PAC-1700G
7-slot Wall-mount Chassis
Version: 1.0

Quick Installation Guide

ABOUT THE PAC-1700G

The 7-slot, heavy-duty steel PAC-1700G compact wall-mount industrial chassis is designed to operate reliably in industrial environments where it will be exposed to dust, wide temperature variations, and shocks and vibrations, among other things.

SPECIFICATIONS

- **Form Factor:** 7-slot compact chassis
- **SBC Form Factor:** Full-size, slot CPU cards
- Construction: Plastic
- Slots Number: 7-slot
- **Cooling:** 1 x 8cm fan
- Drive Bay:
  - 1 x 3.5” FDD
  - 1 x 5.25” Optical drive
  - 2 x 3.5” HDDs
- Dimensions (DxWxH):
  - 433mm x 233mm x 253.7mm
- Operating Temperature: 0~40°C
- Relative Humidity: 5~95%
- Vibration:
  - 5 to 17Hz, 0.1” double amplitude displacement
  - 17 to 640Hz, 1.5G acceleration peak to peak
- **Shock:** 10G acceleration peak to peak

PACKING LIST

When you unpack the chassis, make sure the following items have been shipped.

- 1 x Quick Installation Guide
- 1 x Power cord
- 2 x Wall-mount plates
- 1 x Screw set

DETAILS OF INCLUDED SCREWS

The attached screw set includes five screw types. Screws used for chassis installation are shown below.

1 2 3 4 5

Peripherals/Parts	Screw Label (refer to the picture above)
3.5” FDD	5
5.25” Optical Drive	5
3.5” HDD	1
Power Supply Unit	1
Wall-mount Plate	3
Backplane	3
	2

Table 1: Screws for Peripheral/Parts

DIMENSION DRAWING

The dimensions of the PAC-1700G are shown below.

