

IPC-601-SCA

1U e-Server Chassis

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CHAPTER 1

Introduction

This chapter gives background information on the IPC-601-SCA.

Sections include:

- Introduction
- Specifications
- Dimensions

1.1 Introduction

The IPC-601-SCA is a 1U high, rack-mount e-Server chassis for high-density internet services. Engineered for service providers and enterprises, the IPC-601-SCA's rack-mount 1U form factor is best for stacking servers as services grow. The IPC-601-SCA is designed to accommodate PICMG passive backplane and full-sized CPU card configurations to provide flexibility with high reliability. With various CPU cards configuration options, the IPC-601-SCA provides flexibility and high performance at the same time.

1.2 Specifications

- **Construction:** Heavy-duty steel
- **Disk drive capacity:** Three optional hot-swap hard disc drive space and one slim-type CD-ROM disk drive and one slim-type floppy disk drive.
- **Indicators:** LEDs for power On/Off, HDD and alarm
- **Controls:** Momentary power switch and alarm reset switch on front panel
- **Cooling fan:** Three 7 CFM cooling fans, 21 CFM in total
- **Weight:** 8 kg (17.6 lbs)
- **Dimensions (W x D x H):** 482 x 610 x 44 mm (19" x 24" x 1.7")
- **Interior paint color:** Black 2U 2X; Fabric Texture

Passive backplane (PCA-6102P1V)

- **Slots:** One PICMG slot for full-sized CPU card, and one PCI slot for expansion
- **PC board:** 4-layer PCB with ground and power planes for reduced noise and low power-supply impedance
- **Dimensions:** 313 x 38 mm (12.3" x 1.5")

Power supply

- **Output rating:** 320 watts max.
- **Input rating:** 115/230 V_{AC}, 50/60 Hz, auto-switch
- **Output voltage:** +3.3 V @ 20 A, +5 V @ 32A, +12 V @ 12 A, -5 V @ 0.5 A, -12 V @ 0.5 A, +5 Vsb @ 2 A
- **Minimum load:** +5 V @ 1.0 A
- **MTBF:** 50,000 Hours @ 70 % load
- **Safety:** UL/CUL/CE

