



integration with integrity

Quick Installation Guide

Half-Size 6-Slot Industrial Wallmount Chassis 1407690

Version 1.0

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## 6- s lot Wall-mount Chassis

### Version: 1.0

## Quick Installation Guide



### ABOUT THE 1407690

The 6-slot, heavy-duty steel 1407690 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:** 6-slot compact chassis
- **SBC Form Factor:** Half-size, slot CPU cards
- **Construction:** Heavy-duty steel
- **Slots Number:** 6-slot
- **Dimensions (DxWxH):**
  - o 218mm x 152mm x 147mm
- **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
- 2 x Wall-mount plates
- 1 x Screw set
- 2 x I/O interface connector brackets (One with two ribbon cables attached)

### DETAILS OF INCLUDED SCREWS

The 1407690 is installed by one type of screws. The type of screw used for chassis installation is shown below.

Parts	
Wall-mount Bracket	
Backplane	
I/O interface connector bracket	

**Table 1: Screws for Peripheral/Parts**

# DIMENSION DRAWING

The dimensions of 1407690 are shown below.

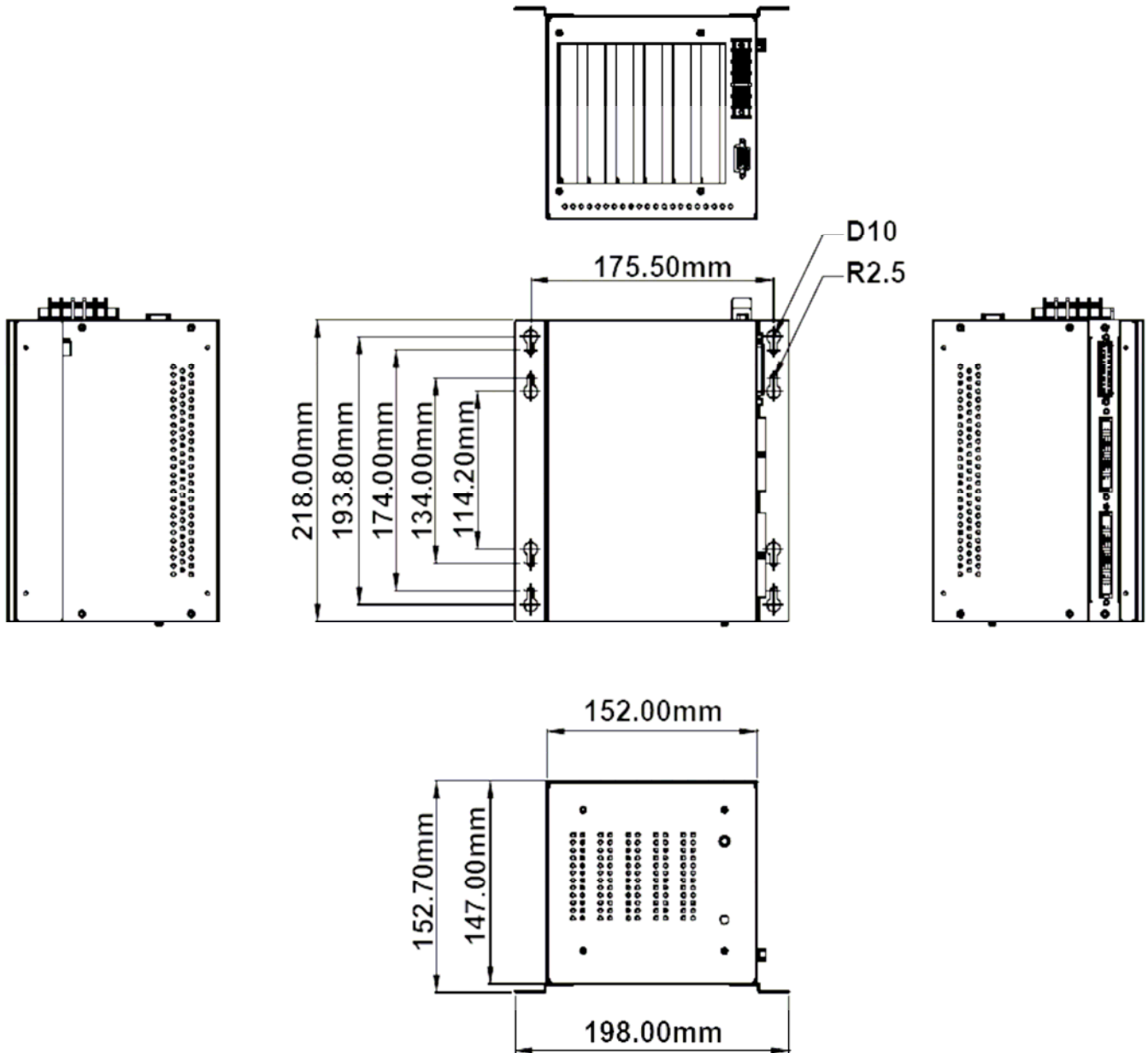


Figure 1: Dimension Drawing (measurement units: millimeter)

## INSTALLATION STEPS

To install the 1407690 chassis, the following installation steps must be completed:

- Step 1:** Unpack the chassis.
- Step 2:** Remove the top cover.
- Step 3:** Install the backplane.
- Step 4:** Install the CPU card.
- Step 5:** Install the PCI and ISA expansion cards.
- Step 6:** Install I/O interface connector.
- Step 7:** Connect the cables.
- Step 8:** Reinstall the top cover.
- Step 9:** 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 1407690 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 by 8 retention screws on both sides, 4 on each side, of the chassis. To remove the top cover, please follow the steps below.

