.0	○	○	×	×	×

Digital I/O

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Communication
GPIB
Remote I/O
Bus Expansion System
Software
Accessories & Cables
Distributed Monitor & Control Network: F&eIT
Multi-Programmable Display
Remote Monitoring Solution
Service & Products

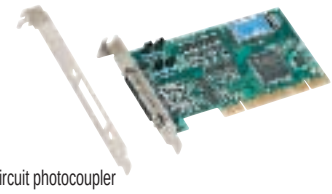
Lineup
PCI
Low Profile PCI
PC Card
USB
Compact PCI
ISA

Low Profile PCI | 50-pin Mini-Ribbon | Input 16 | Output 16 | Isolated | Digital Filter | Surge & Overcurrent Protection | CE
Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O
PIO-16/16L(LPCI)H

- Low Profile PCI-compliant (Standard-size bracket included)
- 16 opto-isolated input, 16 opto-insolated open collector output
- Fast response time (within 200µsecs.)
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

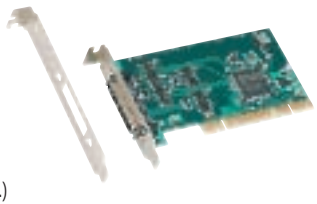
Low Profile PCI | 50-pin Mini-Ribbon | Input 16 | Output 16 | Isolated | Power on Board | Digital Filter | Surge & Overcurrent Protection
Windows Driver | Linux Diver | LabVIEW



Opto-Isolated Digital I/O with On-board 12V Power Supply
PIO-16/16B(LPCI)H

- Low Profile PCI-compliant (Standard-size bracket included)
- On-board battery (12VDC 125mA) to drive the input/output circuit photocoupler
- Fast response time (within 200 µsecs.)
- All input signals can be used as interrupts
- Output transistor has built-in circuit protection (voltage surge, overcurrent)

Low Profile PCI | 50-pin Mini-Ribbon | Input 16 | Output 16 | Non-isolated | Digital Filter | CE
Windows Driver | Linux Diver | LabVIEW



TTL-Level Digital I/O
PIO-16/16T(LPCI)H

- Low Profile PCI-compliant (Standard-size bracket included)
- 16 TTL input, 16 open collector output (40mA sink current max.)
- All input signals can be used as interrupts
- Digital filter and interrupt trigger edge can be set via software

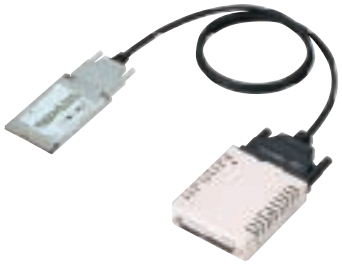
Model		PIO-16/16L(LPCI)H	PIO-16/16B(LPCI)H	PIO-16/16T(LPCI)H	
Input channels		16			
Output channels		16			
Input specifications	Type	Opto-Isolated (for high sink current output)		TTL level (negative logic)	
	Signal Level	12~24VDC		5VDC	
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA			
	Resistance	4.7kΩ			
Output specifications	Type	Opto-Isolated Open Collector (Current sinking type)		Open Collector (negative logic)	
	Rating	35VDC 100mA		30VDC 40mA	
Response Time (Max.)		200µsec		200nsec	
Internal Power		-	12VDC 125mA	-	
Wiring Distance		50m		1.5m	
I/O Address		Any 32-byte boundary			
Power Consumption (Max.)		5VDC 100mA	5VDC 100mA (External), 5VDC 600mA (On-board)	5VDC 100mA	
Bus / Dimensions (mm)		PCI (32bit, 33MHz, 5V or 3.3V*1) / 121.69(L) × 63.41(H)			
Connector		50-Pin Mini-Ribbon Connector 10250-52A2JL [3M] or equivalent			
Options	Software	-			
	Accessories	EPD-50A*2, EPD-37A*3, EPD-37 *3, DTP-3(PC)*4, DTP-4(PC)*4, CM-32(PC)E *3			
	Cables / Connectors	PCA50PS, PCB50PS, PCE50/37PS-0.5P		PCA50PS-0.5P/1.5P, PCB50PS-0.5P/1.5P, PCE50/37PS-0.5P	
Note:		*1: +5V power must be supplied from PCI bus slot. *2: Requires use of optional cable PCB50PS. *3: Requires use of optional cable PCE50/37PS-0.5P and PCB37P or PCB37PS. *4: Requires use of optional cable PCE50/37PS-0.5P.			

Digital I/O

Card Bus | 37-pin D-SUB | Input 16 | Output 16 | Isolated | Digital Filter | Surge & Overcurrent Protection | CE

Windows Driver | Linux Diver | LabVIEW

Opto-Isolated Digital I/O
PIO-16/16L(CB)H



- The connector pin-out is compatible with PIO-16/16L(PCI)H, PIO-16/16L(PCI) and PIO-16/16L(PM).
- Supporting high-speed response of 200µsec or less
- Featuring a 16-point configuration, each common corresponds to a different external power source
- All input points can be used as interrupts

* This card cannot be used with another card requiring external connections when used on a PC with 2 TYPEII PC card slots. For simultaneous use, the other card must be a PC card (excluding memory card) that does not require an external connector.

