Bi-directional Digital I/O Board for Low Profile PCI PIO-48D(LPCI)H



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

Features

Equipped with 48 bi-directional non-isolated TTL level inputs/outputs (positive logic) that support operation equivalent to i8255 mode 0 This product is equipped with 48 non-isolated TTL level inputs/outputs (positive logic) with a response time of 200 nsec.

It operates in the equivalent of mode 0 of an i8255 device for generalpurpose I/O, and you can set the inputs/outputs in software in units of 8 signals (in units of 4 signals for some inputs/outputs).

All input signals can be used as interrupt request signals

You can use all input signals as interrupt request signals and also disable or enable the interrupt in bit units and select the edge of the input signals, at which to generate an interrupt.

Equipped with digital filter to prevent wrong recognition of input signals from carrying noise or a chattering

This product has a digital filter to prevent wrong recognition of input signals from carrying noise or a chattering. All input terminals can be added a digital filter, and the setting can be performed by software.

Windows/Linux support device driver

Using the device driver API-TOOL makes it possible to create applications of Windows/Linux. In addition, a diagnostic program by which the operations of hardware can be checked is provided.

Connectors are compatible with CardBus compatible card PIO-48D(CB)H.

The functions same with CardBus compatible card PIO-48D(CB)H are provided. In addition, as there is compatibility in terms of connector shape and pin assignments, it is easy to migrate from the existing system. When the DIO-68M/96F is used, connector shape and pin assignments is compatible with the PIO-48D(PCI).

Support for both of Low Profile and standard size slots

Support for both of Low Profile and standard size slots (interchangeable with a bundled bracket).

Included Items

Product [PIO-48D(LPCI)H] ...1 Standard Size Bracket...1 Please read the following ... 1 This product is a Low Profile size PCI bus-compliant interface board that extends the input/output function of bi-directional digital signal.

This product is equipped with 48 non-isolated TTL level inputs/outputs that operate equivalent to i8255 mode 0. All input signals can be used as interrupt inputs.

You can select the input/output by the application software in eight signals units (in four signals unit for some inputs/outputs). In addition, this product is equipped digital filtering. Windows/Linux device driver is supported with this product.

- * The contents in this document are subject to change without notice.
- * Visit the CONTEC website to check the latest details in the document.
- * The information in the data sheets is as of September, 2023.

Specifications

Function specification

ltem		Specifications				
I/O	Туре	Non-isolated TTL-level I/O (Positive logic) *1				
	Number of Channels	48ch (all available for interrupts)				
	Interrupts	Combine 48 interrupt signals to one interrupt request signal as the INTA. Either rising edge (LOW-to-HIGH transition) or falling edge (HIGH-to-LOW transition) of input signal can generate interrupt.				
	Response time	200nsec within				
	Rated output current	I _{OL} =24mA (Max) I _{OH} =-15mA (Max)				
Common	Connecting distance	1.5m(Typ.) (depending on wiring environment)				
	I/O address	Any 32-byte boundary				
	Interruption level	1 level use				
	Boards in one system	Maximum of 16 boards can be install in a same system.				
	Power consumption	5VDC 600mA (Max)				
	PCI bus specification	32bit, 33MHz, Universal key shapes supported *2				
	Dimension (mm)	121.69(L) x 63.41(H)				
	Weight	60g				

1 Data "0" and "1" correspond to the Low and High levels, respectively.

*2 This board requires power supply at +5V from an expansion slot (it does not work on a machine with a +3.3V power supply alone).

Installation Environment Requirements

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

Physical Dimensions



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

Support Software							
Name	Contents	How to get					
Windows Version Digital I/O Driver software API-DIO(WDM)	The Windows device driver is provided as a form of Windows API functions. Various sample programs such as C# and Visual Basic. NET, Visual C++, Python etc. and diagnostic program useful for checking operation is provided.	Download from the CONTEC website *1					
Linux Version Digital I/O Driver software API-DIO(LNX)	The Linux device driver is provided as a shared library. The software includes various sample programs such as gcc (C, C++) and Python programs, as well as a configuration tool to configure the device settings.	Download from the CONTEC website *1					
Software Development Tool Kits (SDK) and Support Software	In addition to the device drivers, we offer many software programs for using CONTEC devices in an easier manner.	Download from the CONTEC website *2					

*1 Download the files from the following URL.

https://www.contec.com/download/

*2 For supported software, search the CONTEC website for this product and view the product page. https://www.contec.com/