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

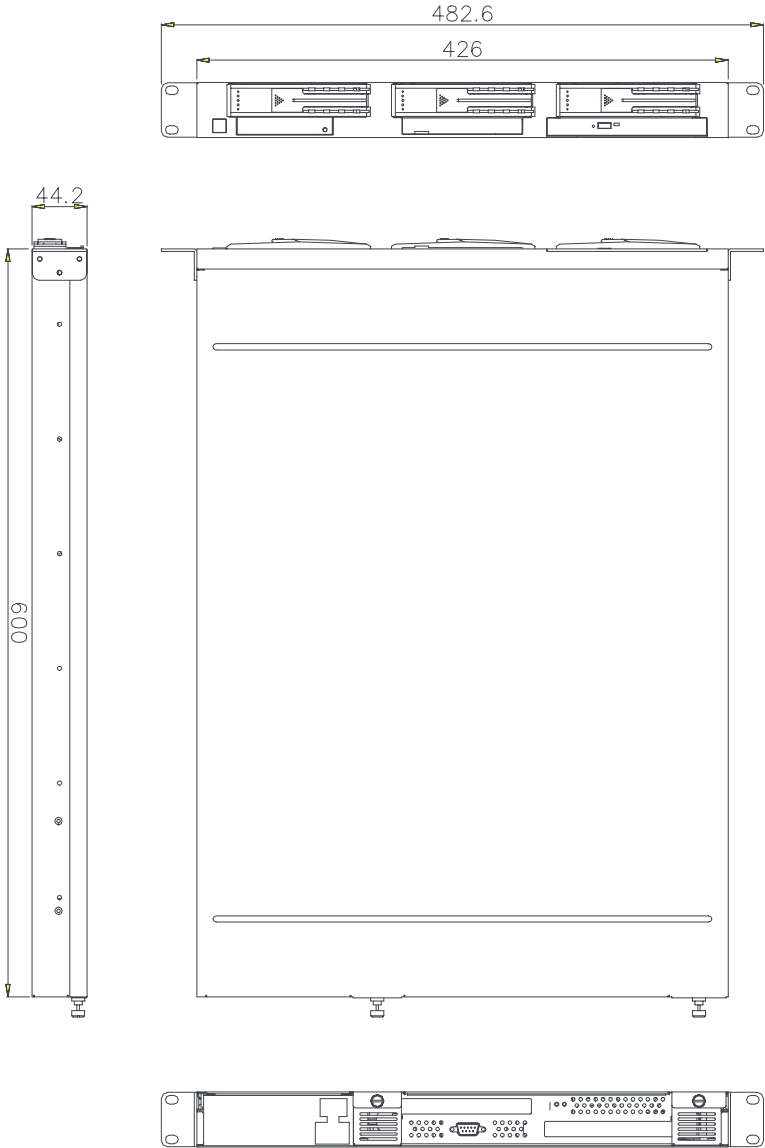


Figure 1-1: IPC-601-SCA dimensions

System Setup

The following procedures are provided to assist you in setting up the IPC-601-SCA

2.1 Removing the Cover

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

Please refer to the Figure 2-1 below for illustration.

