



IW-RF100

User's Manual

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PREFACE

Thank you for choosing In Win IW-RF100. This manual is written for system technicians who are responsible for installation, troubleshooting, managing, and repairing this server chassis. This document provides the overview of all the features of the chassis, a list of accessories or other components you may need to finish the installation, troubleshooting methods, and instructions of adding and removing components on the In Win IW- RF100. For the latest version of this manual, you may visit In Win's server website to download the latest updated version.

SAFETY INFORMATION

To ensure safe and smooth operation of your In Win IW- RF100, it is essential that you choose an appropriate location for the system, provide an appropriate operating environment, and adequate power for all components of the system. As you plan for installation, follow the guidelines below to ensure that the system and its environment are safely and appropriately positioned for efficient operation and service. Your system should be installed and serviced only by technically qualified persons.

Environment selection: The system is designed to operate in a typical office environment. The location should be a clean, dry, and free of airborne particles; a well-ventilated room and away from sources of heat including direct sunlight and radiators; it should keep the sources of vibration or physical shock away; the space should be with a properly grounded wall outlet, and with sufficient space to access the power supply cords. The operation environment temperature should be around 0°C to 40°C (32°F to 104°F).

Heed safety instructions: Before working with In Win IPC/Storage server/ System products, we strongly recommend you are using this guide as a reference and follow the safety instructions. The instructions in this manual will help you ensure and maintain compliance with existing product certifications and approvals. Follow the described, regulated components mentioned in this manual. Use of non UL listing products or other regulatory did not approvals will make non-compliance with product regulations in the region(s) in which the product is sold.

System power on/off: The power button DOES NOT totally turn off the system AC power. To remove the power of system, you have to unplug the AC power cord from the outlet or system's power supply units. Make sure the power cord is unplugged before you open the chassis, add, or remove any components.

Hazardous conditions, devices and cables: Hazardous electrical conditions usually present on power supply units, and communication cables. Disconnect the power cord, and any other device which attached to the server before opening the case. Otherwise, it will raise the risk of personal injury or equipment damage.

Electrostatic discharge (ESD) and ESD protection: In most cases, ESD damages disk drives, electronic boards, and other parts. We recommend that you work the installation only at an ESD free space. If the situation does not allow, perform ESD protection actions by wearing an anti-static wrist strap attached to ground any unpainted metal surface on your server during your operation.

Installing or removing jumpers: A jumper is a short length of conductor used to close, open or bypass part of an electronic circuit. Jumpers on In Win backplane have a small tab on top that you can pick up with your fingertips. Grip the jumper carefully, and plug the jumper to cover the jumper pins on the backplane. Once you need to remove the jumper, gripping the jumper, and carefully pull out without squeezing.

CAUTION



To avoid damage and prove your safety, please notice and following the terms listed below:

1. No to populate hard drives and turn on the power before the system is settle down.
2. Tighten or loosen all the screws, please use screw driver to operate.
3. Apply the correct screws which packed in the accessories box.
4. For your safety, it requires at least two persons lift, and place the unit.
5. Before mounting the unit to the cabinet, make sure the rail is installed correctly.
6. When installing and removing any module or parts, please operate by the handles.

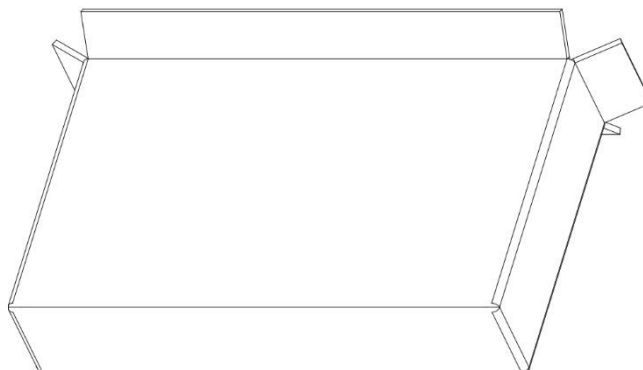
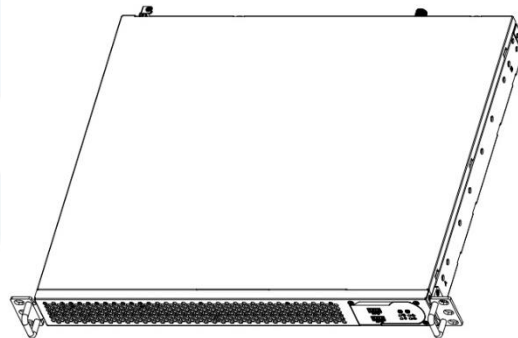
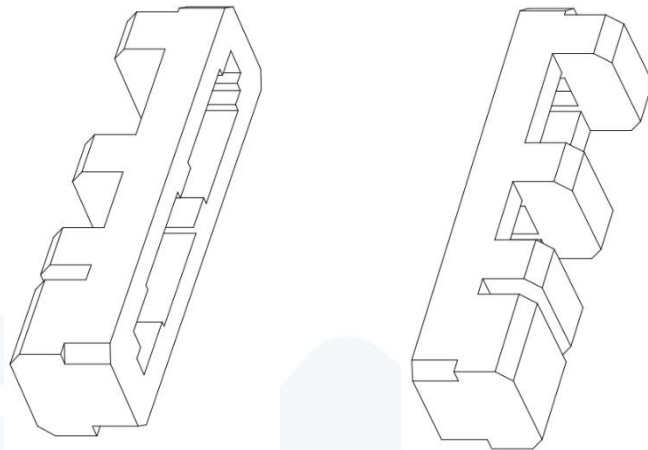
SPECIFICATIONS