Optional Products

Product Name	Model type	Description
Shielded Cable for CardBus Digital I/O Card	DIO-68M/96F	0.5m
Shielded Cable With Two 68pin Connector	PCB68PS-0.5P	0.5m
	PCB68PS-1.5P	1.5m
Shield Cable with One 68-Pin Connector	PCA68PS-0.5P	0.5m
	PCA68PS-1.5P	1.5m
Screw Terminal (M3 * 68)	EPD-68A	*1*3
Screw Terminal (M3 * 96)	EPD-96A	*2*3
Terminal Unit for Relay Terminal Banks	EPD-96	*2
Screw Terminal	DTP-64A	*2

*1 PCB68PS-0.5P or PCB68PS-1.5P optional cable is required separately.

*2 DIO-68M/96F optional cable is required separately.

*3 "Spring-up" type terminal is used to prevent terminal screws from falling off.

Component Name



No.	Name
1	Interface Connector
2	Board ID Setting Switch

The optional connector cable (DIO-68M/96F or PCA68PS-**P, PCB68PS-**P) is used to connect the board to external devices.

The cable is used together with a terminal block to connect external devices.



Layout on the Interface Connector(CN1)

	GND	1			35	GND	
	GND	2	1	35	36	GND	
	1-PA0	3			37	2-PA0	
	1-PA1	4)	38	2-PA1	
	1-PA2	5	내림	<u>∎</u> †′	39	2-PA2	
1.4 mont	1-PA3	6			40	2-PA3	2 A port
1-A port	1-PA4	7			41	2-PA4	2-A port
	1-PA5	8			42	2-PA5	
	1-PA6	9			43	2-PA6	
	1-PA7	10			44	2-PA7	
	GND	11			45	GND	
	GND	12			46	GND	
	1-PB0	13			47	2-PB0	
	1-PB1	14			48	2-PB1	
	1-PB2	15			49	2-PB2	
1-B port	1-PB3	16			50	2-PB3	2-B port
	1-PB4	17			51	2-PB4	2 b port
	1-PB5	18			52	2-PB5	
	1-PB6	19			53	2-PB6	
	1-PB7	20			54	2-PB7	
	GND	21			55	GND	
	GND	22	16		56	GND	
	1-PC0	23	⋳⋕⋻	ē₩	57	2-PC0	
1-C port	1-PC1	24		- <u>'</u> /	58	2-PC1	2-C port
(Low)	1-PC2	25			59	2-PC2	(Low)
	1-PC3	26	34	68	60	2-PC3	
	GND	27			61	GND	
	GND	28			62	GND	

Ver.1.16

	1-PC4	29	63	2-PC4	
1-C port	1-PC5	30	64	2-PC5	2-C port
(High)	1-PC6	31	65	2-PC6	(High)
	1-PC7	32	66	2-PC7	
	GND	33	67	GND	
	GND	34	68	GND	

* 1-PA0 - 2-PC7 can be used as all of interrupt signal.

Signal name	Description
1-PA0 - 2-PC7	48 input/output signal pins. Connect the signals from an external device to these signal pins.
GND	These pins are connected to the slot's GND.

