

IPC-613

2U e-Server Chassis

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Chapter 1 General Information

1.1 Introduction

The IPC-613 is a 2U high, rack-mount e-Server chassis for high-density internet services. Engineered for service providers and enterprises, the IPC-613's rack-mount 2U form factor is best for stacking servers as services grow. The IPC-613 is designed to accommodate ATX motherboards. With various configuration possibilities, the IPC-613 provides the flexibility and high performance at the same time.

1.2 Specifications

- **Construction:** Heavy-duty steel
- **Disk drive capacity:** Four optional hot-swap 3.5" hard disk drive space, one 5.25" CD-ROM drive and one 3.5" floppy disk drive
- **Expansion slots:** Two PCI expansion slots on the PCI riser card
- **Indicators:** LEDs for power, fan, and temperature
- **Controls:** Momentary power switch and alarm reset switch on front panel
- **Cooling fan:** Three 38.6 CFM cooling fans, 115.8 CFM in total
- **Weight:** 10 kg (22 lbs)
- **Dimensions (W x D x H):** 482 x 595 x 88 mm (19" x 23.4" x 3.5")
- **Interior paint color:** Black 4C 2X; brushed finish, Ni

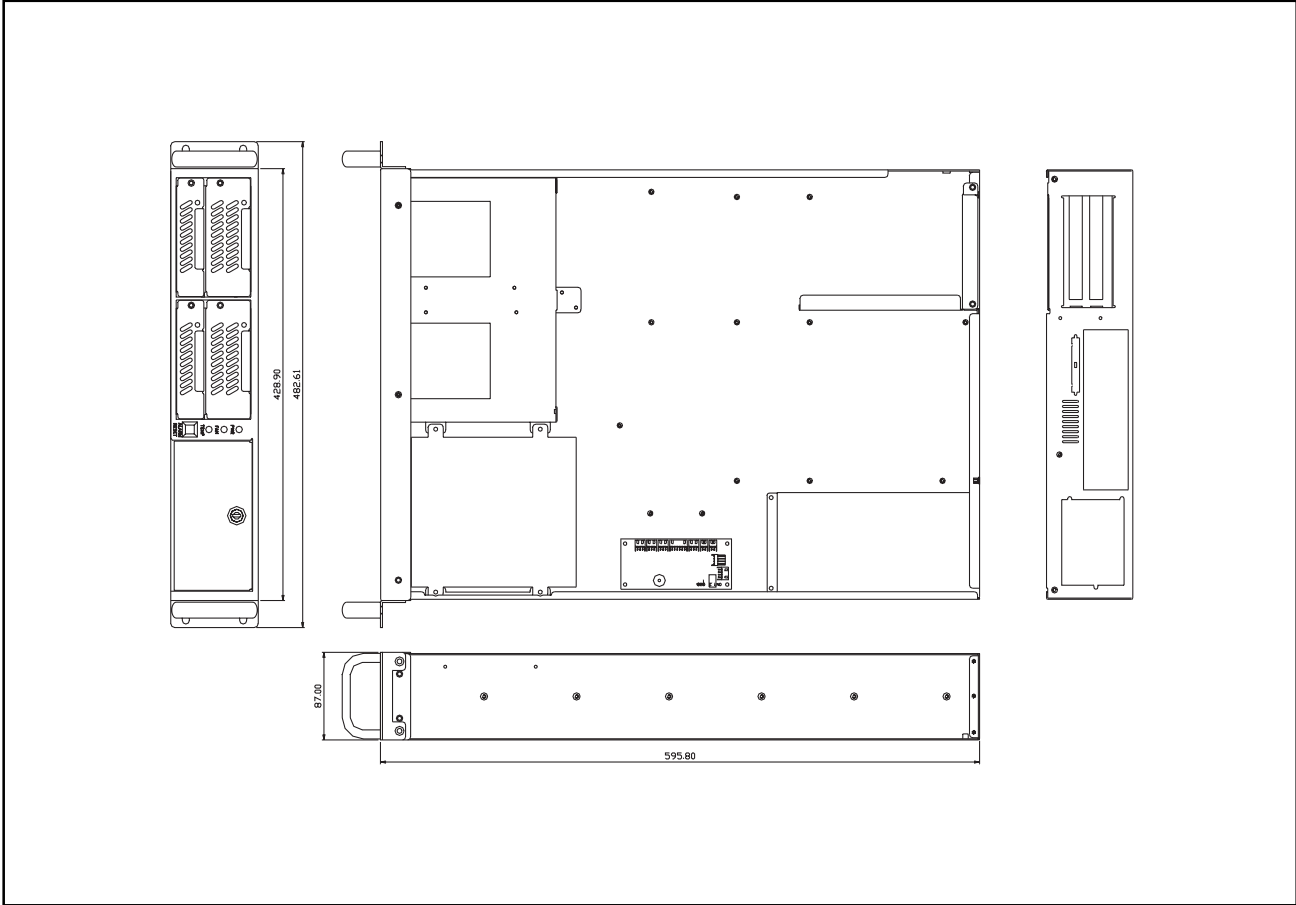
Power supply

- **Output rating:** 300 W
- **Input rating:** 100/200 V_{AC}
- **Output voltage:** +3.3 V @ 16 A, +5 V @ 26 A, +12 V @ 10 A, -5 V @ 0.25 A, -12 V @ 1 A, +5 V_{SB} @ 1.5 A
- **Minimum load:** +5 V @ 1 A, +12 V @ 0.5 A
- **MTBF:** 50,000 @ 50° C
- **Safety:** CE / UL / CUL

Environmental specifications

- **Operating temperature:** 0 ~ 45° C (32 ~ 113° F)
- **Relative humidity:** 10 ~ 95% @ 40° C, non-condensing
