

NPC-8118

1U 19" 标准的上架型网络应用平台

**1U 19" standard rack-mount network
application platform**

Version : C02



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安全使用小常识

1. 产品使用前，务必仔细阅读产品说明书；
2. 为避免人体被电击或产品被损坏，在每次对板卡进行拔插、重新装配或配置前，须先关闭交流电源或将交流电源线从电源插座中拔掉；
3. 在需对产品进行搬动时，务必先将交流电源线从电源插座中拔掉；
4. 当产品需增加 / 减少板卡时，务必先拔掉交流电源；
5. 当需连接或拔除任何信号线前，须确定所有的电源线事先已被拔掉；
6. 为避免频繁开关机对产品造成不必要的损伤，关机后，应至少等待 30 秒后再开机；
7. 如果要进行升级或拆装等动作，须在静电放电工作台上完成所有操作，因为有些精密器件对静电放电（ESD）很敏感；
8. 如果没有静电放电工作台，可通过以下方法降低 ESD 可能造成的危害：
 - a) 戴上一条防静电腕带并与相应产品的金属部分相连；
 - b) 在触摸产品部件前，先触摸相应产品机箱上的金属壳；
 - c) 当插拔部件时，身体最好与产品的金属机箱保持接触，以释放静电；
 - d) 避免不必要的走动；
 - e) 拿产品部件（尤其是板卡）时仅拿住边缘；
 - f) 将产品部件置于一个接地的无静电的操作平台上。如果可能的话，使用一块导电泡沫垫（非部件的包装材料）；
 - g) 不要让部件在操作平台上滑动。
9. 用十字螺丝刀进行操作，最好是强力螺丝刀（带磁性，避免螺丝遗留在机箱内）。要注意的是，一定不要将工具或零件遗留在机箱内；
10. 保证系统良好的散热与通风；
11. 非专业维修人员不得打开机箱。

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第一章 产品介绍

简介

NPC-8118 是一款 1U 19" 标准的上架型网络应用平台产品。该产品采用 Intel® B65/C206/H61 芯片组，支持 Intel® Sandy Bridge 以及 Ivy bridge Processor in LGA1155 Package，板载 4×240Pin DIMM (H61 为 2 条)，内存容量可达 16GB，板载 6 个千兆电口、4 个千兆光口 (H61 无光口)、1 个标准 PCIe x8 插槽、1 个标准 PCI，支持 2 组 bypass，支持 1 个 3.5 寸硬盘和 2 个 2.5 寸硬盘，标配 ATX 单电源，支持 PCIe 网络扩展，支持 4 个 USB2.0 接口和 2 个 RS-232 串口。

主要功能介绍

微处理器

支持 Intel® Socket FCLGA1155 封装 Xeon E3-1275，Xeon E3-1225，I3-2120，I5-2500 等 Sandy bridge CPU，以及 I5-3550S，I7-3770，E3-1225V2 等 Ivy bridge CPU (B65/H61 平台不支持 Xeon 系列)。

系统芯片组

Intel® B65/C206/H61

系统存储器

支持 1333/1066MHz DDR3 内存，板载 4 条内存插槽 (H61 为 2 条)，支持双通道，最大支持 16GB 内存 32GB 内存 (H61 为 16GB)。

网络功能

板载 6 个千兆电口和 4 个千兆光口 (H61 无光口)、1 个网络模块扩展接口，LAN1 可支持网络唤醒功能，LAN3 和 LAN4 支持一组 bypass 功能，LAN5 和 LAN6 支持第二组 bypass 功能，4 个 SFP 千兆光纤网络接口 (仅 C206 平台支持)。

显示功能

CPU 集成图形控制器，支持 VGA 显示，支持最高分辨率及刷新率 2048×1536@75Hz。

Watchdog 功能

支持 255 级，可编程按分或秒；

支持看门狗超时中断或复位系统。

扩展总线

可扩展 1 个 PCIe X8 卡；支持高 98.4mm；长 166.25 mm；兼容 PCIe 2.0 标准。

I/O 接口

- 提供 2 个 RS-232 串口，其中 COM1 使用 RJ45 连接器，支持重定向功能；COM2 以插针形式提供扩展使用；
- 提供 4 个 USB2.0 接口；
- 提供 6 个千兆电口和 4 个千兆光口（H61 无光口）；
- 预留 1 个 VGA 接口。

电源特性

- 输入电压/频率：220VAC/50Hz；
 - 整机功耗：42.6 W（待机状态）；整机功耗：114 W（运行 MaxPower 100%）；
- 备注：搭配不同的主板功耗值会不同。

主要性能指标

机械尺寸、重量与环境

- 外形尺寸：436.5 mm（长）×482.6 mm（宽）×43.6（高）；
- 净重：6.6Kg
- 工作环境：
 - 温度：0℃～45℃
 - 湿度：10%～95%（非凝结状态）
- 贮存环境：
 - 温度：-10℃～60℃
- 恒定湿热：
 - 温度 40℃，湿度：30～90%RH

