



## Quick Installation Guide

1401100

Version: 1.0

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# 1401100

## 5-slot Wall-mount Chassis



### ABOUT THE 1401100

The 5-slot, heavy-duty steel 1401100 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:** 5-slot compact chassis
- **SBC Form Factor:** Half-size, slot CPU cards
- **Construction:** Metal
- **Slots Number:** 5-slot
- **Cooling:** 1 x 8cm
- **Drive Bay:** 1 x 3.5" HDD
- **Dimensions (DxWxH):**
  - o 269mm x 140mm x 230.5mm
- **Operating Temperature:** 0~40°C
- **Relative Humidity:** 5~95%
- **Vibration:**
  - o 5 to 17Hz, 0.1" double amplitude displacement
  - o 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.



Peripherals/Parts	Screw Label (refer to the picture above)
3.5" FDD	5
3.5" HDD	1
1U Power Supply Unit	1
Wall mount Plate	3
Backplane	3
	2

Table 1: Screws for Peripheral/Parts

# DIMENSION DRAWING

The dimensions of the 1401100 are shown below.

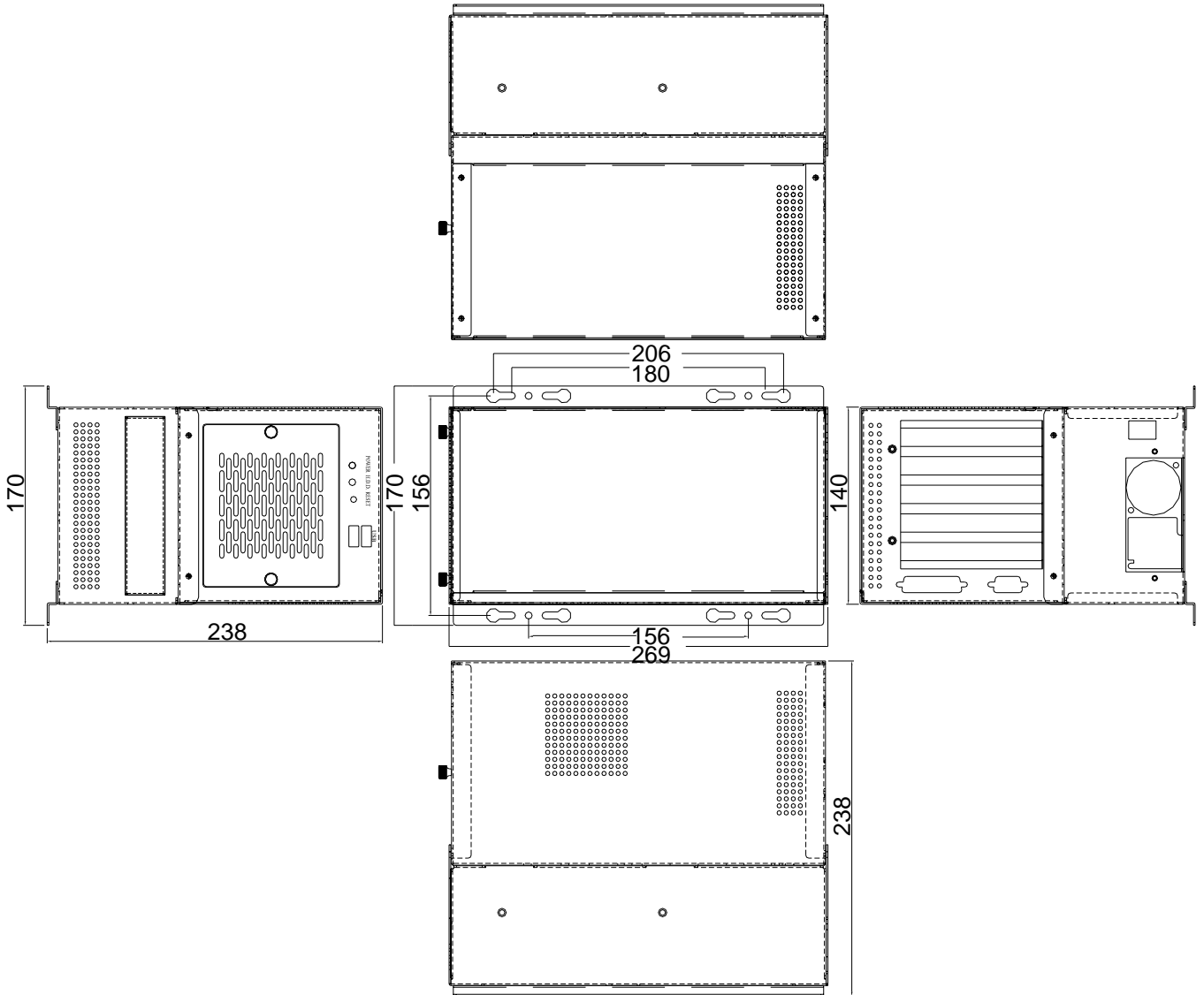


Figure 1: Dimension Drawing (measurement units: millimeter)