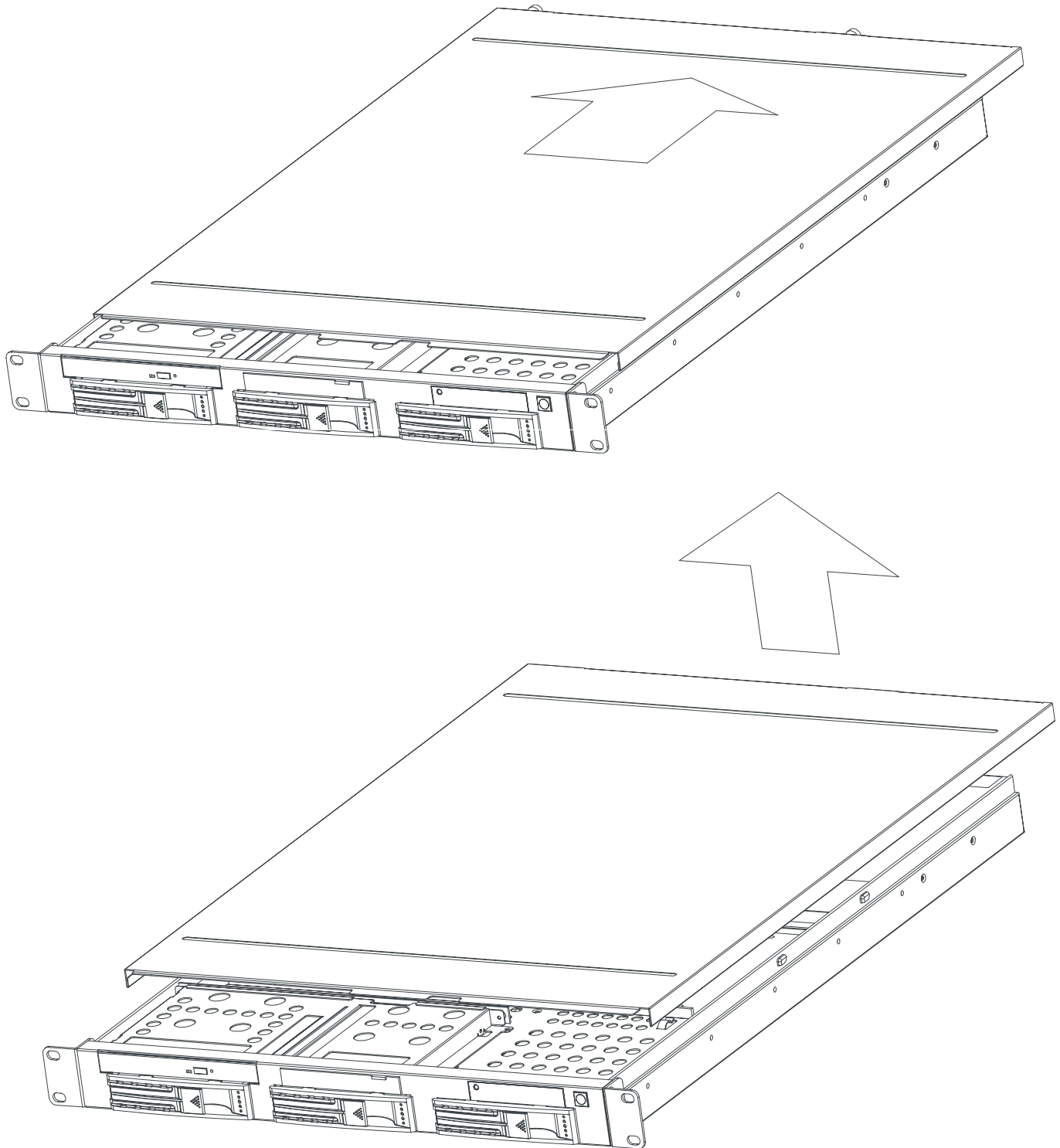


Figure 2-1: Upper cover removing

2.3 Replacing the Fan

The IPC-601-SCA provides three hot-swap fans. There is no screws on the fans and it is easy to replace the fans.

2.4 Adding Disk Drives

The IPC-601-SCA supports three hard disk drives, one slim-type CD-ROM (which is set in the master mode only) and one slim-type floppy disk drive. The IPC-601-SCA provides one SCA-2 backplane and supports three hot-swap hard disk drives.

Please notice that if the hard disk drives used in the IPC-601-SCA shall be 3.5", 1" 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. Unfasten the dummy HDD trays from the hard disk racks.
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.