电磁兼容性

- GB 9254-2008 辐射骚扰（A）级；
- GB 9254-2008 传导骚扰（A）级；
- GB/T 17626.2-2006 静电放电（2）级；
- GB/T 17626.4-2006 脉冲群抗扰度（2）级；
- GB/T 17626.5-2008 浪涌（冲击）抗扰度（2）级；
- GB/T 17626.6-2008 传导抗扰度（2）级。

可靠性

- 平均无故障工作时间：MTBF≥50000h
- 平均维修时间：MTTR≤0.5h

安全性

- 满足 GB4943 的基本要求。

机械环境适应性

- 振动：频率（5-200Hz）加速度（1g）幅度（0.5mm）
- 冲击：加速度（10g）持续时间（11ms）

安装方式

- 19" 上架式 桌面式（台面式） 嵌入面板式
- 壁挂式 VESA 标准支撑臂 手提便携式
- 其他方式_____

运输与贮存要求

● 运输：

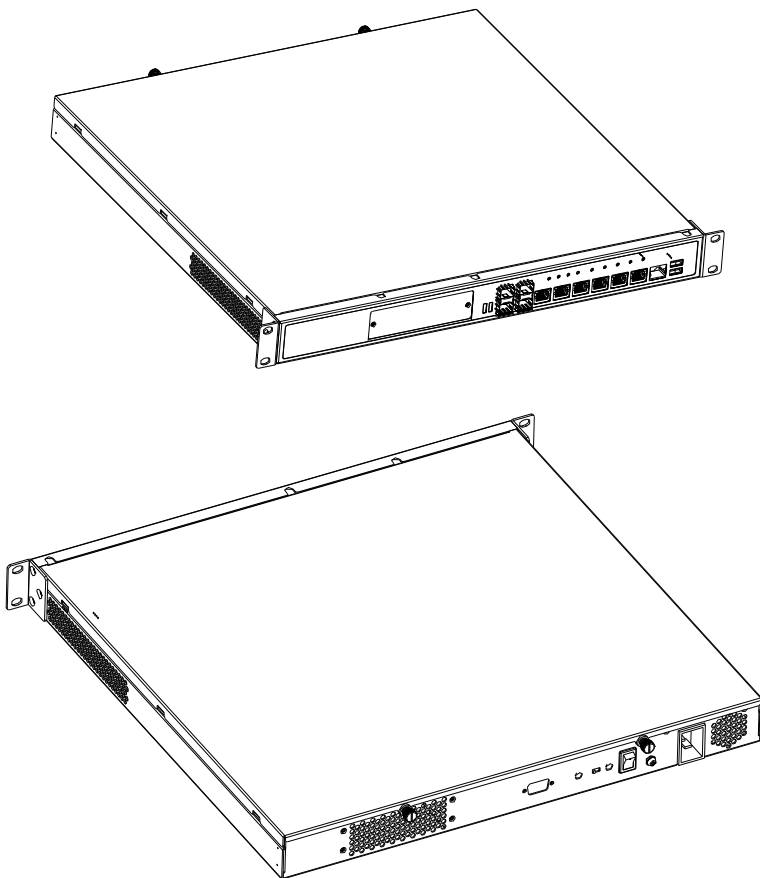
包装好的产品能以任何交通工具，运往任何地点，在长途运输时不得装在敞开的船舱和车厢中，中途转运时不得存放在露天仓库中，在运输过程中不允许和易燃、易爆、易腐蚀的物品同车（或其他运输工具）装运，并且产品不允许经受雨、雪或液体物质的淋袭与机械损坏。

● 贮存：

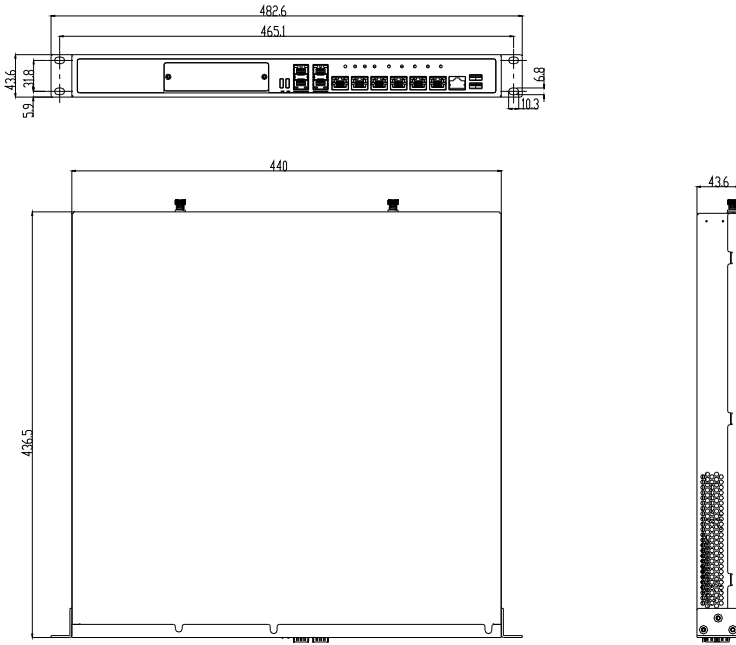
产品贮存时应存放在原包装箱内，存放产品的仓库环境温度为 0℃~40℃，相对湿度为 20%~85%。仓库内不允许有各种有害气体、易燃、易爆炸的产品及有腐蚀性的化学物品，并且无强烈的机械振动、冲击和强磁场作用。包装箱应垫离地面至少 10cm，距离墙壁、热源、冷源、窗口或空气入口至少 50cm。