- Step 1:** Remove all eight top cover retention screws, four retention screws from each side of the chassis.
- Step 2:** Lift the cover up gently.



**Figure 2: Remove the 8 Top Cover Retention Screws and Lift the Top Cover Up**

### STEP 3: BACKPLANE INSTALLATION

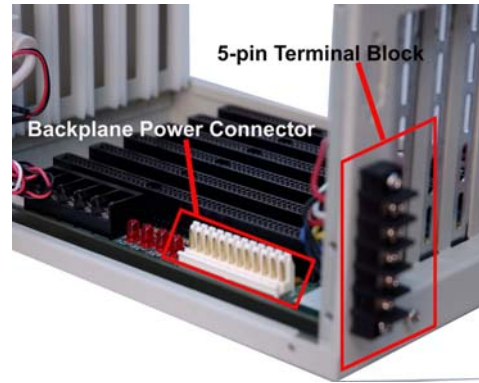
The Global American backplanes listed below are compatible with the 1407690 chassis.

Model No.	SBC Type	PCI	ISA	PSU
BP-6S-RS-R30	ISA	0	6	AT
IP-6S-RS-R30	PCISA	3	2	AT
IP-5S2-RS-R30	PCISA	4	0	AT

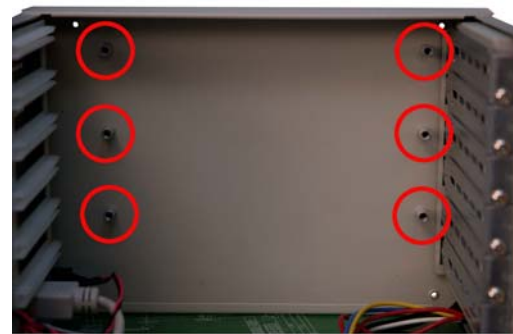
**Table 1: Compatible Backplane Modules**

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

- Step 1:** Mount the backplane onto the 6 predrilled elevated screw holes. Position the backplane so that when the CPU card and PCI/ISA expansion cards are installed, the CPU card and PCI/ISA expansion card I/O connectors face the rear of the chassis.



**Figure 3: Locations of the Backplane Power Connector and the 5-pin Terminal Block**



**Figure 4: Locations of the 6 Predrilled Elevated Copper Pillars**

- Step 2:** Secure the backplane to the chassis with 6 retention screws.



Figure 5: Insert 6 Backplane Retention Screws

## STEP 4: CPU CARD INSTALLATION

To install a CPU 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.

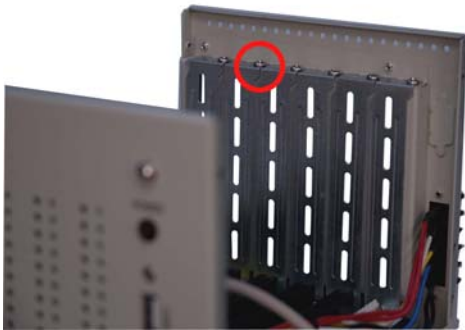


Figure 6: Remove the Slot Cover Retention Screw

- Step 2:** Slide a half-size CPU card into the socket on the backplane reserved for the CPU card.
- Step 3:** To secure the CPU card, reinsert the previously removed slot cover retention screw.

## STEP 5: PCI/ISA EXPANSION CARD INSTALLATION

The 1407690 supports up to 5 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 a 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 6: I/O INTERFACE CONNECTOR BRACKET INSTALLATION



Figure 7: The Two Detachable I/O Interface Connectors

The 1407690 comes with 2 detachable I/O interface connector brackets. One bracket is equipped with 2 preinstalled ribbon cables (one 34-pin and one 40-pin). The second bracket has no preinstalled ribbon cables.

- Step 1:** Install the I/O interface connector bracket with the cables on the side near the 5-pin terminal block. Make sure the ribbon cables are in the chassis and the interface connectors attached to the I/O interface connector bracket face outwards.
- Step 2:** Align the 2 retention screw holes in both ends of the I/O interface connector bracket, one in each end, with the 2 retention screw holes in the chassis.

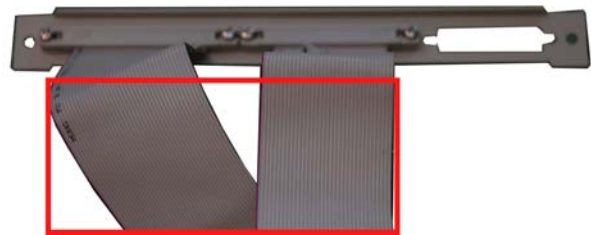


Figure 8: I/O Interface Connector Bracket with a 40-Pin and a 34-Pin Ribbon Cables

- Step 3:** To secure the I/O interface connector bracket to the chassis, insert 2 retention screws on both ends, one on each end, of the I/O interface connector bracket.

