# cPCIS-ET2600 Series

## 4U Height Wide Temperature Range Subsystem for 3U CompactPCI Modules

## User's Guide



Recycled Paper

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Manual Rev. 1.00, January 2, 2013

Part No.: 50-15088-2000

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# How to Use This Manual

This manual is designed to help you use the cPCIS-ET2600 series 3U CompactPCI Subsystem . It is divided into six chapters:

**Chapter 1: Introduction**, gives an overview of the product features.

**Chapter 2: Getting Started,** describes the unpacking procedure, setup and configuration of the subsystem .

**Chapter 3: Backplane**, gives a detailed description of the backplanes used in the cPCIS-ET2600 Series subsystems.

**Chapter 4: Cooling System**, describes how to remove and replace the subsystem air filters, fan and temperature alarm conditions and the hot swappable fans used to cool the subsystem .

**Chapter 5: Power Supply Unit**, describes the PSUs of the cPCIS-ET2600 Series subsystems.

**Chapter 6: Specifications**, describes the subsystem's detailed specifications.



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# 1 Introduction

## 1.1 Product Definition

The cPCIS-ET2600 wide temperature range subsystem is rack mountable, 4U in height, and designed for 3U CompactPCI cards and modules. They are ideal for industrial or transport applications where small chassis size with multi-functionality are important, and provide maximum cooling efficiency, a guarded power on/off button, ample power capacity, a hot swap backplane and easy maintenance. Their ability to handle a wide range of temperatures and excellent shock and vibration characteristics make them suitable for operating in a rigorous environment. An embedded alarm board monitors temperature & fan status to maximize continuous operation. The cPCIS-ET2600 Series allows for custom configuration, giving system integrators maximum flexibility to build in specialized functionality.

This user's manual provides unpacking, operating, and maintenance information for the cPCIS-ET2600 3U CompactPCI subsystem. The cPCIS-ET2600 subsystem is assembled using the following components:

**Components:**

- Chassis: cPRK-2600ET
- Power Supply: 3U CompactPCI
- Backplane: PICMG 2.0 R3.0 Hot Swap compatibility
- Cooling: 5 hot swappable, push-in fans with removable air filters

