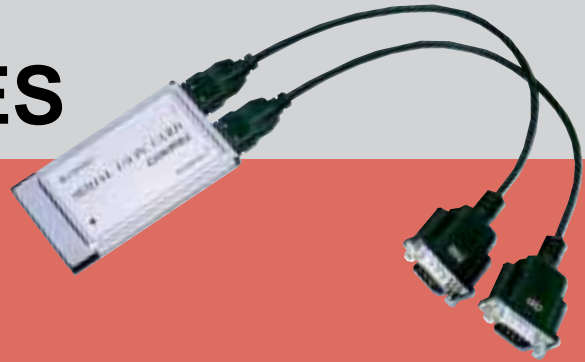


PC CARD SERIES



C-02	Digital I/O Cards
C-03	Analog I/O Cards
C-04	Communication Cards
C-06	Accessories and cables (Optional)

PC card

It is the card type extension device for personal computers which became standards by PCMCIA (Personal Computer Memory Card International Association) and JEIDA (Japan Electronics Industries Development Association). It is mainly used as an object for the expansion of a notebook PC or save space personal computer. In addition to a type with a speed [a bus width of 16 bits / maximum transmission speed] of 16MB [/second], there is also a type corresponding to "ZV Port" which can transmit the type and animation corresponding to "CardBus" with a speed [a bus width of 32 bits / maximum transmission speed] of 132MB [/second], and a sound at high speed.



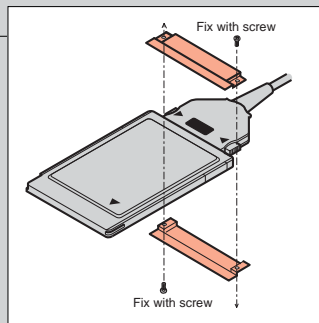
Features

Plug & Play function

An I/O port address, an interruption level, etc. to occupy are set up automatically. Unlike the interface board of an ISA Bus or C(98) bus, neither a troublesome I/O port address nor an interruption level needs to be set up.

PC card attachment

The instrument called "PC card attachment" is attached to the product of PC card attachment our company. If this instrument is attached in a cable connection part, a cable omission when power is added accidentally, and breakage can be prevented. It is safe even when using on the scene of FA or LA applications.

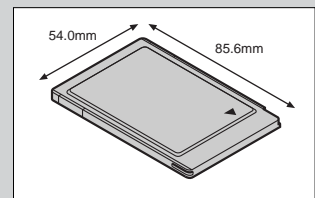


Useable slot

It can be used with PCMCIA, Rel.2.1/JEIDA Ver.4.1 or subsequent ones, and a personal computer with the notation of TYPE II and III

Card size

A size of PC card is divided into the following three kinds by the difference in thickness. All the products of our company are unified into TYPE II. All in-every-direction sizes are common.



TYPE I	Thickness size is 3.3mm. and is the size that to memory card seen mostly. It can be used by the slot with the notation of Type I-III
TYPE II	Thickness size is 5.5mm and is the size that on cards for I/O extension, such as a modem and SCSI, seen. It can be used by the slot with the notation of TYPE II-III.
TYPE III	Thickness size is 10.5mm. It sees to a card type hard disk mostly. It can be used only by the slot with the notation of TYPE III

Digital I/O Card

Opto-Isolated Digital I/O Card

PIO-16/16L(PM)

NEW



Input
16

Output
16

Isolated

API function library attachment [API-PAC(W32)]

FEATURES

- Opto-isolated input/output providing improved noise resistance
- Digital filter can be applied to the input signals
- All of the 16 input signals can generate interrupt request

SPECIFICATIONS

Inputs channels	16 (16 channels with the common)
Output channels	16 (16 channels with the common)
I/O Circuit	
Signal level	DC12V-24V
Internal power	-
Input specification	
Input type	Opto-Isolated Input (for high sink current output) (Negative logic)
Interrupt	Combine 16 interrupt signal lines to one interrupt request signal as INTA
Input resistance	3kΩ
Output specification	
Output type	Opto-Isolated Open Collector Output (current sinking type) (Negative logic)
Output rating	+35VDC 100mA
Response time (Max.)	1msec

Maximum distance	50m (dependent on wiring environment)
I/O address	Any 16-byte boundary
Power consumption (Max.)	+5VDC 200mA(Max.)
Operating Temp./Humidity	0-50°C, 20-90%RH (no condensation)
Length of an attached cable	1m
Card type	PCMCIA 2.1/JEIDA 4.2, 16-bit PC Card, JEIDA Type II
Weight	500g(include PC card, an attached cable, an insulation circuit box)
Option	
Software	ACX-PAC(W32)BP, ACX-PAC(W32)AP
Accessories	DTP-3(PC), DTP-4(PC), EPD-37*1, CM-32(PC)E*1
Cables/Connector	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M

*1:Option cable of PCB37P or PCB37PS is required.