Pin Assignments of Optional Connector DIO-68M/96F



1-PC7 A48 GND A47 1-PC6 A46 GND A45 1-PC3 A44 GND A43 1-PC3 A44 GND A43 1-PC3 A40 GND A43 GND A44 GND A33 1-PC3 A40 GND A33 1-PC4 A36 GND A33 1-PC4 A36 GND A33 1-PC1 A36 GND A33 1-PC2 A38 GND A33 1-P84 A26 GND A23 GND A24 GND A25			1			1		
GND A47 1-PC6 A46 GND A45 1-PC3 A44 GND A43 1-PC4 A42 GND A43 1-PC4 A42 GND A33 GND A34 GND A33 1-PC3 A40 GND A33 1-PC4 A38 GND A37 GND A33 1-PC1 A48 GND A33 1-PC1 A36 GND A33 GND A33 1-PE6 A30 GND A25 GND A23 GND A23 <		1-PC7	A48			B48	2-PC7	
1-PC0 A46 GND A43 1-PC3 A44 GND A43 1-PC4 A42 GND A41 1-PC3 A40 GND A33 1-PC3 A40 GND A33 GND A33 1-PC3 A36 GND A37 1-PC1 A36 GND A33 1-PC3 A36 GND A33 1-PC1 A36 GND A33 1-PC3 A34 GND A33 1-PC4 A42 GND A33 1-PC3 A34 GND A33 1-PC4 A46 GND A33 1-PC4 A32 GND A33 1-P64 A32 GND A23 1-P85 A28 GND A23		GND	A47			B47	GND	
I-C.port (High) GND A45 A43 B45 GND ChU I-PC3 A44 A42 A44 2-PC3 A44 GND A41 GND B43 GND A44 GND A41 GND B43 GND B45 GND I-PC4 A42 A44 GND B45 GND B45 GND I-PC4 A42 A44 B40 2-PC3 B45 GND B45	1.0	1-PC6	A46			B46	2-PC6	
(Highy) 1-PC5 A44 GND A43 1-PC4 A42 GND A41 GND A41 GND A41 GND A41 GND A43 GND A37 1-PC2 A38 GND A37 1-PC1 A36 GND A37 1-PC1 A36 GND A37 1-PC1 A36 GND A33 1-PC0 A34 GND A33 1-PC0 A34 GND A33 1-PR0 A32 GND A33 1-PR6 A30 GND A21 1-PR4 A26 GND A23 1-PR4 A26 GND A23 1-PR4 A26 GND A21 1-PR5 A22 GND A21 1-PR0 A18 GND A17 </td <td>1-C port</td> <td>GND</td> <td>A45</td> <td></td> <td></td> <td>B45</td> <td>GND</td> <td>2-C port</td>	1-C port	GND	A45			B45	GND	2-C port
GND A43 1+PC4 A42 GND A41 I+PC3 A40 GND A39 1+PC4 A38 GND A39 1+PC3 A40 GND A39 1+PC1 A36 GND A37 1+PC1 A36 GND A37 1+PC1 A36 GND A33 1+PC1 A36 GND A33 1+PC1 A36 GND A33 1+PC1 A36 GND A33 1+PR7 A32 GND A31 1+PR6 A30 GND A23 1+PR4 A26 GND A23 1+PR4 A26 GND A23 1+PR0 A18 GND A21 GND A21 1+PR0 A16 GND	(riigii)	1-PC5	A44			B44	2-PC5	(riigri)
1.4PC4 A42 GND A41 GND A40 GND A40 GND A39 1.4PC3 A40 GND A37 1.4PC3 A38 1.4PC1 A36 GND A37 1.4PC3 A44 GND A37 1.4PC1 A36 GND A33 1.4PC0 A34 GND A33 1.4PC1 A36 GND A31 1.4PC3 A44 GND A31 1.4PB6 A30 GND A27 1.4PB1 A26 GND A22 GND A23 1.4PB1 A26 GND A23 1.4PB1 A20 GND A21 1.4PB1 A20 GND A11 GND A18 GND A18		GND	A43			A43	GND	
GND A41 1-PC3 A40 GND A39 1-PC2 A38 1-PC1 A36 GND A37 1-PC1 A36 GND A37 1-PC1 A36 GND A33 1-PC1 A36 GND A33 1-PC1 A36 GND A33 1-PC7 A34 GND A33 1-PB7 A32 GND A31 1-PB6 A30 1-PB5 A28 GND A27 1-PB4 A26 1-PB5 A28 GND A21 1-PB4 A26 GND A23 1-PB2 A22 GND A21 1-PB4 A26 GND A18 1-PB4 A26 GND A11 1-PB4 A20 <		1-PC4	A42			B42	2-PC4	