Model Name	IW-RF100
Standard	EIA-RS310D
M/B Form Factor	MINI ITX (6.7" x 6.7"), ATX(12" x 10")
Dimensions (D x W x H)	365 x 482.6 x 44 mm (14.3" x 19" x 1.75")
Drive Bay	Internal: 2.5" HDD x 2 2.5" HDD x 1 + 3.5" HDD x 1 (optional 2.5" HDD x 2)
Power Supply	Supports ▪ Form Factor: Flex ▪ Watt: Single 265W, or 315W
Indicator	Power Status, HDD, LAN Activity LEDs,
Front Control Panel	Power Switch, System Reset, USB 3.0 x 2
Cooling Fan	Supports 40 x 28 mm PWM Easy-Swap Fan x 2 (Max up to 3)
Expansion Slot	Full Height PCI Slot x 1 (via riser card and bracket)
Material	Material: SGCC Thickness: 1.0 mm
Slide Rail	20" Friction slide rail

1 Product Introduction

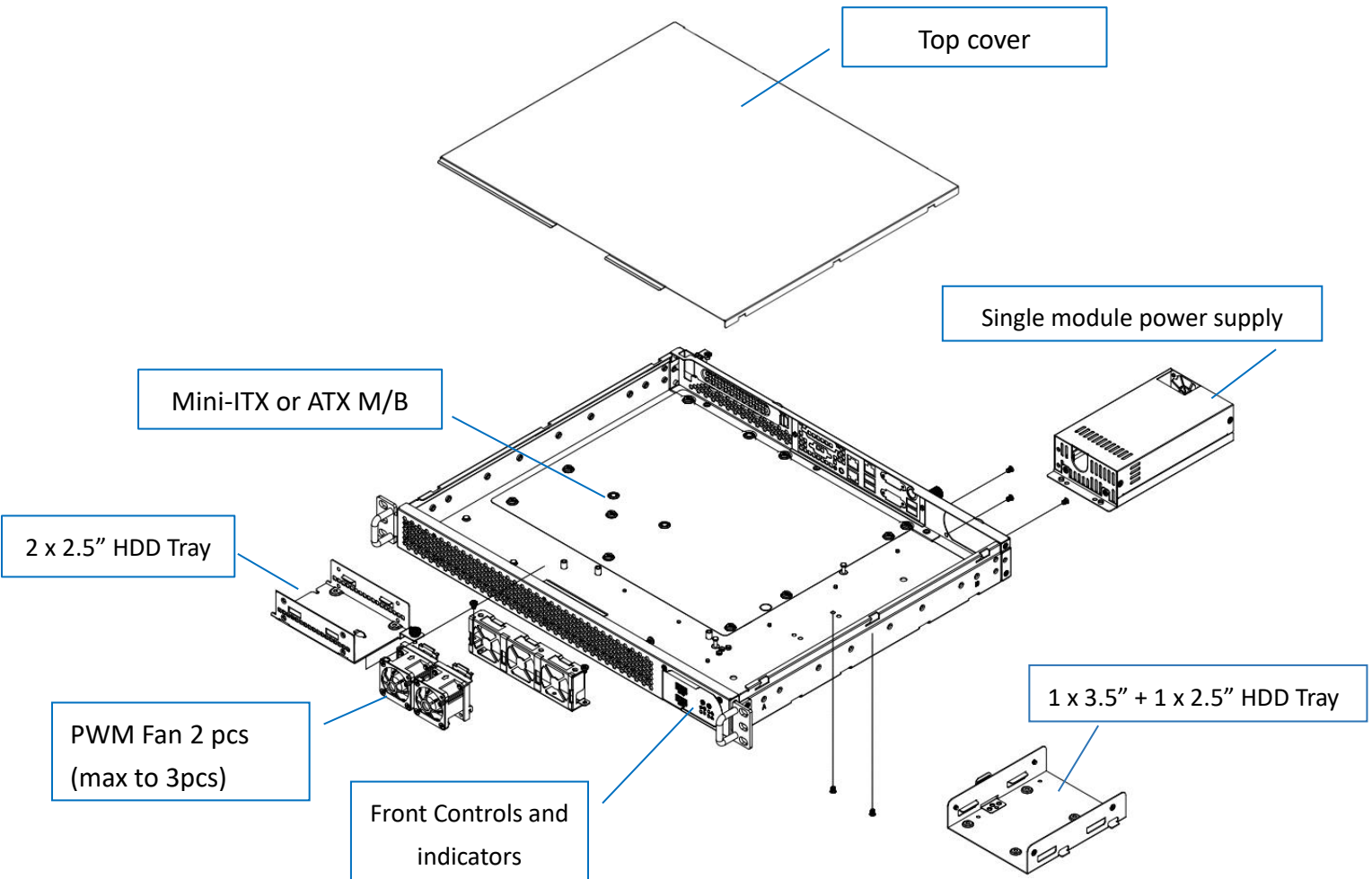
1.1 Box Content

When you open the carton box of IW-RF100, the contents should include:



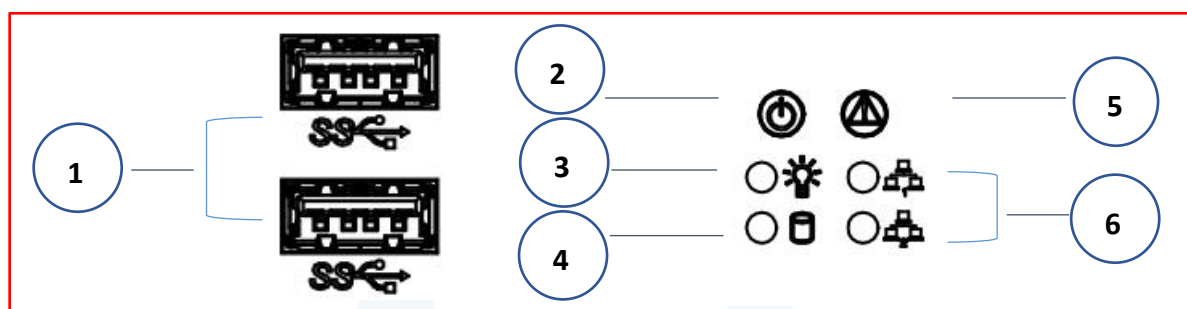
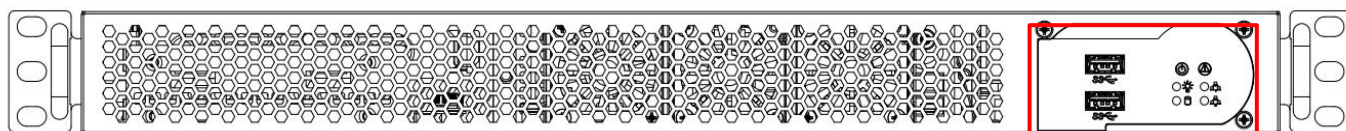
1.2 General Information

When you open the top cover should be like the diagram shows bellow.



1.2.1 Front Panel Controls and Indicators

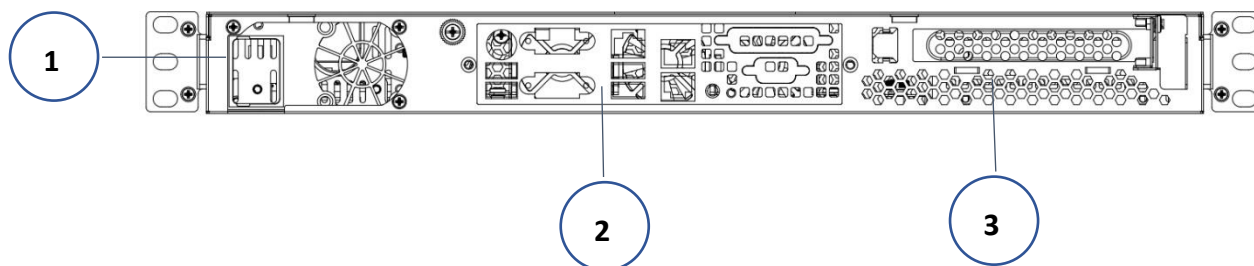
The front control panel includes USB IO ports and indicator LED lights.



No.	Name	Color	Status	Description
1	USB3.0 Connector	No LED function		USB devices connection
2	Power ON/OFF Button	Blue	Solid on	System is powered on
			Off	System is not powered on
3	Power LED	No LED function		Press the button to activate Power LED
4	Hard Disk LED	Green	Blinking	System HDD accessing
5	Reset Button	No LED function		System reset
6	LAN LED	Amber	Blinking	Link between system and network
			Off	No data transmission or receiving is occurring

1.2.2 Rear Panel Configuration

The rear side of IW-RF100 contains the space of AC power source, system IO, and an expansion cards slot.



No.	Name	Description
1	Power Supply Window	This window is for installing single PSU, please reference In-Win compatibility list to select the compatible models.
2	System I/O (depend on M/B specification)	The I/O shield is different by brands and models, please contact In Win sales for custom I/O shield service.
3	Full Height PCI Slot x 1	The slot support standard high profile cards. The bracket should be removed before using.

