

User Manual



IW-PLG Tower

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PREFACE

Thank you for choosing the InWin IW-PLG Tower. This manual is written for system technicians who are responsible for installation, troubleshooting, 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, troubleshooting methods and instructions on adding and removing components in the InWin IW-PLG Tower. 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-PLG Tower, 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.

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 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 Re moving 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.

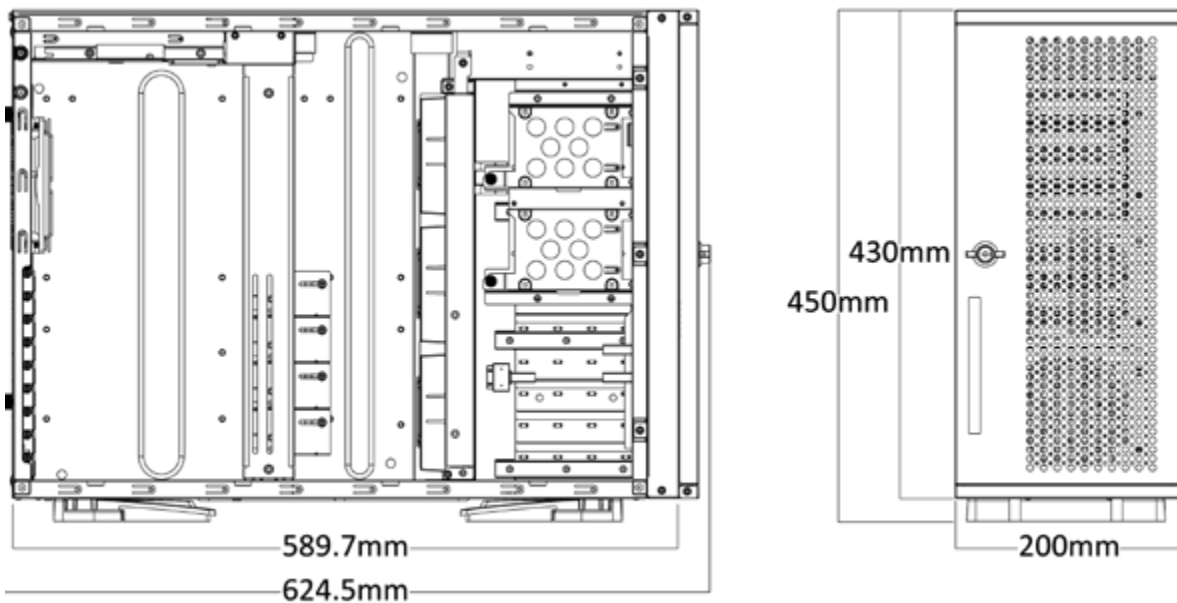


SPECIFICATIONS

Model Name	IW-PLG Tower
Industry Standard	EIA-RS310D
M/B Form Factor	ATX (12" x 9.6"), CEB (12" x 10.5"), EEB (12" x 13")
Drive Bay	<ul style="list-style-type: none"> • External 2.5"/3.5" hot-swap trays x 12 (pre-installed x 8), 5.25" x 1 • Internal 2.5" x 2 or 3.5" x 1
Power Supply	Supports: <ul style="list-style-type: none"> • Form factor: 80 Plus Platinum CRPS with PDB cable management • Watt: 800W/1200W/1600W/2000W
Indicator	Power status, HDD LED, LAN1/LAN2/LAN3/LAN4 LED, ID LED, system fail activity LED
Front Control Panel	Power switch, ID switch, system reset, NMI, USB 3.0 x 2
Chassis Security	Supports padlock loop or kensington lock
Backplane	Mini-SAS (SFF-8643), 12Gb/s supported x 3 (pre-installed x 2)
Cooling Fan	<ul style="list-style-type: none"> • Middle: 92 x 25mm PWM fans x 3 • Rear: 120 x 25mm PWM fan x 1
Expansion Slot	Full-height PCIe slots x 9
Material	<ul style="list-style-type: none"> • Material: SGCC • Thickness: 1.0mm
Rail Kit	Supports 28" tool-less & ball-bearing slide rail
Product Dimensions (DxWxH; Chassis Only)	589.7 x 200 x 430mm (23.22" x 7.87" x 16.93")
Package Dimensions (DxWxH)	860 x 610 x 360mm
Weight	Net weight: 16.95kg Gross weight: 21.28kg
Cubic Feet	6.67
Container Information	Single packing with pallets: <ul style="list-style-type: none"> • 20': 100pcs • 40': 220pcsw • 40' HQ: 264pcs

- The actual product is subject to change without prior notice. In Win Development Inc. reserves the right to make any final modifications.
- The adjacent image is for reference only. All hardware components and optional parts are not included.