Card Bus | 68-pin 0.8mm Pitch | Bi-direct 16 | Non-isolated | Digital Filter

Windows Driver | Linux Diver | LabVIEW

Bi-Directional LVTTL Digital I/O
PIO-48D(CB)H

NEW

Pb Free

- 48-point two-way digital I/O i8255 Mode 0 - compliant
- 200nsec high-speed response with non-Isolated LVTTL level I/O
- Equipped with functions equivalent to those of PCI bus-compliant board PIO-48D(PCI)
- All input signals (Max. 48 points) can be used as interrupts

* This card cannot be used with another card requiring external connections when used on a PC with 2 TYPEII PC card slots. For simultaneous use, the other card must be a PC card (excluding memory card) that does not require an external connector.

Optional cable
DIO-68M/96F

Model		PIO-16/16L(CB)H	PIO-48D(CB)H
Input channels		16 channels share one common (All the input points can be used as interrupt input.)	-
Output channels		16 channels share one common	-
I/O channels		-	48
Input specifications	Type	Opto-Isolated (for high sink current output)	TTL level (positive logic)
	Signal Level	12~24VDC(±10%)	-
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	Outputs 1 interrupt signal INT by putting together 48 points of interrupt input signals. Interrupt is generated at the edge (set by software) of fall (HIGH→LOW)or rise (LOW→HIGH).
	Resistance	4.7kΩ	-
Output specifications	Type	Opto-Isolated Open Collector (Current sinking type) (negative logic)	-
	Rating	35VDC 100mA	-
Response Time (Max.)		200µsec	200nsec
Internal Power		-	
Wiring Distance		50m (Max.)	1.5m (Max.)
I/O Address		Any 32-byte boundary	
Power Consumption (Max.)		3.3V 200mA	3.3V 120mA
Bus / Dimensions (mm)		PC Card Standard CardBus / TYPE II	PC Card Standard CardBus / 85.6(W) × 54.0(D) × 5.0(H) TYPE II
Connector		37-pin female D-type DCL-J37SAF-20L9 [JAE] or equivalent	68-pin 0.8mm Pitch
Options	Software	-	
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A*1, EPD-37*1, CM-32(PC)E*1	DTP-64(PC)*2, EPD-96*2
	Cables / Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M	DIO-68M/96F, PCA68PS-0.5P/1.5P
Note:		*1: Requires use of optional cable PCB37P or PCB37PS. *2: Requires use of optional cable DIO-68M/96F.	

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PCMCIA | 37-pin D-SUB | Input 16 | Output 16 | Isolated | Digital Filter | Surge Protection | CE
Windows Driver | LabVIEW

Opto-Isolated Digital I/O
PIO-16/16L(PM)

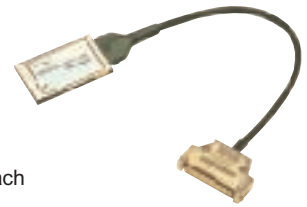
- Connector pin assignment compatible with PIO-16/16L(PCI)H, PIO-16/16L(PCI), PIO-16/16L(PC)V
- Digital filter can be applied to input signals
- All 16 input signals can be used as interrupts

* This card cannot be used with another card requiring external connections when used on a PC with 2 TYPEII PC card slots. For simultaneous use, the other card must be a PC card (excluding memory card) which does not require an external connector.

PCMCIA | 37-pin D-SUB | Bi-direct 24 | Non-isolated | CE
Windows Driver | LabVIEW

Bi-Directional TTL-Level Digital I/O
PIO-24W(PM)

- High speed TTL-level I/O (positive logic)
- 24 bi-directional channels, 3 groups of 8 points each



PCMCIA | 37-pin D-SUB | Bi-direct 32 | Non-isolated | Digital Filter | CE
Windows Driver | LabVIEW

TTL-Level Digital I/O
PIO-32D(PM)

- Groups can be either input or output (user selectable) i.e. card can support different configurations, including 16 input /16 output; all 32 as input or all 32 as output
- High speed TTL-level I/O
- All input signals can be used as interrupts

* This card cannot be used with another card requiring external connections when used on a PC with 2 TYPEII PC card slots. For simultaneous use, the other card must be a PC card (excluding memory card) which does not require an external connector.