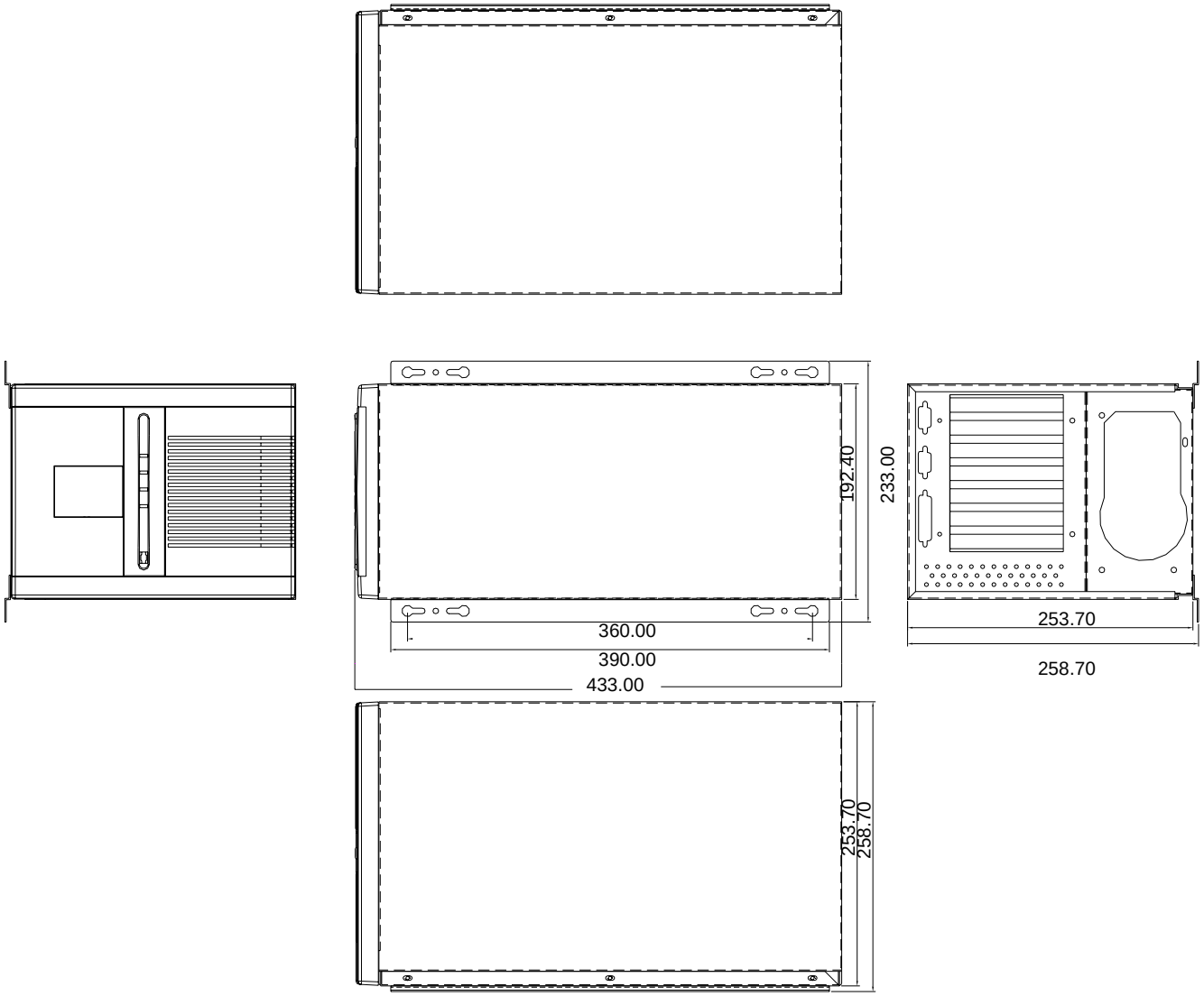


Figure 1: Dimension Drawing (measurement units: millimeter)

INSTALLATION STEPS

To install the PAC-1700G chassis, the following installation steps must be completed:

Step 1: Unpack the chassis.

Step 2: Remove the cover.

Step 3: Remove the upper compartment.

Step 4: Install the PSU.

Step 5: Install the optical drive.

Step 6: Install the FDD.

Step 7: Reinstall the upper compartment.

Step 8: Install the backplane.

Step 9: Install the HDD.

Step 10: Connect the cables.

Step 11: Install the CPU card.

Step 12: Install the PCI and ISA expansion card.

Step 13: Reinstall the top cover.

Step 14: Install the wall-mount plates.

The installation steps outlined above are described in detail below. Please refer to the relevant section.

STEP 1: UNPACK

The PAC-1700G is shipped in a plastic bag that is placed inside a cardboard box. The items are also shipped with the chassis. When you unpack the chassis you must:

- Make sure all the items listed in the **PACKING LIST** section are present.
- Make sure the chassis has not been damaged in any way.

STEP 2: TOP COVER REMOVAL

The top cover is secured to the chassis with six retention screws on both sides of the chassis.

Step 1: Remove all six top cover retention screws from both sides of the chassis, three from each side.

Figure 2: Top Cover Retention Screws

Step 2: Slide the cover backwards and then lift the cover up gently.

Figure 3: Remove the Top Cover

STEP 3: UPPER COMPARTMENT REMOVAL

The upper compartment is secured to the lower compartment with four retention screws. To remove the upper compartment, follow the steps outlined below:

Step 1: Remove four retention screws, two from the top of the chassis and two from both sides of the FDD drive bay.

Figure 4: Top Upper Compartment Retention Screws

Figure 5: Upper Compartment Retention Screws on the FDD Drive Bay

Step 2: Slide the upper compartment backwards and lift it up gently.

Model No.	Input	Type	Watt	Output Range						
				+3.3V	+5V	+12V1	+12V2	-5V	-12V	+5Vsb
ACE-925AP-U-RS	AC	AT	250W	N/A	22A	11A	N/A	0.5A	0.7A	N/A
ACE-940AP-RS	AC	AT	390W	N/A	40A	15A	N/A	0.3A	0.8A	N/A
ACE-832AP-RS	AC	ATX	300W	28A	30A	15A	N/A	0.3A	0.8A	2A
ACE-841AP-S-RS	AC	ATX	400W	28A	33A	20A	N/A	0.5A	1A	2A

Table 2: Compatible IEI PSUs.

Figure 6: Slide the Upper Compartment Backwards

STEP 4: INSTALL THE POWER SUPPLY UNIT (PSU)

Once the upper compartment has been removed, the PSU must be installed. Compatible IEI PSUs are listed above in **Table 2**.

