



IW-RL100

1U Liquid-Cooled Rackmount Chassis

User Manual

PREFACE

Thank you for choosing the InWin IW-RL100 1U Liquid-Cooled Rackmount Chassis. This manual is written for system technicians who are responsible for installation, managing and repairing this server chassis. This document provides an overview of all the features of the chassis, a list of accessories or other components you may need to finish the installation and instructions on adding and removing components in the InWin IW-RL100. For the latest version of this manual, you may visit InWin's server website.

SAFETY INFORMATION

To ensure a safe and smooth operation of your InWin IW-RL100, it is essential that you choose an appropriate location for the system, provide an appropriate operating environment and supply an adequate amount of 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 a qualified technician.

Proper Environment Selection:

The system is designed to operate in a typical office environment:

- The location should be clean, dry and free of airborne particles.
- It should be placed in a well-ventilated room, and away from sources of heat including direct sunlight and radiators.
- It should be kept away from sources of vibration or physical shock.
- The space should be accommodated with a properly grounded wall outlet, and with sufficient space to access the power supply cords.
- The operating environment temperature should be around 0°C to 40°C (32°F to 104°F).

Heed Safety Instructions:

Before working with InWin IPC/storage/SMB server products, we strongly recommend you use 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 regulators may not comply 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 the system, you must unplug the AC power cord from the outlet or the 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 can be present on/in power supply units and their cables. Disconnect the power cord and any other devices attached to the server before opening the case. Failing to follow safety procedures will increase the risk of personal injury or equipment damage.

Electrostatic Discharge (ESD) and ESD Protection:

In most cases, ESD may damage disk drives, electronic boards and other parts. We recommend that you conduct installation only at an ESD free space. If not possible, perform ESD protection protocol by wearing anti-static wrist straps attached to the ground on any unpainted metal surface on your server during operation.

Installing or Removing Jumpers:

A jumper is a short length conductor used to close, open or bypass part of an electronic circuit. Jumpers on InWin backplanes 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, grip the jumper and carefully pull without squeezing.



CAUTION

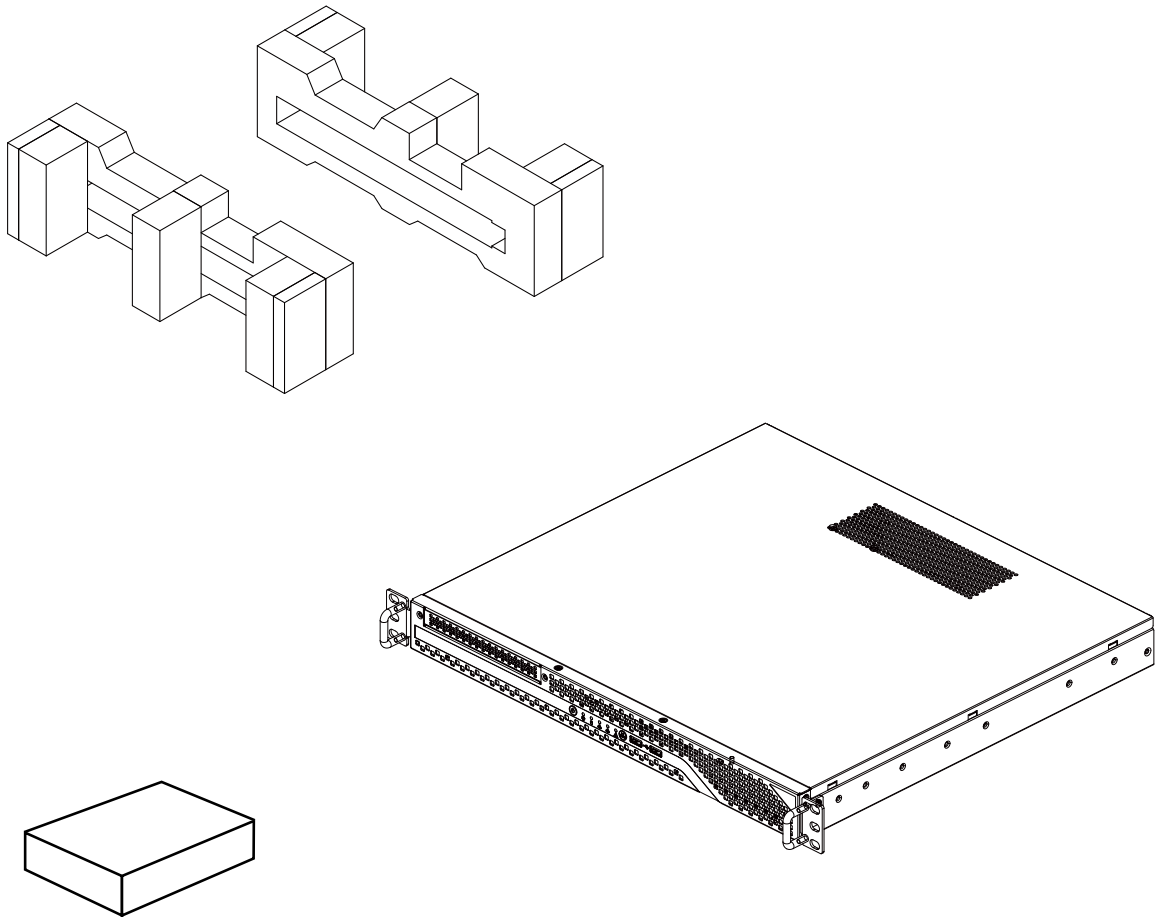
To avoid damage and maintain your safety, please read the following terms listed below:

1. Do not populate hard drives and turn on the power until the system has stabilized. Make sure hard drives and other components are properly connected before turning on the system.
2. Tighten or loosen all screws with a screwdriver.
3. Apply the correct screws packed in the accessories box.
4. For your safety, please have at least two people lift and install the unit in its designated area.
5. Before mounting the unit to the cabinet, make sure the rail is installed correctly.
6. When installing and removing any module or part, please use the handles.

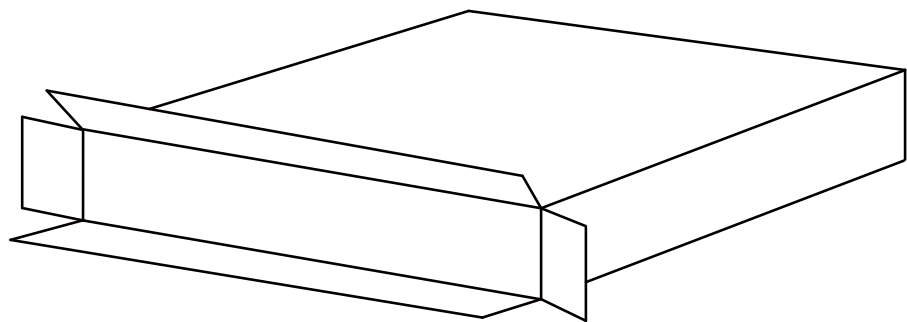
1 Product Introduction

1.1 Box Contents

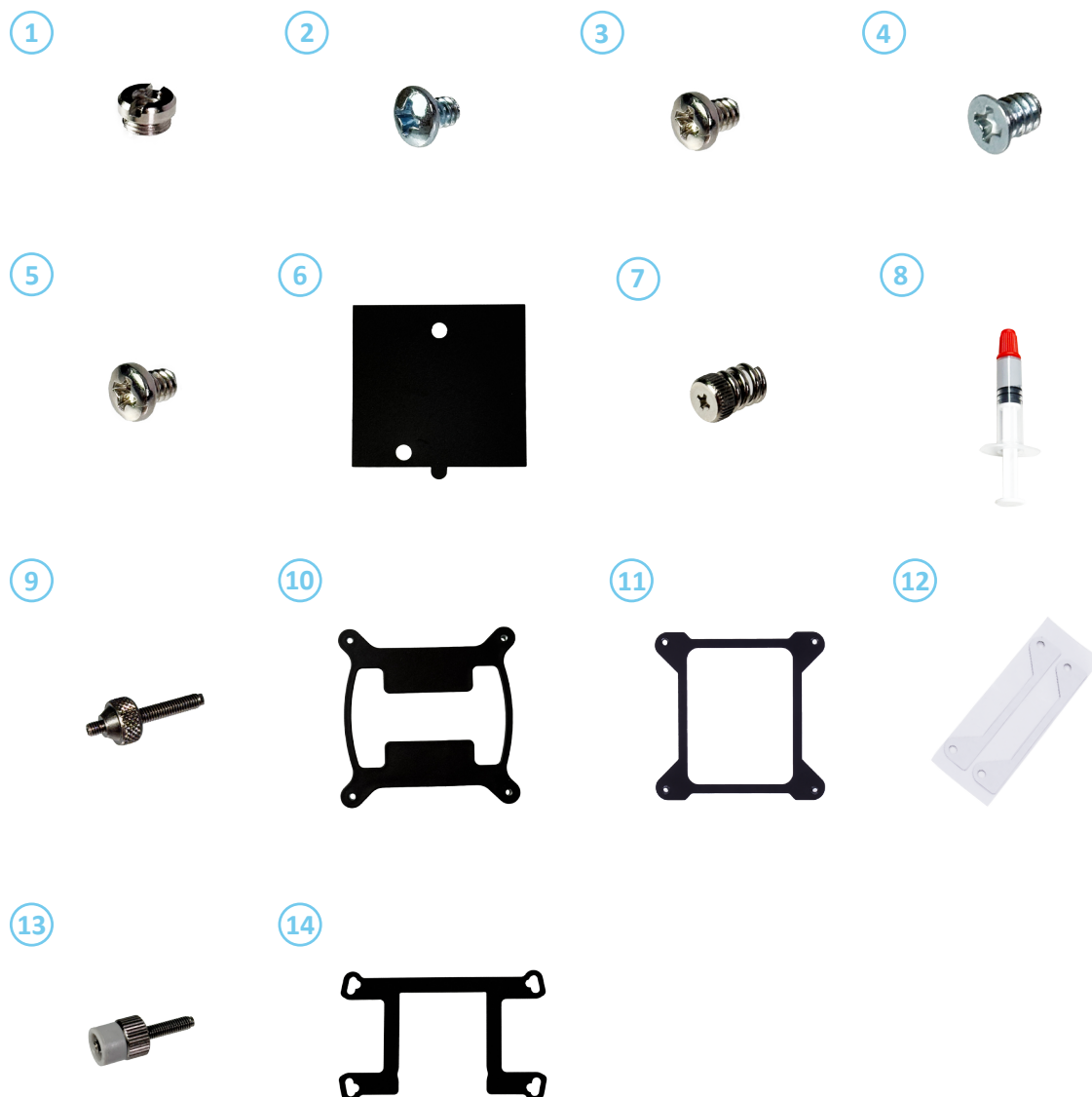
When you open the IW-RL100 box, the contents should include following:



Accessory Box



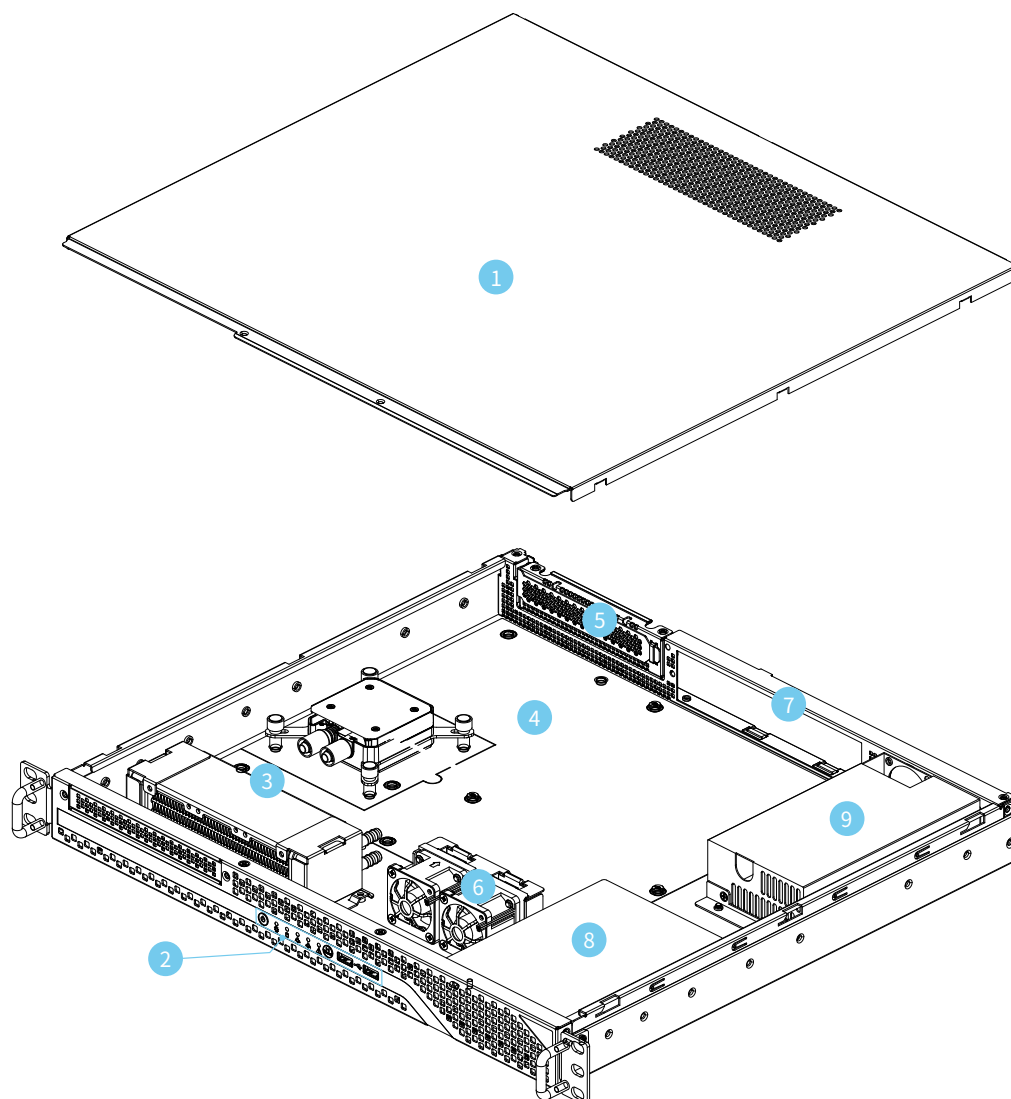
1.2 Accessories Box



No.	Item	No.	Item
1	Motherboard Stand-Offs x 10	8	Thermal Compound x 1
2	Motherboard Screws x 11	9	Standoff Screws (LGA 1851/1700) x 4
3	PSU Screws A x 2	10	Intel CPU Backplate (High standoff) x1
4	PSU Screws B x 3	11	Intel CPU Backplate (Low standoff) x1