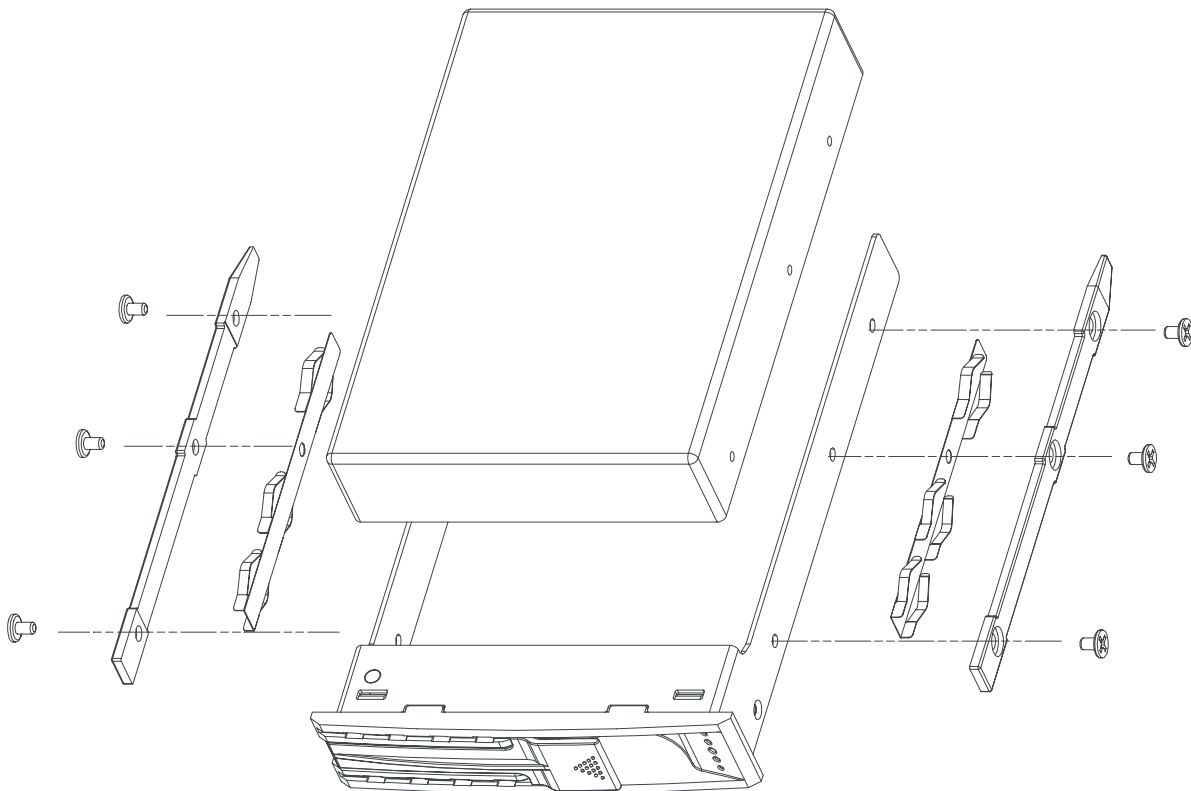


Figure 2-3 Installing a hard disk drive in the hard disk rack

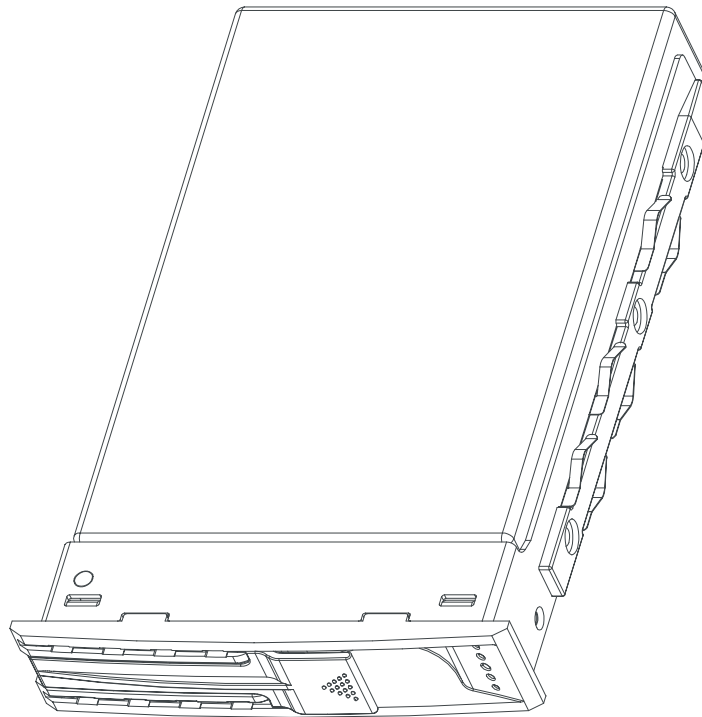


Figure 2-4: Hard disk assembled

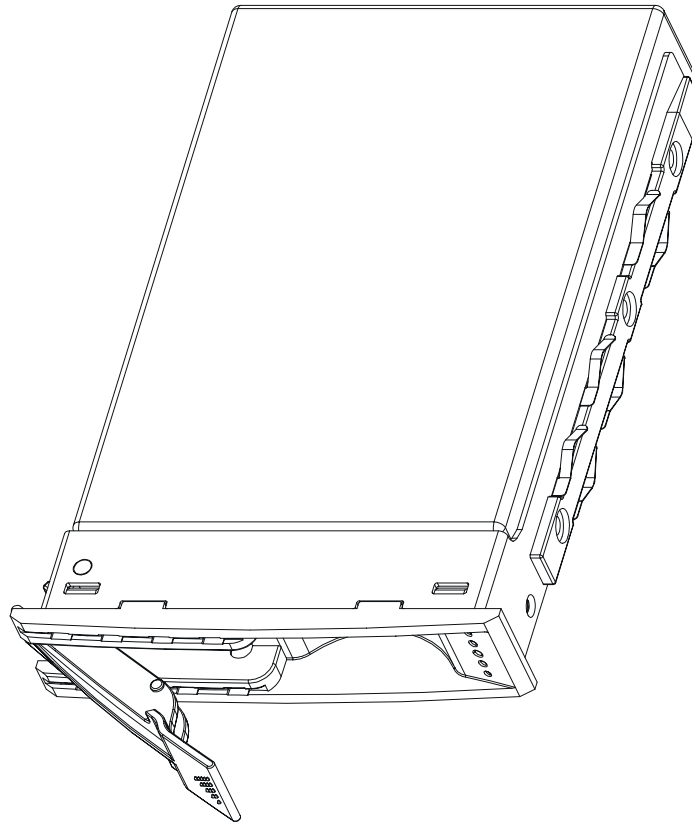