第二章 安装说明

产品外观图

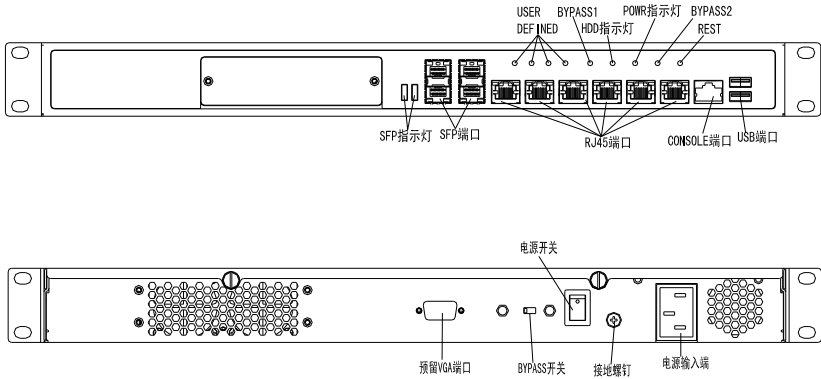


产品外形及安装尺寸图

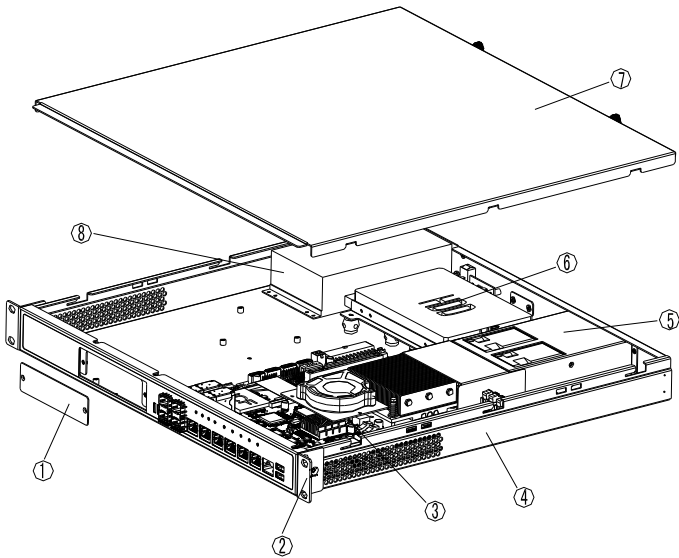


单位：mm

外部控制接口图



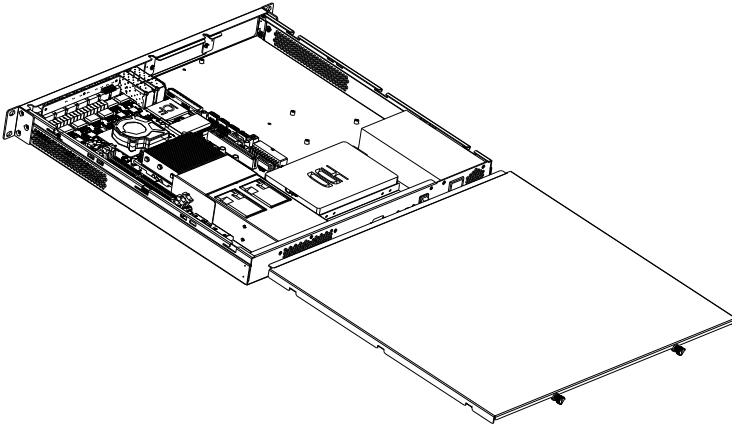
箱体装配图



1、空白挡板	2、挂耳
3、主板	4、箱体
5、风扇	6、硬盘
7、箱盖	8、电源

开盖安装

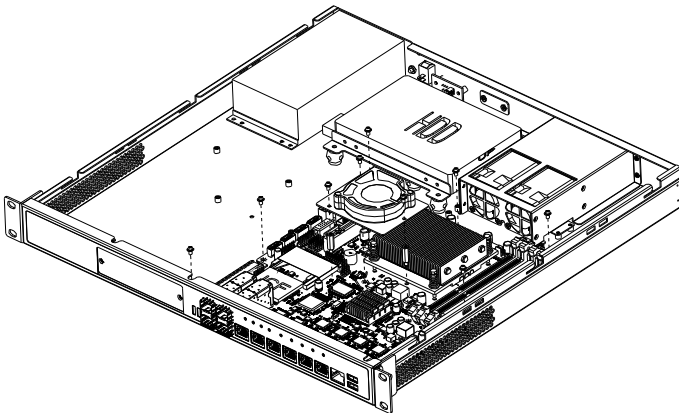
拧开机箱背板 2 个松不脱螺钉，然后把箱盖用力向后拖，即可把箱盖打开。



主板安装和拆卸

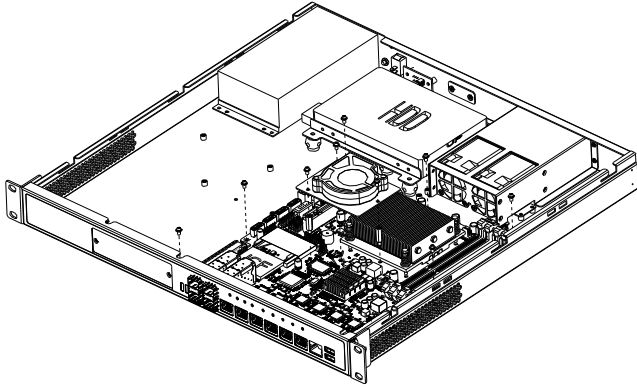
主板安装:

把主板放在机箱的对应位置上，用 6 颗 M3 盘头组合螺钉和 3 颗 CH-M3-16-5 六角铜螺柱固定，六角铜螺柱上面安装涡轮风扇，并用 3 颗 M3 盘头组合螺钉固定。



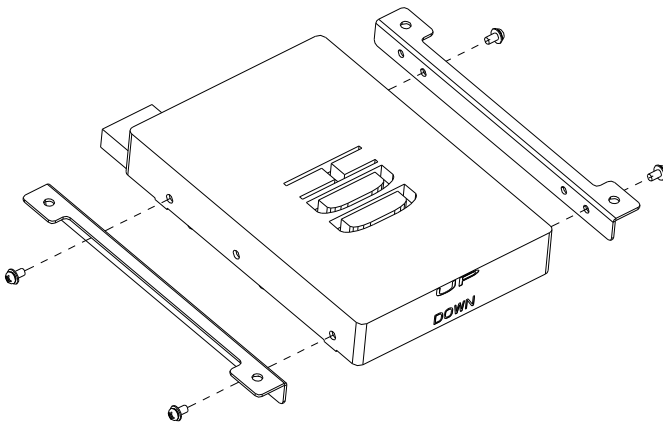
主板拆卸：

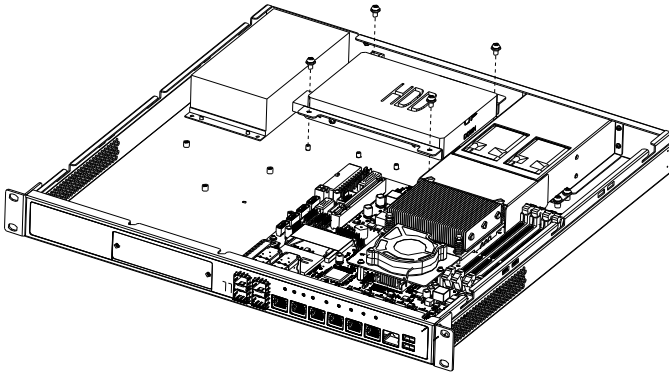
打开箱盖，先拧开固定在主板上方的涡轮风扇固定架的 3 颗 M3 螺钉。然后再拧开固定主板的 6 颗 M3 螺钉和 3 颗 CH-M3-16-5 六角铜螺柱，即可把主板拆卸。



驱动器安装

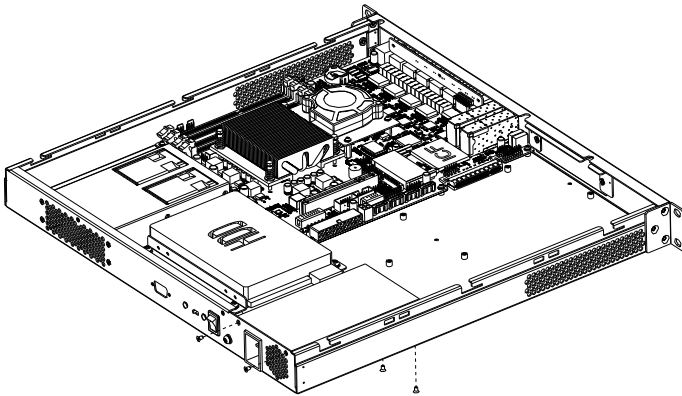
先将硬盘和硬盘支架用 4 颗盘头#6-32*1/4 螺钉固定，然后放入箱体对应位置，用 4 颗 M4 盘头螺钉固定即可。