PRODUCT DIMENSIONS



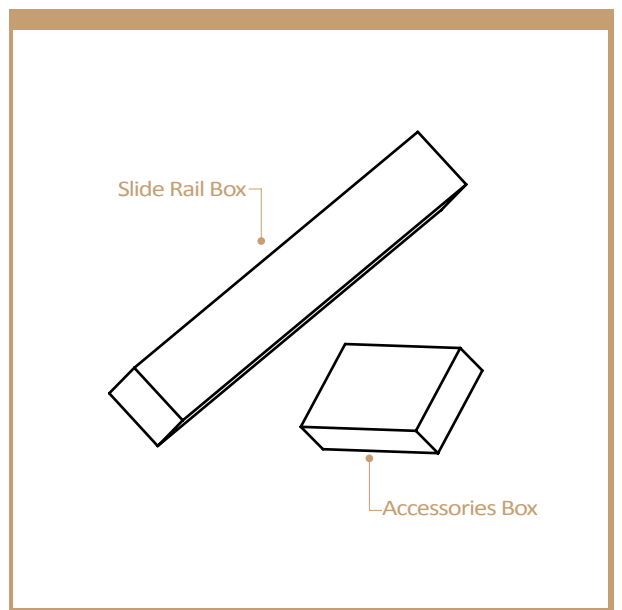
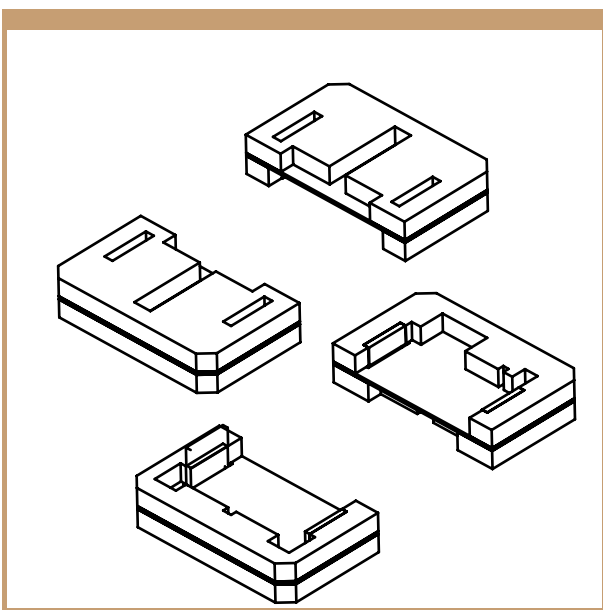
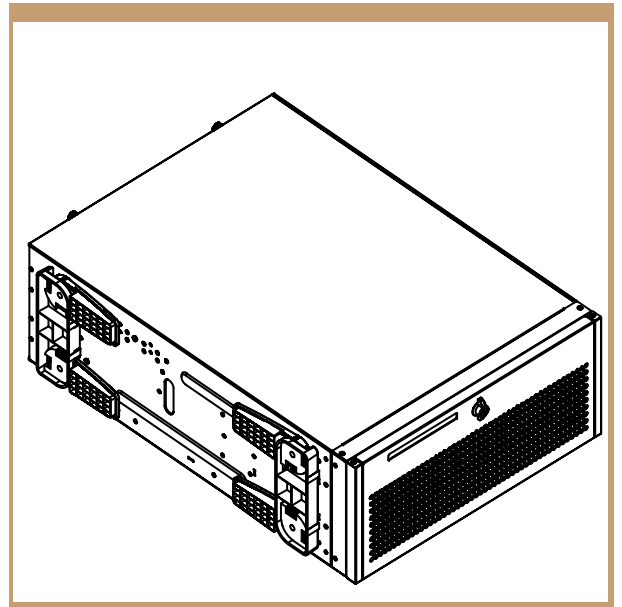
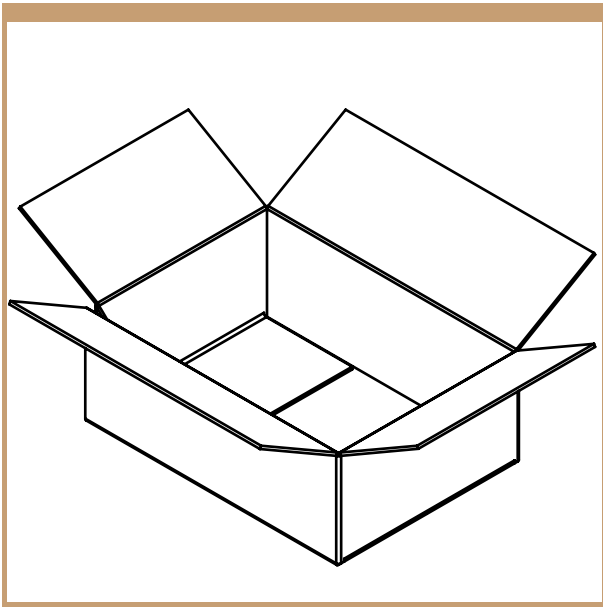
12Gb/s Backplane Specifications