1-PC3 A40 GND A39 1-PC2 A38 GND A37 1-PC1 A36 GND A37 1-PC1 A36 GND A37 1-PC1 A36 GND A33 GND A33 GND A33 GND A34 GND A33 GND A33 GND A33 GND A31 1-P86 A30 GND A22 GND A23 GND A24 GND A25 1-P85 A28 GND A22 GND A23 1-P82 A22 GND A25 GND A16 GND A17 H GND GND A18 GND A19 1-P82 A26		GND	A41			B41	GND	
GND A39 [1] [49] B39 GND B38 2-PC2 B37 GND 1-PC1 A36 GND A37 B36 2-PC1 B36 2-PC1 B36 2-PC1 B36 2-PC1 B36 2-PC1 B37 GND A37 1-PC0 A34 GND A33 GND B33 GND B34 2-P80 B33 GND B34 2-P80 B33 GND B34 2-P80 B33 GND B34 2-P80 B34 2-P80 B34 2-P80 B34 2-P80 B34 2-P81 B36 <td< td=""><td></td><td>1-PC3</td><td>A40</td><td></td><td></td><td>B40</td><td>2-PC3</td><td></td></td<>		1-PC3	A40			B40	2-PC3	
1-PC2 A38 A48 B48 B38 2-PC2 2-C port (Low) 1-PC1 A36 B37 GND B35 GND GND A33 1-PC0 A34 B35 GND B35 GND GND A33 1-PB7 A32 B33 GND B32 2-PB7 GND A31 1-PB6 A30 6ND A22 GND B30 2-PB6 GND A22 GND A22 GND B22 GND 1-PB5 A28 GND A22 B27 GND B26 2-PB6 GND A22 GND A23 GND B26 2-PB6 B27 GND B26 2-PB1 B26 CND B26 2-PB1 B20 2-PB1 B20 2-PB1 B18 2-PB0 GND A11 GND A11 GND B16 2-PA7 GND A11 GND B11 </td <td></td> <td>GND</td> <td>A39</td> <td>[1]</td> <td>[49]</td> <td>B39</td> <td>GND</td> <td></td>		GND	A39	[1]	[49]	B39	GND	
1-C port (Low) GND A37 1+PC1 A36 GND B37 GND B24, port B36 2-PC1 B35 GND GND A33 1+PC0 A34 B34 2-PC0 B33 GND GND A33 GND A33 B34 2-PC0 B33 GND GND A33 GND A33 B32 2-PB7 B31 GND GND A23 GND A23 B30 2-PB6 B30 2-PB6 GND A23 GND A23 B22 GND B28 2-PB6 B20 GND A23 B23 GND B24 2-PB1 GND A23 FPB1 A20 B21 GND B21 GND GND A11 FPB1 A20 GND B17 GND B18 2-PB0 GND A13 FPB3 A20 B11 GND B13 GND GND A11 FPA5 A12 B1 <td></td> <td>1-PC2</td> <td>A38</td> <td>A48</td> <td>B48</td> <td>B38</td> <td>2-PC2</td> <td></td>		1-PC2	A38	A48	B48	B38	2-PC2	
(LUM) 1-PC1 A36 2-PC1 (LUM) GND A33 35 GND 834 2-PC0 GND A33 GND 833 GND 833 GND 1+PB7 A32 GND A31 1+PB7 A32 833 GND GND A31 1+PB6 A30 GND A23 831 GND GND A23 GND A23 GND 822 2-PB7 GND A27 1+PB3 A24 825 GND 822 2-PB4 GND A23 1+PB3 A24 823 GND 822 2-PB2 GND A23 1+PB4 A26 823 GND 822 2-PB1 B23 GND A21 1+PB4 A26 823 GND 823 GND GND A13 1+PB4 A20 817 GND 818 2-PA5 GND A13 1+PA6	1-Cport	GND	A37	\square		B37	GND	2-C port
GND A35 1+PC0 A34 GND A33 1+PB7 A32 GND A31 1+PB6 A30 GND A23 GND A23 GND A23 GND A23 GND A27 1+PB5 A28 GND A27 1+PB4 A26 GND A27 1+PB3 A24 GND A25 GND A21 1+PB2 A22 GND A21 1+PB3 A24 GND A21 1+PB4 A26 GND A11 1+PB3 A24 GND A12 GND A13 1+PB4 A20 GND A11 1+PB4 A20 GND A11 1+PA6 A14 1+PA7<	(LOW)	1-PC1	A36		-)	B36	2-PC1	(LOW)
1-PC0 A34 GND A33 1-PB7 A32 GND A31 1-PB6 A30 GND A22 GND A23 1-PB6 A30 GND A29 1-PB5 A28 GND A27 1-PB4 A26 GND A23 1-PB3 A24 GND A23 1-PB2 A22 GND A23 1-PB2 A22 GND A23 1-PB2 A22 GND A21 1-PB2 A22 GND A11 1-PB4 A20 GND A11 1-PB4 A10 GND A11 1-PB4 A16 GND A11 1-PA5 A12 GND A11 1-PA5 A12 GND A11		GND	A35	40	⊡++-	B35	GND	