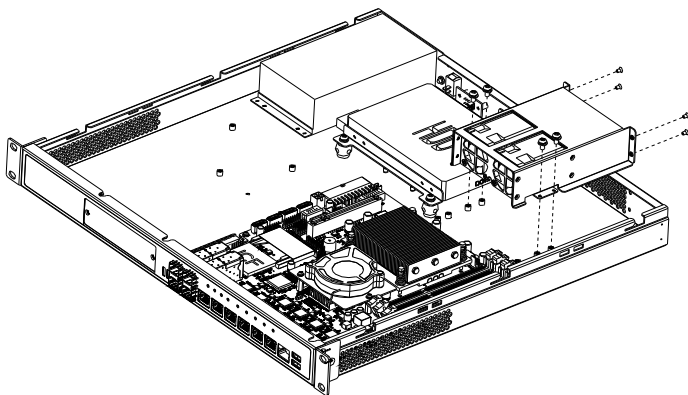
电源安装

把电源放入箱体对应位置，然后用 4 颗沉头#6-32*1/4 螺钉分别从箱体底部和后部固定即可。



风扇安装

先把 2 个风扇和风扇支架用 16 颗 ST4. 0*10 螺钉固定，然后整体放入机箱对应位置，从此箱体外面用 4 颗 M3 沉头螺钉固定风扇支架，内部用 4 颗盘头螺钉固定风扇支架即可。



第三章 驱动程序安装说明

本产品的驱动程序安装及主板详细信息请参考整机配套光盘，在此不做介绍。



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Hotline: 4008809666



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

NPC-8118 is a 1U 19" standard rack-mount network application platform. It contains Intel® B65/C206/H61 chipset, Supports Intel® Sandy Bridge and Ivy Bridge Processor in LGA1155 Package. It provides 4x240Pin DIMM(two for H61)on-board up to 16GB; six Gigabit electric ports and four Gigabit optical ports (H61 has no optical fiber connector) ; one standard PCIe x8 slot, one standard PCI. The product supports two-group bypass; one 3.5" hard disk and two 2.5" hard disks; ATX single power as standard configuration; PCIe network expansion; four USB2.0 ports and two RS-232 serial ports.

Main Function

Microprocessor

Supports Intel® Socket FCLGA1155 package Sandy Bridge CPUs, such as Xeon E3-1275, Xeon E3-1225, I3-2120 and I5-2500, as well as Ivy Bridge CPUs, such as I5-3550S, I7-3770 and E3-1225V2 (B65/H61 platform does not support Xeon series).

System Chipset

Intel® B65/C206/H61.

System Memory

Supports 1333/1066MHz DDR3 memory and four memory slots on-board (two for H61) with dual-channel, Supports 32GB memory in maximum (16GB for H61). supporting dual channel.

Network Function

Provides Six Gigabit electric ports, four Gigabit optical ports (H61 has no optical fiber connector) and one network module expansion connector on-board. LAN1 supports Wake-on-LAN function; LAN3 and LAN4 support one group of Bypass function while LAN5 and LAN6 support the other group of Bypass, four SFP Gigabit optical LAN ports (only supported by C206 platform).

Display Function

CPU integrates graphics controller, supporting VGA display with the maximum resolution and refresh rate of 2048x1536@75Hz.

Watchdog Function

- 255 levels, programmable by minute or second;
- Supports watchdog timeout interrupt or reset system.

Expansion Bus

Expandable to one PCIe x8 card, 98.4mm in height and 166.25 mm in length; complying with PCIe 2.0 standard.

External IO

- Two RS-232 serial ports: COM1 adopts RJ45 connector, supporting serial port redirection function; COM2 provides expansion function in pin headers.
- Four USB2.0 ports;
- Six Gigabit electric ports and four Gigabit optical ports (H61 has no optical fiber connector) ;

- One reserved VGA connector.

Power Feature

- Input Voltage/Frequency: 220VAC/50Hz;
- Power Consumption of the PC: 42.6 W (Standby); Power Consumption of the PC: 114 W (100% operate MaxPower);

Note: the power consumption value varies with the board in use.

Main Performance

Mechanical Dimensions, Weight and Environment

- Dimensions: 436.5mm (L) x 482.6mm (W) x 43.6mm (H);
- Net Weight: 6.6Kg;
- Operating Environment:
Temperature: 0°C ~ 45°C;
Humidity: 10% ~ 95% (non-condensing);
- Storage Environment:
Temperature: -10°C ~ 60°C;
- Constant Wet & Humidity:
Temperature: 40°C, Humidity: 30 ~ 90%RH.