The PSU is secured to the rear of the lower compartment. To install a compatible PSU, follow the steps below:

Step 1: Mount a PSU at the rear of the lower compartment.

Step 2: Align the four PSU retention screw holes with the four retention screw holes in the rear of the lower compartment.

Step 3: To secure the PSU to the rear of the chassis, insert four retention screws.

Figure 7: PSU Retention Screws

STEP 5: OPTICAL DRIVE INSTALLATION

The PAC-1700G chassis can support one 5.25” optical drive in the lower compartment. To install a 5.25” optical drive, please follow the steps below:

Step 1: Open the front panel cover by pushing the switch button rightwards.

Figure 8: Push the Front Panel Cover Switch Rightwards

Step 2: Remove the 5.25” optical drive bay front cover by pushing it to the front of the chassis from inside.

Figure 9: 5.25” Optical Drive Bay Front Cover

Step 3: Slide a 5.25” optical drive into the 5.25” optical drive bay from the front panel.

Figure 10: Slide a 5.25” Optical Drive into the 5.25” Optical Drive Bay

Step 4: Align the four 5.25” optical drive retention screw holes with the four retention screw holes in the 5.25” optical drive bay.

Step 5: To secure the 5.25” optical drive to the 5.25” optical drive bay, insert four retention screws, two into each side of the 5.25” optical drive.

Figure 11: 5.25” Optical Drive Retention Screws

Step 6: Connect the 5.25” optical drive power cable and the interface connector cable.

STEP 6: FDD INSTALLATION

The PAC-1700G chassis can support one 3.5” FDD in the lower compartment. To install a 3.5” FDD, please follow the steps below:

Step 1: Remove the 3.5” FDD drive bay front cover by pushing it to the front of the chassis from inside.

Figure 12: FDD Drive Bay Front Cover

Step 2: Slide an FDD into the FDD drive bay.

Figure 13: Slide an FDD into the 3.5” FDD Drive Bay

Step 3: Align the four FDD retention screw holes with the retention screw holes in the FDD drive bay.

Step 4: To secure the FDD to the FDD drive bay, insert four retention screws, two into each side.

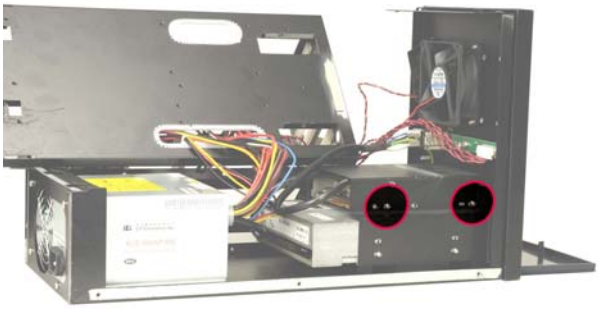


Figure 14: FDD Retention Screws

Step 5: Connect the FDD power cable and the interface connector cable.

STEP 7: UPPER COMPARTMENT REINSTALLATION

Before any other peripherals and components are installed, the upper compartment must be reinstalled. To do this, please follow the steps below:

NOTE:

- If an AT PSU is installed, the power switch cable must be connected to the power switch before the upper compartment is reinstalled.
- If an ATX PSU is installed, the power switch cable must be run through the elliptical hole at the front of the upper compartment base.

Step 1: Run all the power cables and FDD and optical drive ribbon cables through the longer elliptical hole in the upper compartment base.

Figure 15: Run the Cables through the Longer Elliptical Hole

Step 2: Run all the LEDs, reset, power switch and USB cables and fan power cable through the space on the right side of the furthest right card guide.

Figure 16: Run Front Panel Cables through the Space

Step 3: Reinstall the upper compartment and reinsert the four previously removed upper compartment retention screws.

STEP 8: BACKPLANE INSTALLATION

Compatible IEI backplanes are listed below:

Model No.	SBC Type	PCI	ISA	PSU
IP-7SA-RS-R30	PCISA	4	2	AT
PCI-7S-RS-R30	PICMG 1.0	4	3	AT/ATX

Table 3: Compatible IEI Backplanes

To install the PCI-7S-RS-R30 backplane, please follow the instructions below:

Step 1: Insert copper pillars into the shorter elevated predrilled screw holes corresponding to the PCI-7S-RS-R30 backplane retention screw holes.