Model		PIO-16/16L(PM)	PIO-24W(PM)	PIO-32D(PM)
Input channels		16 channels share one common (All the input points can be used as interrupt input.)	-	
Output channels		16 channels share one common	-	
I/O channels		-	24	32
Controller Chip		-	i8255 compatibility	
Input specifications	Type	Opto-Isolated (for high sink current output) (negative logic)	TTL level (positive logic)	
	Signal Level	12~24VDC	-	
	Interrupts	16 interrupt signals combine to one interrupt request signal as INTA	-	
	Resistance	3kΩ	33Ω (1LS TTL load)	Pull-up 100kΩ
Output specifications	Type	Opto-Isolated Open Collector (Current sinking type) (negative logic)	TTL level (positive logic)	
	Rating	35VDC 100mA	5VDC 1mA (2LS TTL load)	I_{OL}=6mA, I_{OH}=-2mA
Response Time (Max.)		1msec	200nsec	
Internal Power		-		
Wiring Distance		50m (Max.)	1.5m (Max.)	
I/O Address		Any 16-byte boundary		
Power Consumption (Max.)		5VDC 200mA	5VDC 100mA	5VDC 200mA
Bus / Dimensions (mm)		PCMCIA Rel.2.1/JEIDA 4.2 upper / Typel II	PCMCIA Rel.2.0/JEIDA 4.1 upper / Type II	PCMCIA Rel.2.1/JEIDA 4.2 upper / Type II
Connector		37-pin female D-type		
Options	Software	-		
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A*1, EPD-37*1, CM-32(PC)E*1	DTP-3(PC), DTP-4(PC), EPD-37A*1, EPD-37*1	DTP-3(PC), DTP-4(PC), EPD-37A*1, EPD-37*1, CM-32(PC)E*1
	Cables / Connectors	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M	PCA37P-1.5, PCB37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P, CN5D37M	

Note: *1: Requires use of optional cable PCB37P or PCB37PS.

Digital I/O

USB 2.0 | Input 32 | Isolated | Windows Driver | LabVIEW

Opto-Isolated Digital Input (USB cable included)

DI-32(USB)

NEW

- On-board trigger monitoring
- Screw-less connectors for easy wiring
- Input channels can be expanded by use of extension modules (3 modules - max)
- Sample development and utility debugging software included

USB 2.0 | Output 32 | Isolated | Windows Driver | LabVIEW

Opto-Isolated Digital Output (USB cable included)

DO-32(USB)

NEW

- Transistor Output that is designed to work with large capacities: 12~24V, 150mA (max.) per channel; 36~48V, 50mA (max.) per channel (Drives LED display directly)
- Screw-less connectors for easy wiring
- Output channels can be expanded by use of extension modules (3 modules - max)
- Sample development and utility debugging software included

USB 2.0 | Input 16 | Output 16 | Isolated | Windows Driver | LabVIEW

Opto-Isolated Digital I/O (USB cable included)

DIO-16/16(USB)GY

NEW

- On-board trigger monitoring (Digital Input)
- Transistor Output that is designed to work with large capacities: 12~24V, 150mA (max.) per channel; 36~48V, 50mA (max.) per channel (Drives LED display directly)
- Screw-less connectors for easy wiring
- I/O channels can be expanded by use of extension modules (3 modules - max)
- Sample development and utility debugging software included

Model		DI-32(USB)	DO-32(USB)	DIO-16/16(USB)GY	
Input channels		32	-	16	
Output channels		-	32	16	
Input specifications	Type	Opto-Isolated (for high sink/source current output)	-	Opto-Isolated (for high sink/source current output)	
	Signal Level	12~24VDC	-	12~24VDC	
	Resistance	3kΩ	-	3kΩ	
Output specifications	Type	-	Opto-Isolated Open Collector (current sinking type)		
	Rating	-	12~48VDC, 150mA per point (12~24V)50mA per point (36~48V)		
Response Time (Max.)		1msec*1			
Connector		FMC 1,5/18-ST-3.5 [PHOENIX CONTACT]			
Wiring Distance		50m			
USB speed		12Mbps <Full speed>, 480Mbps <High speed>			
Power Consumption (Max.)		5VDC 450mA *2			
Dimensions (mm)		50.4(W) × 64.7(D) × 94.0(H)			
Weight (main unit)		100g			
Included cable Length		USB cable 1.8m			
Options	Software	-			
	Applicable Modules *3	DI-32(FIT)GY	DO-32(FIT)GY	DIO-16/16(FIT)GY	
	Applicable Power Supplies *3	POW-AD13GY, POW-AD22GY, POW-AD25GY, POW-DD10GY, POW-DD43GY			
	Applicable Adapters *3	POA-AD22			

Note:
*1: USB module will execute API function via USB communication. The time required for such execution is about several milliseconds.
*2: Since current consumption may exceed 500mA when using extension modules, please use an optional power supply.
*3: Please refer to P-04 or visit our web site for the details of Applicable Modules, Power supplies, Adapters.