Backplane	Mini-SAS HD Backplane
Dimensions (W x H)	111.5mm x 111.5mm
Backplane Type	Passive
Host Interface	Mini-SAS HD (SFF-8643) x 1
HDD Interface	SAS/SATA HDD x 4

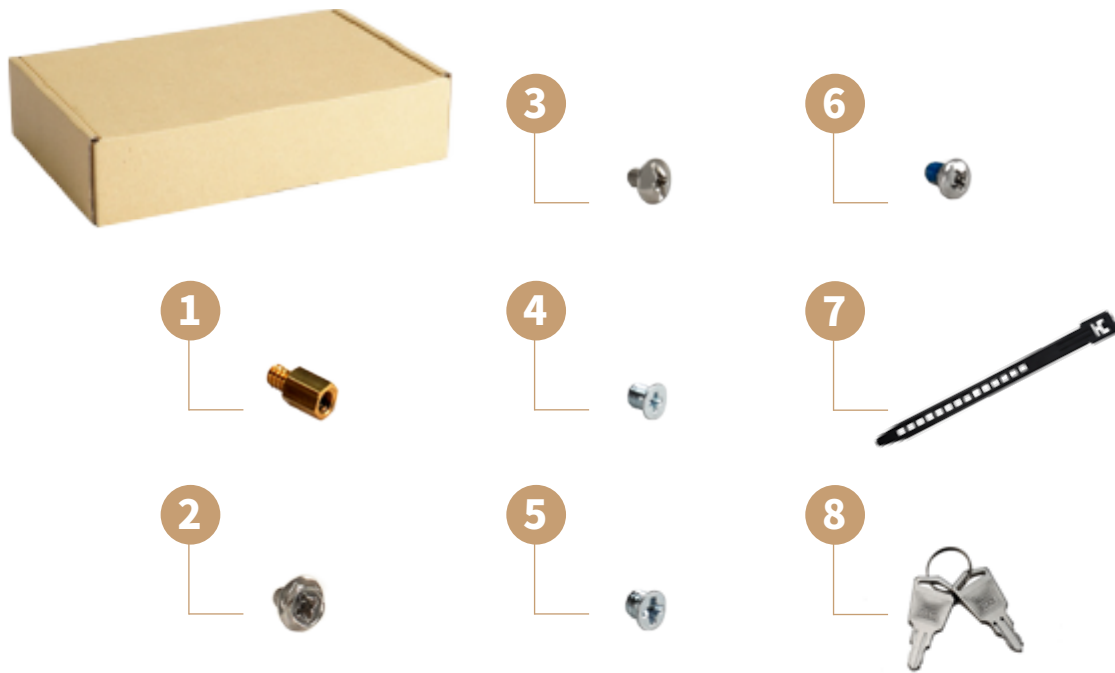
Product Introduction

Box Contents

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



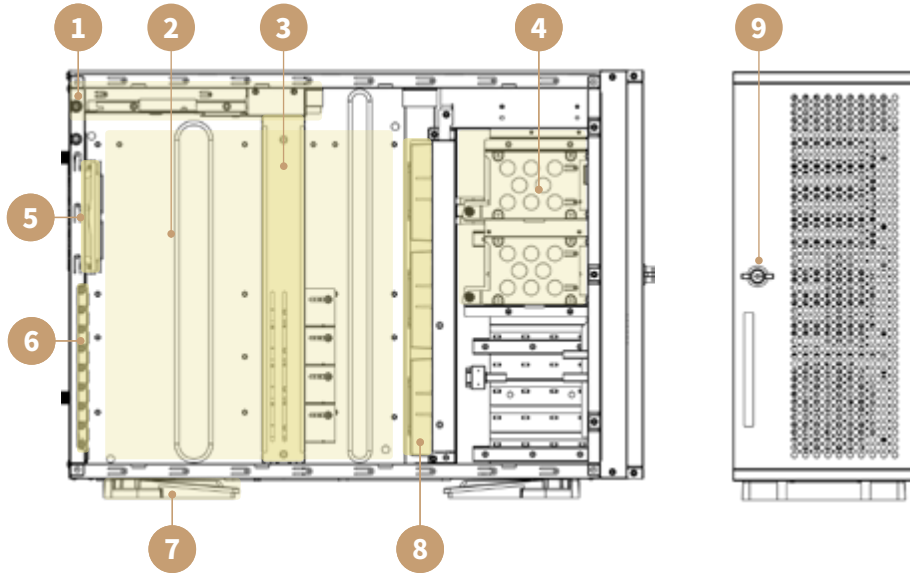
 Accessories Box



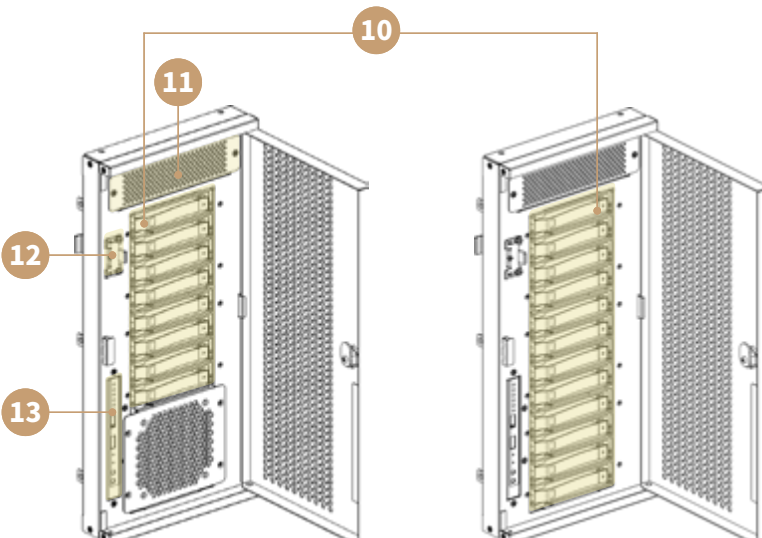
No	Item	No.	Item
1	Motherboard Stand-offs x 16	5	3.5" External HDD Screws x 48
2	Motherboard Screws x 21	6	3.5" Internal HDD Screws x 6
