

CPC-3414B

19" 4U CPCI 机箱

19" 4U CPCI Chassis

Version: C00



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Safety Instructions

1. Please read this manual carefully before using the product;
2. Before inserting, removing or re-configuring motherboards or expansion cards, first disconnect the computer and peripherals from their power sources to prevent electric shock to human bodies or damage to the product;
3. Before moving the product, please unplug the AC cable from the power socket;
4. When inserting or removing boards, please firstly unplug the AC power cable;
5. Before connecting or disconnecting any signal cable, make sure all power cables are unplugged in advance;
6. After turning off the computer, wait at least 30 seconds before turning it back on;
7. All the operations such as upgrade, remove or installation shall be implemented on the ESD worktable, because some exactitude components are sensitive to electrostatic discharge (ESD).
8. If there's no ESD worktable, please take the following measures to prevent damage from electrostatic discharge (ESD):
 - a) Wear a antistatic wrist strap and connect it with the metal part of the corresponding product;
 - b) Always touch the metal enclosure or frame before touching any components;
 - c) Keep part of your body in contact with the metal enclosure to discharge the static while handling components;
 - d) Avoid unnecessary movement;
 - e) Hold the components (especially the boards) by the edges;
 - f) Place the components on a grounded, static-free operating platform. Use a conductive foam pad if available (not the component wrapper).
 - g) Do not let the components slide on the operating platform.
9. Use cross-head screwdriver to operate. A magnetic screwdriver is recommended (Magnet helps to prevent screws from remaining in the enclosure). Do not leave any tools or accessories inside the enclosure;
10. Ensure abundant cooling and ventilation.
11. Non-professional personnel are not allowed to open the enclosure.

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Chapter 1 Product Introduction

Overview

CPC-3414B is a 4U 14-slot 3U CompactPCI board system, standard 19" rack-mount PC, which supports to install add-in cards from both front and rear of the chassis. The product provides one system slot and thirteen expansion slots.

The chassis features excellent EMC performance, immunity to interference, compact structure, reliable interconnection, excellent anti-vibration and anti-shock performance. It is highly reliable and quite convenient to replace fans and dust-proof net.

The product is appropriate for various harsh environments, especially such industries as in-vehicle, measurement and control, and military, etc.

Expansion Bus

Expandable to thirteen CPCI boards, 100mm in height and 160mm in length; PICMG2.0 standard compliant.

Power Feature

Power Consumption of the PC: 45.6W (Mated with CPC-3813CLD3N, standby);

Power Consumption of the PC: 69W (Mated with CPC-3813CLD3N, 100% operate MaxPower).

Main Performance

Mechanical Dimensions, Weight and Environment

- Dimensions: 440mm (L) x 177mm (H) x 298mm (D);
- Net Weight: 11.5Kg;

➤ Operating Environment:

Temperature: 0°C ~ 50°C;

Humidity: 5% ~ 95% (non-condensing);

➤ Storage Environment:

Temperature: -20°C ~ 60°C;

Humidity: 5% ~ 95% (non-condensing).

EMC

- Radiation disturbance is compliant with GB9254-2008, class A;
- Conducted susceptibility meets the threshold of GB/T 17618-1998;

Reliability

- MTBF≥50000h;
- MTTR≤0.5h.

Safety

Meets the basic requirements of GB4943;

Mechanical and Environment Adaptability

- Anti-vibration: 5 ~ 19Hz/1.0mm amplitude; 19 ~ 200Hz/1.0g acceleration;
- Anti-shock: 10g acceleration, 11ms duration;

Mounting Mode

19" Rack Mount Desktop Embedded Panel

Wall Mount VESA Standard Arm Portable

Others _____

Requirements of Transportation and Storage

● Transportation

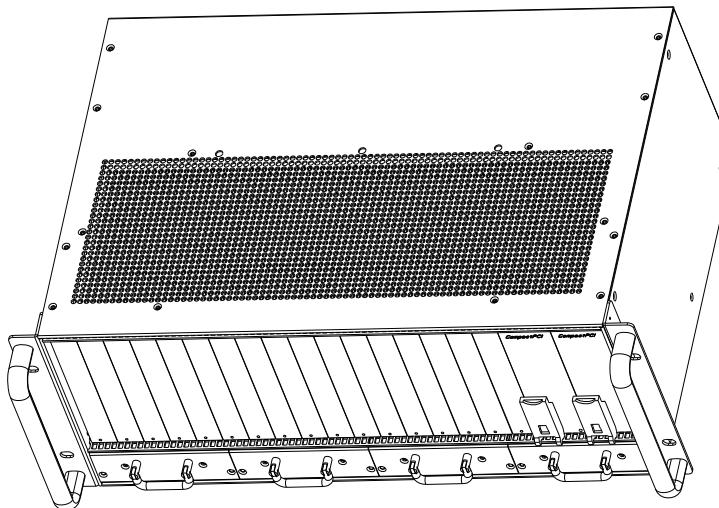
Well-packaged products are suited for transportation by truck, ship, and plane. During transportation, products should not be put in open cabin or carriage. During transshipping, products should not be stored in open air without protection from the atmospheric conditions. Products should not be transported together with inflammable, explosive and corrosive substances and are not allowed to be exposed to rain, snow and liquid substances and mechanical force.