Bi-Directional TTL Digital I/O Card

PIO-24W(PM)



Bi-direct
24

Non
Isolated

CE

API function library attachment [API-PAC(W32)]

FEATURES

- High speed TTL-level I/O (positive logic)
- 24 bi-directional channels, in 3 groups of 8
- I/O direction can be set by software two input signals can generate an interrupt request signal

SPECIFICATIONS

No. of channels	24
Output type	TTL level (positive logic)
Controller chip	i8255 or equivalent
Input protection resistor	33Ω(1LS TTL load)
Output rating	DC+5V 1mA(2LS TTL load)
Response time (Max.)	200nsec
Maximum distance	1.5m (dependent on wiring environment)
Interrupt Request Level	One of IRQ 3-7,9-12,14 or 15
Interrupt Request Causes	2 (rising edges of PC0 and PC3)
I/O address	Any 16-byte boundary

Power consumption (Max.)	DC+5V 100mA
Operating Temp./Humidity	0-50°C, 20-90%RH (no condensation)
Length of an attached cable	300mm
Card type	PCMCIA 2.1/JEIDA 4.2, 16-bit PC Card, JEIDA Type II
Weight	120g(include a cable)
Option	
Software	ACX-PAC(W32)BP, ACX-PAC(W32)AP, DDE SERVER(W32)
Accessories	DTP-3(PC), DTP-4(PC), EPD-37*1
Cables/Connector	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M

*1:Option cable of PCB37P or PCB37PS is required.

TTL-Level Digital I/O Card

PIO-32D(PM)

NEW



Bi-direct
32

Non
Isolated

API function library attachment [API-PAC(W32)]

FEATURES

- 32 bi-directional channels, in 4 groups of 8
- High speed TTL-level I/O (negative logic)
- All of the 32 input signals can generate interrupt request

SPECIFICATIONS

No. of channels	32
Output/Input type	TTL level (negative logic)
Input resistor	100kΩ
Output rating	I _{OL} =6mA, I _{OH} =-2mA
Response time (Max.)	200nsec
Maximum distance	1.5m (dependent on wiring environment)
Interrupt Request Level	1 interrupt
Interrupt Request Causes	Combine 32 interrupt signal lines to one interrupt request signal as INTA

I/O address	Any 16-byte boundary
Power consumption (Max.)	+5VDC 200mA(Max.)
Operating Temp./Humidity	0-50°C, 20-90%RH (no condensation)
Length of an attached cable	1m
Card type	PCMCIA 2.1/JEIDA 4.2, 16-bit PC Card, JEIDA Type II
Weight	200g(include PC card, an attached cable)
Option	
Software	ACX-PAC(W32)BP, ACX-PAC(W32)AP
Accessories	DTP-3(PC), DTP-4(PC), EPD-37*1, CM-32(PC)E*1
Cables/Connector	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M

*1:Option cable of PCB37P or PCB37PS is required.

C-02

PC CARD SERIES

Digital
I/O CardAnalog
I/O CardCommunication
Card

Option

Analog I/O Card

8 Channel 12-Bit Multi-Function Card

AD12-8(PM)

FEATURES

- 8 channels single-ended analog input
- Built-in FIFO memory capable of storing 16,384 bytes of conversion data
- 2 channels analog outputs, Digital I/O - 4 inputs, 4 outputs, TTL

■ SPECIFICATIONS

Analog Inputs	
Channels	16 single-ended
Input Range	-10V - +10V
Input Impedance	20kΩ or more
Resolution	12bit
Conversion Speed(Max.)	10 μsec/ch
Buffer memory	FIFO type 16,384 words
Internal clock	10,000nsec - 104,857,600nsec (specifiable in steps of 100nsec)
External clock input	TTL-level, falling edge
Simultaneous sampling control output	1 TTL-level
Interrupt Request Level	One of IRQ 3-7,9-12,14 or 15
Analog Outputs	
Channels	2 TTL-Level
Output Range	0V - +4.095V
Resolution	12bit
Update rate(Max.)	16 μsec
Maximum drive	5mA

Digital I/O	
Inputs channels	4 TTL-level inputs (positive logic)
Output channels	4 TTL-level outputs (positive logic)
General	
I/O address	Any 16-byte boundary
Power consumption (Max.)	DC+5V 100mA
Operating Temp./Humidity	0-50°C, 20-90%RH (no condensation)
Length of an attached cable	300mm
Card type	PCMCIA 2.1/JEIDA 4.2, 16-bit PC Card, JEIDA Type II
Weight	120g (included a cable)
Option	
Software	ACX-PAC(W32)BP, ACX-PAC(W32)AP, DDE SERVER(W32)
Accessories	DTP-3(PC), DTP-4(PC), EPD-37*
Cables/Connector	PCA37P, PCB37P, PCA37PS, PCB37PS, CN5-D37M

*Option cable of PCB37P or PCB37PS is required.