Figure 2-5: Opening the hard drive bay

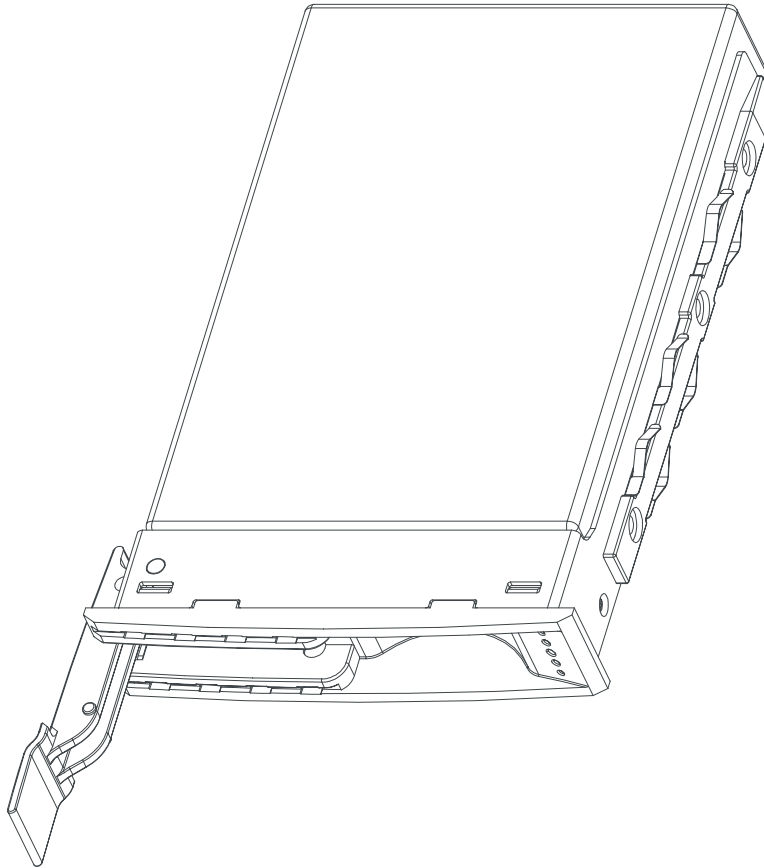


Figure 2-6: Hard drive bay fully open

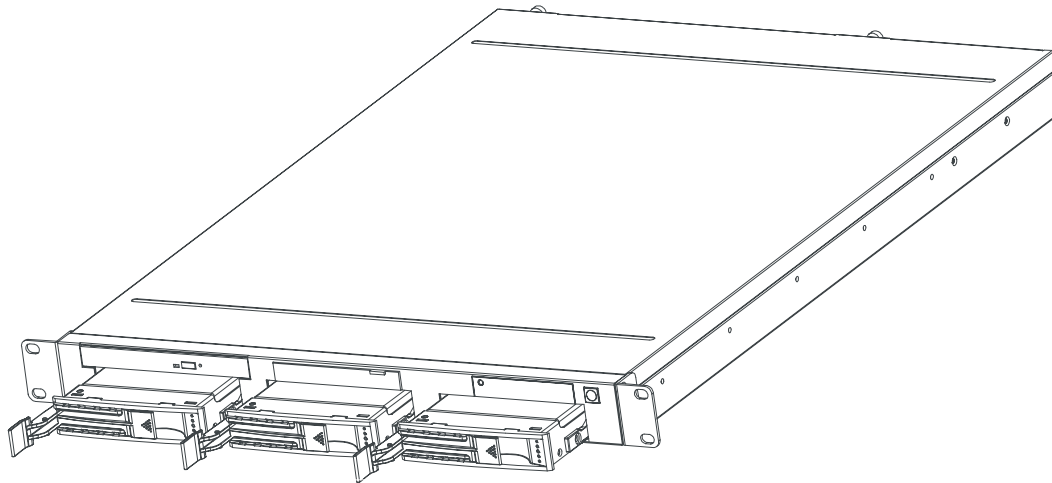


Figure 2-7: Putting the hard drives into the hard drive bays

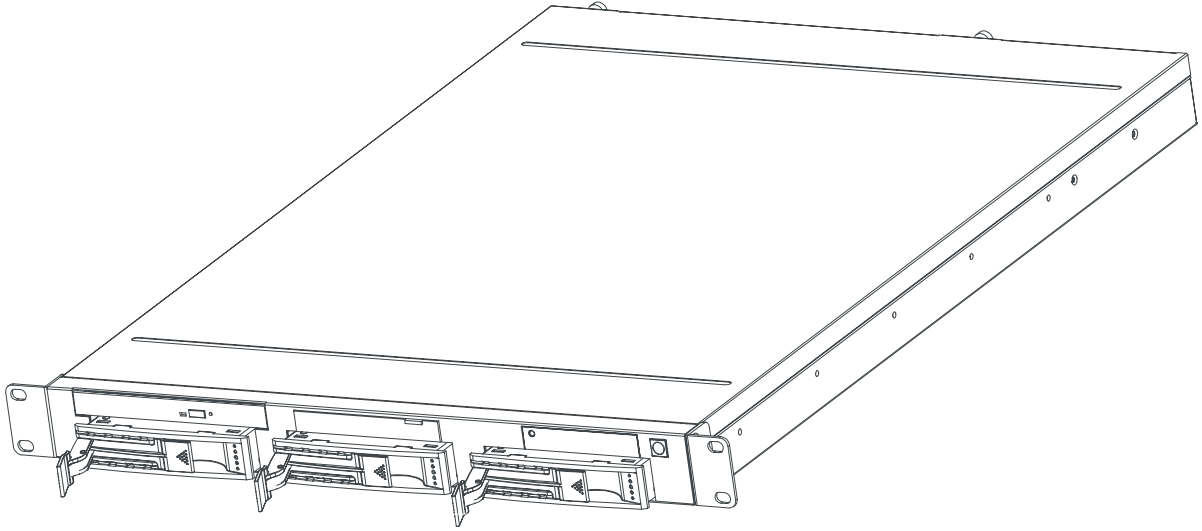