5	3.5" HDD screws x 8	12	Backplate Stickers (Low standoff) x1
6	Mylar x 1	13	Standoff Screws (AMD4/AMD5) x 4
7	Thumbscrew Caps x 4	14	AMD Mounting Bracket x1

1.3 General Information

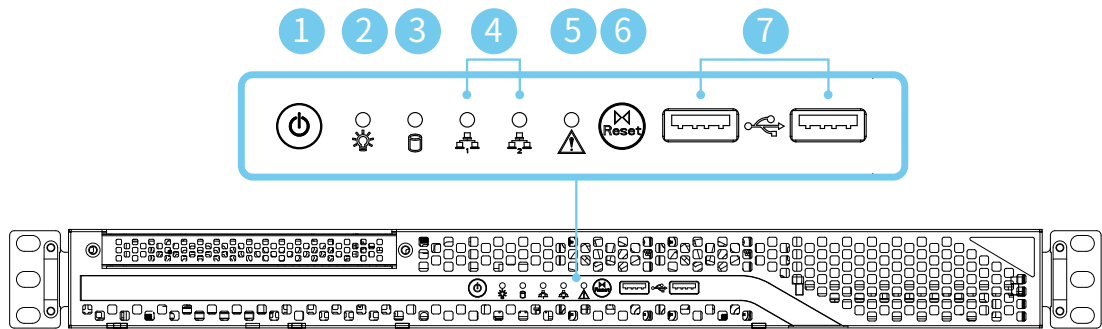
When you open the chassis, it should reflect the diagram's image.