2 Hardware Installation

2.1 Removing and Installing a Hard Drive

In Win IW-RF100 has one 3.5" disk cage and one 2.5" disk cage, which support installing a 3.5" hard drive, and stacking two 2.5" drives.

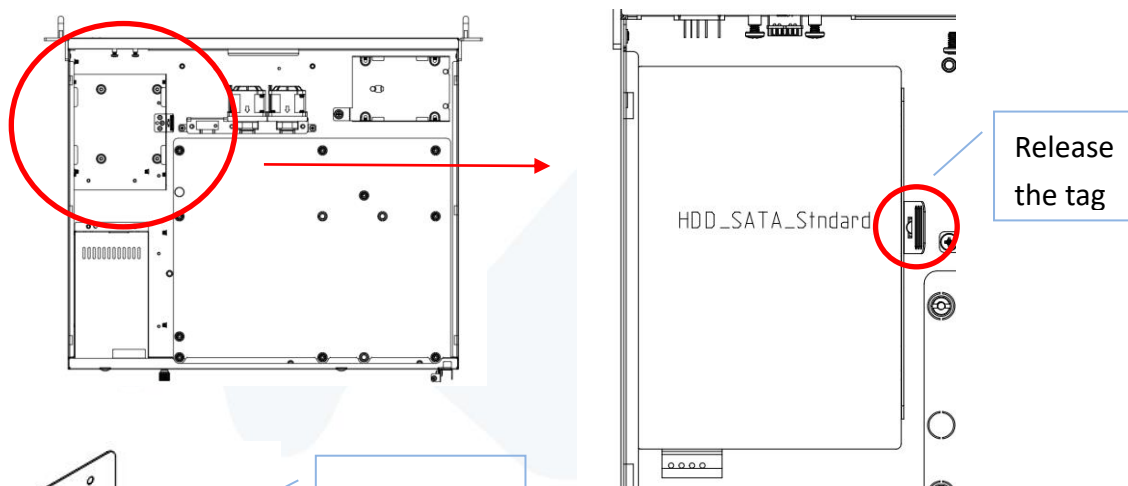
2.1.1 Installing a 3.5" Hard Drive

Step 1: Press the release tag and pull backward the disk cage to lift.

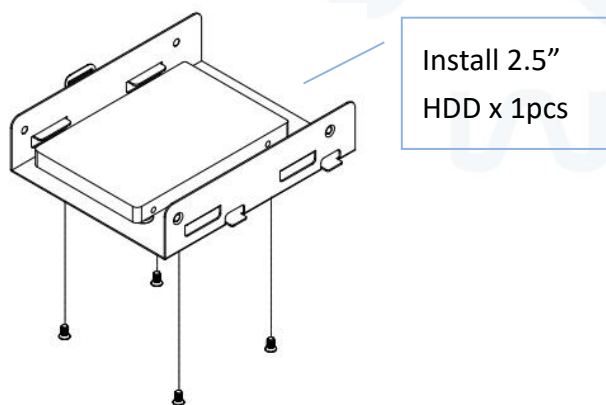
Step 2: Populate the hard drive on the cage with 4 screws which you can find in the accessory box.

Step 3: Put back the disk cage to the chassis, and push back the lever until you hear "click"