GND A33 1-PB7 A32 GND A31 1-PB6 A30 GND A31 1-PB6 A30 GND A21 1-PB5 A28 GND A27 1-PB4 A26 GND A23 1-PB3 A24 GND A23 1-PB2 A22 GND A21 1-PB1 A20 GND A21 1-PB1 A20 GND A17 1-PB2 A22 GND A17 1-PB4 A20 GND A11 1-PB4 A20 GND A11 1-PB4 A20 GND A11 1-PB4 A10 GND A11 148 [96] B11 GND GND A11 [48] [96]		1-PC0	A34			B34	2-PC0	
1-PB7 A32 GND A31 1-PB6 A30 GND A29 1-PB5 A28 GND A27 1-PB4 A26 GND A27 1-PB4 A26 GND A27 1-PB3 A24 GND A23 1-PB1 A20 GND A21 1-PB1 A20 GND A21 1-PB1 A20 GND A19 1-PB3 A24 GND A11 1-PB1 A20 GND A11 1-PB2 A22 GND A11 1-PA7 A16 GND A11 1+PA6 A14 GND A11 1+PA5 A12 GND A11 1+PA5 A12 GND A01 GND A06		GND	A33		91	B33	GND	
GND A31 1-PB6 A30 GND A29 1-PB5 A28 GND A29 1-PB4 A26 GND A27 1-PB4 A26 GND A27 1-PB4 A26 GND A23 1-PB1 A20 GND A21 GND A23 1-PB1 A20 GND A19 1-PB0 A18 GND A17 1-PB1 A20 GND A11 1-PB1 A20 GND A11 1-PB1 A20 GND A11 1-PB3 A12 GND A11 1-PA6 A14 GND A13 1-PA5 A12 GND A01 (48) GND B11 GND B12 2-PA5		1-PB7	A32			B32	2-PB7	
1-P86 A30 GND A29 1-P85 A28 GND A27 1-P85 A28 GND A27 1-P84 A26 GND A27 1-P83 A24 GND A23 1-P82 A22 GND A21 1-P81 A20 GND A17 1-P84 A16 GND A17 1-P84 A16 GND A17 1-P84 A16 GND A13 1-P85 A12 GND A13 1-P84 A10 GND A13 1-P84 A10 GND A11 1-P84 A10 GND A13 1-P84 A10 GND A11 1-P84 A06 GND A07 1-P84 A08 <td></td> <td>GND</td> <td>A31</td> <td></td> <td></td> <td>B31</td> <td>GND</td> <td></td>		GND	A31			B31	GND	
GND A29 1-PB5 A28 GND A27 1-PB4 A26 GND A27 1-PB4 A26 GND A27 1-PB4 A26 GND A23 GND A23 1-PB2 A22 GND A21 1-PB1 A20 GND A17 GND A17 1-PB1 A20 GND A11 B1 CND B1 PB0 GND A17 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A01 (48) B01 B14 2-PA6 B13 GND B14 2-PA6 B15 GND B06 2-PA3 <t< td=""><td></td><td>1-PB6</td><td>A30</td><td></td><td></td><td>B30</td><td>2-PB6</td><td></td></t<>		1-PB6	A30			B30	2-PB6	
1-PB5 A28 GND A27 1-PB4 A26 GND A27 1-PB4 A26 GND A27 1-PB4 A26 GND A25 1-PB3 A24 GND A22 GND A22 GND A21 1-PB2 A22 GND A21 1-PB1 A20 GND A17 GND A18 GND A17 1-P80 A18 GND A11 1-P84 A16 GND A13 1-PA5 A12 GND A11 48 B01 B14 2-PA6 B13 GND B14 2-PA6 B13 GND B04 2-PA3 B07 GND B08 GND B07 GND <t< td=""><td></td><td>GND</td><td>A29</td><td></td><td></td><td>B29</td><td>GND</td><td></td></t<>		GND	A29			B29	GND	
GND A27 1-PB4 A26 GND A25 1-PB3 A24 GND A25 1-PB2 A24 GND A23 1-PB2 A22 GND A21 1-PB2 A22 GND A21 1-PB1 A20 GND A19 1-PB7 A16 GND A17 1-PB7 A16 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A11 148 B01 B12 2-PA5 B11 GND B12 2-PA5 B11 GND B03 GND B04 2-PA3 B07 GND B08 GND B07 GND		1-PB5	A28			B28	2-PB5	