1	Top cover	6	40 x 28mm PWM fans x 2 (optional)
2	Front controls and indicator	7	Rear I/O shield mounting area
3	1U-height AIO liquid cooler (pre-installed)	8	HDD mounting area
4	M/B mounting area	9	1U Flex PSU mounting area
5	Full-Height PCIe Slot x 1		

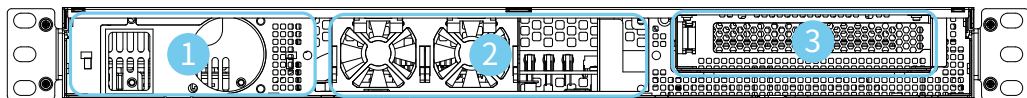
1.3.1 Front Panel Controls and Indicators

The IW-RL100 control panel, indicators are located on the Front Panel.



No.	Name	Color	Status	Description
1	Power On/Off Button	N/A		Press the button to turn the power on.
2	Power LED	Blue	Solid on	System is powered on.
			Off	System is off.
3	Hard Disk LED	Amber	Blinking	System HDD accessing.
4	LAN LED (LAN1 – LAN2)	Blue	Blinking	Link between system and network.
			Off	No data transmission or receiving is occurring.
5	System Fail LED	Amber	Solid on	System Status (- , +).
			Solid on	System Status (+ , -).
6	System Reset Button	N/A		Press the button to activate system reset.
7	USB 3.0 Connector	N/A		USB devices connections.

1.3.2 Rear Panel Configuration



No.	Name	Description
1	Power Supply Window	This window is for installing single PSU, please reference InWin compatibility list to select the compatible models.
2	System I/O (Depends on M/B Specifications)	InWin offers a customized service for 1U I/O shield. For more Information, please contact InWin's sales reps.
3	Full-Height PCIe Slot x 1	The slot supports standard high profile cards. The bracket should be removed before using.

2 Hardware Installation

2.1 Motherboard & AIO Installation

Before installing the motherboard, please find the I/O shield from your motherboard package and install it into the system I/O window. If you cannot find the I/O shield, please check with your motherboard vendor, or contact InWin for I/O shield OEM service.

For a quick installation video, please visit [IW-RL100 Motherboard & AIO Installation](#).

2.2 Fan Bracket & Expansion Card Installation

The IW-RL100 has options to add additional fans and expansion card bracket set. Users can select the options according to the system need.

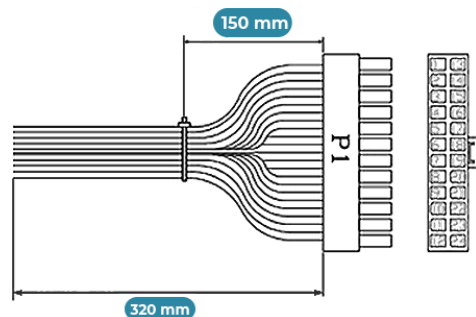
For a quick installation video, please visit [Fan Bracket & Expansion Card Installation](#).

2.3 PSU & HDD Tray Installation

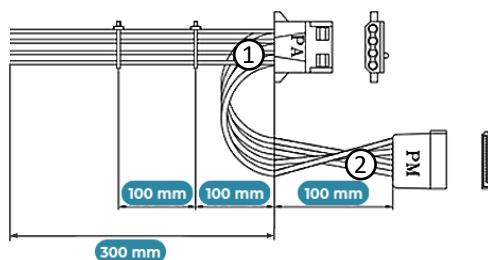
The IW-RL100 has options of single power supply unit. Users can select power supply according to the environment's requirements. The IW-RL100 also features a 3.5" HDD tray.

For a quick installation video, please visit [IW-RL100 PSU & HDD Tray Installation](#).