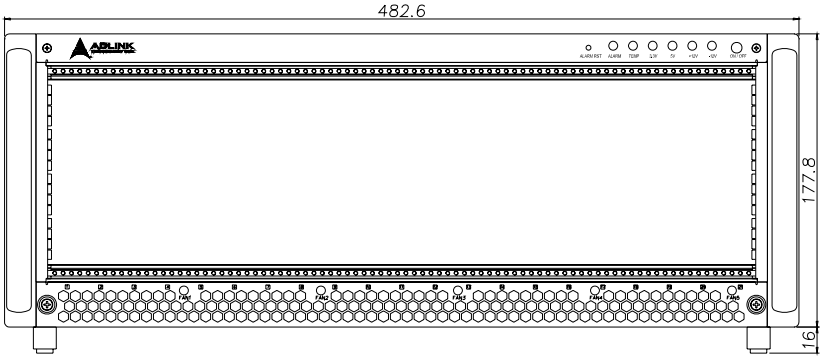


**cPCIS-ET2632R shown**

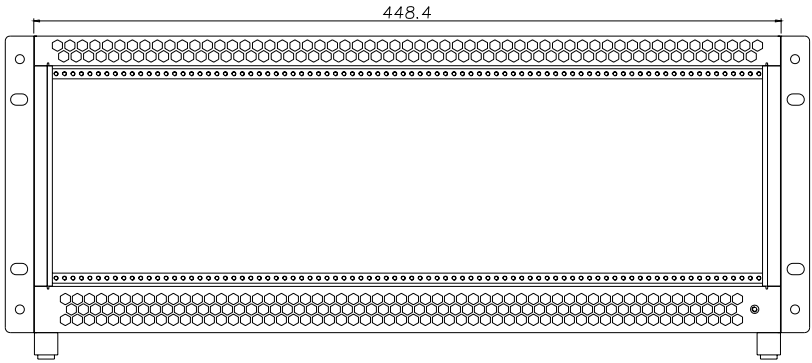


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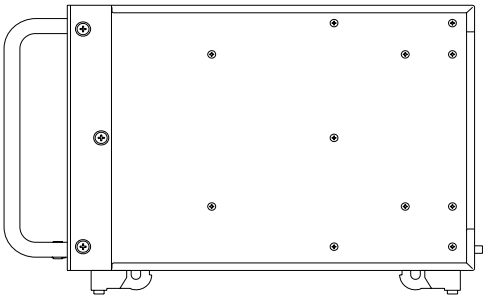
## 1.2 Mechanical Drawing




FRONT VIEW




REAR VIEW



SIDE VIEW



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## 1.3 Configurations

The cPCI-ET2600 Series comes in the following configuration:

| | system slots | peripheral slots | PSU(s) | monitor | PICMG |
|---|---|---|---|---|---|
| cPCIS-ET2632[R] | 1 | 7 | 250W cPCI (1 + 1) | — | 2.0, 2.1, 2.11 |

*cPCIS-ET2632 is available with rear I/O backplanes for Rear Transition Modules (RTMs) and is indicated by an “R” suffix on the model name.

## 1.4 Customized Systems

Subsystem s can also be customized to meet individual needs. To customize a subsystem please contact an ADLINK dealer. For complete systems, users must order CPU modules in addition to the subsystem .



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# 2 Getting Started

In this chapter, we will describe the unpacking procedure of the subsystem and CompactPCI board and power supply unit (PSU) installation procedures for cPCIS-ET2600 Series models with CompactPCI PSU(s) only.

## 2.1 Shipping Contents

Check the shipping carton for any damage. If the shipping carton and contents are damaged, please notify the dealer for a replacement. Retain the shipping carton and packing material for inspection by the dealer. Obtain authorization before returning any product to ADLINK.

Check that the following items are included in the package. If there are any missing items, please contact your dealer:

- One cPCIS-ET2600 Series subsystem
- This User's Manual
- Power cord (either N. American or European)

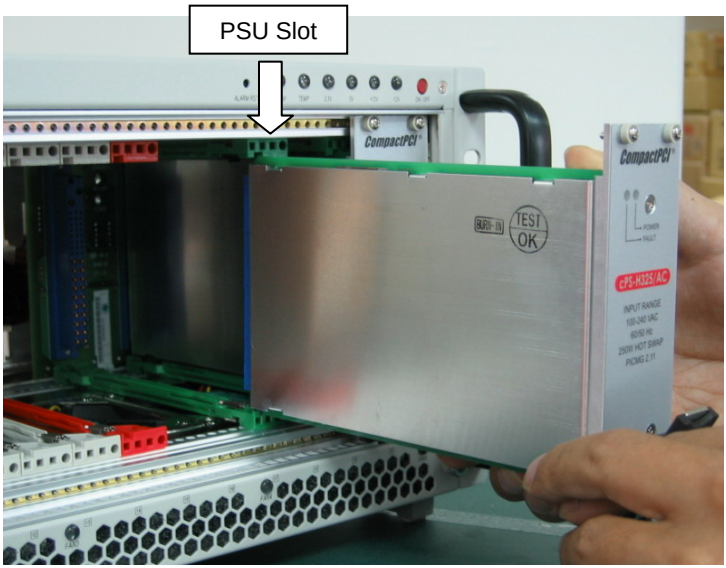
## 2.2 CompactPCI Board & PSU Installation
cPCIS-ET2600 Series models with CompactPCI PSU(s)

The CompactPCI connectors are rigid and require careful handling when inserted and removed. Improper handling of cards can easily damage the backplane.