EMC

- GB 9254-2008 Radio Disturbance, class A;
- GB 9254-2008 Conducted Disturbance, class A
- GB/T 17626.2.2006 Electrostatic discharge, level 2;
- GB/T 17626.4-2006 Burst Immunity, level 2;

- GB/T 17626.5-2008 Surge (Impact) immunity, level 2;
- GB/T 17626.6-2008 Conducted susceptibility, level 2;

Reliability

- MTBF ≥ 50000 h
- MTTR ≤ 0.5 h

Safety

- Meets the basic requirements of GB4943;

Mechanical and Environment Adaptability

- Vibration: frequency (5 ~ 200Hz), acceleration (1g), amplitude (0.5mm);
- Shock: acceleration (10g), duration (11ms);

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

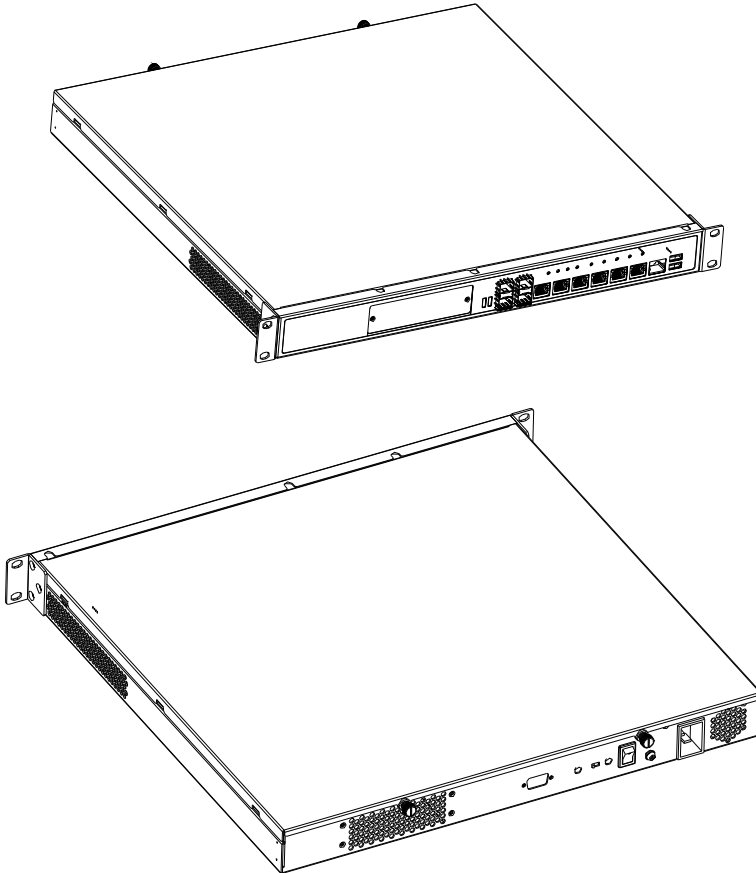
and liquid substances and mechanical force.

- **Storage**

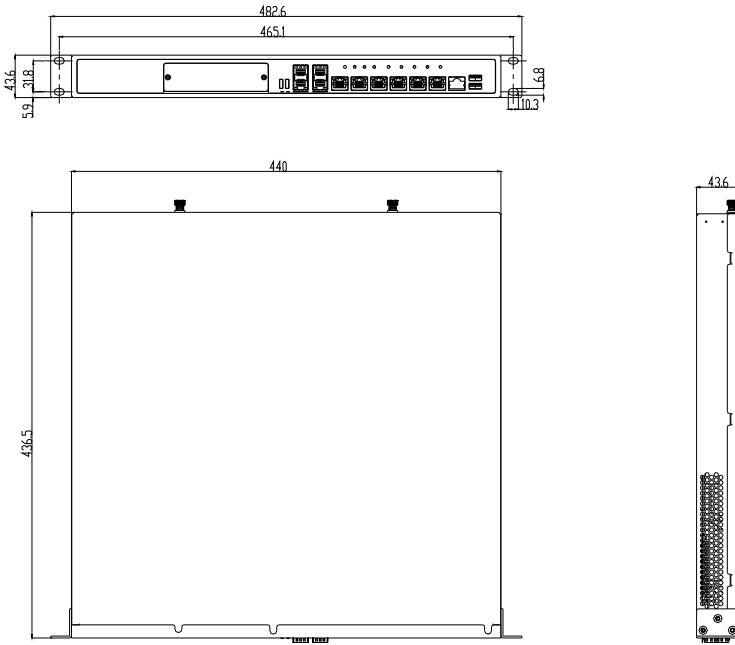
Products should be stored in package box when it is not used. And warehouse temperature should be 0°C ~ 40°C, and relative humidity should be 20% ~ 85%. In the warehouse, there should be no harmful gas, inflammable, explosive products, and corrosive chemical products, and strong mechanical vibration, 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

