

Buffer Amplifier Function Extension Box
for analog input board
ATBA-32F, ATBA-8F



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

Model	Number of Input Channels
ATBA-32F	Single-Ended Input: 32ch or Differential Input: 16ch
ATBA-8F	Single-Ended Input: 8ch

Features

Buffered by high speed high accuracy amplifiers

This terminal has equipped high response speed high accuracy amplifiers, the inputted analog signals can be truthfully transferred to our analog input board. And because of the high input impedance of buffer amplifiers, the influence applied to the output impedance of signal source can be limited to a very low level.

Crosstalk Prevention

These products are used to prevent the crosstalk while analog signals of low response speed sources are being inputted to the analog input board.

Compact designing

With its compact designing, you can carry it easily after simply removed the connection cables.

Aluminum Dustproof Cover-Box

The cover-box is lightly designed by using aluminum in consideration of portability.

Packing List

- Termination Panel [ATBA-32F or ATBA-8F]...1
- Power supply connector (MC1,5/3-ST-3,5)...1
- User's Manual...1
- Warranty Certificate ...1
- Signal name Label Sheet...1

These products are purposed to add buffer amplifier function to CONTEC analog input board.

These products reduces signal-crosstalk in case of inputted analog signals are low response speed.

Moreover, These products enables steady signal measurement, since the buffer amplifier can reduce possible signal noise that may come from a long connection cable.

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* Visit the CONTEC website to check the latest details in the document.

* The information in the data sheets is as of January, 2025

Specifications

Specifications

Item	ATBA-32F	ATBA-8F
Analog Input (Buffer Amplifier Part)		
Insulated specification	Unisolated	
Absolute max. input voltage	±15V	
Number of Input Channels *1	Single-Ended Input: 32ch or Differential Input: 16ch	Single-Ended Input: 8ch
Input voltage range	-10V - +10V	
Input Impedance	1MΩ or more	
Non-Linearity error *2	±0.03% of FSR	
CN1 Connector Assignment	The same definition as the used AD board ATBA-8F: only CH0 - CH7 have buffer amplifier. (other 24 channels are straight-connected).	
External power supply	5VDC, 0.85A (Max)	5VDC, 0.3A (Max)
Operating Conditions	0 - 50°C, 10 - 90%RH (No condensation)	
Physical dimensions (mm)	110(W) x 70(D) x 22(H) (No protrusion)	
Weight	150g	
Supported Products	AIO-163202UG-PE, AIO-163202G-PE, AIO-123202UG-PE, AIO-123202G-PE, AIO-163202F-PE, ADA16-32/2(PC)F, AIO-163202FX-USB	
Standard	CE Marking (EMC Directive Class A, RoHS Directive), UKCA	

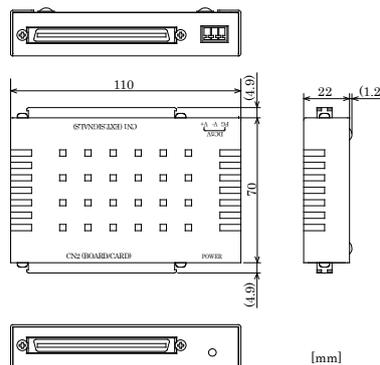
*1 It depends on the number of AD board's input channels.

*2 When the environment temperature is 0°C or 50°C, the maximum non-linearity error is 0.04% of full input range.

Specifications of Interface Connector CN1, CN2

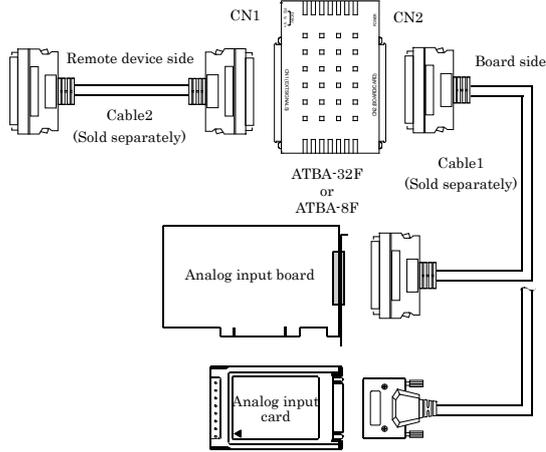
Type of Connector	PCR-E96LMD (mfd. by HONDA)
Type of mating connector (option)	PCR-E96FA (mfd. by HONDA)
Connecting Cable (option)	PCB96PS-0.5P, PCB96PS-1.5P, PCB96P-1.5 PCA96PS-0.5P, PCA96PS-1.5P, PCA96P-1.5 ADC-68M/96F

Physical Dimensions



Connect a Board/Card

Board/Card Connection



*1: To obtain an effective buffer amp connection, connect this unit near to the analog input board. Using a 0.5 m Shield Cable is recommended.

Correspondence Products (Optional)

- Board for PCI Express : AIO-163202UG-PE, AIO-163202G-PE, AIO-123202UG-PE, AIO-123202G-PE, AIO-163202F-PE
- Board for PCI : ADA16-32/2(PCI)F
- USB I/O Unit : AIO-163202FX-USB
- Card for CardBus : ADA16-32/2(CB)F * End of sale

Cables (Optional)

- Shielded cable with a 96-pin half-pitch connectors on 2 Ends : PCB96PS-0.5P (0.5m), PCB96PS-1.5P (1.5m)
- Flat cable with a 96-pin half-pitch connectors on 2 Ends : PCB96P-1.5 (1.5m),
- Shielded cable with a 96-pin half-pitch connector to open-ended : PCA96PS-0.5P (0.5m), PCA96PS-1.5P (1.5m)
- Flat cable with a 96-pin half-pitch connector to open-ended : PCA96P-1.5 (1.5m)
- 68/96-pin conversion shielded cable for analog input/output : ADC-68M/96F (0.5m) *1

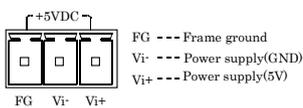
*1 ATBA-32F, ATBA-8F uses this cable when connecting the PC card.

⚠ CAUTION

- To use the AC adapter, please connect it to the terminal first, then plug the AC adapter into a outlet.
- When the terminal is not used, please leave the AC adapter unplugged.
- Continuously using the AC adapter under high temperature environment will affect its life.
- Use the AC adapter not in a closed place but in a well-ventilated place. The AC adapter heats up itself when loaded heavily. If the AC adapter is exposed to high temperature or used continuously, you should keep the load at about 80% of the maximum load.
- Please use the DC cable with a length of less than 1m to meet "CE EMC Directive".

Connecting an External Power Supply

Because the corresponding analog board have not voltage output, an external power supply is required to make the terminal work.



Items	Specification
Power Voltage	5VDC
Voltage Tolerance	±5%
Current Capacity	0.85A or larger

A bundled connector plug (MC1,5/3-ST-3,5, Phoenix Contact. Suitable wire: AWG28 - 16) can help you to connect the external power supply.

When you using this MC1,5/3-ST-3,5 plug to connect the external power supply, please strip the end of the corresponding wire, insert it into the connector plug, then fix the screw to secure.

There is an optional AC adapter available from CONTEC.

Accessories (Optional):

- AC adapter (Input 90 - 264VAC, Output: 5VDC 2.0A) : POA200-20

When using the external power supply. The terminal can provide the maximum power supply of 5VDC, 2A.