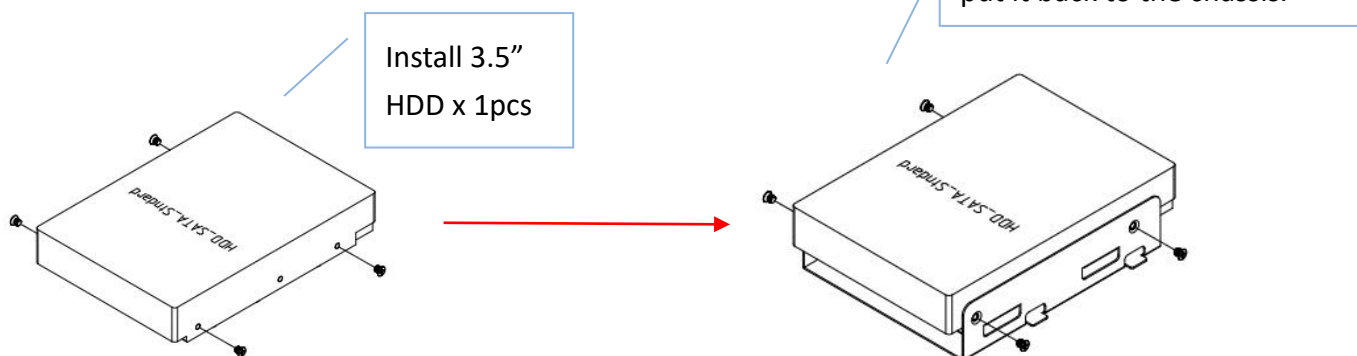
Step 1



Step 2



Step 3



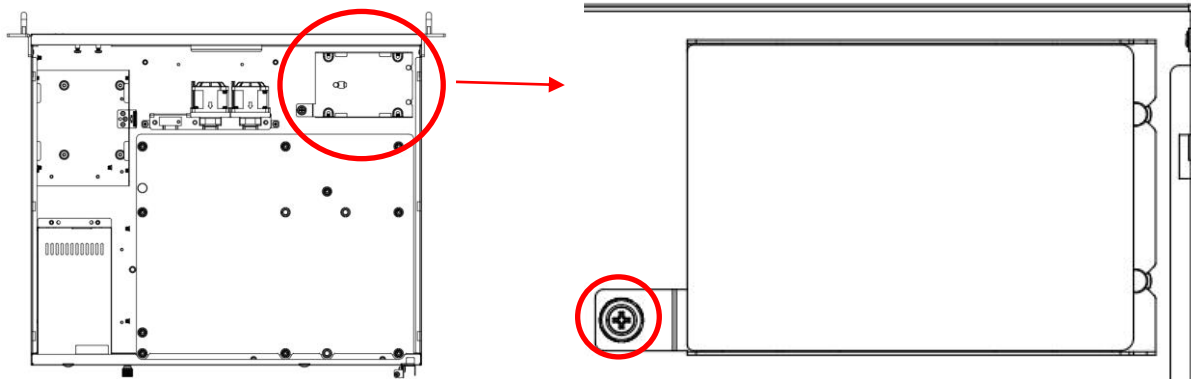
2.1.2 Installing a 2.5" Drive

Step 1: Loosen the thumb screw and pull backward to remove disk cage.

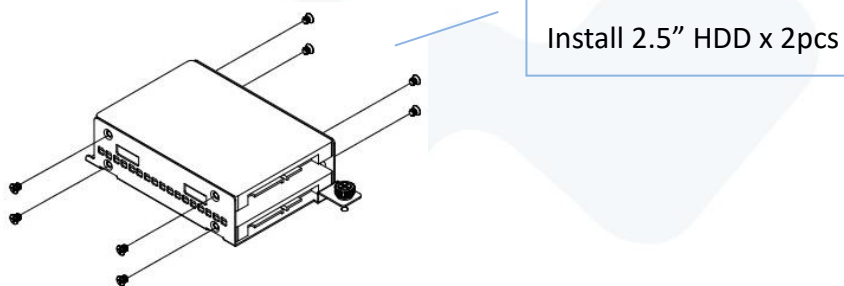
Step 2: Populate a 2.5" drive to the tray and fix with 4 screws.

Step 3: Put back the disk cage, and make sure the standoff is in right position. Tighten the thumb screw to finish the installation

Step 1



Step 2



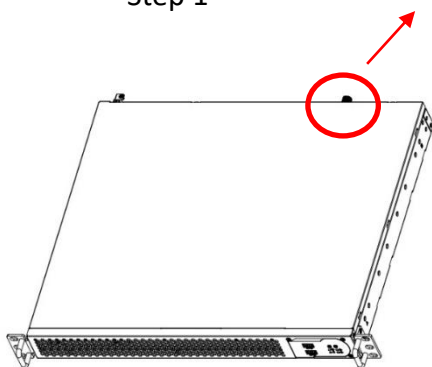
2.2 Removing and placing Top Cover

Step 1: Release the screw on the back-end of cover, and pull backward the top cover.

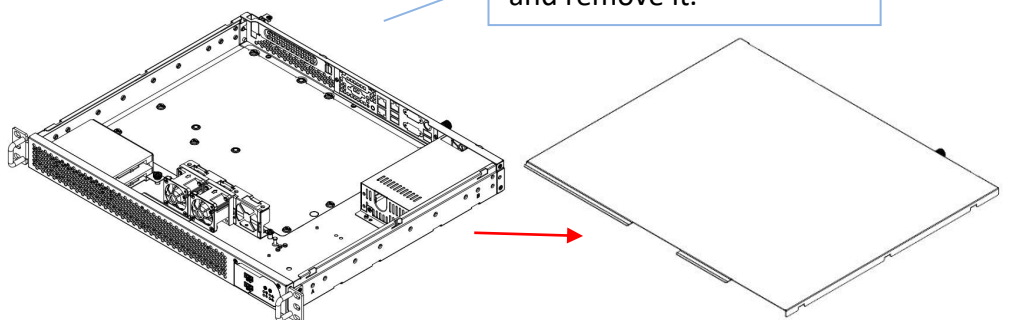
Step 2: Lift the top cover to remove.

To place the top cover, repeat backward the above steps to complete the action.