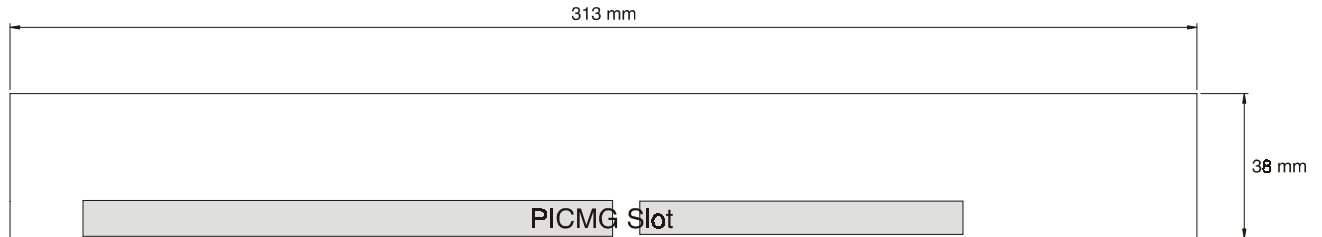


Figure 2-7: Closing the latches

Appendix A Passive Backplane

PCA-6102P1V: 2 ISA / 3 PCI / 1 CPU slots

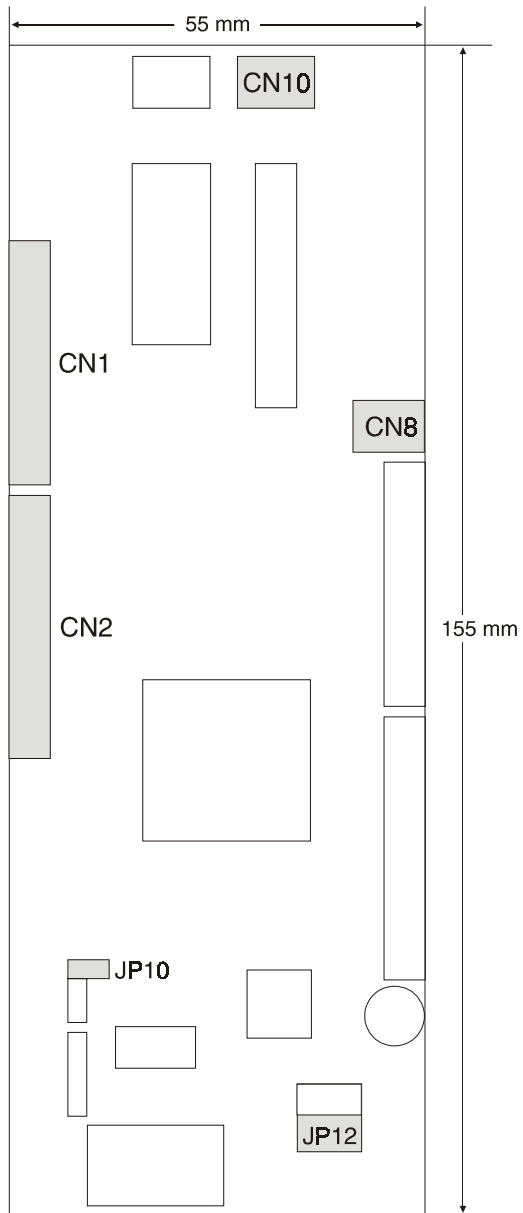
Dimensions: 313 x 38 mm



Unit: mm (inches)