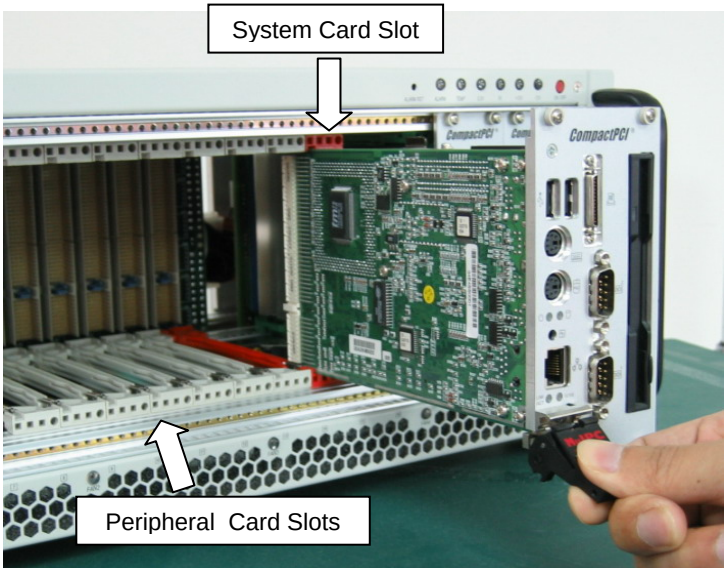
The PSU slot also has an obvious indicator such as a green card guide rail in a standard CompactPCI chassis (see photo below).



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System slots usually have obvious indicators (e.g. red card guide rail, triangle mark enclosing the slot number on the backplane, etc.) System cards can only be installed in a system slot. Do not insert a system card into any other slot, or insert any peripheral card into system slot.

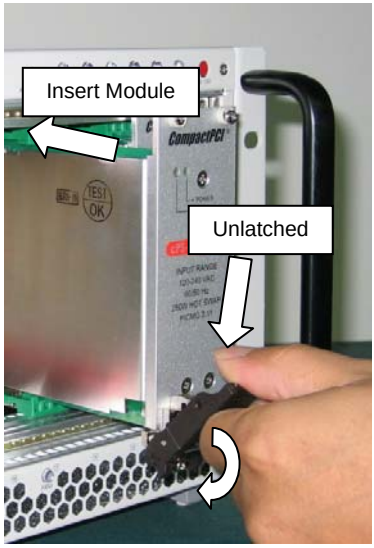


The handle on CompactPCI cards and PSUs ensures simple and safe installation and removal. Please follow the procedures below to install a CompactPCI module into a cPCIS-ET2600 Series chassis with CompactPCI PSU(s):

**CompactPCI Card Installation/Removal Procedure**

1. Place the subsystem on a level surface or rackmount it. Remove the blanking plates where required by undoing the retaining screws at each end. Retain the blanking plates for possible future use. The system should not be put into use without blanking plates for all empty slots, otherwise the EMC and cooling performance will be compromised
2. Hold the SBC module, peripheral card or PSU module vertically. For PSU modules, make sure that the handle is unlatched (i.e. that it is pulled downwards) by first pressing on the locking button with your thumb.



