

[ANALOG I/O | E Series Intelligent I/O ] PCI

For options, please see Page J-08 (Accessories & Cables) and Page I-01 (Software)  
Please see Page 2-1 for PCI specifications

**Multi-Function A/D**  
**AD12-16(PCI)E**



API-PAC(W32) included [API Function Library]

\*1: Linearity error when operating in 25°C environment  
\*2: When using a signal source with a high-speed built-in operational amplifier.  
\*3: Requires use of optional cable PCB37P or PCB37PS  
\*4: Requires use of optional cable DT/E2 and PCB15P  
\*5: Optional PCB15P cable is required when using FTP-15 terminal panel

**SPECIFICATIONS**

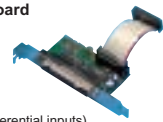
Input channels	16 single-ended, 8 differential
Output channels	1
Resolution	12bit
Analog Input	
Range	±10V, 0~+10V
Gain	x1, x2, x4, x8
Conversion Speed	10µsec/ch (Max.)
Nonlinearity error *1*2	±2LSB (Gain: x1, x2) ±4LSB (Gain: x4, x8)
Impedance	1MΩ or more
Analog Output	
Range	±10V, ±5V, 0~+10V
Rating	±5mA
Conversion Speed	6µ sec/ch (Max.)
Nonlinearity error *1*2	±1/2LSB
Impedance	1Ω or less
Trigger	Start trigger: 3 Mode, Stop trigger: 4 Mode
Isolation	-
Timer	2~7 x 10 <sup>13</sup> µsec
Digital I/O	General Digital I/O: Input 3, Output 4 (TTL-level)
Interrupts	
Request Events	A total of 15 types are available including the one used for terminating the operation.
Request Levels	One interrupt (Enable or Disable is selectable)

**FEATURES**

- 16MB data buffer memory (FIFO or ring buffer) enables sampling to be executed independently of the processing power of the PC.
- Variety of triggers available for starting/stopping data input.
- 1 analog output, 4 TTL digital inputs, 4 TTL digital outputs and one i8254-compatible counter

I/O address	Any 32-byte boundary
Power Consumption	5VDC 1100mA (max)
PCI Bus / Dimensions (mm)	32bit, 33MHz, 5V / 176.41(L) x 106.68(H)
Connectors	
CN1(AIO): 37-pin female D-type CN2(DIO): 16-pin Header	
Options	
Software	ACX-PAC(W32)BP
Accessories	DTP-3(PC), DTP-4(PC), ATP-16 *3, FTP-15 *4 EPD-37A *3, EPD-37 *3, ATSS-16 *3, ATII-8A *3 ATLF-8 *3, ATUH-16(PCI)
Cables / Connectors	PCA37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P, PCA15P-1.5, PCB15P-1.5 *4, PCC16PS, PCD8PS, DT/E1, DT/E2, CN5-D37M

**16ch Multiplexer Sub-Board**  
**ATUH-16(PCI)**



(Adds 16 single-ended or 8 differential inputs)

**High Speed Multi-Function A/D**  
**AD16-16(PCI)E**



API-PAC(W32) included [API Function Library]

\*1: Linearity error when operating in 25°C environment  
\*2: When using a signal source with a high-speed built-in operational amplifier.  
\*3: Requires use of optional cable PCB37P or PCB37PS  
\*4: Requires use of optional cable DT/E2 and PCB15P  
\*5: Optional PCB15P cable is required when using FTP-15 terminal panel

**SPECIFICATIONS**

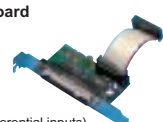
Input channels	16 single-ended, 8 differential
Output channels	1
Resolution	16bit
Analog Input	
Range	±10V, ±5V, 0~+10V, 0~+5V
Gain	-
Conversion Speed	10µsec/ch (max)
Nonlinearity error *1*2*7	±5LSB
Impedance	1MΩ or more
Analog Output	
Range	±10V, 0~+10V
Rating	±5mA
Conversion Speed	13µsec/ch (max)
Nonlinearity error *1*2	±2LSB
Impedance	-
Trigger	Start trigger: 3 Mode, Stop trigger: 4 Mode
Isolation	-
Timer	2~7 x 10 <sup>13</sup> µ sec
Digital I/O	General Digital I/O: Input 3, Output 4 (TTL-level)
Interrupts	
Request Events	A total of 15 types are available including the one used for terminating the operation.
Request Levels	One interrupt (Enable or Disable is selectable)

**FEATURES**

- High-precision 16-bit converter
- 16MB data buffer memory (FIFO or ring buffer) enables sampling to be executed independently of the processing power of the PC.
- 1 analog output, 4 TTL digital inputs, 4 TTL digital outputs and one i8254-compatible counter

I/O address	Any 32-byte boundary
Power Consumption	5VDC 1300mA (max)
PCI Bus / Dimensions (mm)	32bit, 33MHz, 5V / 176.41(L) x 106.68(H)
Connectors	
CN1(AIO): 37-pin female D-type CN2(DIO): 16-pin Header	
Options	
Software	ACX-PAC(W32)BP
Accessories	DTP-3(PC), DTP-4(PC), ATP-16 *3, FTP-15 *4 EPD-37A *3, EPD-37 *3, ATSS-16 *3, ATII-8A *3 ATLF-8 *3, ATUH-16(PCI)
Cables / Connectors	PCA37P-1.5, PCA37PS-0.5P/1.5P, PCB37PS-0.5P/1.5P, PCA15P-1.5, PCB15P-1.5 *4, PCC16PS, PCD8PS, DT/E1, DT/E2, CN5-D37M

**16ch Multiplexer Sub-Board**  
**ATUH-16(PCI)**



(Adds 16 single-ended or 8 differential inputs)

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ANALOG I/O

Product Lineup  
/ Basic  
Knowledge

F Series  
Multi-Function I/O

Features

PCI

PC Card

E Series  
Intelligent I/O

Features

PCI

ISA

Standard I/O

Low Profile  
PCI /  
PCI

PC Card

USB

ISA