● Storage

Products should be stored in package box when it is not used. And warehouse temperature should be 0°C ~ 40°C, and relative humidity should be 20% ~ 85%. In the warehouse, there should be no harmful gas, inflammable, explosive products, and corrosive chemical products, and strong mechanical vibration, shock and strong magnetic field interference. The package box should be at least 10cm above ground, and 50cm away from wall, thermal source, window and air inlet.

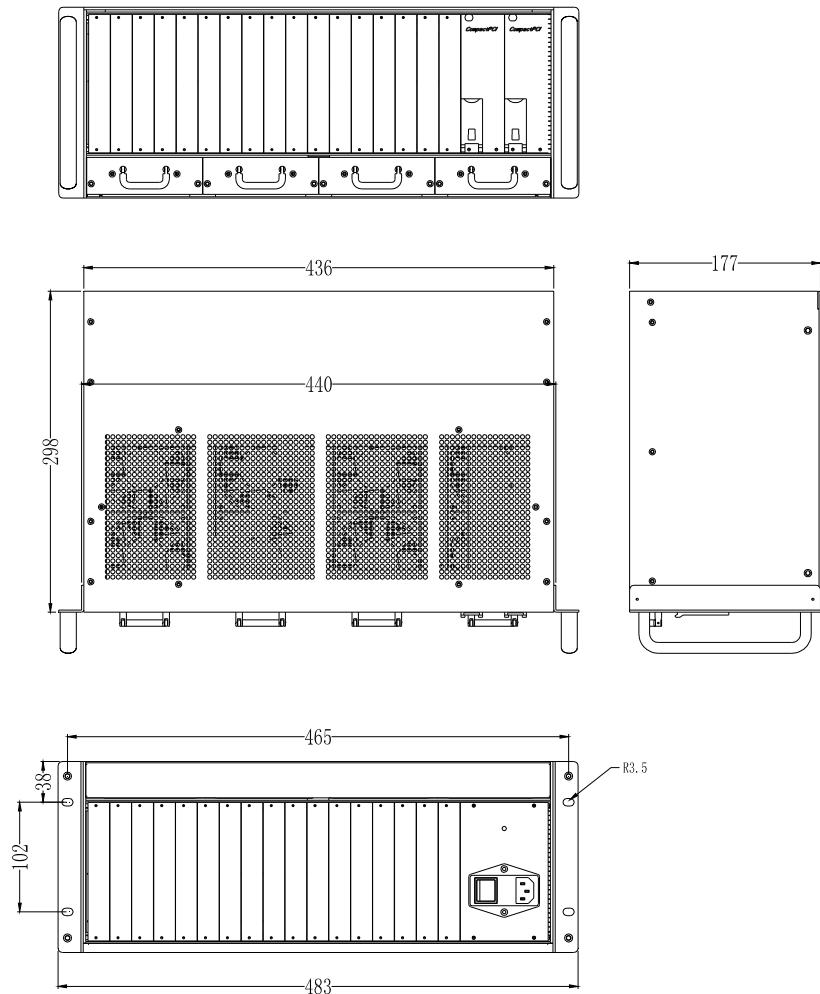
Chapter 2 Installation

Product Outline



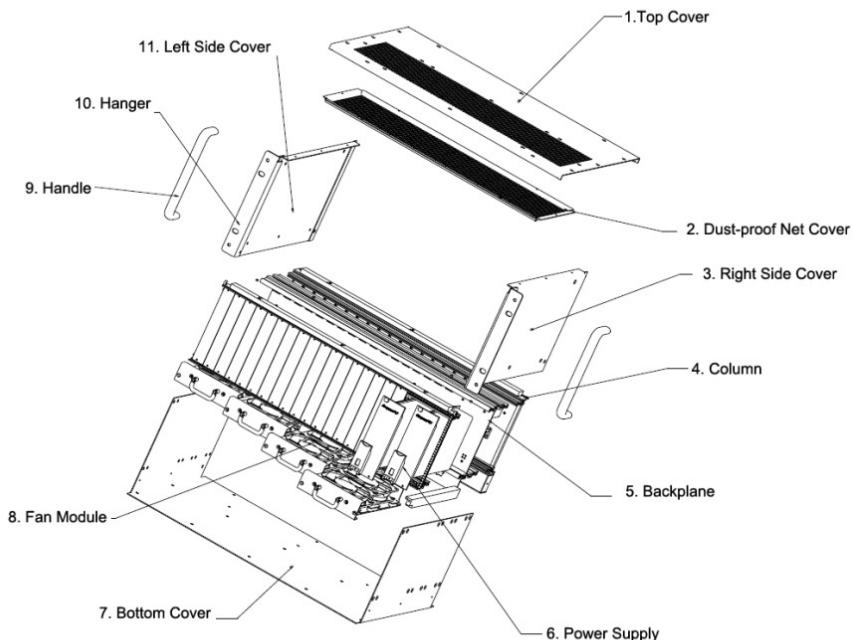
Unit: mm

Product Appearance and Installation Dimensions



Unit: mm

Overall Assembly Drawing



1	Top Cover	2	Dust-proof Net Cover
3	Right Side Cover	4	Column
5	Backplane	6	Power Supply
7	Bottom Cover	8	Fan Module
9	Handle	10	Hanger
11	Left Side Cover	12	

- 1) Power off the system and remove the power cord;
- 2) Lay the chassis on a stable platform;
- 3) Remove all of the front and rear add-in cards and the power module; lay the components at a safe place;
- 4) Remove the screws fixing the butt welding modules on both sides, those fixing the top cover of the chassis and those fixing the air deflector and then locate the screws at a safe place; take off the butt welding modules on both sides, the top cover of the chassis and the air deflector and then locate them at a safe place;
- 5) Remove the screws of the fixing columns (the columns fixing the backplane) on both sides of bottom cover of the chassis and then locate the screws at a safe place;
- 6) Remove all the cables on the backplane and locate them at a safe place. When removing the cables, please hold the connector. Do not pull the cables with force, which may cause bad contact and even disconnection;
- 7) Please take out the column and the backplane carefully and gently lay them on a stable platform; please avoid accidental bump when taking out the components;
- 8) Remove the screws fixing the backplane on the column and locate the screws at a safe place;
- 9) Take off the backplane and wrap it with exclusive packing material;
- 10) Take out the new backplane and check the IO settings to see whether the settings are in accord with the requirements;
- 11) Fix the backplane on the column in the designated direction;
- 12) Gently put the backplane and the column into the chassis; please avoid accidental bump;
- 13) Fix the backplane and the column on the bottom cover of the chassis by screws;
- 14) Assemble the left and right side covers, the air deflector and the top cover back