- **Safety:** UL / CE approved
- **CE compliant**

1.3 Dimensions



Unit: mm (inches)

Figure 1-1: IPC-613 dimensions

Chapter 2 System Setup

The following procedures are provided to assist you in installing drives and plug-in cards into the IPC-613.

2.1 Removing the Cover

1. Unscrew the screws at the rear side of the chassis.
2. Slide the upper cover backwards.
3. Lift up the upper cover to open the chassis.



Figure 2-1: Upper cover removing

2.2 Drive Bay

The IPC-613 supports four hard disk drives, one CD-ROM drive and one floppy disk drive. There are two types of the IPC-613 available: IPC-613 and IPC-613-SCA. The IPC-613-SCA provides a SCA-2 backplanes and therefore support four hot-swap hard disk drives.

Please notice that the IPC-613 support two 3.5", 1" height SCSI hard disk drives with 80-pin SCA-2 connectors and two 3.5" 1.6" height SCSI hard disk drives with 80-pin SCA-2 connectors.

In order to install the hard disk drives in the chassis, please follow the following procedures.

1. Unscrew the screws on the hard disk trays and pull them out.
2. Put hard disk drives in the hard disk racks and fasten them with screws.
3. Slide the hard disk racks into the drive bay.



Figure 2-2: Hot-swap hard disk drive bay

2.3 Installing A Motherboard

The IPC-613 support ATX motherboards. Please contact Advantech for recommended motherboard solutions.



Figure 2-3: IPC-613 with server motherboard

2.4 Installing the Riser Card

One riser card is shipped with the IPC-613. This riser card can support two PCI expansion slots. Please refer to Figure 2-4 to install the riser card.