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USB 2.0 | Input 16 | Isolated | CE | Windows Driver | LabVIEW

Opto-Isolated Digital Input (USB cable included)

DI-16(USB)GY

- On-board trigger monitoring
- 2 Screw-less connectors for easy wiring - no special tools needed
- Input channels can be expanded by use of extension modules (3 modules - max)
- Sample development and utility debugging software included

USB 2.0 | Output 16 | Isolated | CE | Windows Driver | LabVIEW

Opto-Isolated Digital Output (USB cable included)

DO-16(USB)GY

- Transistor Output that is designed to work with large capacities, 24VDC, 150mA (max) per channel (Drives LED display directly)
- 2 Screw-less connectors for easy wiring - no special tools needed
- Output channels can be expanded by use of extension modules (3 modules - max)
- Sample development and utility debugging software included

USB 2.0 | Input 8 | Output 8 | Isolated | CE | Windows Driver | LabVIEW

Opto-Isolated Digital I/O (USB cable included)

DIO-8/8(USB)GY

- On-board trigger monitoring (Digital Input)
- Transistor Output that is designed to work with large capacities, 24VDC, 150mA (max) per channel (Drives LED display directly)
- 2 Screw-less connectors for easy wiring - no special tools needed
- I/O channels can be expanded by use of extension modules (3 modules - max)
- Sample development and utility debugging software included

Model		DI-16(USB)GY	DO-16(USB)GY	DIO-8/8(USB)GY	
Input channels		16	-	8	
Output channels		-	16	8	
Input specifications	Type	Opto-Isolated (for high sink/source current output)	-	Opto-Isolated (for high sink/source current output)	
	Signal Level	12~24VDC	-	12~24VDC	
	Resistance	3kΩ	-	3kΩ	
Output specifications	Type	-	Opto-Isolated Open Collector (current sinking type)		
	Rating	-	12~24VDC 150mA		
Response Time (Max.)		1msec*1			
Connector		FK-MC 0.5/9-ST-2.5 [PHOENIX CONTACT]			
Wiring Distance		50m			
USB speed		12Mbps <Full speed>, 480Mbps <High speed>			
Power Consumption (Max.)		5VDC 450mA *2			
Dimensions (mm)		50.4(W) × 64.7(D) × 94.0(H)			
Weight (main unit)		100g			
Included cable Length		USB cable 1.8m			
Options	Software	-			
	Applicable Modules *3	DI-16(FIT)GY	DO-16(FIT)GY	DIO-8/8(FIT)GY	
	Applicable Power Supplies *3	POW-AD13GY, POW-AD22GY, POW-AD25GY, POW-DD10GY, POW-DD43GY			
	Applicable Adapters *3	POA-AD22			

*1: USB module will execute API function via USB communication. The time required for such execution is about several milliseconds.
*2: Since current consumption may exceed 500mA when using extension modules, please use an optional power supply.
*3: Please refer to P-04 or visit our web site for the details of Applicable Modules, Power supplies, Adapters.

Note:

Digital I/O

Compact PCI | 96-pin Half Pitch | Input 64 | Isolated | Digital Filter | Windows Driver | LabVIEW

Opto-Isolated Digital Input
PI-64L(CPCI)

- 64 opto-isolated input with superb noise resistance (12 to 24VDC)
- Digital filter and interrupt trigger edge can be set via software
- Connector pin assignment compatible with PI-64L(PCI)

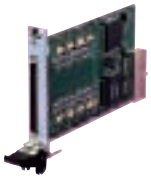
Compact PCI | 96-pin Half Pitch | Output 64 | Isolated | Windows Driver | LabVIEW

Opto-Isolated Digital Output
PO-64L(CPCI)

- 64 opto-isolated open collector output (35VDC, 100mA)
- Provides information on the state of the current output data without affecting that data
- Connector pin assignment compatible with PO-64L(PCI)

Compact PCI | 96-pin Half Pitch | Input 32 | Output 32 | Isolated | Digital Filter | Windows Driver | LabVIEW

Opto-Isolated Digital I/O
PIO-32/32L(CPCI)



- 32 opto-isolated input, 32 points opto-isolated open collector output
- Digital filter and interrupt trigger edge can be set via software
- Connector pin assignment compatible with PIO-32/32L(PC)

Model		PI-64L(CPCI)	PO-64L(CPCI)	PIO-32/32L(CPCI)	
Input channels		64	-	32	
Output channels		-	64	32	
I/O Circuit	Signal Level	12~24VDC (±15%) (4mA/12V~8mA/24V per point)	12~24VDC (±15%)	12~24VDC (±15%) (4mA/12V~8mA/24V per point)	
	Internal Power	-			
Input specifications	Type	Opto-Isolated (for high sink current output)	-	Opto-Isolated (for high sink current output)	
	Interrupts	4 interrupt signals combine to one interrupt request signal as INTA	- -	4 interrupt signals combine to one interrupt request signal as INTA	
	Resistance	3kΩ		3kΩ	
Output specifications	Type	-	Opto-Isolated Open Collector (Current sinking type)		
	Rating	-	35VDC 100mA		
Expansion Function		-			
Response Time (Max.)		1msec			
Wiring Distance		50m (Max.)			
I/O Address		Any 32-byte boundary			
Power Consumption (Max.)		5VDC 300mA			
Bus / Dimensions (mm)		Compact PCI / 3U × 4HP			
Connector		96-pin Half Pitch (male)			
Options	Software	API-PAC(W32)			
	Accessories	DTP-3(PC)*1, DTP-4(PC)*1, DTP-64(PC)*2, EPD-96*2, CM-32(PC)E*1, CM-64(PC)E*2, CCB-96*2			
	Cables / Connectors	PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS			

*1: Requires use of optional cable PCB96WS.
*2: Requires use of optional cable PCB96PS.

