

Buffer Amplifier Function Extension Box for analog input board ATBA-16E



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

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

This board is 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.

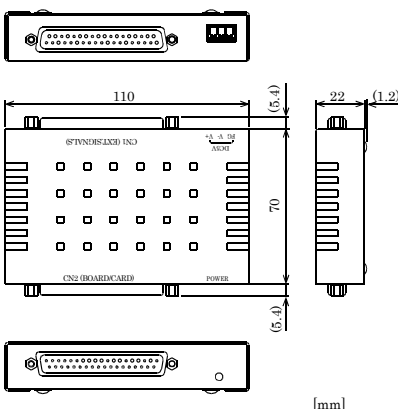
Aluminum Dustproof Cover-Box

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

Packing List

ATBA-16E Termination Panel...1
Power supply connector (MC1,5/3-ST-3,5)...1
User's Manual...1
Warranty Certificate ...1
Signal name Label Sheet...1

Physical Dimensions



This product is purposed to add buffer amplifier function to CONTEC analog input boards.

This product reduces signal-crosstalk in case of inputted analog signals are low response speed.

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

- * 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 July, 2023.

Specifications

Specifications of ATBA-16E

| Item | Specifications |
|--------------------------------------|--|
| Analog Input (Buffer Amplifier Part) | |
| Unisolated specification | Unisolated |
| Absolute max. input voltage | □15V |
| Number of Input Channels | 16ch (Single-Ended Input) 8ch (Differential Input) |
| Input voltage range | -10V - +10V |
| Input Impedance | 1MΩ or more |
| Non-Linearity error *1 | □0.03% of FSR |
| CN1 Connector Assignment | The same definition as the used AD board |
| External power supply | 5VDC, 0.4A (Max) |
| Operating Conditions | 0 - 50°C, 10 - 90%RH (No condensation) |
| Dimensions (mm) | 110(W) x 70(D) x 22(H) (No protrusion) |
| Weight | 100g |
| Supported Products | AIO-163202UG-PE, AIO-163202G-PE, AIO-123202UG-PE, AIO-123202G-PE, AIO-161601UE3-PE, AIO-161601E3-PE, AIO-121601UE3-PE, AIO-121601E3-PE, AD12-16(PC)EV, AD16-16(PC)EV, AD12-16U(PC)EV, AD16-16U(PC)EV, AD12-16(PC)E, AD16-16(PC)E, AD12-16U(PC)EH, AD16-16U(PC)EH, AD12-16(PC)I, AD12-16(PC)EH, AD16-16(PC)EH, AD12-16U(PC)EH, AD16-16U(PC)EH |
| Standard | VCCI Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA |

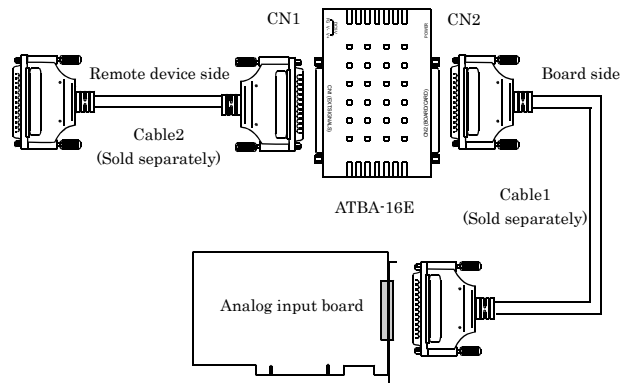
*1 When the environment temperature is 0°C or 50°C, the maximum non-linearity error is 0.04% of full input range.

Specifications of Interface Connector CN1, CN 2

| | |
|-----------------------------------|--|
| Type of Connector | DCLC-J37SAF-20L9L[mfd. by JAE, Female] equivalent Lock nut: UNC#4-40[inch screw threads] |
| Type of mating connector (option) | 17JE-23370-02(D8C) [mfd. by DDK, Male] equivalent FDICD-37P [mfd. by HIROSE, Male] equivalent DC-37P-N[mfd. by JAE, Male] equivalent |
| Connecting Cable (option) | PCB37PS-0.5P, PCB37PS-1.5P, PCB37P-1.5P PCA37PS-0.5P, PCA37PS-1.5P, PCA37P-1.5P |

Connect a Board

Board Connection



Board Connection

Board for PCIe :

AIO-163202UG-PE, AIO-163202G-PE, AIO-123202UG-PE,
AIO-123202G-PE, AIO-161601UE3-PE, AIO-161601E3-PE,
AIO-121601UE3-PE, AIO-121601E3-PE

Board for PCI :

AD12-16(PCI)EV, AD16-16(PCI)EV, AD12-16U(PCI)EV, AD16-16U(PCI)EV,
AD12-16(PCI)E, AD16-16(PCI)E, AD12-16U(PCI)EH, AD16-16U(PCI)EH,
ADI12-16(PCI) *1

Board for ISA :

AD12-16(PC)EH, AD16-16(PC)EH, AD12-16U(PC)EH, AD16-16U(PC)EH

*1 When connect this terminal to ADI12-16(PCI), an external power supply is necessary.

Cables (Optional)

Shielded cable with a 37-pin D-SUB connectors on 2 Ends
: PCB37PS-0.5P (0.5m), PCB37PS-1.5P (1.5m)

Flat Cable with a 37-Pin D-SUB Connectors on 2Ends
: PCB37P-1.5 (1.5m)

Shielded cable with a 37-pin D-SUB connectors on 2 Ends
: PCA37PS-0.5P (0.5m), PCA37PS-1.5P (1.5m)

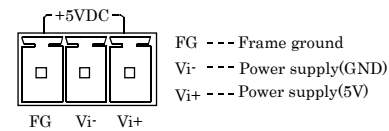
Flat Cable with a 37-pin D-SUB Connector
: PCA37P-1.5 (1.5m)

Connecting an External Power Supply

The terminal can get its power supply from the analog board. In this situation, external power supply is not required.

If you want to control the power consumption of the computer or to use this product together with other terminals, you can use an external power supply to provide power for the terminal.

In case to connect an ADI12-16(PCI) board, an external power supply is required.



| Items | Specification |
|-------------------|----------------|
| Power Voltage | 5VDC |
| Voltage Tolerance | ±5% |
| Current Capacity | 0.8A 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 internal power supply:
The terminal can provide the maximum power supply of +5VDC, 1.2A.
(Up to 2A of current can be supplied from analog board and this terminal consumes a total of 0.8A current)
- When using the external power supply:
The terminal can provide the maximum power supply of 5VDC, 2A.

⚠ 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.