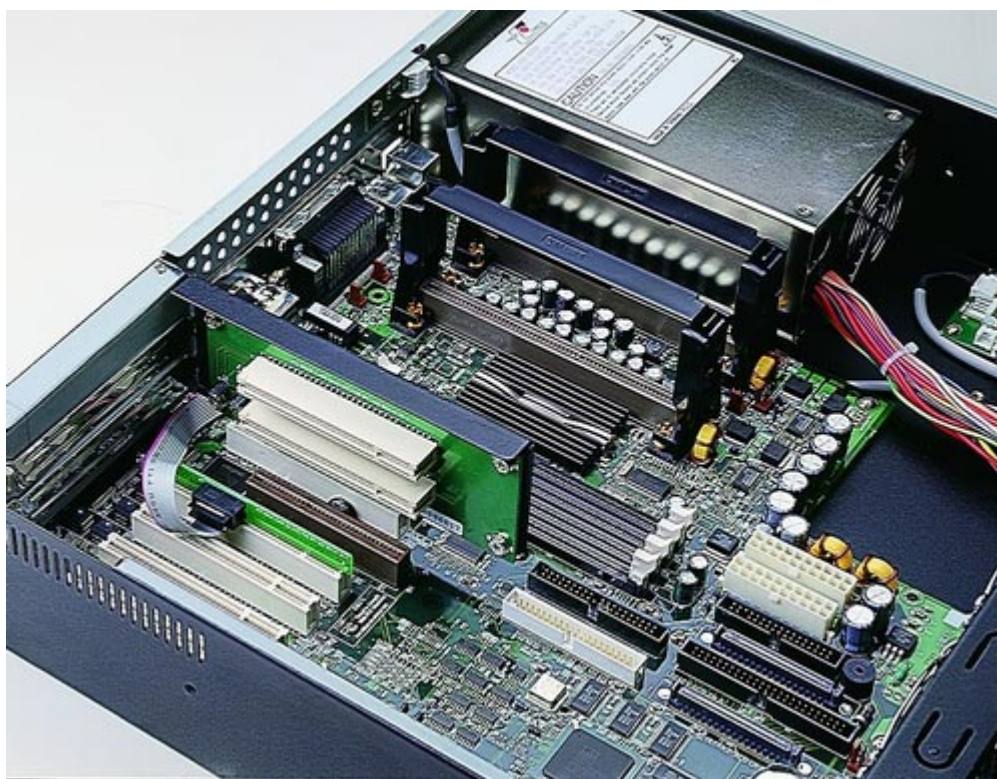


Figure 2-4: Riser card on the motherboard

2.5 Temperature Setting

If the chassis interior temperature exceeds 65° C (149° F) (default setting), the LED changes color from green to red. There will be audio alarm as well. The LED remains red until the temperature goes below 63° C.

Temperature also can be selected (SW1) on the alarm board inside the chassis:

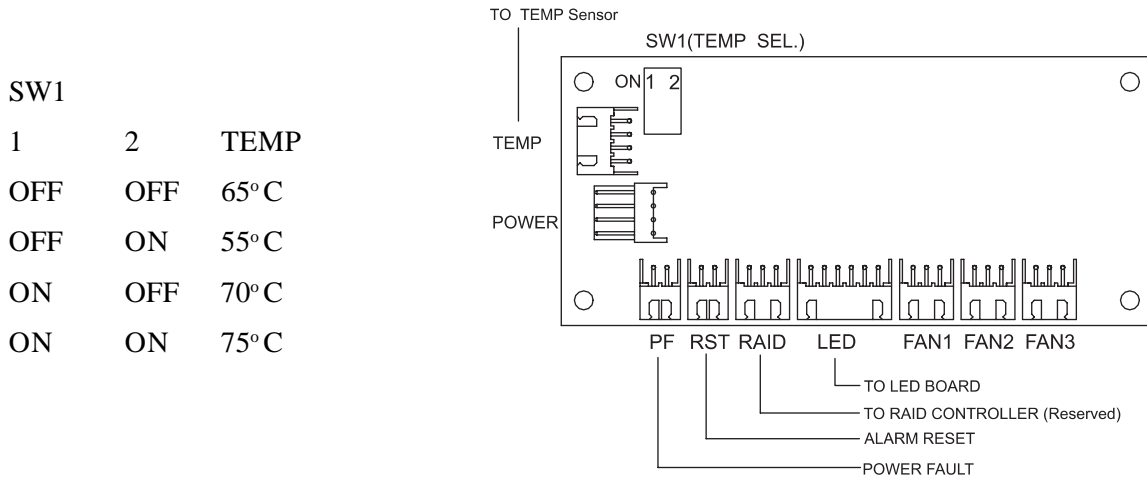


Figure 2-5: Temperature Setting

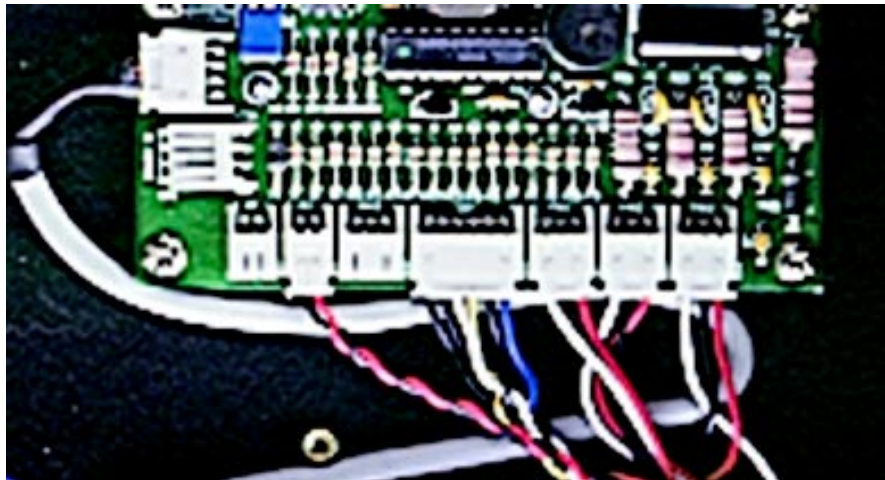
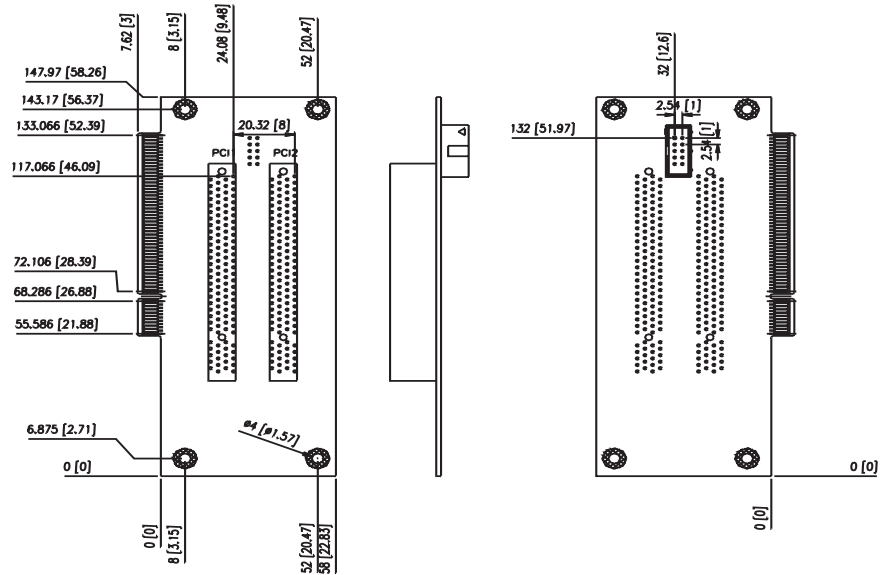


Figure 2-6: System monitoring alarm board

Appendix A Riser Card

Two PCI expansion slots at 32-bit, 33 MHz

Part Number: 9686613000



Unit: mm (inches)

Appendix B Safety Instructions

B.1 English

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and 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 could 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 overvoltage.
12. Never pour any liquid into an opening. This could 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 any 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 installation reference guide.
 - e. The equipment has been dropped and damaged.
 - f. The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS MAY DAMAGE THE EQUIPMENT.**

The sound pressure level at the operator's position according to IEC 704-1:1982 is equal to or less than 70 dB(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.

B.2 German - Wichtige Sicherheitshinweise

1. Bitte lesen Sie sich diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie keine Flüssig- oder Aerosolreiniger. Am besten dient ein angefeuchtetes Tuch zur Reinigung.
4. Die Netzanschlußsteckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Verletzungen hervorrufen.
7. Die Belüftungsöffnungen dienen zur Luftzirkulation die das Gerät vor Überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
8. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
9. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
10. Alle Hinweise und Warnungen die sich am Geräten befinden sind zu beachten.
11. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
12. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
13. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
14. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu überprüfen:
 - a. Netzkabel oder Netzstecker sind beschädigt.
 - b. Flüssigkeit ist in das Gerät eingedrungen.
 - c. Das Gerät war Feuchtigkeit ausgesetzt.
 - d. Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
 - e. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
 - f. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.
15. Bitte lassen Sie das Gerät nicht unbehehrt hinten unter -20° C (-4° F) oder oben 60° C (140° F), weil diesen Temperaturen das Gerät zerstören könnten.

Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 beträgt 70dB(A) oder weniger.

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