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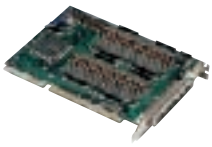
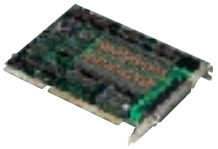
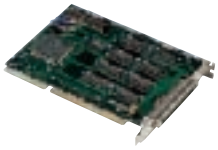
ISA

Model	Opto-Isolated Digital Input Board PI-32L(PC)V	Opto-Isolated Digital Input Board PI-64L(PC)	Opto-Isolated Digital Input Board with On-Board 12V Power Supply PI-32B(PC)H
			
SPECIFICATIONS			
Input channels	32	64	32
Output channels	-		
I/O Circuit — Signal level	12~24VDC		
I/O Circuit — Internal power	-		12VDC 250mA
Input specifications — Type	Opto-Isolated (for high sink current output)		
Input specifications — Interrupts	Can use 2 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15	Can use 4 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15	Can use 2 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15
Input specifications — Resistance	3kΩ		
Output specifications — Type	-		
Output specifications — Rating	-		
Expansion function	-	Yes	-
Response time (Max.)	1msec		
Wiring Distance	50m		30m
I/O address	4 ports occupation	Any 8-byte boundary (general) Any 16-byte boundary (optional)	4 ports occupation
Power consumption (Max.)	5VDC 50mA	5VDC 100mA	5VDC 50mA (External) 5VDC 800mA (On-board)
Bus / Dimension (mm)	ISA AT Bus / 163.0(L) × 122.0(H) viz. 6.5"(L) × 4.75"(H)		
Connector	37-pin female D-type	96-pin half pitch connector (male)	37-pin female D-type
Option — Software	API-PAC(W32)		
Option — Accessories	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1, CM-32(PC), CM-32(PC)E *1	DTP-3(PC) *2, DTP-4(PC) *2, DTP-64 *3, EPD-96 *3, CCB-96 *3 CM-32(PC) *2, CM-64(PC)E *3	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1, CM-32(PC), CM-32(PC)E *1
Option — Cables / Connector	PCA37P, PCB37P, PCA37PS, PCB37PS	PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS	PCA37P, PCB37P, PCA37PS, PCB37PS
CE marking	○	○	○

*1: Requires use of optional cable PCB37P or PCB37PS.
*2: Requires use of optional cable PCB96W or PCB96WS.
*3: Requires use of optional cable PCB96P or PCB96PS.

ISA

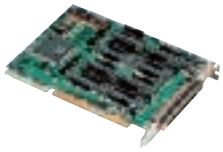
Model	Negative-Common Opto-Isolated Digital Input Board PI-32RL(PC)	TTL Digital Input Board PI-32T(PC)H	PI-64T(PC)
			
SPECIFICATIONS			
Input channels	32		64
Output channels	-		
I/O Circuit — Signal level	12~24VDC	5VDC	
I/O Circuit — Internal power	-		
Input specifications — Type	Opto-Isolated (for source current output)	TTL-level	
Input specifications — Interrupts	Can use 2 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15	Can use 2 interrupt lines simultaneously from IRQ 3~7, 9	Can use 4 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15
Input specifications — Resistance	3kΩ	10kΩ	
Output specifications — Type	-		
Output specifications — Rating	-		
Expansion function	-		Yes
Response time (Max.)	1msec	200nsec	
Wiring Distance	50m	1.5m	
I/O address	4 ports occupation		Any 8-byte boundary (general) Any 16-byte boundary (optional)
Power consumption (Max.)	5VDC 300mA	5VDC 420mA	5VDC 200mA
Bus / Dimension (mm)	ISA AT / 6.5"(L) × 4.75"(H)	ISA XT / 5.5"(L) × 4.25"(H)	ISA AT / 6.5"(L) × 4.75"(H)
Connector	37-pin female D-type		96-pin half pitch connector (male)
Option — Software	API-PAC(W32)		
Option — Accessories	DTP-3(PC), DTP-4(PC), EPD-37A *1, EPD-37 *1	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1, CM-32(PC), CM-32(PC)E *1	DTP-3(PC) *2, DTP-4(PC) *2, DTP-64 *3, EPD-96 *3, CCB-96 *3 CM-32(PC) *2, CM-64(PC)E *3
Option — Cables / Connector	PCA37P, PCB37P, PCA37PS, PCB37PS	PCA37P-1.5, PCB37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P	PCA96P-1.5, PCB96P-1.5, PCB96W-1.5, PCA96PS-0.5/1.5, PCB96PS-0.5/1.5, PCB96WS-1.5P
CE marking	○	○	○

*1: Requires use of optional cable PCB37P or PCB37PS.
*2: Requires use of optional cable PCB96W or PCB96WS.
*3: Requires use of optional cable PCB96P or PCB96PS.