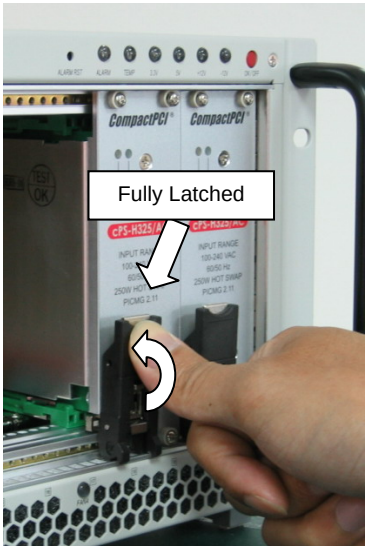



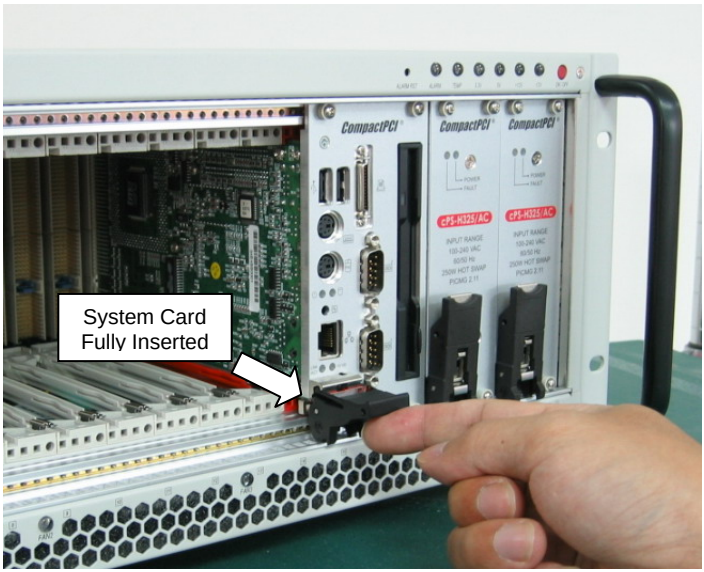

3. Carefully insert the module into the desired slot by sliding the edges of the board into the appropriate card guide rail. Take care to ensure correct alignment of the card with the chassis during insertion to prevent damage to the card and/or backplane.
4. Continue inserting the card until the handle engages with the chassis.
5. Pull upwards on the handle for final insertion. For PSU modules, ensure that the locking button on the handle is fully latched into position.



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To remove the module, press the release button (if necessary), and reverse steps 1 through 5 above.

## 8 • Backplane

## 2.3 RTM (Rear Transition Module) Installation

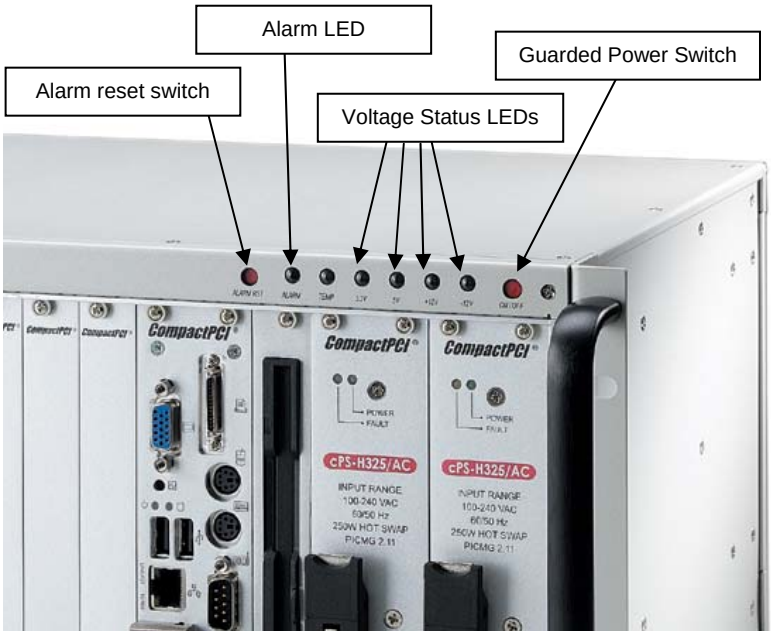
The installation and removal procedures for a RTM are the same as those for CompactPCI boards. Because they are shorter than front boards, pay careful attention when inserting or removing RTMs. Only models with an “R” at the end of the model number support RTMs.

**Note:** We strongly recommended the use of RTMs with AB type connectors to prevent damaging the backplane during RTM installation.

## 2.4 Powering Up the System

Connect the supplied power cord to the socket on the back of the chassis. All supplied PSUs are full range 90-240VAC and do not require input voltage setting. Insert a system module into the appropriate card slot.