3	ODD Screws x 4	7	Cable Ties x 10
4	2.5" SSD Screws x 44	8	Front Bezel Keys x 2

General Information

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



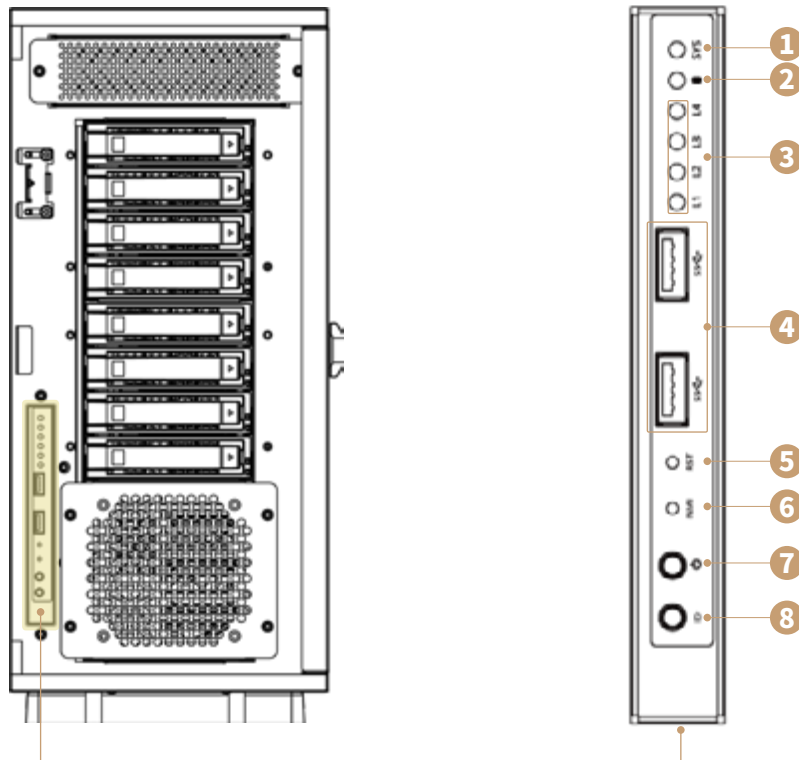
No	Item	No	Item	No	Item
1	PSU mounting area	4	2.5" x 2 or 3.5" x 1	7	Foot stands
2	MB mounting area	5	120 x 25mm PWM rear fan x 1	8	92 x 25mm PWM middle fan x 3
3	GPU holder	6	Full-height PCIe slot x 9	9	Front panel with lock



No	Item
10	2.5"/3.5" hot-swap tray x 12 (pre-installed x 8)
11	5.25" x 1
12	Side panel lock
13	Indicator & front control panel