Step 1



Step 2



2.3 Removing and Installing the fan wall

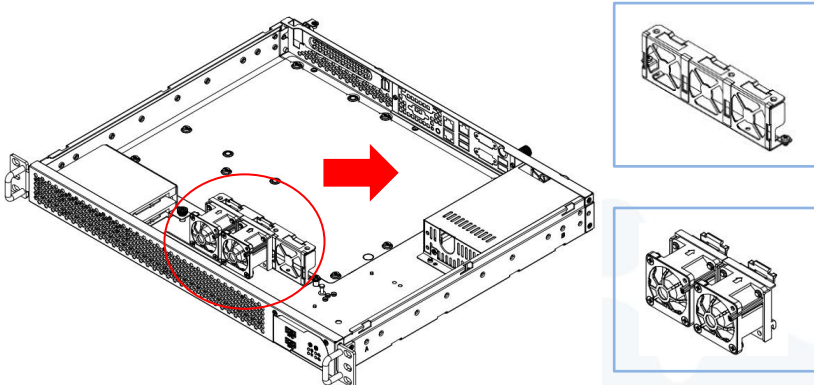
The fan module of IW-RF100 is tool-less design with easy swap feature. Removing the fan wall before posting the motherboard to get more space for the processing.

2.3.1 Removing the fan wall

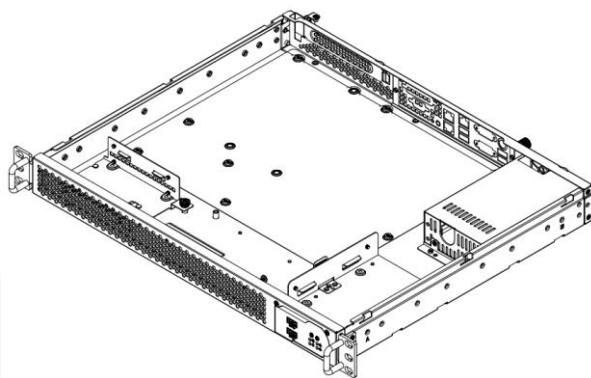
Step 1: Unplug the fans' power cable and push the plastic tabs to lift the fan modules

Step 2: Unscrew the fan wall bracket to remove

Step 1



Step 2



2.4 Removing and Installing a PSU

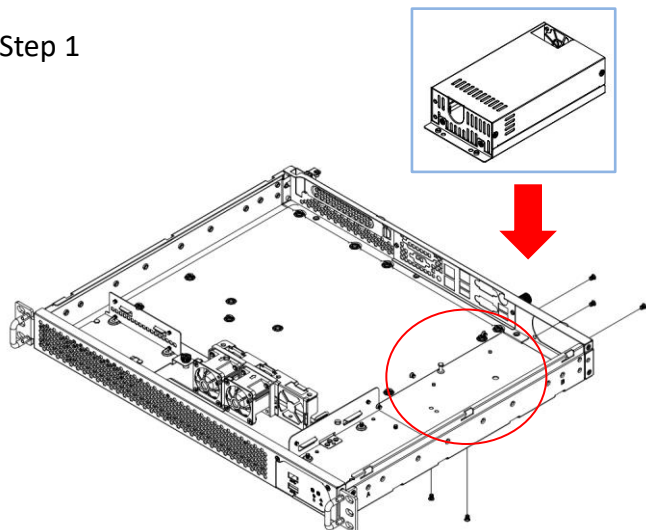
In Win IW-RF100 supports single Flex-ATX power supply unit. Users can select power supply according to the environment's wattage requirements.

2.4.1 Installing Single PSU

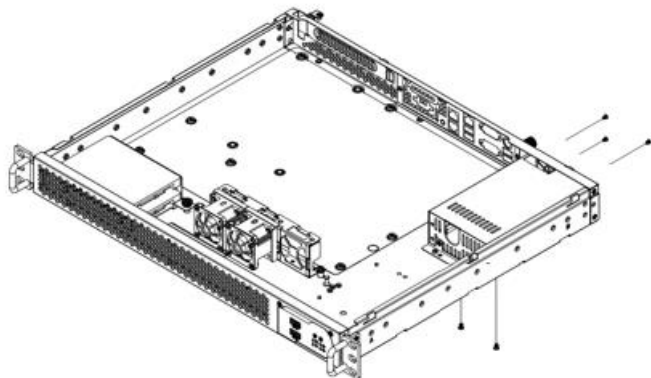
Step 1: Place the PSU to the rear right corner of the chassis and make sure the screw holes on the rear bracket meet the chassis frame

Step 2: Use 5 screws to fix the power supply unit.

Step 1



Step 2



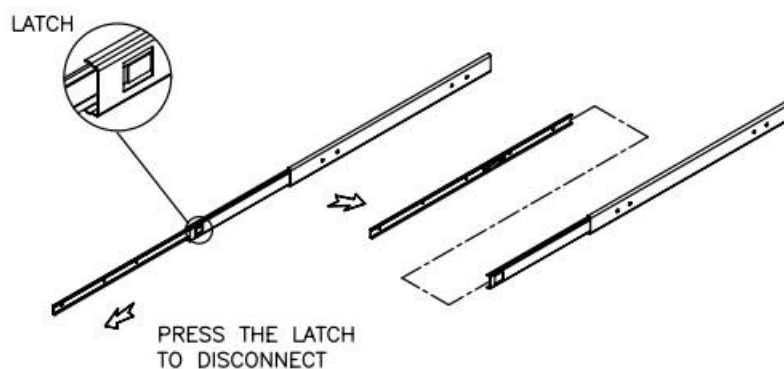
2.5 Installing a Slide Rail

In Win IW-RF100 is a rackmount model, which support EIA-RS310D standard cabinet and chassis rack. In Win provides standard slide rail to let users mount the chassis on to the cabinet.

