AIMB-C300

Multifunction Chassis for EmbATX motherboard

User Manual

Copyright

Advantech Co., Ltd copyrights this documentation and the software included with this product in 2005. All rights are reserved. Advantech Co., Ltd. reserves the right to make improvements in the products described in this manual at any time without notice.

No part of this manual may be reproduced, copied, translated or transmitted in any form or by any means without the prior written permission of Advantech Co., Ltd. Information provided in this manual is intended to be accurate and reliable. However, Advantech Co., Ltd. assumes no responsibility for its use, or for any infringements of the rights of third parties, which may result from its use.

Acknowledgements

IBM and PC are trademarks of International Business Machines Corporation.

On-line Technical Support

For technical support and service, please visit our support website at:
http://www.advantech.com/support
This manual is for the AIMB-C300.

FCC

This device complies with the requirements in part 15of the FCC rule:Operation is subject to be following two conditions:

(1)this device may not cause harmful interference

(2)this device must accept any interference received, including interference that may cause undesired operation.

Contents

General Information

Chapter 1 General Information

1.1 Introduction

The AIMB-C300 is a industrial computer chassis designed for space-conscious applications. Customers can expand their business without having to worry about space efficiency because the AIMB-C300 supports for Embedded ATX series industrial motherboards. Fast-growing Internet service providers and corporate enterprise customers can use the AIMB-C300 as computing platforms for their mission critical applications. This chassis comes with 200W ATX PFC power supply, dual abundant cooling fans, front-accessible air filter, USB, PS/2 keyboard connector, system reset, system alarm reset and system power switch. The viewable LED indicators on front door support alarm notification of system status. This ultra-compact 2U ATX M/B form factor delivers rack space optimization without sacrificing performance, expandability, serviceability, or manageability.

1.2 Specification

• Expansion Driver Bay: 2x3.5" Hard Disk, 1 slim CD, 1 FDD or Card Reader

• Small Module: Support Display Small Module

• Button: Power Switch Button, Reset Button

• Front Key Lock & Air Filter

• PCI slot: 1 PCI Riser Card

• LED: 1 Green LED light (Power on) 1 Yellow LED Light (HDD active)

• Wall Mount: Wall Mount Tool For Vertical/Parallel (optional)

• Cable kits: 1 USB Cable

• I/O panel Blank (default)

• 4 COMs (optional)

• Operating temperature: $0 \sim 40 \times °C$ ($32 \sim 104 \times °F$)

• Non-operating temperature: $-20 \sim 60 \times °C$ ($-4 \sim 140 \times °F$)

• Relative humidity: $10 \sim 95\%$ @ $40 \times °C$, non-condensing

• Shock resistance: 30 G acceleration, peak to peak, 11 ms (non-operating) 10 G acceleration peak to peak, 11 ms acceleration peak to peak (operating)

• Vibration: 5 ~ 500 Hz, 0.5 G sine wave, and 5 ~ 500 Hz, 1 G (rms.) random

• Dimensions (W x H x D): 383 x 362 x 90.9mm

• Safety: CE compliant, C-UL approved

1.3 Power Supply

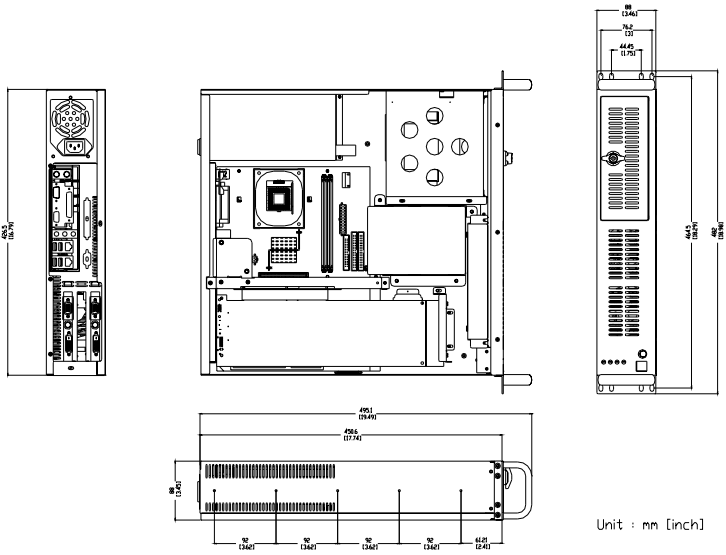| *Table 1.1:* Power Supply					
Model Name	Watt	Input	Output	Mini-load	Safety& MTBF
1757000112 (ATX, PFC)	200W	90~264 Vac(Full -range)	+5 V @ 35 A +3.3 V @ 20A +12 V @ 16 A -12 V @ 1A -5 V @ 0.5 A +5 Vsb @ 2 A	+5V @ 3A +12V @ 2A -5V @ 0.05A- 12V @ 0.05A +3.3V @ 1A +5Vsb @ 0.1A	UL1950, CSA 22.2 NO/960, TUV IEC 950

1.4 Dimension Diagram

Unit : mm [inch]

Figure 1.1: Dimension Diagram

System Setup

Chapter 2 System Setup

WARNING: Before starting the installation process, turn off the power switch and disconnect the system power cord from the chassis, or unplug the power cord from the power outlet. When in doubt, consult with an experienced technician.

2.1 Removing the top cover

First, remove the chassis cover by two M3 screws, which are on the rear location of chassis.

To remove the top cover:

1. Detach the two screws on the rear side.

2. Lift off the cover.

IMPORTANT: Make sure you fully remove the top cover when maintaining full-size cards.