1-PB4 A26 GND A25 1-PB3 A24 GND A23 1-PB2 A22 GND A23 1-PB2 A22 GND A21 1-PB1 A20 GND A21 1-PB1 A20 GND A19 1-PB0 A18 GND A17 1-PB6 A14 GND A15 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A11 (48) [96] B14 2-PA6 B13 GND B14 2-PA3 B07 GND B08 2-PA3 B07 GND B08 2-PA3 B07 GND <td></td> <td>GND</td> <td>A27</td> <td></td> <td></td> <td>B27</td> <td>GND</td> <td></td>		GND	A27			B27	GND	
1-Bport GND A25 1-PB3 A24 GND A23 1-PB2 A22 GND A23 1-PB1 A20 GND A21 1-PB1 A20 GND A19 1-PB0 A18 GND A17 1-PB0 A18 GND A17 1-PA7 A16 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A01 (48) [96] B11 GND B12 2-PA5 B11 GND B03 GND 1-PA3 A08 GND A07 1-PA2 A06 GND A07 1-PA2 A06 GND A07 1-PA3		1-PB4	A26			B26	2-PB4	
1-PB3 A24 GND A23 1-PB2 A22 GND A21 1-PB2 A22 GND A21 1-PB1 A20 GND A19 1-PB0 A18 GND A17 1-PB0 A18 GND A17 1-PA6 A14 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA4 A10 GND A13 1-PA4 A10 GND A13 1-PA4 A10 GND A03 GND A04 B01 B11 GND A09 1-PA3 A08 GND A07 1-PA3 A08 GND A07 1-PA2 A06 GND A07 1-PA0 A02 GND A06 <tr< td=""><td>1-B port</td><td>GND</td><td>A25</td><td></td><td></td><td>B25</td><td>GND</td><td>2-B port</td></tr<>	1-B port	GND	A25			B25	GND	2-B port
GND A23 1-PB2 A22 GND A21 1-PB1 A20 GND A11 1-PB0 A19 1-PB0 A19 1-PB0 A18 GND A17 1-PB0 A18 GND A17 1-PA0 A16 GND A17 1-PA6 A14 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA4 A10 [48] B01 B12 2-PA6 B13 GND B14 2-PA6 B13 GND B04 B07 GND B07 GND B06 2-PA3 B07 GND B06 2-PA2 B05	-	1-PB3	A24			B24	2-PB3	
1-P82 A22 GND A21 1-P81 A20 GND A19 1-P81 A20 GND A19 1-P80 A18 GND A17 1-P87 A16 GND A17 1-PA7 A16 GND A13 1-PA5 A12 GND A13 1-PA4 A10 GND A13 1-PA4 A10 GND A01 B01 B01 B12 2-PA5 B11 GND B12 2-PA3 B03 GND B04 B07 GND A03 GND A05 1-PA0 A02 GND A02 GND A02 GND A02 GND A02 GND A02 GND A02 <tr< td=""><td></td><td>GND</td><td>A23</td><td></td><td></td><td>B23</td><td>GND</td><td></td></tr<>		GND	A23			B23	GND	
GND A21 1-PB1 A20 GND A19 1-PB1 A20 GND A19 1-PB0 A18 GND A17 1-PA7 A16 GND A15 1-PA6 A14 GND A13 1-PA5 A12 GND A11 1-PA4 A10 GND A13 1-PA4 A10 GND A11 48 B01 B12 2-PA7 B13 GND B14 2-PA6 B13 GND B14 2-PA6 B15 GND B16 2-PA3 B10 2-PA4 B06 2-PA2 B05 GND B04 2-PA1 B05 GND B06 2-PA2 B05 GND B04 2-PA0 <td></td> <td>1-PB2</td> <td>A22</td> <td></td> <td></td> <td>B22</td> <td>2-PB2</td> <td></td>		1-PB2	A22			B22	2-PB2	
1-PB1 A20 GND A19 1-PB0 A18 GND A17 1-PA7 A16 GND A17 1-PA7 A16 GND A13 1-PA5 A12 GND A11 1-PA5 A12 GND A11 1-PA5 A12 GND A11 1-PA5 A12 GND A01 GND A01 1-PA5 A12 GND A01 1-PA5 A12 GND A09 1-PA3 A08 GND A07 1-PA2 A06 GND A07 1-PA1 A04 GND A03 1-PA0 A02 GND A02 GND A01 B02 2-PA0 B03 GND B04 2-PA0		GND	A21			B21	GND	