2.5.1 Identifying the sections of the Slide Rail

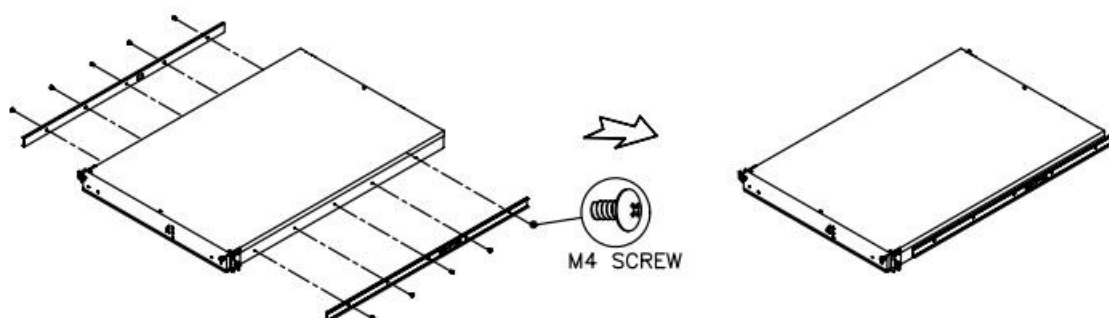
2.5.2 Installing a Slide Rail

Step 1: Release the inner rail from the slide

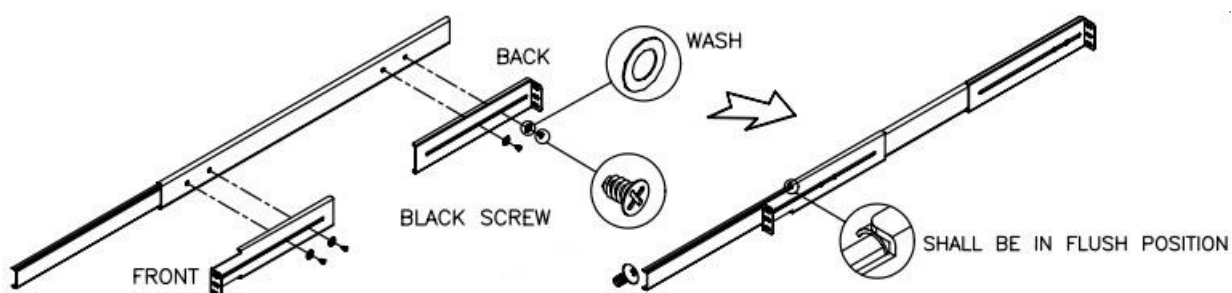


Step 2: Mount the inner rails onto the chassis by the direction which the arrows show.

FASTEN 6 SCREWS AT LEAST TO ATTACH INNER CHANNEL ONTO THE CHASSIS



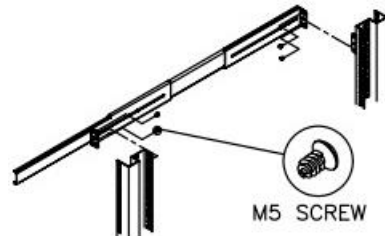
Step 3: Install the outer rails and the brackets onto the rack.



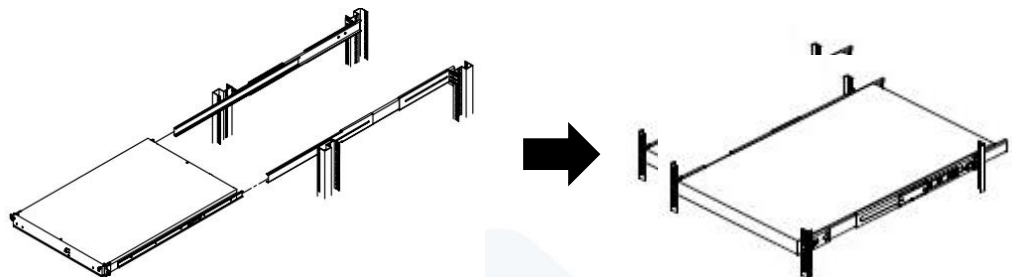
2.5.3 Mount the chassis onto the cabinet

Step1: Make sure the ball bearing retainer is at the forefront.

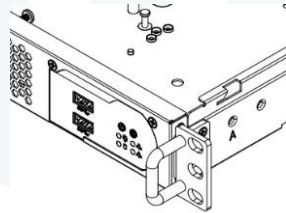
Step2: Insert the inner rail to the outer rail which has already locked up on the cabinet.



Step3: Mount the inner rail onto the chassis by the direction which the arrows show on the image.



Step 4: Use 2 M6 screws to fix the handle bracket on the rack.