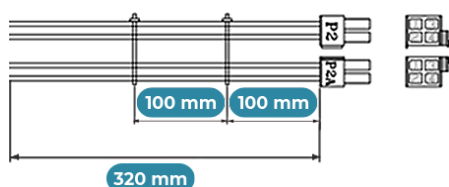
2.3.1 Power Supply Cable Information



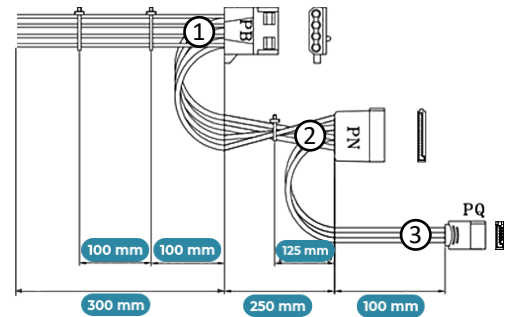
24-Pin Main Power Connector



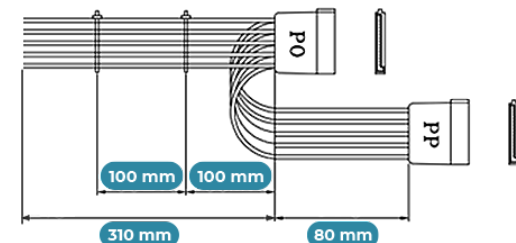
1. Peripheral Power Connector
2. SATA Power Connector



4+4 Pin CPU Power Connector



1. Peripheral Power Connector
2. SATA Power Connector
3. Slim SATA Power Connector

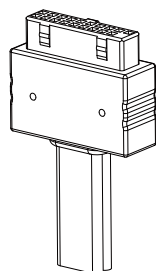


SATA Power Connector

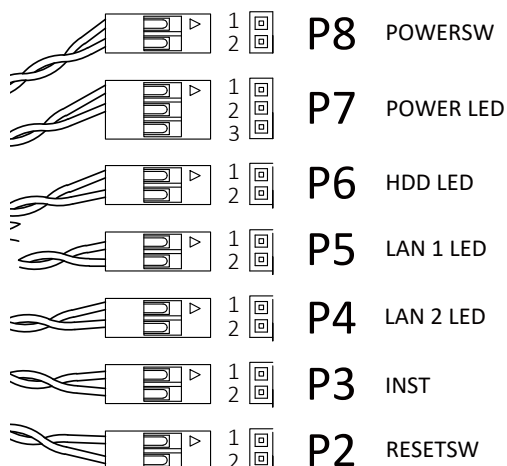
2.4 Connecting Cables

Connecting LED Cable, Front Control Panel

Refer to your motherboard user guide for pin functions and locations, and then plug the connectors to the pins on the motherboard to activate the functions.



USB 3.0



No.	Connector Name	Abbreviation	Color	Front I/O Indication
P8	Power Switch	POWER SW	White/Black	Power ON/OFF Button with LED
P7	POWER LED	POWER LED	White/Purple	Power ON/OFF Button with LED
P6	HDD LED	H.D.D LED	White/Blue	HDD Active LED
P5	LAN 1 LED	LAN 1	White/Green	LAN LED
P4	LAN 2 LED	LAN 2	White/Yellow	LAN LED
P3	INST	INST	White/Orange	Intrusion Switch
P2	Reset Switch	RESET SW	White/Red	System Reset Button

- If the motherboard's led power source is a 3-pin type, please use the 3-pin to 2-pin adapter from the accessories box to connect.

2.5 Installing the Slide Rail

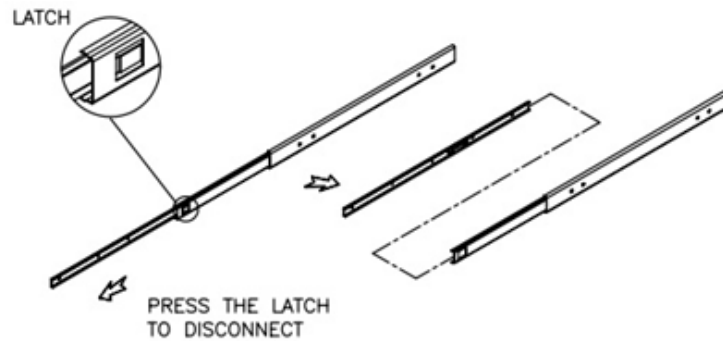
The IW-RL100 is a rackmount model, which supports EIA-RS310D standard cabinets and chassis racks. InWin provides standard slide rails to allow users to mount the chassis onto the cabinets.