The cPCIS-ET2600 Series subsystems feature a guarded power switch. Use a suitably shaped object (such as a pen) to actuate the power switch. All LEDs will light up to indicate normal operating conditions.




**Note:** If there are any faults with the power supply, the appropriate Voltage Status LED will turn off to notify the user.



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# 3 Backplane

In this chapter, we will describe the backplane for the cPCIS-ET2600 Series subsystems. The following table specifies the backplane(s) that correspond to each model.

| | backplane | slots | power backplane |
|---|---|---|---|
| cPCIS-ET2632[R] | cBP-3208[R] | 8 | cBP-3062A |

## 3.1 cBP-3208[R] Backplane

The cBP-3208[R] is a 3U CompactPCI 32-bit backplane with optional rear I/O (designated by an “R” suffix). It is used by the cPCIS-2630 / 2631 / 2632 / 2650 / 2651[R].

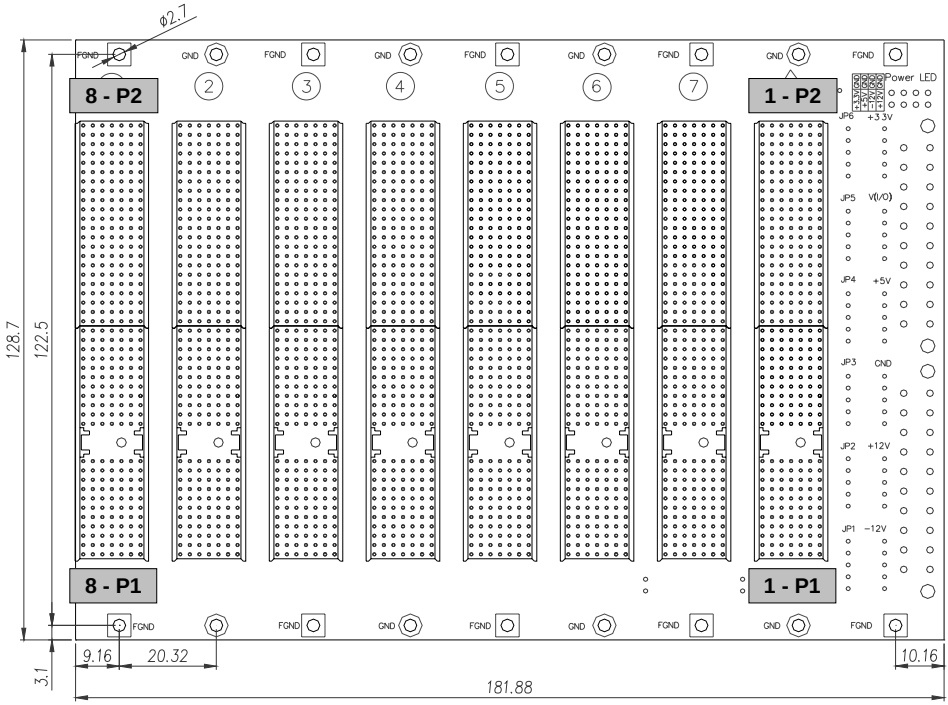
### Specifications

- Standard CompactPCI height for 3U cPCI cards
- CompactPCI Compliancy
  - PICMG 2.0 CompactPCI core specification R3.0
  - PICMG 2.1 CompactPCI hot swap R2.0
- Dimensions: 141.3 x 128.7 mm
- PCI bus clock: up to 32-bit/33MHz
- System Slot: one R-hand side dual-slot
- System Slot Rear I/O: P2 rear I/O with AB-type shroud
- Peripheral slots: 7
- Peripheral Slots Rear I/O: P2 rear I/O with AB-type shroud (optional)
- Power Connectors: ATX connector x2, DC screw terminals
- V (I/O): 3.3V or 5V selectable, default 5V
- Other connectors: INH#, Reset, PWR_FAL#