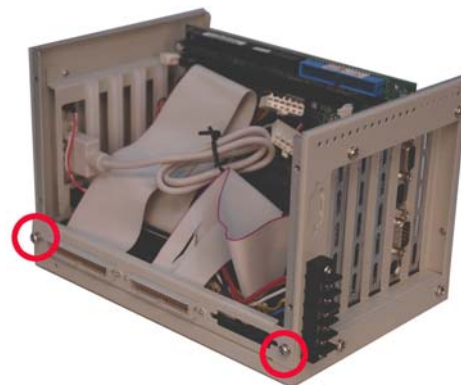






Figure 9: Secure the I/O interface connector bracket to the Chassis

## STEP 7: CABLING

There are a button, a LED and a port on the front bezel of the 1407690 chassis.

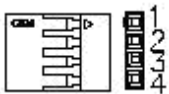
- o 1 x Power LED
- o 1 x Reset button
- o 1 x USB cable
- o 1 x 5-pin terminal block wire

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	 USB cable
1	 5-Pin Terminal Block Wire

**Table 2: Chassis Connectors**








The pin definitions for the USB cable are shown below:



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

**Table 3: Pin Definitions of USB Cable**

The power input definitions are shown below:

		
+5V		1
-5V		2
+12V		3
-12V		4
GND		5
		

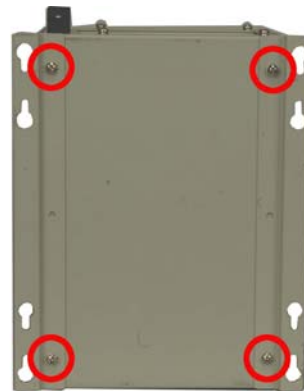
## STEP 8: COVER REINSTALLATION

After you have completed the above procedures, the top cover can be reinstalled. To do this, reinstall the top cover and reinsert the eight previously removed retention screws.

## STEP 9: WALL-MOUNT PLATES INSTALLATION

Two wall-mount plates are shipped with the 1407690 chassis. The wall-mount plates are installed on the sides, at the bottom of the chassis. Each plate is secured to the chassis by two 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 screws in the wall-mount plate.
- Step 2:** Insert 2 retention screws for each wall-mount plate.



**Figure 10: Locations of the 4 Wall Mounting Holes**

## CHASSIS MAINTENANCE

### ■ I/O INTERFACE CONNECTOR BRACKET REPLACEMENT

The 1407690 chassis comes with a spare I/O interface connector bracket. To replace the I/O interface connector bracket, please follow the steps below.

- Step 1:** Remove the top cover. (Please refer to **STEP 2: REMOVE THE TOP COVER**)
- Step 2:** Unplug the I/O interface connectors.
- Step 3:** Remove the 2 I/O interface connector bracket retention screws.

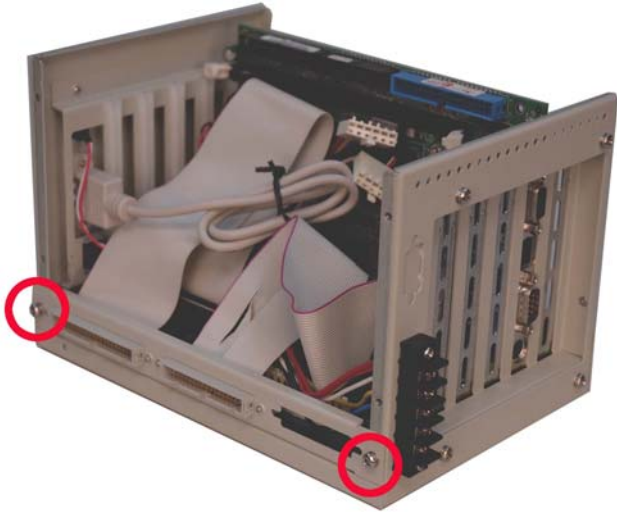


Figure 11: I/O interface connector bracket Retention Screws

- Step 4:** Remove 2 I/O interface connector retention screws for each I/O interface connector.



Figure 12: I/O Interface Connectors Retention Screws

- Step 5:** Install the I/O interface connector to the spare I/O interface connector bracket and insert the previously removed ribbon cable retention screws.
- Step 6:** Install the new I/O interface connector bracket to the chassis. (Please refer to **STEP 6: I/O INTERFACE CONNECTOR BRACKET INSTALLATION**)

### ■ CABINET INSTALLATION

The 8 screw holes in the wall-mount plates can be used to secure the chassis to the rails or trays in your rack cabinet to prevent the chassis from falling forwards. The 8 mounting holes in the two wall-mount plates on the sides of the chassis are shown below.



Figure 13: Locations of the 8 Wall Mounting Holes



#### NOTE:

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

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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 your products, projects and business.



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