Digital I/O

ISA

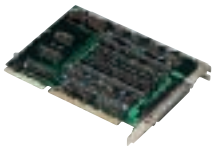
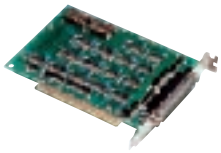
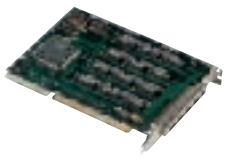
SPECIFICATIONS

Model		Opto-Isolated Digital Output Board PO-32L(PC)V	PO-64L(PC)	Opto-Isolated Digital Output Board with On-Board 12V Power Supply PO-32B(PC)H
				
Input channels		-		
Output channels		32	64	32
I/O Circuit	Signal level	12~24VDC		
	Internal power	-		+12VDC 250mA
Input specifications	Type	-		
	Interrupt	-		
	Resistance	-		
Output specifications	Type	Opto-Isolated Open Collector (current sinking type)		
	Rating	35VDC 100mA	35VDC 150mA	35VDC 100mA
Expansion function		-	Yes	-
Response time (Max.)		1msec		
Wiring Distance		50m		30m
I/O address		4 ports occupation	Any 8-byte boundary (general) Any 16-byte boundary (optional)	4 ports occupation
Power consumption (Max.)		5VDC 50mA	5VDC 250mA	5VDC 50mA (External) 5VDC 800mA (On-board)
Bus / Dimension (mm)		ISA AT Bus / 163.0(L) × 122.0(H) viz. 6.5"(L) × 4.75"(H)		
Connector		37-pin female D-type	96-pin half pitch connector (male)	37-pin female D-type
Option	Software	API-PAC(W32)		
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1, CM-32(PC), CM-32(PC)E *1	DTP-3(PC) *2, DTP-4(PC) *2, DTP-64 *3, EPD-96 *3, CCB-96 *3 CM-32(PC) *2, CM-64(PC)E *3	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1, CM-32(PC), CM-32(PC)E *1
	Cables / Connector	PCA37P, PCB37P, PCA37PS,PCB37PS	PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS	PCA37P, PCB37P, PCA37PS, PCB37PS
CE marking		○	○	○

*1: Requires use of optional cable PCB37P or PCB37PS.
*2: Requires use of optional cable PCB96W or PCB96WS.
*3: Requires use of optional cable PCB96P or PCB96PS.

ISA

SPECIFICATIONS

Model		Negative-Common Opto-Isolated Digital Output Board PO-32RL(PC)	TTL-Level Digital Output Board PO-32T(PC)H	PO-64T(PC)
				
Input channels		-		
Output channels		32		64
I/O Circuit	Signal level	12~24VDC	5VDC	
	Internal power	-		
Input specifications	Type	-		
	Interrupt	-		
	Resistance	-		
Output specifications	Type	Opto-Isolated (current sourcing type)	Open collector output (negative logic), TTL	TTL Open collector
	Rating	35VDC 150mA	5VDC 40mA	30VDC 40mA
Expansion function		-		Yes
Response time (Max.)		1msec	200nsec	
Wiring Distance		50m	1.5m	
I/O address		4 ports occupation		Any 8-byte boundary (general) Any 16-byte boundary (optional)
Power consumption (Max.)		5VDC 300mA	5VDC 550mA	5VDC 250mA
Bus / Dimension (mm)		ISA AT / 6.5"(L) × 4.75"(H)	ISA XT / 5.5"(L) × 4.25"(H)	ISA AT / 6.5"(L) × 4.75"(H)
Connector		37-pin female D-type		96-pin half pitch connector (male)
Option	Software	API-PAC(W32)		
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A *1, EPD-37 *1	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1, CM-32(PC), CM-32(PC)E *1	DTP-3(PC) *2, DTP-4(PC) *2, DTP-64 *3, EPD-96 *3, CCB-96 *3 CM-32(PC) *2, CM-64(PC)E *3
	Cables / Connector	PCA37P, PCB37P, PCA37PS, PCB37PS	PCA37P-1.5, PCB37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P	PCA96P-1.5, PCB96P-1.5, PCB96W-1.5, PCA96PS-0.5/1.5, PCB96PS-0.5/1.5, PCB96WS-1.5P
CE marking		○	○	○

*1: Requires use of optional cable PCB37P or PCB37PS.
*2: Requires use of optional cable PCB96W or PCB96WS.
*3: Requires use of optional cable PCB96P or PCB96PS.