⚙️ Front Panel Controls and Indicators

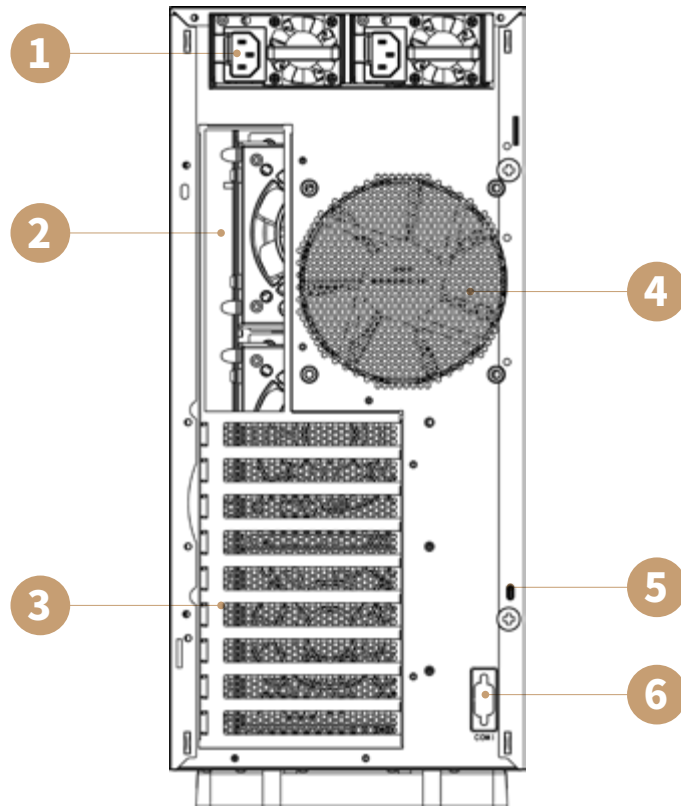
After unlocking and opening the front bezel, you can see the disk bays, and the control panel, USB I/O ports and indicators are located on the left side.



No	Item	Color	Status	Description
1	System Fail LED	Green	Solid on	System ok
		Amber	Solid on	System faulty
2	Hard Disk LED	Green	Blink	System HDD accessing
3	LAN1-LAN4 LED	Amber	Blinking	Link between system and network
			Off	No data transmission or receiving is occurring
4	USB 3.0 Connector	N/A		USB ports
5	System Reset Button	N/A		Press the button to activate system reset
6	NMI Button	N/A		Press the button to activate user-defined function
7	Power On/Off Button with LED	Blue	Solid on	System is powered on
			Off	System is off
8	Chassis ID Button with LED	Blue	Solid on	Press the button to activate system identification

⚙️ Rear Panel Configuration

The rear side of IW-PLG Tower contains the position of power Supply, system IO, 9 expansion cards slot and rear fan location.



No	Item	Description
1	Power Supply Area	This window is for installing CRPS PSU, please reference InWin's compatibility list to select the compatible models.
2	System I/O (Depends on M/B Specifications)	The I/O shield should come with motherboard and provided by motherboard vendors.
3	Full Height PCI Slots x 9	The slots support high profile cards. The bracket should be removed before using.
4	Rear Fan	120 x 25mm PWM fan for IW-PLG Tower for better system cooling.
5	Security	Supports padlock loop or Kensington lock.
6	COM Port Support	RS-232 Com port for DB-9.

Hardware Installation

■ Please follow the installation steps below to set up your IW-PLG tower. For a quick installation video, please visit [InWin Server youtube channel](#).

Motherboard 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.

Expansion Card Installation

Please follow the instructions to install the expansion card and the adjustable card holder (optional). A wide range of GPUs are compatible.

Hard Drive Installation

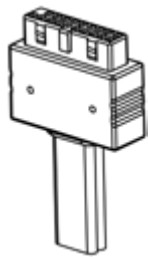
The IW-PLG Tower has 12 external hot-swap disk bays, which support both 2.5" and 3.5" hard drives. The IW-PLG Tower also supports internal 2.5" SSDs x 2 or 3.5" HDD x 1.

Fan Installation

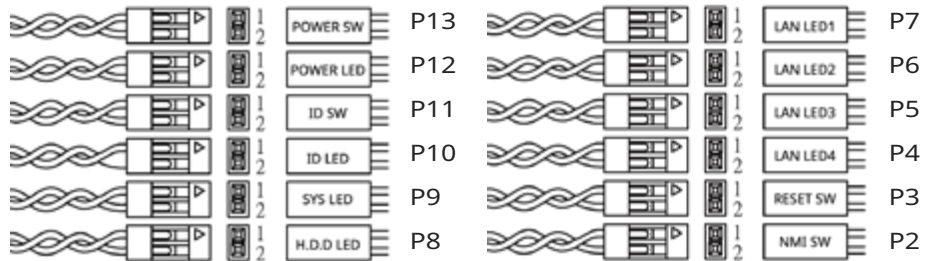
The fan module of the IW-PLG Tower is flexible to optimize the cooling efficiency. The IW-PLG Tower supports 92 x 25mm x 3 PWM fans in the middle and 120 x 25mm x 1 PWM fan on the rear wall. The optional rear fan kit also provides excellent cooling airflow for GPU cards.

⚙️ Connecting LED Cable, Front Control Panel and Front USB I/O Ports

The InWin IW-PLG Tower has a built-in front control panel and USB access ports. Please refer to your motherboard user guide for pin function and locations, and then plug the connectors to the pins on the motherboard to activate the functions.