with the chassis and then fix them with screws;

- 15) Please connect the cables at the corresponding position according to system requirements;
- 16) Recheck the installation and connection and then power on to test the system;
- 17) Confirm whether the power operates normally via LED indicators and system monitoring module;
- 18) Insert all of the front and rear add-in cards into the corresponding position and then the cards can operate normally.

Installing the Power Supply

The exclusive power module for CPC-3414B has been installed in the chassis before delivery; please replace the module according to the following steps:

- 1) Loosen the screws fixing the panel of the power module until it breaks away from the chassis;
- 2) Press the latch device on the handle of the power module, pull the handle and then draw the power module outward with force;
- 3) Restore the handle after taking out the power module and then wrap the module with exclusive packing material;
- 4) Make sure the input mode of the new power module is consistent with the system requirements;
- 5) Gently insert the power module into the chassis along the guide rail until it contacts with the power backplane and press the latch device on the handle of the power module, then pull the handle outward. Push the power module with force and restore the handle inwardly at the same time;
- 6) After tightly installing the power module, fix the panel on the chassis by screws;
- 7) Observe the LED indicators on the panel of the power module; the module can be used when the indicators display normally.

Installing the Front/Rear Add-in Cards

All the front/rear add-in cards for CPC-3414B shall be configured by users, which shall meet the backplane signal definitions and the PICMG mechanical and structural standards. It is recommended to use the panel with excellent EMC design and the handle with locking device. (Please install as follows)

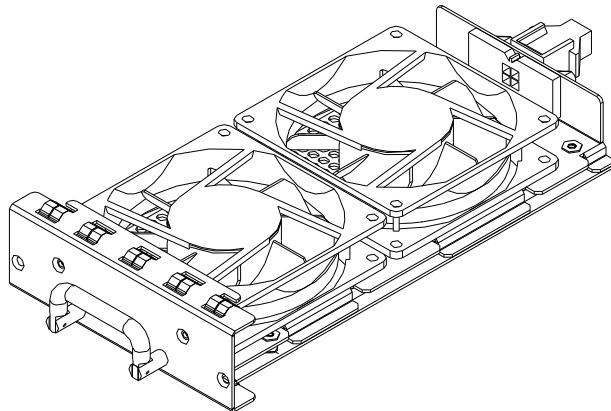
1. When installing the front/rear add-in cards, please do as follows:

- 1) Firmly hold the panels of the front/rear add-in cards with the component side facing up;
- 2) Gently push the cards into the corresponding slot along the guide rail;
- 3) When it approaches the backplane connector, press the latch device on the handle of the panel with both hands and pull outward; then force inwardly until it buckles the chassis and push the card inward at the same time;
- 4) Confirm the card is properly seated and fasten the handle on chassis.