GND A19 1-P80 A18 GND A17 1-PA7 A16 GND A17 1-PA6 A14 GND A15 1-PA6 A14 GND A13 1-PA5 A12 GND A11 1-PA5 A12 GND A11 (48) [96] B12 2-PA5 B11 GND 1-PA3 A08 GND A07 1-PA2 A06 GND A07 1-PA3 A08 GND A07 1-PA2 A06 GND A07 1-PA2 A06 GND A03 GND A04 GND A03 B04 2-PA1 B03 GND B04 2-PA0 B05 GND B01 GND		1-PB1	A20			B20	2-PB1	
1-P80 A18 GND A17 1-PA7 A16 GND A17 1-PA7 A16 GND A15 1-PA6 A14 GND A13 1-PA6 A14 GND A13 1-PA5 A12 GND A11 1-PA4 A10 GND A11 (48) [96] B10 2-PA5 B11 GND B10 2-PA4 B09 GND B08 2-PA3 B07 GND B08 2-PA3 B07 GND B04 2-PA1 B05 GND B04 2-PA2 B05 GND B04 2-PA1 B03 GND B04 2-PA0 B05 GND B04 2-PA0 B05 GND <td></td> <td>GND</td> <td>A19</td> <td></td> <td></td> <td>B19</td> <td>GND</td> <td></td>		GND	A19			B19	GND	
GND A17 1-PA7 A16 GND A15 1-PA6 A14 GND A15 1-PA6 A14 GND A13 1-PA5 A12 GND A11 1-PA4 A10 GND A11 1-PA4 A10 1-PA4 A10 1-PA4 A10 1-PA4 A10 1-PA4 A10 1-PA4 A10 GND A01 [48] [96] B11 GND B02 2-PA3 B03 GND B04 2-PA2 B05 GND B04 2-PA1 B05 GND B04 2-PA2 B05 GND B03 GND B04 2-PA0 B02 2-PA0 B01 GND		1-PB0	A18			B18	2-PB0	
1-PA7 A16 GND A15 1-PA6 A14 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A11 1-PA4 A10 GND A11 1-PA4 A10 1-PA4 A10 1-PA4 A10 GND A09 1-PA3 A08 GND A07 1-PA2 A06 GND A07 1-PA1 A04 GND A05 1-PA0 A02 GND A03 GND A02 GND A01		GND	A17			B17	GND	
GND A15 1-PA6 A14 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A13 1-PA4 A10 1-PA4 A10 1-PA4 A10 1-PA4 A10 1-PA4 A10 1-PA4 A06 GND A07 1-PA2 A06 GND A07 1-PA2 A06 GND A07 1-PA2 A06 GND A07 1-PA2 A06 GND A05 1-PA1 A04 GND A02 0-1 PA0 1-PA0 A02 GND A01		1-PA7	A16			B16	2-PA7	
1-PA6 A14 GND A13 1-PA5 A12 GND A13 1-PA5 A12 GND A11 [48] [96] B14 2-PA6 B12 2-PA5 B11 GND 1-PA4 A10 1-PA4 A10 1-PA3 A08 GND A07 1-PA2 A06 GND A05 1-PA1 A04 GND A05 1-PA0 A02 1-PA0 A02 GND A01 B03 GND B04 2-PA2 B05 GND B04 2-PA1 B05 GND B02 2-PA0 B02 2-PA0		GND	A15			B15	GND	
GND A13 B13 GND 1-PA5 A12 A01 B01 B12 2-PA5 GND A11 [48] [96] B11 GND 1-PA4 A10 B13 GND B13 GND 1-PA5 A12 B13 GND B12 2-PA5 B11 GND A01 B13 GND B13 GND 1-PA4 A10 [48] [96] B11 GND B13 GND 1-PA4 A10 B03 ChD B10 2-PA3 B07 GND GND A06 B06 2-PA3 B07 GND B05 GND 1-PA1 A04 B05 GND B04 2-PA0 B02 2-PA0 GND A02 B02 2-PA0 B02 2-PA0 B01 GND		1-PA6	A14		/	B14	2-PA6	
1-PA5 A12 A01 B12 2-PA5 GND A11 [48] B01 B11 GND 1-PA4 A10 B11 GND B11 GND 1-PA3 A08 B00 GND B00 CPA4 1-PA3 A08 B07 GND B06 2-PA3 GND A07 B06 2-PA3 B07 GND 1-PA2 A06 B06 2-PA3 B05 GND GND A03 B05 GND B04 2-PA1 B04 2-PA1 B05 GND B02 2-PA0 1-PA0 A02 B01 GND B02 2-PA0		GND	A13			B13	GND	
GND A11 [48] [96] B11 GND 1-PA4 A10 B10 2-PA4 GND A09 B09 GND 2-Aport 1-PA3 A08 B07 GND B06 2-PA3 GND A07 B06 2-PA3 B05 GND 1-PA2 A06 B05 GND B06 2-PA2 GND A03 B04 2-PA1 B04 2-PA1 GND A03 B03 GND B04 2-PA0 1-PA0 A02 B01 GND B03 GND		1-PA5	A12	A01	B01	B12	2-PA5	