USB 3.0



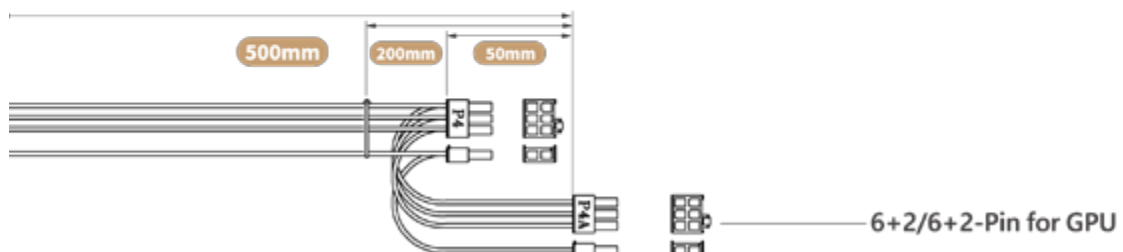
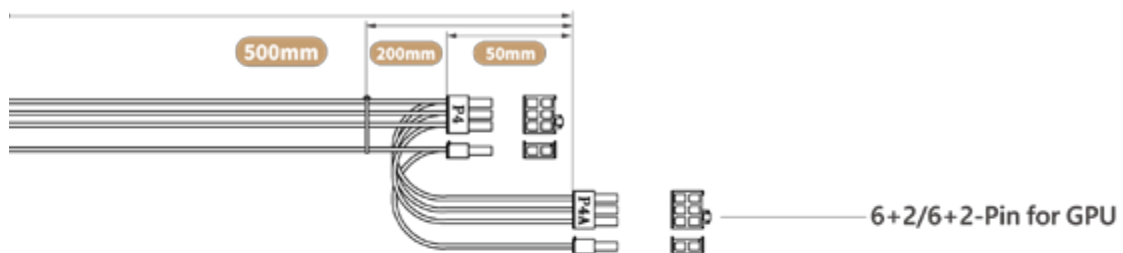
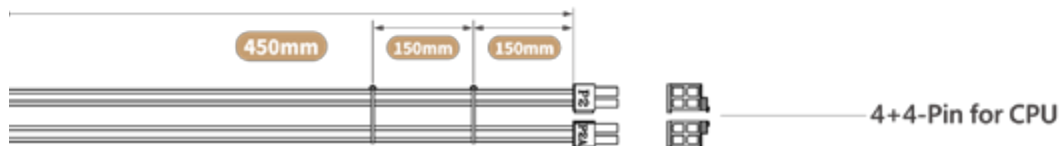
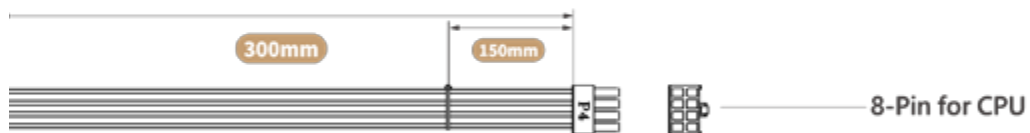
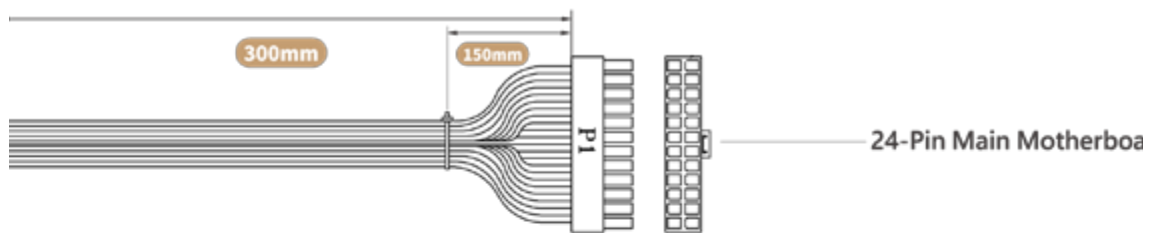
LED Connector

No	Connector	Color	Front I/O Indication
P2	NMI Switch	Black/Brown	NMI Button
P3	Reset Switch	Red/Orange	Power Reset Button with LED
P4	LAN LED 4	Yellow/Green	LAN LED
P5	LAN LED 3	Blue/Purple	LAN LED
P6	LAN LED 2	Gray/White	LAN LED
P7	LAN LED 1	Black/Brown	LAN LED
P8	HDD LED	Red/Orange	HDD Active LED
P9	System LED	Yellow/Green	System Fail LED
P10	ID LED	Blue/Purple	Chassis ID Button with LED
P11	ID Switch	Gray/White	Chassis ID Button with LED
P12	Power LED	Black/Brown	Power ON/OFF Button with LED
P13	Power Switch	Red/Orange	Power ON/OFF Button with LED
USB	USB 3.0 Connector	Black Flat	USB 3.0

