
Buffer Amplifier Box for Analog Input Boards

ATBA-16E User's Manual

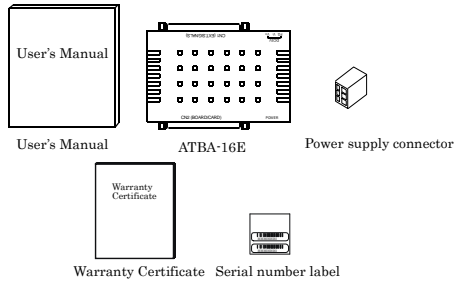
CONTEC CO.,LTD.

Thank you for purchasing the CONTEC product.

The product consists of the items listed below. Check, with the following list, that your package is complete. If you discover damaged or missing items, contact your retailer.

Product Configuration List

- ATBA-16E Termination Panel...1
- Power supply connector (MC1,5/3-ST-3,5)...1
- This User's Manual...1
- Warranty Certificate ...1
- Serial number label ...1



⚠ CAUTION

- Use this product in the specified environment (temperature and humidity).
 - Do not use or store the product in a location exposed to extremely high or low temperature or susceptible to rapid temperature changes.
For example: - Do not exposure to direct sunlight
 - In the vicinity of a heat source
 - Clean the ATBA-16E by wiping lightly with a soft cloth moistened with water or a cleaning solution.
Take care to avoid the use of benzene, thinners or other volatile solutions which may cause deformation or discoloration.
 - CONTEC will bear no responsibility for any problems, etc., resulting from modifying this product.
 - When carrying the product, be careful not to apply direct vibration or shock to the board.
 - The information in this document is subject to change without notice.
 - All relevant issues have been considered in the preparation of this document. Should you notice an omission or any questionable item in this document, please feel free to notify CONTEC CO., LTD.
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About the Terminal

ATBA-16E 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, ATBA-16E enables steady signal measurement, since the buffer amplifier can reduce possible signal noise that may come from a long connection cable.

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.

Setup Hardware

This section explains the components of the terminal and how to set up.

Parts of the Terminal

Figure 1 shows the major parts of the terminal.

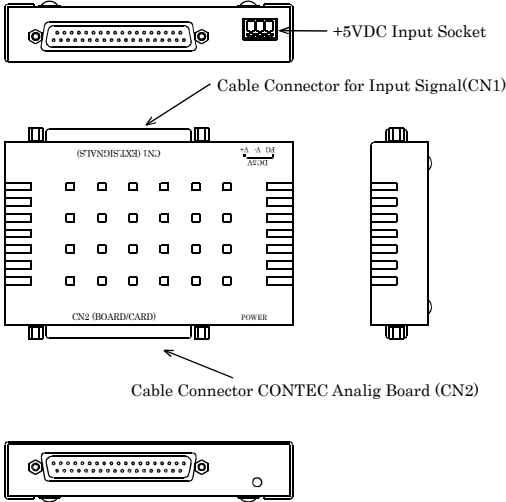


Figure 1. Component Locations

- CN1: The connector used to connect analog input signal sources.
(Pin assignment of CN1 is the same as corresponding analog input board used.)
- CN2: The connector used to connect the CONTEC analog input board.

Connect a Board

Board Connection

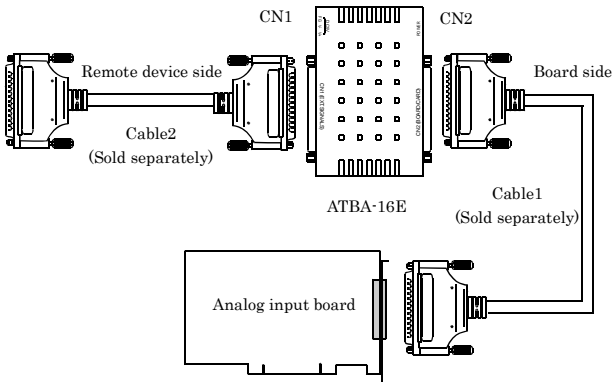


Figure 2. Board Connection

Correspondence Boards (Optional)

Board for PCI :

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

Board for ISA :

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

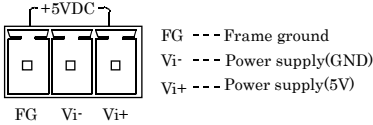


Table 1. Specification of External Power Supply

Items	Specification
Power Voltage	5VDC
Voltage Tolerance	±5%
Current Capacity	0.8A or larger

Figure 3. Pin Assignment of +5 VDC input Socket

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.

Dimensions

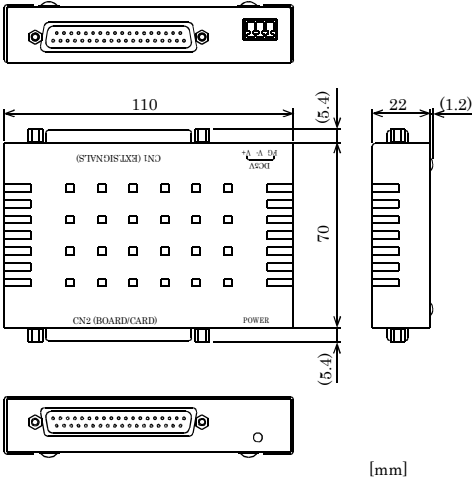


Figure 4. Dimensions

Specifications

Table 2. Specifications of ATBA-16E

Item	Specification
Analog Input (Buffer Amplifier Part)	
Insulated specification	Un-Isolated
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	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, ADI12-16(PC), AD12-16(PC)EH, AD16-16(PC)EH, AD12-16U(PC)EH, AD16-16U(PC)EH

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

Table 3. Specifications of Interface Connector CN1, CN 2

Type of Connector	DCLC-J37SAF-20L9L[mfd. by JAE, Female] equivalent Thumb screw: UNC#4-40(inch screw)
Type of mating connector (option)	17JE-23370-02(D8C) [mfd. by DDK, Male] equivalent FDCCD-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

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