1-PA4 A10 B10 2-PA4 1-Aport GND A09 B09 GND 1-PA3 A08 B08 2-PA3 GND A07 B07 GND 1-PA2 A06 B06 2-PA2 GND A05 B05 GND 1-PA1 A04 B04 2-PA1 GND A03 B03 GND 1-PA0 A02 B02 2-PA0		GND	A11	[48]	[96]	B11	GND	
1-Aport GND A09 B09 GND 2-A port 1-PA3 A08 B08 2-PA3 B07 GND GND A07 B07 GND B07 GND 1-PA2 A06 B06 2-PA2 B06 2-PA1 GND A05 B04 2-PA1 B04 2-PA1 GND A03 B03 GND B03 GND 1-PA0 A02 B02 2-PA0 B04 GND		1-PA4	A10			B10	2-PA4	
1-PA3 A08 B08 2-PA3 GND A07 B07 GND 1-PA2 A06 B06 2-PA2 GND A05 B05 GND 1-PA1 A04 B04 2-PA1 GND A03 B03 GND 1-PA0 A02 B02 2-PA0 GND A01 B01 GND	1-A port	GND	A09			B09	GND	2-A port
GND A07 B07 GND 1-PA2 A06 B06 2-PA2 GND A05 B05 GND 1-PA1 A04 B04 2-PA1 GND A03 B03 GND 1-PA0 A02 B02 2-PA0 GND A01 B01 GND		1-PA3	A08			B08	2-PA3	
1-PA2 A06 B06 2-PA2 GND A05 B05 GND 1-PA1 A04 B04 2-PA1 GND A03 B03 GND 1-PA0 A02 B02 2-PA0 GND A01 B01 GND		GND	A07			B07	GND	
GND A05 B05 GND 1-PA1 A04 B04 2-PA1 GND A03 B03 GND 1-PA0 A02 B02 2-PA0 GND A01 B01 GND		1-PA2	A06			B06	2-PA2	1
1-PA1 A04 B04 2-PA1 GND A03 B03 GND 1-PA0 A02 B02 2-PA0 GND A01 B01 GND		GND	A05			B05	GND	1
GND A03 B03 GND 1-PA0 A02 B02 2-PA0 GND A01 B01 GND		1-PA1	A04			B04	2-PA1	1
1-PA0 A02 B02 2-PA0 GND A01 B01 GND		GND	A03			B03	GND	1
GND A01 B01 GND		1-PA0	A02			B02	2-PA0	1
		GND	A01			B01	GND	

* The numbers in square brackets [] are pin numbers designated by HONDA TSUSHIN KOGYO CO., LTD.

To perform input/output using this product with the CONTEC device driver, specify logical ports and logical bits when calling each function. For details, refer to the "Relationships between API-TOOL Logical Ports/Bits and Connector Signal Pins" of Reference Manual.

Connecting Input and Output Signals

I/O Circuit

Signals are TTL levels and positive logic.



- When used for output, do not short the outputs to digital ground. Doing so may lead to malfunctions.
- When used for output and a pull-up resistor is connected externally, use a 5 V power source and a resistance of approximately 10 k Ω for the pull-up.
- When used for input, use an external 5 V power source and a resistance of approximately 10 kΩ for the pullup. If input voltage levels are not fixed, the input value will fluctuate.

Example Connection 1 Connection Example U

Connection Example Using 1-PA0 for Input and 2-PA0 for Output (Using DIO-68M/96F)



*1 Resistor value should be adjusted according to the specification of the LED to use and the desired intensity level.

Example Connection 2

Connection Example Using 1-PA0 for Input and 2-PA0 for Output (Using PCA68PS-**P)



*1 Resistor value should be adjusted according to the specification of the LED to use and the desired intensity level.

Circuit Block Diagram