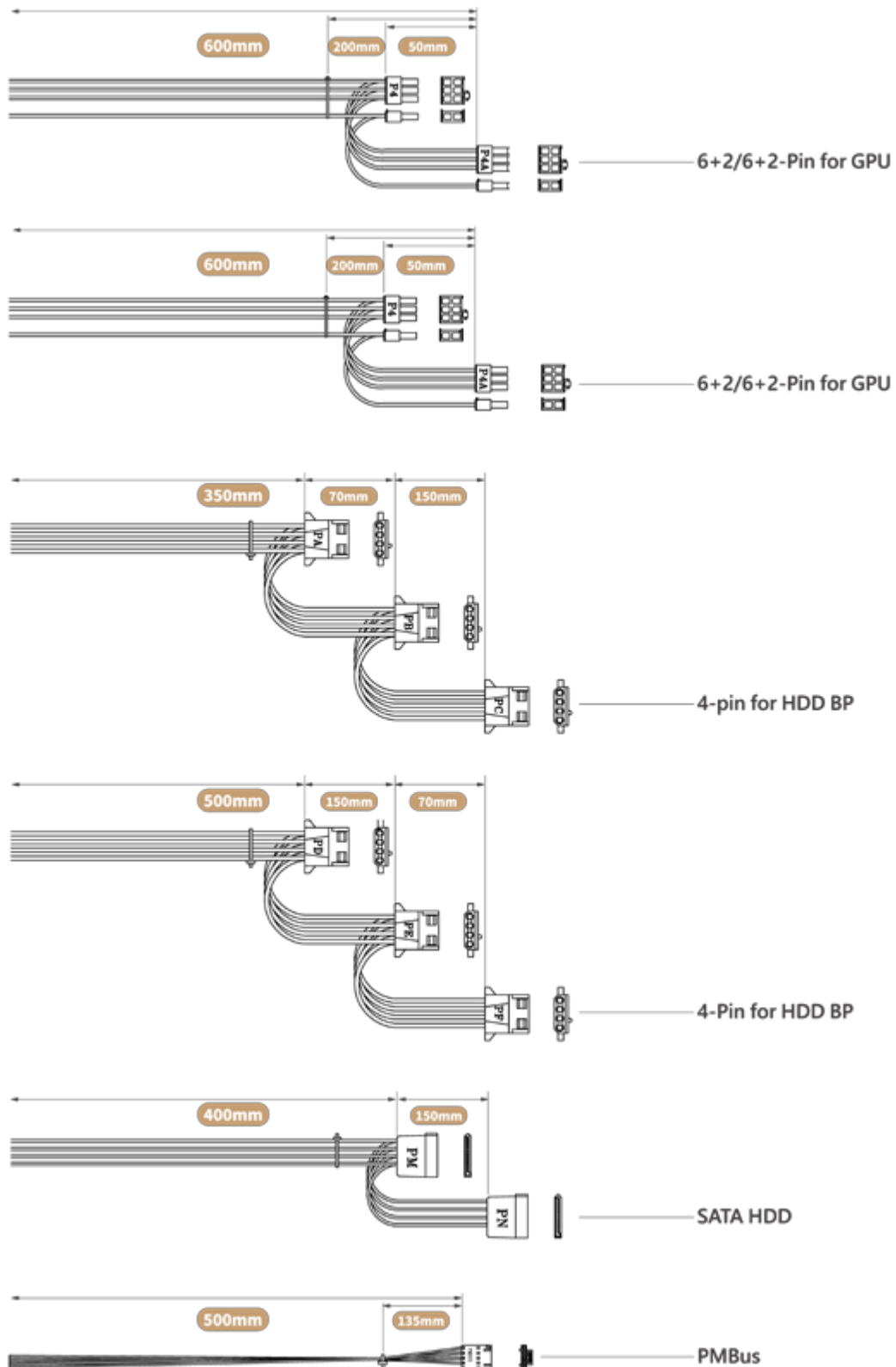
⚙️ Power Supply Installation

The InWin IW-PLG Tower supports 80 Plus Platinum CRPS with PDB cable management. InWin offers different wattage of CRPS, please refer to our website for more detailed information to match your regions.

■ Power Supply Cable Information



Power Supply Cable Information



Slide Rail Installation

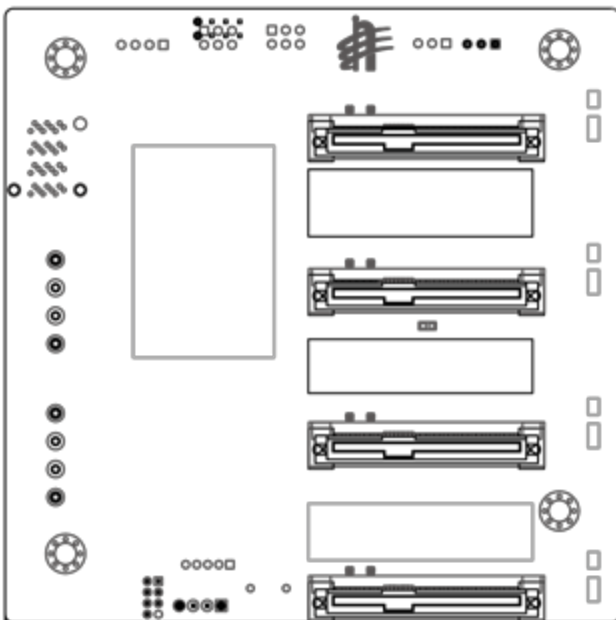
The IW-PLG Tower supports EIA-RS310D standard cabinets and chassis racks. InWin provides standard slide rails to allow users to mount the chassis onto the cabinets. Or the slide rail by your order might be different. You can reference the quick installation guide inside the slide rail package and follow the instructions to mount the rail onto your cabinet or chassis rack.