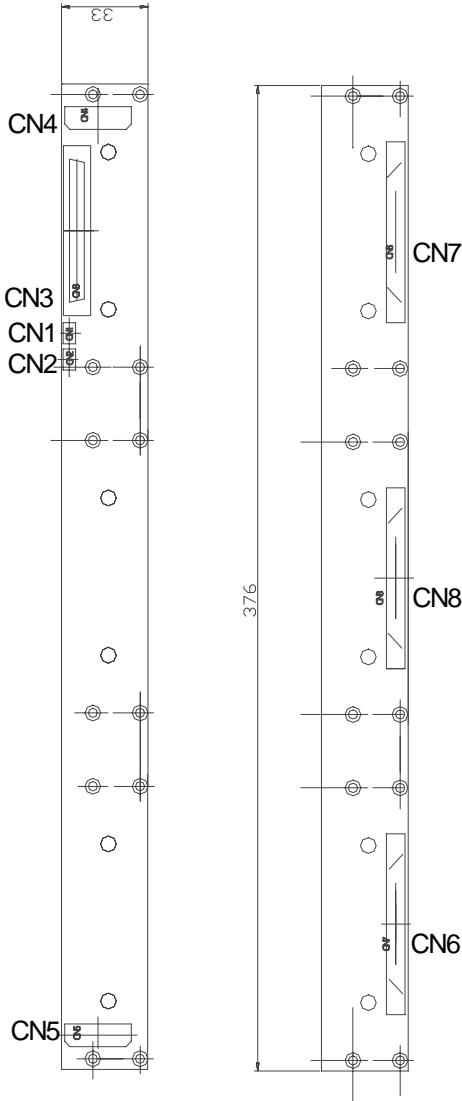
Connector	Description
CN1	Fan 1 connector
CN2	Fan 2 connector
CN3	Fan 3 connector
CN4	Fan 4 connector
CN5	Alarm board connector
J5	3.3 V output
J4	SBC feature connector
JP1	Enable / Disable ATX power function
ATX	ATX power connector
PCIsbt	PCI expansion slot
PICMG sbt	PICMG full sized CPU card