API function library attachment [API-PAC(W32)]

PC CARD SERIES

C-03

Digital
I/O Card

Analog
I/O Card

Communication
Card

Option

32 Channel 16-Bit High Speed Multi-Function Card

ADA16-32/2(CB)F

Now developing

■ FEATURES

- The highly efficient multi-function card which supports the high precision 16-bit analog input with the PC card
- Supporting the bus master transfer function which works without load of CPU, high-speed mass data collection is available
- It can input from and output to analog signal up to 64Mbytes data
- Connector with screw lock

■ SPECIFICATIONS

- Analog Inputs
 - Resolution : 16bit
 - Input Channels : 32
 - Conversion Speed : 500kSPS (2 μsec) [Bus master transfer function]
- Analog Outputs
 - Resolution : 16bit
 - Output Channels : 2 channels
 - Conversion Speed : 100kSPS (10 μsec) [Bus master transfer function]
- Digital Inputs
 - Input Channels : TTL Level 4 channels
- Digital Outputs
 - Output Channels : TTL Level 4 channels
- Counter Input
 - Channels : TTL Level one interrupt request signal as INTA,
 - Counting system : 32-bit up/down counter



Communication Card

2 Port RS-232C Serial Communication Card COM-2(PM)



RS-232C

FEATURES

- Standard COM Driver for Windows XP/2000/NT/Me/98/95 included
- Programmable baud rate from 50 to 115,200bps

■ SPECIFICATIONS

Interface Type	RS-232C (Async. serial transmission)
Channels	2ch
Speed	50-115,200bps
Data type	5-8 bits / 1,1.5,2 stop bit
Parity Check	even, odd, non-parity
Controller	16550 or equivalent
Interrupt	One of IRQ 3-7,9-12,14 or 15
Maximum distance	15m
I/O address	Any 16-byte boundary
Power consumption (Max.)	+5VDC 170mA
Connector	9-pin male D-type DELC-J9PAF-20L9[JAE] or equivalent

Attached Software	Standard COM Driver for Windows XP/2000/NT/Me/98/95
Length of an attached cable	250mm
Card type	PCMCIA 2.1/JEIDA 4.2, 16-bit PC Card, JEIDA Type II
Weight	30g
Option	
Software	API-PAC(W32), ACX-PAC(W32)BP, ACX-PAC(W32)AP
Accessories	-
Cables/Connector	RSS-9M/9F, RSC-9F, RSS-25M/9F, RSC-25F/9F, CN5-D9F

1 Port RS-232C Serial Communication Card COM-1(PM)



RS-232C



FEATURES

- It is possible as standards COM1-COM4 of Windows XP/2000/NT/Me/98/95
- Programmable baud rate from 50 to 115,200bps
- A single-channel serial RS-232C I/O port is provided.

■ SPECIFICATIONS

Channels	1
Type	RS-232C (non-isolated)
Interface type	Async. serial transmission
Speed	50-115,200bps
Data length	5,6,7,8
Stop bits	1,1.5,2
Parity check	even, odd, non-parity
Controller	16550 or equivalent
Maximum distance	15m
Interrupt Request Level	One of IRQ 3-7,9-12,14 or 15

I/O address	Any 8-byte boundary
Power consumption (Max.)	+5VDC 100mA
Operating Temp./Humidity	0-50°C, 20-90%RH(no condensation)
Length of an attached cable	150mm
Card type	PCMCIA 2.1/JEIDA 4.2, 16-bit PC Card, JEIDA Type II
Weight	70g (include a cable)
Option	
Software	API-PAC(W32), ACX-PAC(W32)BP, ACX-PAC(W32)AP, SUPPORT-PAC(PC)103
Cables/Connector	RSS-9M/9F, RSC-9F, RSS-25M/9F, RSC-25F/9F, CN5-D9F

1 Port RS-485/RS-422A Communication Card COM-1D(PM)



RS-422A

RS-485

Isolated



FEATURES

- Standard COM Driver for Windows XP/2000/NT/Me/98/95 included
- A single-channel serial RS-422A/485 I/O port is provided
- Signal lines are all isolated on the COM-1D(PM) offering excellent resistance to noise