2.5.1 Identifying the Slide Rail

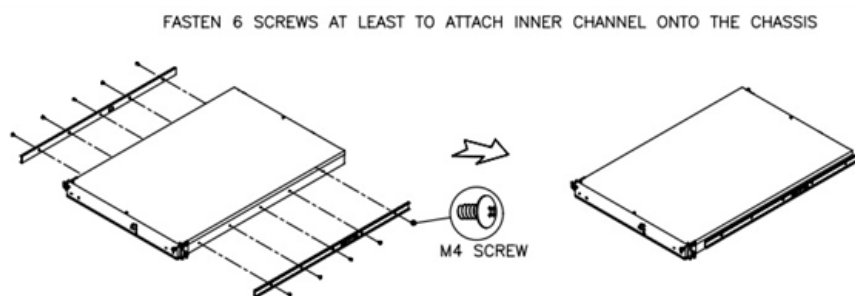
The slide rail by your order might be different. You can reference the quick installation guide inside the slide rail package and follow the instructions to mount the rail onto your cabinet or chassis rack.

2.5.2 Installing a Slide Rail

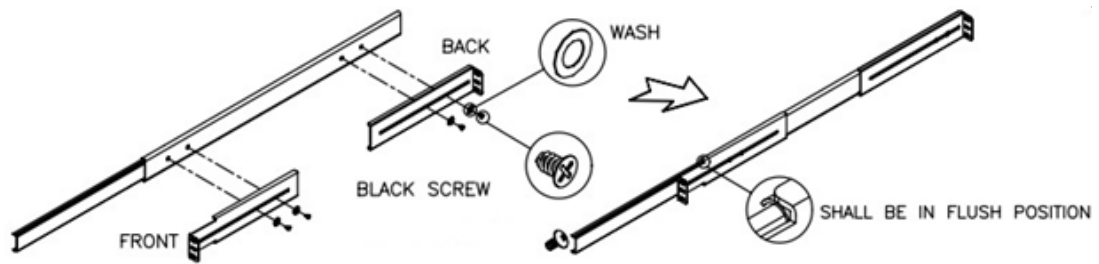
Step 1: Release the inner rail from the slide.



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



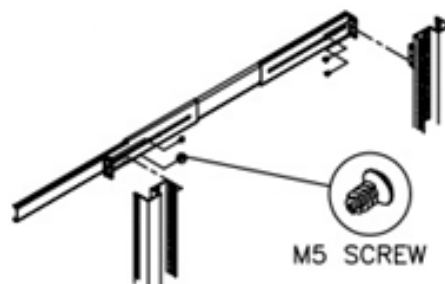
Step 3: Install the outer rails and the brackets onto the rack.



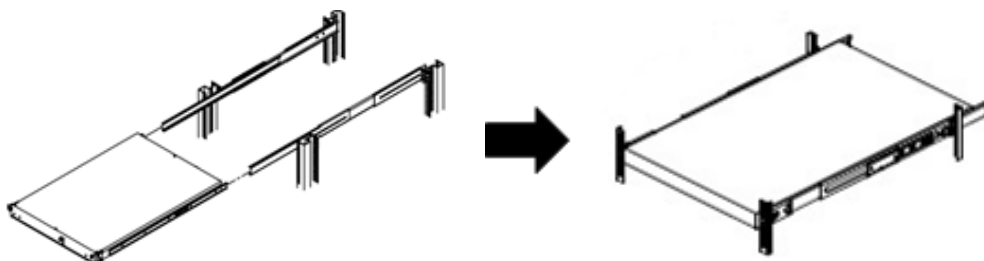
2.5.3 Mount the chassis onto the cabinet

Step 1: Make sure the ball bearing retainer is at the forefront.

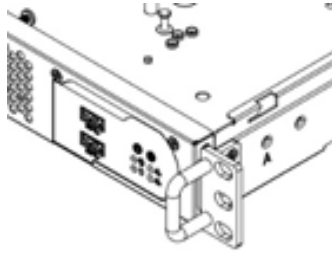
Step 2: Insert the inner rail to the outer rail which has already locked on the cabinet.



Step 3: 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.



3 Compatibility Lists

To reach the best performance and avoid system failure, InWin strongly recommends customers to choose the components from InWin's compatibility list. All the components are tested in InWin's lab, and assured the components are compatible with InWin's chassis. You can download the latest updated device compatibility list from InWin's website: ipc.in-win.com.

4 Technical Support

If you need help with installation or troubleshooting, you can contact your local InWin reps, or send an e-mail to InWin's local contacts for technical assistance.



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