Appendix B Alarm Board



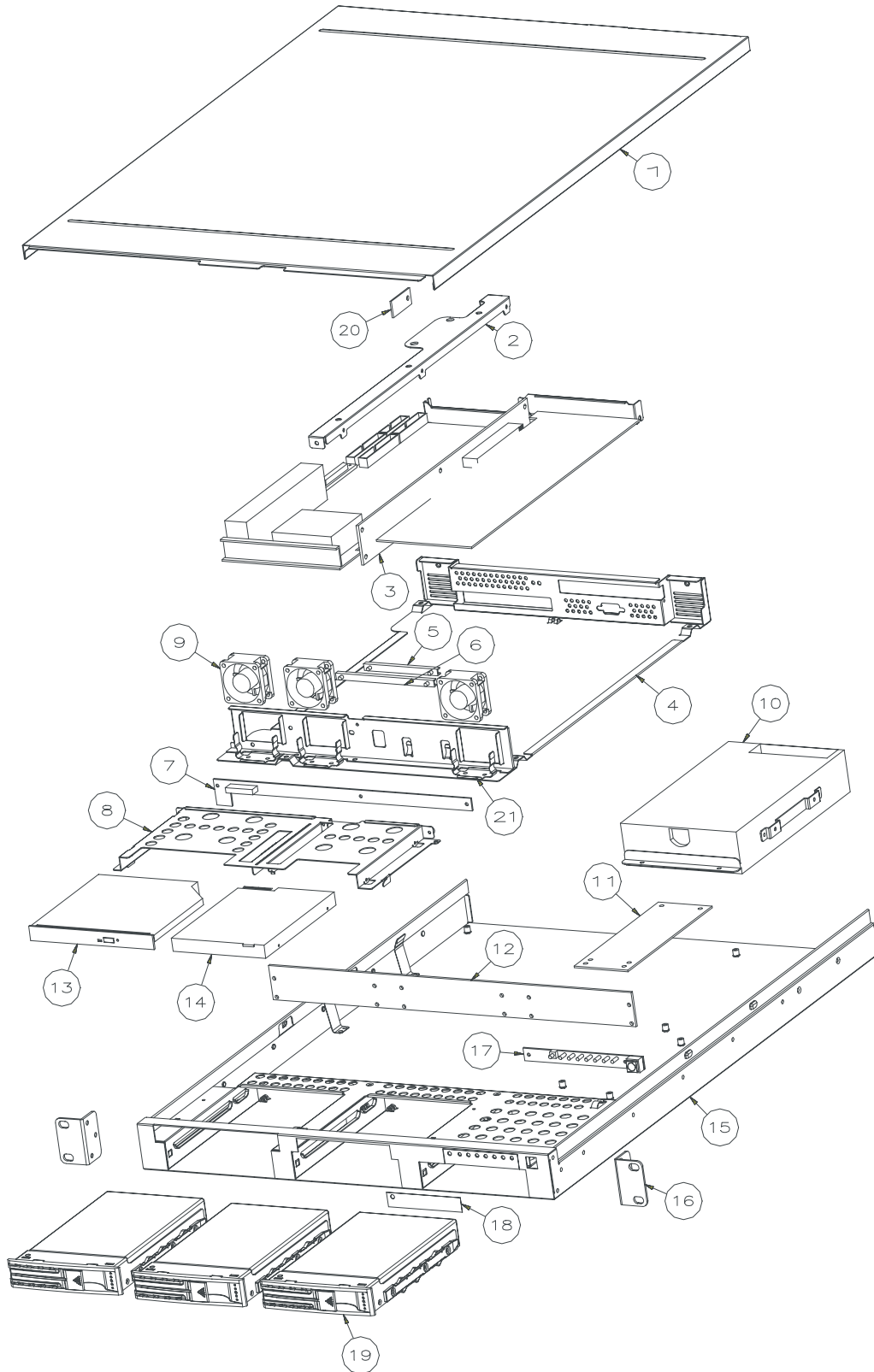
Connector	Description
CN1	Alarm LED connector to LED board
CN2	Fan sensor connector to backplane PCA-6102P1V
CN8	Power connector to power supply
CN10	Temperature connector to temp. sensor
JP10	+5 V Vcc connector to LED board
JP12	Alarm reset connector to LED board

Appendix C SCA-2 Backplane



IPC-601 SCA-2 Backplane	
Connector	Description
CN1	N/A
CN2	SCSI HDD active indicator
CN3	68-pin SCSI connector (to host)
CN4	power connector
CN5	power connector
CN6	SCA-2 SCSI HDD connector (ID3)
CN7	SCA-2 SCSI HDD connector (ID1)
CN8	SCA-2 SCSI HDD connector (ID2)

Appendix D Exploded Diagram



Item	Part No.	Description
1	1962601010	Top Cover
2	1962601040	Riser Card Holder
3	9686601000	Purch PCA-6102P1V B/P
4	1962601030	SBC & Add-on card holder
5	1992601010	PCB Guide Rail
6	1992601020	PCB Guide Rail
7	9686601010	Purch Slim CD-ROM/FDDAdapter
8	1962601020	Slim CD-ROM/FDD Holder
9	1759205500	Fan 40x40x20mm
10	1757930017	PS 300W
11,20	9692622001	Ass'y Alarm Board
12	9696100080	Ass'y SCSI Back Plane
13	9689000296	Purch 24X Slim CD-ROM
14	9683000037	Purch 3.5" Slim FDD
15	196260100	Chassis Underplate
16	1962601060	Rack Mount Ear
17	9696060100	LED board
18	1971601000	LED indicator plate
19		HDD drawer Ass'y
19.1	1962601070	Drawer for 3.5" HDD
19.2	1962601080	EMI Bracket for 3.5" HDD
19.3	1997601000	Front Bezel for 3.5" HDD drawer
19.4	1997601010	Slide rail for 3.5" HDD drawer
19.5	1997601020	Handle for 3.5" HDD drawer
19.6	1997601030	Plastic 3.5" HDD holderfor w/o HDD
21	1962601001	Fan Bracket

Appendix E Safety Instructions

E.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.

E.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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