## INSTALLATION STEPS

To install the 1401100 chassis, the following installation steps must be completed:

- Step 1:** Unpack the chassis.
- Step 2:** Remove the cover.
- Step 3:** Install the PSU.
- Step 4:** Install the HDD.
- Step 5:** Reinstall the upper compartment.
- Step 6:** Install the backplane.
- Step 7:** Connect the cables.
- Step 8:** Install the CPU card.
- Step 9:** Install the PCI and ISA expansion cards.
- Step 10:** Reinstall the top cover.
- Step 11:** 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 1401100 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: REMOVE THE TOP COVER

The top cover is secured to the chassis with four retention screws on the left side of the chassis.

- Step 1:** Remove all four top cover retention screws from the left side of the chassis.



Figure 2: Top Cover Retention Screws

- Step 2:** Slide the cover leftwards and then lift the cover up gently.



Figure 3: Remove the Top Cover

### STEP 3: INSTALL THE POWER SUPPLY UNIT (PSU)

Once the top cover has been removed, the PSU must be installed. Compatible 1U PSUs are listed in **Table 2** on **page 4**.

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

- Step 1:** Remove the upper compartment by removing the four upper compartment retention screws, two from the front and two from the rear of the chassis.



Figure 4: Upper Compartment Retention Screws at the Front

Model No.	Input	Type	Watt	Output Range						
				+3.3V	+5V	+12V1	+12V2	-5V	-12V	+5Vsb
3107740	AC	AT	150W	N/A	16A	6A	N/A	N/A	0.3A	N/A
3107723	AC	ATX	150W	10A	14A	4.2A	N/A	N/A	0.3A	2A
3107750	AC	ATX	180W	16.8A	12A	10A	N/A	N/A	0.8A	2A

**Table 2: Compatible PSUs.**



**Figure 5: Upper Compartment Retention Screws at the Rear**

**Step 2:** Remove the 3.5" drive bracket by removing the four retention screws from both sides of the drive bracket, two from each side.



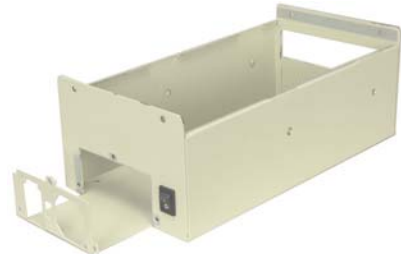
**Figure 6: 3.5" HDD Bracket Retention Screws**

**Step 3:** Remove the PSU bracket located in the lower compartment by removing the four PSU bracket retention screws, three from the rear of the chassis and one from the bottom surface of the chassis.



**Figure 7: PSU Bracket Retention Screws**

**Step 4:** Slide the PSU bracket backwards and remove the PSU bracket.



**Figure 8: Remove the PSU Bracket**

**Step 5:** Mount the PSU onto the PSU bracket. Make sure the power socket and the PSU fan are inserted into the corresponding holes in the rear of the PSU bracket.

**Step 6:** To secure the PSU to the PSU bracket, insert five retention screws, three into the rear and two into the front of the PSU bracket.



**Figure 9: PSU Retention Screws at the Rear**



**Figure 10: PSU Retention Screws at the Front**

**Step 7:** Reinstall the PSU bracket with the PSU.

**Step 8:** To secure the PSU bracket to the chassis, reinsert the four previously removed PSU bracket retention screws.

## STEP 4: HDD INSTALLATION

The 1401100 chassis can support one 3.5" HDD in the lower compartment. To install a 3.5" HDD, please follow the steps below:

- Step 1:** Mount a 3.5" HDD onto the 3.5" drive bracket.
- Step 2:** To secure the 3.5" HDD to the 3.5" HDD bracket, insert four retention screws from the bottom surface of the 3.5" HDD bracket.



Figure 11: 3.5" HDD Retention Screws

- Step 3:** Reinstall the 3.5" drive bracket and reinsert the four previously removed retention screws.
- Step 4:** Connect the 3.5" HDD power connector and IDE/SATA Connector.

## STEP 5: 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 cables, apart from the AT PSU power switch cable, through the elliptical hole in the upper compartment base.



Figure 12: Run the Cables through the Elliptical Hole

- Step 2:** Reinstall the upper compartment and reinsert the four previously removed upper compartment retention screws.