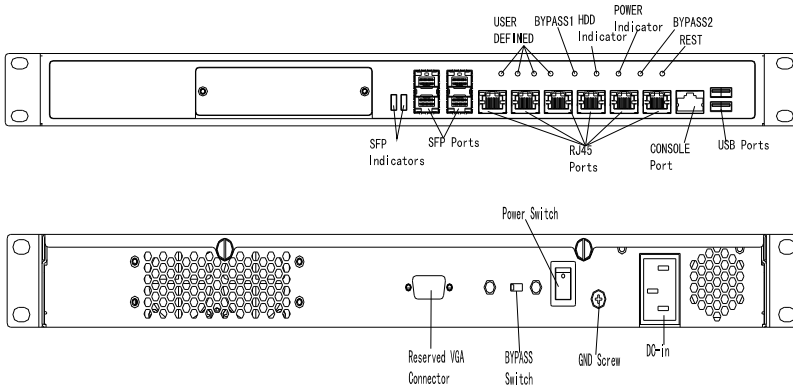


Product Appearance and Installation Dimensions

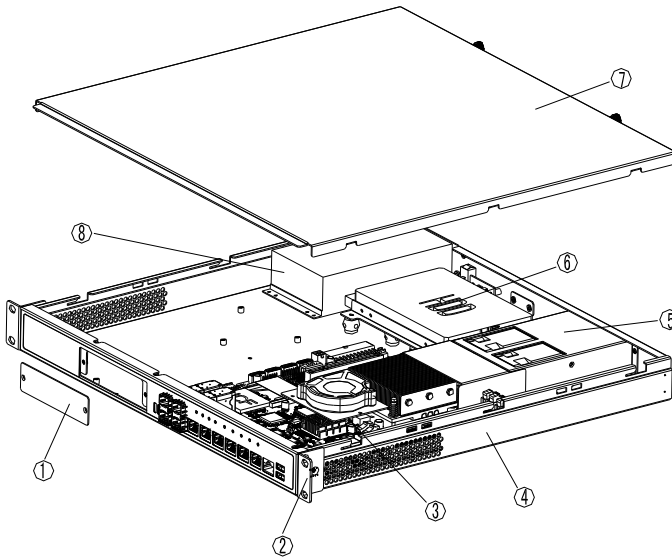


Unit: mm

External Connectors



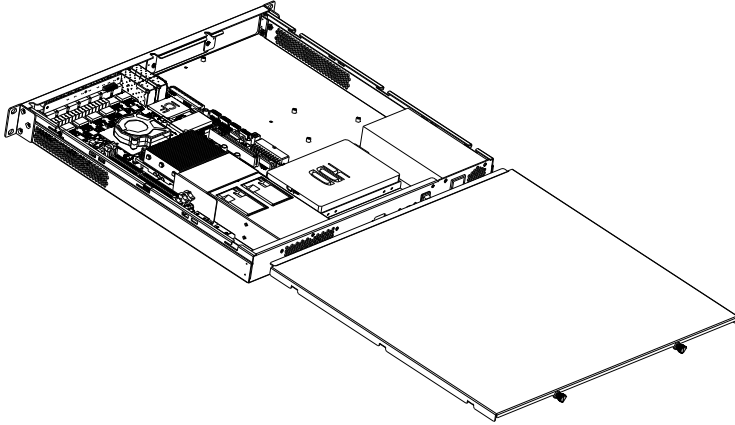
Overall Assembly Drawing



1. Blank Baffle	2. Hanger
3. Motherboard	4. Chassis
5. Fan	6. Hard Disk
7. Cover	8. Power

Installing the Cover

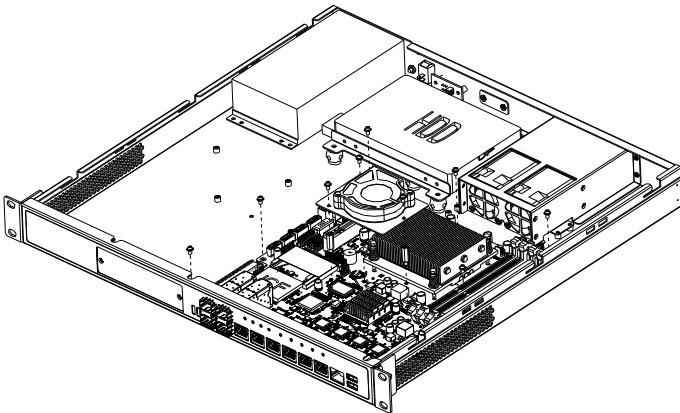
Loosen the two captive screws on the backplane of the chassis, and then pull the cover backward with force to remove it.



Installing and Removing the Motherboard

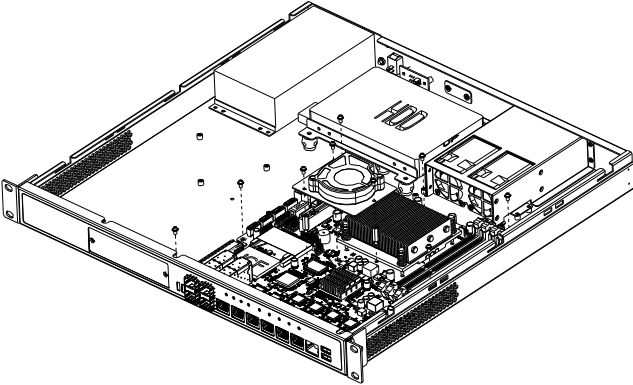
Installing the motherboard:

Lay the motherboard at the corresponding position in chassis and fix the board by six M3 pan head combo screws and three CH-M3-16-5 hexagon copper studs. Install the turbo fan on the hexagon copper studs and fix it by three M3 pan head combo screws.