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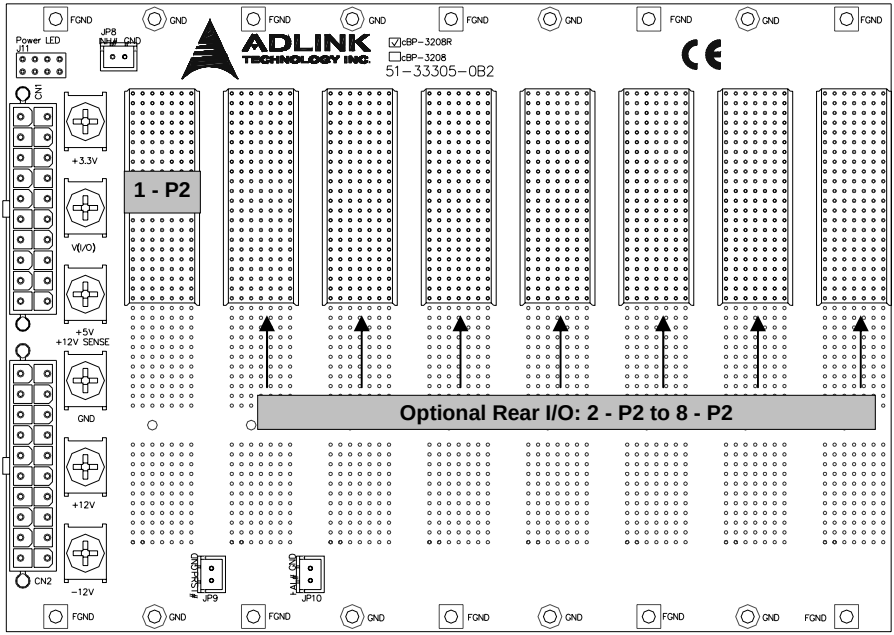
## Mechanical Drawing




**cBP-3208[R] Front View**



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**cBP-3208[R] Rear View**



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## Pin Assignment

- [1 – P1] System Slot

| Pin | Z | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **25** | GND | +5V | REQ64# | ENUM# | +3.3V | +5V | GND |
| **24** | GND | AD[1] | +5V | V(I/O) | AD[0] | ACK64# | GND |
| **23** | GND | +3.3V | AD[4] | AD[3] | +5V | AD[2] | GND |
| **22** | GND | AD[7] | GND | +3.3V | AD[6] | AD[5] | GND |
| **21** | GND | +3.3V | AD[9] | AD[8] | M66EN | C/BE[0]# | GND |
| **20** | GND | AD[12] | GND | V(I/O) | AD[11] | AD[10] | GND |
| **19** | GND | +3.3V | AD[15] | AD[14] | GND | AD[13] | GND |
| **18** | GND | SERR# | GND | +3.3V | PAR | C/BE[1]# | GND |
| **17** | GND | +3.3V | IPMB_SCL | IPMB_SDA | GND | PERR# | GND |
| **16** | GND | DEVSEL# | GND | V(I/O) | STOP# | LOCK# | GND |
| **15** | GND | +3.3V | FRAME# | IRDY# | BDSEL | TRDY# | GND |
| **12-14** | Key | | | | | | |
| **11** | GND | AD[18] | AD[17] | AD[16] | GND | C/BE[2]# | GND |
| **10** | GND | AD[21] | GND | +3.3V | AD[20] | AD[19] | GND |
| **9** | GND | C/BE[3]# | IDSEL | AD[23] | GND | AD[22] | GND |
| **8** | GND | AD[26] | GND | V(I/O) | AD[25] | AD[24] | GND |
| **7** | GND | AD[30] | AD[29] | AD[28] | GND | AD[27] | GND |
| **6** | GND | REQ# | GND | +3.3V | CLK | AD[31] | GND |
| **5** | GND | Reserved | Reserved | PCIRST# | GND | GNT# | GND |
| **4** | GND | IPMB_PWR | HEALTHY# | V(I/O) | INTP | INTS | GND |
| **3** | GND | INTA# | INTB# | INTC# | +5V | INTD# | GND |
| **2** | GND | TCK | +5V | TMS | TDO | TDI | GND |
| **1** | GND | +5V | -12V | TRST# | +12V | +5V | GND |
| **Pin** | **Z** | **A** | **B** | **C** | **D** | **E** | **F** |