■ SPECIFICATIONS

Channels	1
Type	RS-422A, RS-485 (Isolation)
Isolation	2500V
Interface type	Async. serial transmission
Speed	50-115,200bps
Data length	5,6,7,8
Stop bits	1,1.5,2
Parity Check	even, odd, non-parity
Controller	16550 or equivalent
Maximum distance	1200m

Interrupt Request Level	One of IRQ 3-7,9-12,14 or 15
I/O address	Any 8-byte boundary
Power consumption (Max.)	DC+5V 100mA
Operating Temp./Humidity	0-50°C, 20-90%RH (no condensation)
Length of an attached cable	150mm
Card type	PCMCIA 2.1/JEIDA 4.2, 16-bit PC Card, JEIDA Type II
Weight	70g
Option	
Software	API-PAC(W32), ACX-PAC(W32)BP, ACX-PAC(W32)AP, SUPPORT-PAC(PC)103
Cables/Connector	CN5-D9F

C-04

PC CARD SERIES

Digital I/O Card

Analog I/O Card

Communication Card

Option

IEEE-488.2/GPIB Interface Card GP-IB(PM)



API function library attachment [API-PAC(W32)]

SPECIFICATIONS

Channels	1
Type	IEEE488.1, IEEE488.2
Interface type	8 parallel lines, 3 handshake lines
Speed	50Kbyte/sec(Max.)
Signal logic	Low logic level : 0.8V or less, High logic level : 2.0V or more
Total cable length	20m
Cable length between device	4m
Connectable number of device(Max.)	Max. 15 devices
Interrupt Request Level	One of IRQ 3-7,9-12,14 or 15

FEATURES

- Conforms to IEEE-488.2 specifications
- Data transfer can be performed at a maximum rate of 50Kbytes/sec

I/O address	Any 16-byte boundary
Power consumption (Max.)	DC+5V 100mA
Operating Temp./Humidity	0-50°C, 20-90%RH (no condensation)
Length of an attached cable	2m
Card type	PCMCIA 2.1/JEIDA 4.2, 16-bit PC Card, JEIDA Type II
Weight	250g(include a cable)
Option	
Software	ACX-PAC(W32)BP, ACX-PAC(W32)AP, SUPPORT-PAC(PC)202
Cables/Connector	PCN-02, PCN-04

PC Card Accessories and Cables (Optional)

C-06

PC CARD SERIES

Digital I/O Card

Analog I/O Card

Communication Card

Option

Digital I/O and Analog I/O Accessories & Cables

Terminal Unit (32ch I/O)

EPD-37

35mm DIN-Rail mountable
Compatible Boards : 32ch I/O Boards
Terminal pitch (10mm)



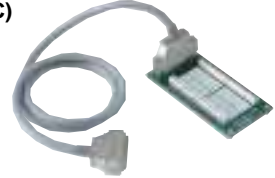
* Cable is option

DTP-3(PC)



* Cable (1m) attached

DTP-4(PC)



* Cable (1m) attached

Cables/Connector

37-pin D-type → 37-pin D-type Shield Cables

PCB37PS-0.5P	0.5m
PCB37PS-1.5P	1.5m
PCB37PS-3P	3.0m
PCB37PS-5P	5.0m



37-pin D-type → 37-pin D-type Flat Cables

PCB37P-1.5	1.5m
PCB37P-3.0	3.0m
PCB37P-5.0	5.0m



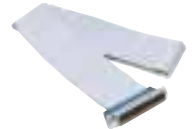
37-pin D-type → 37 wires (Pitch 1.27mm) Shield Cables

PCA37PS-0.5P	0.5m
PCA37PS-1.5P	1.5m
PCA37PS-3P	3.0m
PCA37PS-5P	5.0m



37-pin D-type → 37 wires (Pitch 1.27mm) Flat Cable

PCA37P-1.5	1.5m
PCA37P-3	3.0m
PCA37P-5	5.0m



37-pin D-type (male) Connector x 5

CNS5-D37M

Easy soldering

Communication Card Cables (Optional)

RS-232C Cables

9-pin D-type (male) → 9-pin D-type (female) Shield Cable (1.8m)

RSS-9M/F



9-pin D-type (female) → 9-pin D-type (female) Shield Cable (1.8m)

RSC-9F



25-pin D-type (male) → 9-pin D-type (female) Shield Cable (1.8m)

RSS-25M/9F



25-pin D-type (female) → 9-pin D-type (female) Shield Cable (1.8m)

RSC-25F/9F



GP-IB/IEEE-488 Cable (Optional)

GPIB Cable

PCN-02	2m
PCN-04	4m

High noise eliminate and high reliable GPIB cable



:Double shield cable

:UL Mark