2. When removing the front/rear add-in card, please do as follows:

- 1) Loosen the fixing screws on panel until it breaks away from the chassis;
- 2) Before removing the front add-in card, please pull the handle of the fan module until it is even (so as to avoid the fan handle from intervening the hand when pulling the card).
- 3) Press the latching device on the handle of the panel and open outward; hold the chassis and pull the handle outward until it breaks away from the backplane connector;
- 4) Take out the add-in card along the guide rail and lay the card at a safe place.

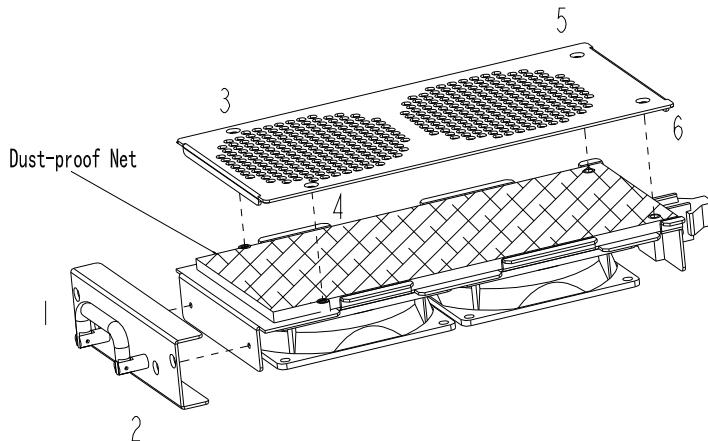
Installing the Fan



Please install the fan according to the following steps:

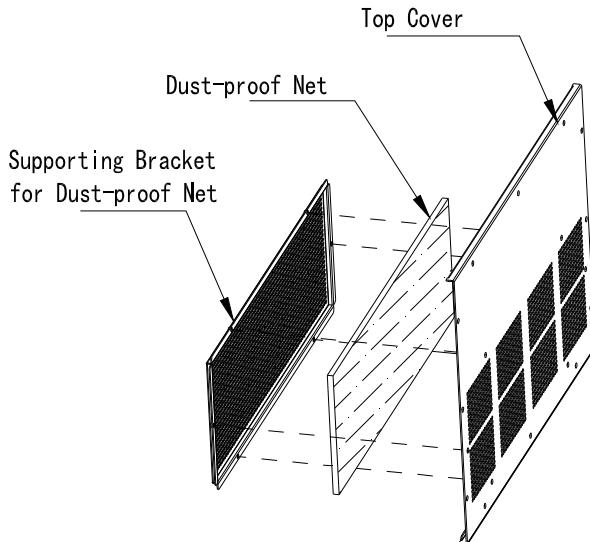
- 1) Turn off the fan power;
- 2) Loosen the fixing screws on the panel of the fan module until it breaks away from the chassis;
- 3) Pull the fan module out of the chassis by the handles on the panel of the fan module and then wrap the module by exclusive packing material;
- 4) Gently insert a new fan module into the chassis and then fasten the screws on the panel.
- 5) Power on the fan and then it may operate normally.

Installing the Dust-proof Net



Please replace the filter net of the fan module according to the following steps:

- 1) Turn off the fan power;
- 2) Loosen the fixing screws on the panel of the filter net until it breaks away from the chassis;
- 3) After taking the panel of the filter net out of the chassis, the filter net will appear;
- 4) Take out the old filter net and gently put a new filter net into the filter net bracket;
- 5) Fasten the screws back on the panel of the filter net.
- 6) Power on the fan and then it may operate normally.



Please replace the filter net of the chassis cover according to the following steps:

- 1) Power off the PC;
- 2) Loosen the fixing screws on the panel of the top cover of the chassis until it breaks away from the chassis;
- 3) Take out the dust-proof net module on the top cover; loosen the fixing screws on the dust-proof net bracket and on the top cover until it breaks away from the top cover;
- 4) Then the filter net will appear;
- 5) Take out the old filter net and gently put a new filter net into the filter net bracket;
- 6) Fasten the filter net bracket with the top cover by screws;
- 7) Power on the PC and then it may operate normally.

Chapter 3 Installing the Drivers

Regarding the installation of the driver program and the detailed information of the motherboard, please refer to the enclosed CD of the PC.