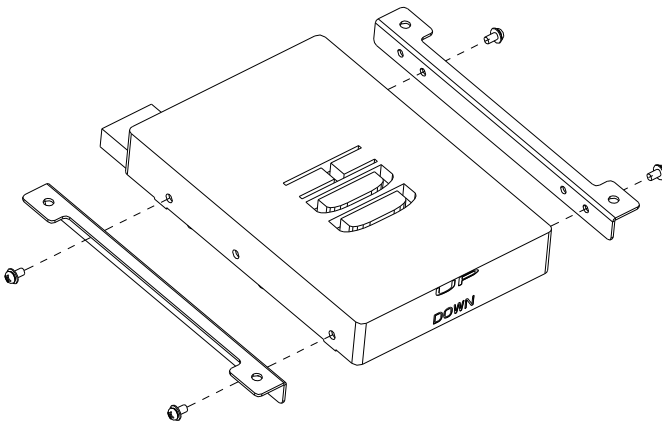
Removing the motherboard:

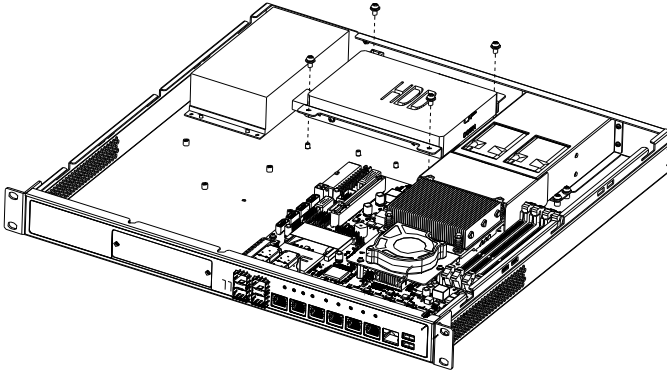
Open the cover, loosen the three M3 screws on the turbo fan fixing bracket first, and then loosen the six M3 screws and three CH-M3-16-5 hexagon copper studs fixing the motherboard to remove it.



Installing the Driver

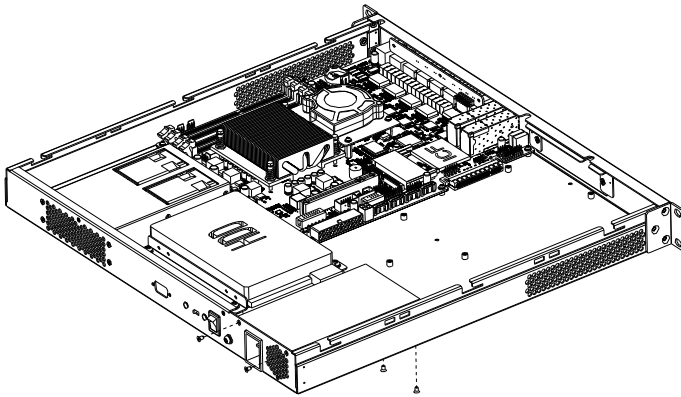
Fix the hard disk with the hard disk bracket by four pan head #6-32*1/4 screws, then put the module at the corresponding position in chassis and fix it by four M4 pan head screws.





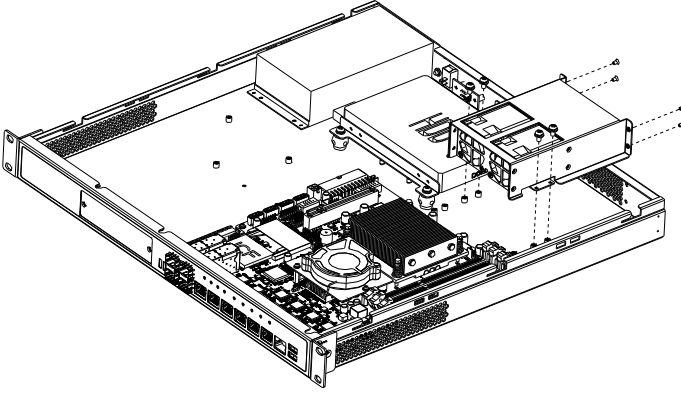
Installing the Power

Lay the power at the corresponding position in chassis and then fix it by four countersunk head #6-32*1/4 screws from the bottom and rear of the chassis.



Installing the Fan

Fix the two fans with the fan bracket by sixteen ST4.0*10 screws, then put the module at the corresponding position in chassis, and fix the fan bracket by four M3 countersunk head screws from external of the chassis and four pan head screws from internal of the chassis.



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.