2.6 Installing Motherboard

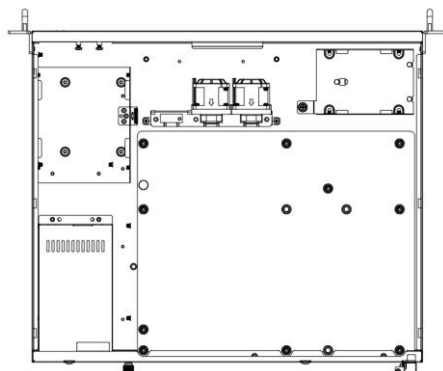
Before installing the motherboard, preparing the IO shield for your motherboard, and mount it to the system IO window 1.2.2 shows. If you cannot find the IO shield, please check with your motherboard vendor, or contact In Win for IO shield production service.

Step 1: Measure the motherboard location and removing the plastic dots to appear the holes.

Step 2: Install the steel pillars, which you can find in the accessories box to the holes matching the motherboard's mounting holes, you may use a flathead screw driver.

Step 3: Place the motherboard down to the chassis, and make sure the pillars' threaded holes are matching the mounting holes on the motherboard.

Step 4: Use hex screws from the accessories box to fix the motherboard in the chassis.

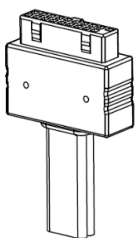


2.7 Connection Cable

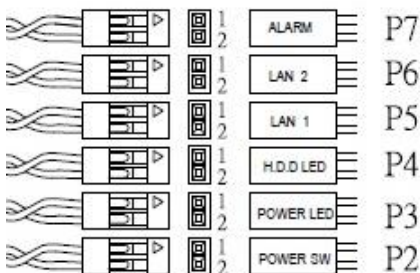
2.2.1 Connecting LED cable, front control panel and front USB IO ports

As 1.2.1 describes, In Win IW-RF100 built-in a set of front control panel and USB access ports. You need to connect to the pins on the motherboard to activate the functions. The pin function and location you can find from your motherboard's user guide.

USB 3.0



LED Connector



No.	Connector Name	Color	Front IO Indication
P2	Power Switch	White/Black	Power ON/OFF Button with LED
P3	Power LED✕	White/Purple	Power ON/OFF Button with LED
P4	HDD LED	White/Blue	HDD Active LED
P5	LAN LED 1	White/Green	LAN LED
P6	LAN LED 2	White/Yellow	LAN LED
P7	Reset	White/Orange	System Reset
USB	USB 3.0 Connector	Flat Black	USB 3.0

✕ If the motherboard's led power source is 3-pin type, please use the 2Pin-to 3Pin convertor from the accessory box to connect.

2.8 Reverse IO

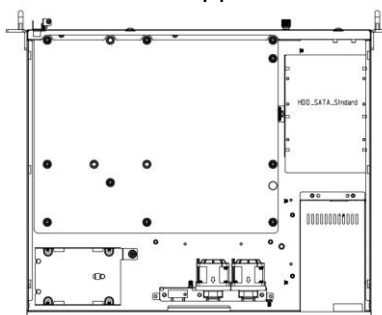
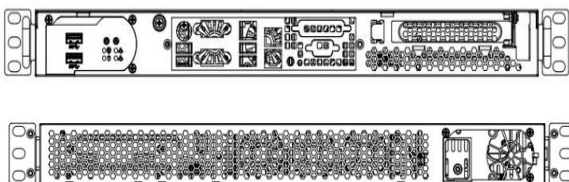
IW-RF100 features IO interface direction reversible, which allows user turn the IO to the front and deploy the appliance easily. It only needs to take few steps to change the factory default rear IO access to front IO access.

Step 1: Remove the top cover.

Step 2: Unload the power supply unit and unscrew the control panel module; switch the position.

Step 3: Unscrew to remove the fan wall, reverse to change the airflow direction.

Step 4: Remove the handle of both sides, and mount on the opposite end to let the handle face the rear side.



3 Compatibility Lists

To reach best performance and avoid system failure, In Win strongly recommend users choosing the components from In Win's compatibility list. All the components are tested in In Win's lab and assured the components are working well with In Win's chassis.

You can download the latest updated device compatibility list from In Win's website:

<https://www.in-win.com/en/ipc-server>

4 Q&A

1. Is it possible to add front cover?

You may adapt IW-RS104-02M's 1U front cover, but it will block the USB ports and lights in rear access, and block the IO ports in front access mode, which is not realistic.

2. Do the chassis support mirrored OS disks?

You can mirror any two hard drives, such as IW-RF100's two 2.5" hard drives, or IW-RF100S' two 3.5" and two 2.5" drives. Yet, the disk mirroring is defined by your motherboard or your RAID 1 controller card. You may check the vendor's guide to mirror your OS disks.

3. Can it support form factor MB such as M-ATX?

In Win IW-RF100 supports motherboard range from Mini-ITX to ATX. Unless you would like to mount a customized motherboard which is not meet Intel's standard, you will need to contact In Win partners or sales for customization service.