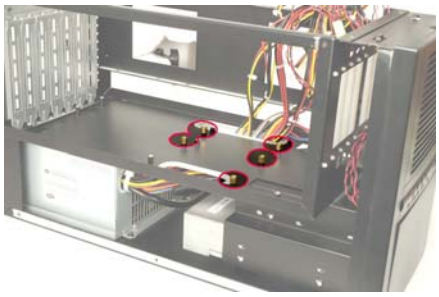


Figure 17: Copper Pillars

Step 2: Mount the backplane onto the base of the upper compartment. Make sure the backplane is positioned so that when the CPU card and PCI/ISA expansion cards are installed, both the CPU card and the PCI/ISA card I/O connectors face the rear of the chassis.

Step 3: Align the PCI-7S-RS-R30 backplane retention screw holes with the retention screw holes in the elevated predrilled retention screw holes and the copper pillars in the base of the upper compartment.

Step 4: Insert nine retention screws to secure the backplane to the chassis.

Step 5: Connect the power cable to the backplane.

To install the IP-7SA-RS-R30 backplane, please follow the instructions below:

Step 1: Insert copper pillars into the shorter elevated predrilled screw holes corresponding to the IP-7SA-RS-R30 backplane retention screw holes.

Figure 18: Copper Pillar

Step 2: Mount the backplane onto the base of the upper compartment. Make sure the backplane is positioned so that when the CPU card and PCI/ISA expansion cards are installed, both the CPU card and the PCI/ISA card I/O connectors face the rear of the chassis.

Step 3: Align the IP-7SA-RS-R30 backplane retention screw holes with the retention screw holes in the elevated predrilled retention screw holes and the copper pillar in the base of the upper compartment.

Step 4: Insert five retention screws to secure the backplane to the chassis.

Step 5: Connect the power cable to the backplane.

STEP 9: 3.5” HDD INSTALLATION

The PAC-1700G chassis supports two 3.5” HDDs on the right side of the chassis. To install an HDD, follow the steps below:

Step 1: Remove the four 3.5” HDD bracket retention screws on the right side of the chassis.

Figure 19: 3.5” HDD Bracket Retention Screws

Step 2: Slide the 3.5” HDD bracket upwards to remove the bracket.

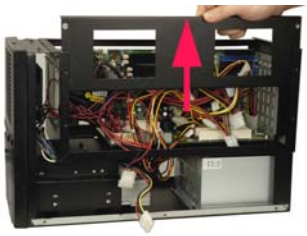


Figure 20: Slide the 3.5” HDD Bracket Upwards

Step 3: Mount a 3.5” HDD onto the 3.5” HDD bracket.

NOTE:

When the 3.5” HDD is installed, make sure both the power socket and the IDE/SATA connector face inwards.

Figure 21: 3.5” HDD Power Sockets and IDE/SATA Connectors Directions

Step 4: Align the 3.5” HDD retention screw holes with the retention screw holes on the sides of the 3.5” HDD bracket.

Step 5: To secure the 3.5” HDD to the 3.5” HDD bracket, insert four retention screws, two into each side of the HDD.

Figure 22: 3.5” HDD Retention Screws

Step 6: Reinstall the 3.5” HDD bracket with the HDD and reinsert the four previously removed 3.5” HDD bracket retention screws.

Step 7: Connect the 3.5” HDD power cable and the IDE/SATA connector ribbon cable.

STEP 10: CABLING

NOTE:

The cables must be connected to the CPU card before CPU card installation due to the limitation of the space.

The PAC-1700G has LEDs, buttons and power switch on the front panel:

- 1 x Power LED
- 1 x HDD LED
- 1 x Power switch
- 1 x Reset button

These components are all connected to the CPU card with cables. To correctly connect these cables, please refer to the technical documentation that came with your CPU card. The connectors that are provided with the chassis are listed below.

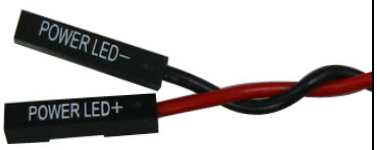
No.	Name
1	 Power LED cable
1	 Reset Switch cable
1	 HDD LED cable
1	 Power switch cable

Table 4: Chassis Connectors

STEP 11: CPU CARD INSTALLATION

To install a CPU card, please follow the instructions below:

NOTE:

The cables must be connected to the CPU card before CPU card installation due to the limitation of the space.