Backplane Introduction

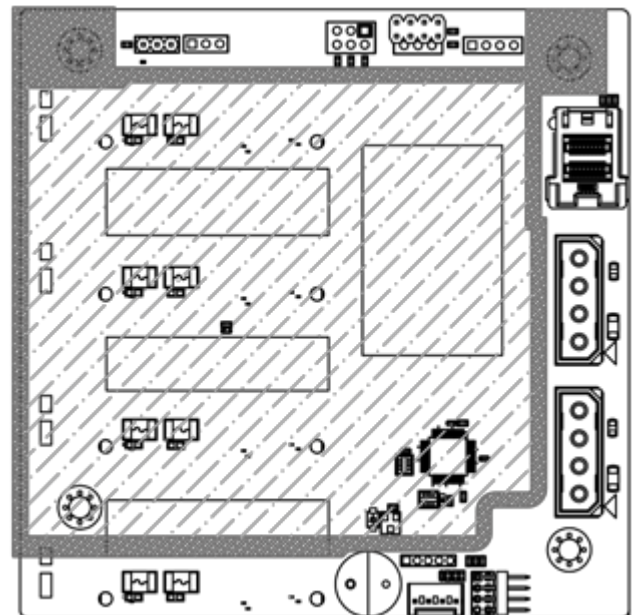
The backplane varies by order. Please reference the backplane user guide to complete the installation. The download link can be found at the download section of each product. Please visit the InWin website ipc.in-win.com

The InWin IW-PLG Tower requires a SAS cable to connect the backplane and your motherboard or RAID controller. InWin provides a verified SAS cable for installation, please contact InWin local partners and sales reps to get more information.

■ For a quick installation video, please visit [InWin Server youtube channel](#).



Top Side



Bottom Side

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

Q&A

a. What is the function of the backplane?

The backplane is the bridge which connects the hard drives and exports the signal to the motherboard. Also, the backplane provides the LED signals indicating the status of the hard drives, and alarming when the system temperature is abnormal.

b. Does backplane support 6Gb or 12Gb SAS?

The InWin IW-PLG Tower is accommodated with 12Gb SAS backplane by default. The 12Gb SAS connector interface (SFF-8643) is compatible with 6Gb SAS HDD. InWin provides OEM/ODM services, so customers may contact their local InWin sales reps for customization.

c. Does the chassis support 3.5", 2.5", SAS and SATA drives? Can I mix the different type of drives in an enclosure?

The InWin IW-PLG Tower supports both 3.5" and 2.5" form factor's SAS/SATA disks. It allows different types of disks to work together in an enclosure. Yet, to reach the best performance, we recommend following the motherboard or RAID controller vendors' instructions.

d. Does the chassis support flash drive?

SAS/SATA and SSD connectors can be attached to the InWin IW-PLG Tower, however, be aware that the NVMe SSD is not supported. We recommend customers refer to InWin's compatibility list to confirm if the SSDs are listed, or please contact InWin's sales reps for better reference.

e. If I want to install the IW-PLG Tower in rack application, is it possible for the PLG to be installed in this manner?

The InWin IW-PLG Tower can be installed in a rack. The P/Ns for tower & rack are different, before you do this, you need to order the rail and the correct PN for the IW-PLG Tower. Please contact your local reseller to purchase the rail & IW-PLG Tower for rail application.

f. Does the chassis support mirrored OS disks?

The InWin IW-PLG Tower supports internal disks at least 2.5" x 2, or 3.5" x 1. Yet, the disk mirroring is defined by your motherboard or your RAID 1 controller card. Check the vendor's guide to mirror your OS disks.

g. Can it support small form factor M/Bs such as M-ATX and Mini-ITX?

The IW-PLG Tower supports motherboard ranges from Mini-ITX to EEB. Unless you would like to mount a customized motherboard, which does not meet Intel's standard, you will need to contact InWin partners or sales for customization service.

h. Do I need a RAID controller card to connect the backplane?

If you would like to construct a solid hardware RAID system, it is required. However, whether you should use the RAID controller card or not depends on your purpose and budget. We recommend discussing with InWin's channel partners for their suggestions.

i. Where can I buy the SAS cable?

The 12Gb SAS to 4 SATA or 12Gb SAS to 6Gb SAS are standard cables that you can easily buy from many vendors. You can buy the verified cable from InWin to eliminate compatibility issues.

■ For more optional items please visit <https://www.ipc.in-win.com/pedestal-tower-iw-plg-gpu-tower>

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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