## STEP 6: BACKPLANE INSTALLATION

The compatible backplanes are listed below:

Model No.	SBC Type	PCI	ISA	PSU
1103838	ISA	0	4	AT
1103839	PCISA	3	0	AT
1103357	PCISA	2	1	AT
1104060	PCISA	3	0	ATX
1104070	PCISA	3	0	ATX

To install a compatible backplane, please follow the instructions below:

- Step 1:** 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.



Figure 13: Elevated Predrilled Screw Holes

- Step 2:** Align the retention screw holes in the backplane with the retention screw holes in the four elevated predrilled retention screw holes in the base of the upper compartment.
- Step 3:** Insert four retention screws to secure the backplane to the chassis.
- Step 4:** Connect the power cable to the backplane.




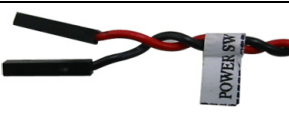

## STEP 7: CABLING

The 1401100 has LEDs, buttons and ports on the front panel and a power switch at the rear panel:

- o 1 x Power LED
- o 1 x HDD LED
- o 1 x Power switch
- o 1 x Reset button
- o 2 x USB ports

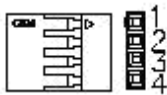
These components are all connected to the CPU card with cables. To correctly connect these cables, please refer to the technical documentation that came with your CPU card.

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
2	 USB cable

**Table 3: Chassis Connectors**

USB cable pin definitions are shown below



PIN No.	Description	Color
1	+5V	Red
2	D-	Dark Yellow
3	D+	Yellow
4	GND	Brown

**Table 4: USB Cable Pinouts**

## STEP 8: CPU CARD INSTALLATION

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



### NOTE:

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

**Step 1:** Connect the HDD, USB, LED, reset 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 14: Remove the Slot Cover Retention Screw**

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



**Figure 15: Slide the CPU Card into the Socket**

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

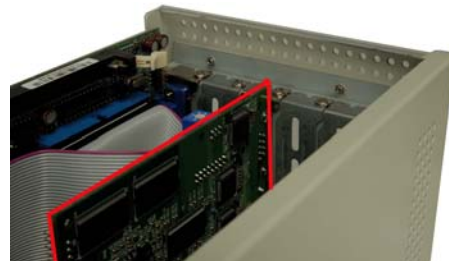
## STEP 9: PCI/ISA EXPANSION CARD INSTALLATION

The 1401100 supports up to four 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.



**Figure 16: PCI/ISA Card**

## STEP 10: 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 four previously removed retention screws.

## STEP 11: WALL-MOUNT PLATES INSTALLATION

Two wall-mount plates are shipped with the 1401100 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:** Insert three retention screws into each wall-mount plate.



Figure 17: 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 1401100 chassis. To replace a fan, please follow the steps below:

**Step 1:** Loosen the two fan filter bracket thumbscrews.



Figure 18: Fan Filter Bracket Thumbscrews

**Step 2:** Unplug the power cable connected to the fan.



Figure 19: Disconnect the Fan Power Cable

**Step 3:** Remove the four fan filter bracket retention screws from inside.



Figure 20: Fan Retention Screws

**Step 4:** Remove the four fan retention screws that secure the fan to the fan filter plate.

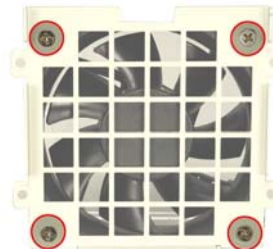


Figure 21: Fan Retention Screws

**Step 5:** Install a new fan and reinsert the four previously removed fan filter plate retention screws.

**Step 6:** Reinstall the fan filter plate with the fan.

**Step 7:** Reinstall the fan filter bracket and tighten the two fan filter bracket thumbscrews.

### ■ FAN FILTER REPLACEMENT

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

**Step 1:** Loosen the two fan filter bracket thumbscrews.



Figure 22: Fan Filter Bracket Thumbscrews

**Step 2:** Pull the fan filter pad out of the space between the fan filter plate and the fan filter bracket.



Figure 23: Pull the Fan Filter Pad out

**Step 3:** Insert a new fan filter pad.

**Step 4:** Reinstall the fan filter bracket and fasten the two fan filter bracket thumbscrews.

## ■ 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.

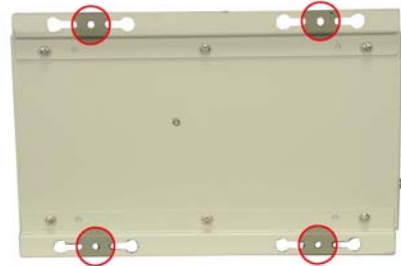


Figure 24: Wall Mounting Holes



### NOTE:

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

Any advice or comments about our products and service, or anything we can help you with please don't hesitate to contact with us. We will do our best to support you for your products, projects and business.

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