Check all the power supply cables and make certain that they are not tangled or blocking the cooling fan blades. This prevents any accidental damage to the cables.(please refer Figure2-1)

PS: We assume the board has already been placed inside.

Figure 2.1: Remove the top cover

2.2 Chassis Front and Rear Sections

The AIMB-C300 comes in two sections: the front section and rear section.

The front section includes:

1.Standard drive bay.

2.HDD bay.

3.Front chassis door.

The rear section includes:

1.Backplane.

2.Power supply with two fans.

3.Bracket for COM port

2.3 The HDD Drive Bay

The HDD drive bay of the AIMB-C300 can hold up to two hard disk.

Installing disk drives

1.Remove the top cover.

2.Detach the two screws holding the HDD bay.

3.Lift off the HDD bay.

4.Insert Hard Disks into their proper locations in the drive bay and secure them with the screws provided.(please refer to figure 2-2).

5.Connect the disk drive power and signal cables.

6.Install the standard drive bay and secure the top front cover with the two screws.(please refer to figure 2-3)

Figure 2.2: HDD drive bay

Figure 2.3: Install the standard drive bay

2.4 The Standard Drive Bay

The standard drive bay of the AIMB-C300 can hold one 3.5" FDD or Card reader (optional) and one Slim CD ROM.

1.Remove the top cover.

2.Detach the two screws holding the standard drive bay.(You could remove the power supply first, it will easier to insert drive bay).

3.Lift off the standard drive bay.

4.Insert the drives into their proper locations in the drive bay and secure them with the screws provided.(please refer to figure 2-4).

5.Connect the disk drive power and signal cables.

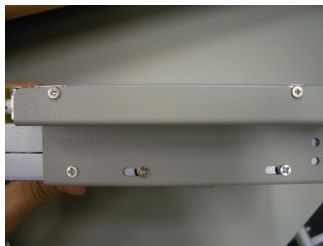6.Install the standard drive bay and secure the top front cover with the two screws.(please refer to figure 2-5)

Figure 2.4: Insert the drives

Figure 2.5: Install the standard drive bay

2.5 PCI Riser card

Please follow the below installation guide to install PCI riser card into AIMB-C300.

1. 32 bit PCI riser card

Install the PCI riser card to the proper location with the provided two screws.(please refer to figure 2-6)

Figure 2.6: PCI riser card

2. 64 bit PCI riser card

First, you have to take away the screw on the original location to avoid the riser card damage.Then just install the riser card to the proper location with the two screws.

2.6 System Status Indicator

Table 2.1: System Status LED

LED	Description	RED	GREEN or Orange
PWR	System Power	N/A	Normal
HDD	Hard Drive activity	N/A	Data access

PWR LED turns on, it indicates system power on.

HDD LED turns on, it indicates HDD data access

2.7 Cooling Fan & Filter

There are dual cooling fans as shown in figure 2-7 located inside the chassis. The cooling fans are low maintenance and provide adequate cooling to the system. If one of those cooling fails, please undo the two screws on the dual cooling fan holder. Replace the failed cooling fan with a good one. Please refer to figure2-7.
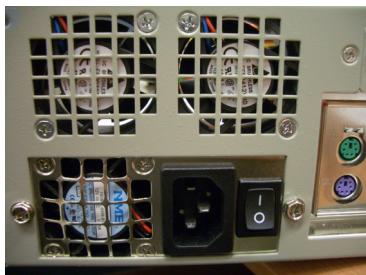

Figure 2.7: Cooling fans

Please refer the figure 2-8 to change the filter if you find the filter is blocked with dust or other particles
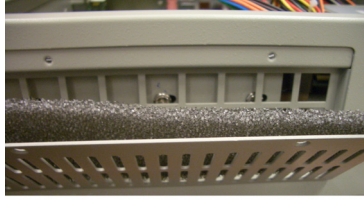
Figure 2.8: System Filter

2.8 Front Panel Switches

The front panel switches are used for system power and system reset.

Power On/Off switch is used for switching the system on or off. The System Reset switch re-initializes the system. This switch is similar to the hardware reset button.

Figure 2.9: Front Panel Switches

Safety Instructions

Appendix A Safety Instructions

A.1 Safety Instructions

1. Read these safety instructions carefully.

2. Keep this User Manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Do not use a damp cloth, liquid or spray detergents for cleaning.

4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.

7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.

12. Never pour any liquid into an opening. This may cause fire or electrical shock.

13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

14. If one of the following situations arises, get the equipment checked by service personnel:

a. The power cord or plug is damaged.

b. Liquid has penetrated into the equipment.

c. The equipment has been exposed to moisture.

d. The equipment does not work well, or you cannot get it to work according to the user manual.

e. The equipment has been dropped and damaged.

f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20× C (-4× F) OR ABOVE 60× C (140× F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70dB(A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

16. Any insulation on conductors inside EQUIPMENT which are connected to ACCESSIBLE METAL PARTS or other PROTECTIVELY EARTHED parts with a protective function to the PROTECTIVE EARTH TERMINAL shall be identified by the colors green and yellow at the termination of the conductors.

17. CAUTION: The computer is provided with a Battery-powered Real-Time Clock Circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent typed recommended by the manufacturer. Discard use batteries according to the manufacturer's instructions.

18. The computer is provided with appropriate safety standards including lec 60826.

19. Install the computer. Before your begin make sure the Green/Yellow wire reliable connection between metal part of computer and earthing of final system.