Step 1: Connect the HDD cables, FDD cables and power cables to the CPU card.

Step 2: Remove the slot cover at the back of the chassis. To do this, remove the slot cover retention screw at the top of the slot cover.

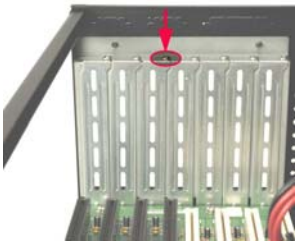


Figure 23: Remove the Slot Cover Retention Screw

Step 3: Slide CPU card into the socket on the backplane reserved for the CPU card. Make sure the back edge of the full-size CPU card slots into the corresponding card guide located at the front of the chassis.

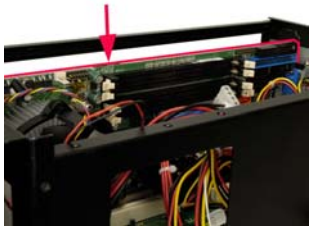


Figure 24: Slide the CPU Card into the Socket

Step 4: To secure the CPU card, reinsert the previously removed slot cover retention screw.

STEP 12: PCI/ISA EXPANSION CARD INSTALLATION

The PAC-1700G supports up to six PCI/ISA expansion cards. If you wish to install a PCI expansion card or an ISA expansion card please follow the instructions below:

Step 1: Remove the slot cover at the back of the chassis. To do this, remove the slot cover retention screw at the top of the slot cover.

Step 2: Slide the PCI/ISA expansion card into the reserved PCI/ISA socket on the backplane.

Step 3: To secure the PCI/ISA expansion card, reinsert the previously removed slot cover retention screw.

STEP 13: TOP COVER REINSTALLATION

After you have completed the above procedures, the top cover can be reinstalled. To reinstall the top cover, slide the cover back over the chassis and reinsert the six previously removed retention screws.

STEP 14: WALL-MOUNT PLATES INSTALLATION

Two wall-mount plates are shipped with the PAC-1700G chassis. The wall-mount plates are installed on the sides, at the bottom of the chassis. Each plate is secured to the chassis with three retention screws. To install the wall-mount plates, please follow the steps below:

Step 1: Align the retention screw holes on the side of the chassis with the retention screw holes in the wall-mount plate.

Step 2: To secure the wall-mount plates, insert three retention screws into each wall-mount plate.

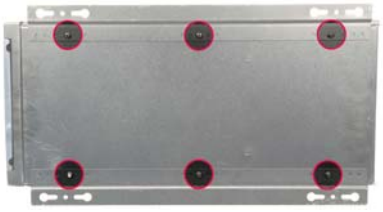


Figure 25: Wall-mount Plate Retention Screws

CHASSIS MAINTENANCE

- **FAN REPLACEMENT**

NOTE:

Please ensure that the power of the computer is switched off before you replace a fan.

There is one 8 cm cooling fan inside the PAC-1700G chassis. To replace a fan, please follow the steps below:

Step 1: Flip open the fan filter cover.

Figure 26: Open the Fan Filter Cover

Step 2: Open the front panel cover.

Figure 27: Open the Front Panel Cover

Step 3: Remove the four front panel frame retention screws to remove the front panel frame.

Figure 28: Front Panel Retention Screws

Step 4: To remove the fan, remove the four fan retention screws.

Figure 29: Fan Retention Screws

Step 5: Install a new fan and reinsert the four previously removed fan retention screws to secure the fan to the front panel.

Step 6: Reinstall the front panel frame and reinsert the four previously removed front panel frame retention screws.

Step 7: Reinstall the fan filter cover and close the front panel cover.

■ FAN FILTER REPLACEMENT

To replace the fan filter, please follow the steps below:

Step 1: Flip open the fan filter cover.

Figure 30: Open the Fan Filter Cover

Step 2: Replace the fan filter pad inside.

Step 3: Reinstall the fan filter cover.

■ CABINET INSTALLATION

Supporting rails, rack trays, or slide rails can be installed using the mounting holes on the sides of the chassis. The four mounting holes in the two wall-mount plates, two in each wall-mount plate, are shown below.

Figure 31: Wall Mounting Holes

NOTE:

If the system is running critical applications, please find appropriate time to backup data and properly shut down the system.