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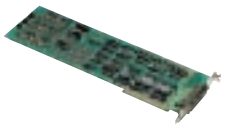
Opto-Isolated Digital I/O Board

PIO-16/16L(PC)V

PIO-32/32L(PC)



Opto-Isolated Digital I/O Board with On-Board 12V Power Supply

PIO-16/16B(PC)H

SPECIFICATIONS

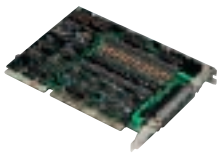
Model		PIO-16/16L(PC)V	PIO-32/32L(PC)	PIO-16/16B(PC)H
Input channels		16	32	16
Output channels		16	32	16
I/O Circuit	Signal level	12~24VDC		
	Internal power	-		12VDC 250mA
Input specifications	Type	Opto-Isolated (for high sink current output)		
	Interrupts	Can use 2 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15	Can use 4 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15	Can use 2 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15
	Resistance	3KΩ		
Output specifications	Type	Opto-Isolated Open Collector (current sinking type)		
	Rating	35VDC 100mA	35VDC 150mA	35VDC 100mA
Expansion function		-	Yes	-
Response time (Max.)		1msec		
Wiring Distance		50m		30m
I/O address		Any 2-byte boundary	Any 4-byte boundary (general) Any 16-byte boundary (optional)	Any 2-byte boundary
Power consumption (Max.)		5VDC 50mA	5VDC 180mA	5VDC 50mA (External)5VDC 800mA (On-board)
Bus / Dimension (mm)		ISA AT Bus / 163.0(L) × 122.0(H) viz. 6.5"(L) × 4.75"(H)		
Connector		37-pin female D-type	96-pin half pitch connector (male)	37-pin female D-type
Options	Software	API-PAC(W32)		
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37*1, EPD-37A*1, CM-32(PC), CM-32(PC)E*1	DTP-3(PC)*2, DTP-4(PC)*2, DTP-64*3, EPD-96*3, CCB-96*3, CM-32(PC)*2, CM-64(PC)E*3	DTP-3(PC), DTP-4(PC), EPD-37*1, EPD-37A*1, CM-32(PC), CM-32(PC)E*1
	Cables / Connector	PCA37P, PCB37P, PCA37PS, PCB37PS	PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS	PCA37P, PCB37P, PCA37PS, PCB37PS
CE marking		○	○	○

*1: Requires use of optional cable PCB37P or PCB37PS.
*2: Requires use of optional cable PCB96W or PCB96WS.
*3: Requires use of optional cable PCB96P or PCB96PS.

ISA

Negative-Common Opto-Isolated I/O Output Board

PIO-16/16RL(PC)



PIO-32/32RL(PC)

SPECIFICATIONS

Model		PIO-16/16RL(PC)	PIO-32/32RL(PC)
Input channels		16	32
Output channels		16	32
I/O Circuit	Signal level	12~24VDC	
	Internal power	-	
Input specifications	Input type	Opto-Isolated (for source current output)	
	Interrupts	Can use 2 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15	Can use 4 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15
	Input resistance	3KΩ	
Output specifications	Output type	Opto-Isolated (current sourcing type)	
	Output rating	35VDC 150mA	
Expansion function		-	Yes
Response time (Max.)		1msec	
Wiring Distance		50m	
I/O address		Any 2-byte boundary	Any 4-byte boundary (general) Any 16-byte boundary (optional)
Power consumption (Max.)		5VDC 350mA	5VDC 150mA
Bus / Dimensions (mm)		ISA AT Bus / 163.0(L) × 122.0(H) viz. 6.5"(L) × 4.75"(H)	
Connector		37-pin female D-type	96-pin half pitch connector (male)
Option	Software	API-PAC(W32)	
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37A*1, EPD-37*1	DTP-3(PC)*2, DTP-4(PC)*2, DTP-64*3, EPD-96*3
	Cables / Connector	PCA37P, PCB37P, PCA37PS, PCB37PS	PCA96P, PCB96P, PCB96W, PCA96PS, PCB96PS, PCB96WS
CE marking		○	○

*1: Requires use of optional cable PCB37P or PCB37PS.
*2: Requires use of optional cable PCB96W or PCB96WS.
*3: Requires use of optional cable PCB96P or PCB96PS.

Digital I/O

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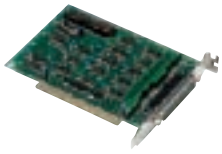
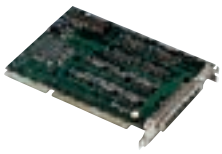
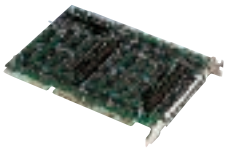
SPECIFICATIONS

Model		TTL-Level Digital I/O Board PIO-16/16T(PC)H	TTL-Level Digital I/O Board PIO-32/32T(PC)	High Current Drive Bi-Directional Digital I/O Board PIO-48D(PC)
				
Input channels		16	32	48
Output channels		16	32	
I/O Circuit	Signal level	5VDC		
	Internal power	-		
Input specifications	Type	TTL-level		
	Interrupt	Can use 2 interrupt lines simultaneously from IRQ 3~7, 9	Can use 4 interrupt lines simultaneously from IRQ 3~7, 9~12, 14 and 15	
	Resistance	10kΩ		
Output specifications	Type	Open collector output (negative logic), TTL	TTL Open collector	TTL-level with Buffer
	Rating	5VDC 40mA	30VDC 40mA	5VDC 24mA
Expansion function		-	Yes	-
Response time (Max.)		200nsec		
Wiring Distance		1.5m		
I/O address		Any 2-byte boundary	Any 4-byte boundary (general) Any 16-byte boundary (optional)	Any 8-byte boundary
Power consumption (Max.)		5VDC 550mA	5VDC 250mA	5VDC 1.25A
Bus / Dimensions (mm)		ISA XT / 5.5"(L) × 4.25"(H)	ISA AT / 6.5"(L) × 4.75"(H)	
Connector		37-pin female D-type	96-pin half pitch connector (male)	50-pin header (male) × 2
Option	Software	API-PAC(W32)		
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1, CM-32(PC), CM-32(PC)E *1	DTP-3(PC) *2, DTP-4(PC) *2, DTP-64 *3, EPD-96 *3, CCB-96 *3 CM-32(PC) *2, CM-64(PC)E *3	STP-50H(98), SCP-50H(98), PSD-50(98)J
	Cables / Connector	PCA37P-1.5, PCB37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P	PCA96P-1.5, PCB96P-1.5, PCB96W-1.5, PCA96PS-0.5/1.5, PCB96PS-0.5/1.5, PCB96WS-1.5P	PCA50J
CE marking		○	○	○

*1: Requires use of optional cable PCB37P or PCB37PS.
*2: Requires use of optional cable PCB96W or PCB96WS.
*3: Requires use of optional cable PCB96P or PCB96PS.

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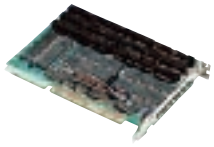
SPECIFICATIONS

Model		Bi-Directional TTL Digital I/O Board PIO-144W(PC)
		
Input channels		144
Output channels		
I/O Circuit	Signal level	5VDC
	Internal power	-
Input specifications	Type	TTL-level
	Interrupt	Can use 6 interrupt lines simultaneously from IRQ 3~7, 9
	Resistance	22Ω
Output specifications	Type	TTL-level
	Rating	5VDC 1mA
Expansion function		-
Response time (Max.)		200nsec
Wiring Distance		1.5m
I/O address		Any 32-byte boundary
Power consumption (Max.)		5VDC 330mA
Bus / Dimensions (mm)		ISA AT Bus / 6.5"(L) × 4.75"(H)
Connector		50-pin header (male) × 6
Option	Software	API-PAC(W32)
	Accessories	STP-50H(98), SCP-50H(98), PSD-50(98)J
	Cables / Connector	PCA50J
CE marking		-

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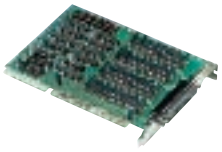
Model

Reed Relay Output Board

RRY-32(PC)



SPECIFICATIONS

Input channels		-
Output channels		32
Output type		Reed Relay SPST
Relay contact specifications	Maximum power	10VA(AC), 10W(DC)
	Maximum voltage	100V(AC), 100V(DC)
	Maximum switching current	0.5A
	Maximum current	1A
	Contact resistance	150mΩ or less
	Response time (Max.)	Within 1msec
	Life expectancy	100,000,000
I/O address		4 ports occupied
Power consumption (Max.)		+5VDC 760mA
Bus / Dimensions (mm)		ISA AT/6.5"(l) × 4.75"(h)
Connector		37-pin female D-type
Option	Software	API-PAC(W32)
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1
	Cables / Connector	PCA37P, PCB37P, PCA37PS, PCB37PS
CE marking		○

*1: Requires use of optional cable PCB37P or PCB37PS.

ISA

Model

Photo MOS Relay Output Board

PRY-32(PC)

SPECIFICATIONS

Input channels		-
Output channels		32
Output type		Photo MOS relay (8 channels with the common)
Relay contact specifications	Rating	100VAC/VDC
	Drive current	250mA max. per channel (1A max. per common)
	Relay resistance	2.6Ω (4Ω Max.)
	Output loss	360mW
	Leakage current	1μA (Max.)
	Response time (Max.)	1msec
I/O address		4 ports occupied
Power consumption (Max.)		+5VDC 450mA
Bus / Dimensions (mm)		ISA AT /6.5"(l) × 4.75"(h)
Connector		37-pin female D-type
Option	Software	API-PAC(W32)
	Accessories	DTP-3(PC), DTP-4(PC), EPD-37 *1, EPD-37A *1
	Cables / Connector	PCA37P, PCB37P, PCA37PS, PCB37PS
CE marking		○

*1: Requires use of optional cable PCB37P or PCB37PS.

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