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- [1 – P2] System Slot

| Pin | Z | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **22** | GND | GA4 | GA3 | GA2 | GA1 | GA0 | GND |
| **21** | GND | CLK6 | GND | NC | NC | NC | GND |
| **20** | GND | CLK5 | GND | NC | NC | NC | GND |
| **19** | GND | GND | GND | NC | NC | NC | GND |
| **18** | GND | NC | NC | NC | NC | NC | GND |
| **17** | GND | NC | NC | PRST# | REQ6# | GNT6# | GND |
| **16** | GND | NC | NC | DEG# | NC | NC | GND |
| **15** | GND | NC | NC | FAL# | REQ5# | GNT5# | GND |
| **14** | GND | NC | NC | NC | NC | NC | GND |
| **13** | GND | NC | NC | NC | NC | NC | GND |
| **12** | GND | NC | NC | NC | NC | NC | GND |
| **11** | GND | NC | NC | NC | NC | NC | GND |
| **10** | GND | NC | NC | NC | NC | NC | GND |
| **9** | GND | NC | NC | NC | NC | NC | GND |
| **8** | GND | NC | NC | NC | NC | NC | GND |
| **7** | GND | NC | NC | NC | NC | NC | GND |
| **6** | GND | NC | NC | NC | NC | NC | GND |
| **5** | GND | NC | NC | NC | NC | NC | GND |
| **4** | GND | V(I/O) | NC | NC | NC | NC | GND |
| **3** | GND | CLK4 | GND | GNT3# | REQ4# | GNT4# | GND |
| **2** | GND | CLK2 | CLK3 | GND | GNT2# | REQ3# | GND |
| **1** | GND | CLK1 | GND | REQ1# | GNT1# | REQ2# | GND |
| **Pin** | **Z** | **A** | **B** | **C** | **D** | **E** | **F** |



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➢ [2 – P1] / [8 – P1] Peripheral Slot

| Pin | Z | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **25** | GND | +5V | REQ64# | ENUM# | +3.3V | +5V | GND |
| **24** | GND | AD[1] | +5V | V(I/O) | AD[0] | ACK64# | GND |
| **23** | GND | +3.3V | AD[4] | AD[3] | +5V | AD[2] | GND |
| **22** | GND | AD[7] | GND | +3.3V | AD[6] | AD[5] | GND |
| **21** | GND | +3.3V | AD[9] | AD[8] | M66EN | C/BE[0]# | GND |
| **20** | GND | AD[12] | GND | V(I/O) | AD[11] | AD[10] | GND |
| **19** | GND | +3.3V | AD[15] | AD[14] | GND | AD[13] | GND |
| **18** | GND | SERR# | GND | +3.3V | PAR | C/BE[1]# | GND |
| **17** | GND | +3.3V | IPMB_SCL | IPMB_SDA | GND | PERR# | GND |
| **16** | GND | DEVSEL# | GND | V(I/O) | STOP# | LOCK# | GND |
| **15** | GND | +3.3V | FRAME# | IRDY# | GND | TRDY# | GND |
| **12-14** | Key | | | | | | |
| **11** | GND | AD[18] | AD[17] | AD[16] | GND | C/BE[2]# | GND |
| **10** | GND | AD[21] | GND | +3.3V | AD[20] | AD[19] | GND |
| **9** | GND | C/BE[3]# | IDSEL | AD[23] | GND | AD[22] | GND |
| **8** | GND | AD[26] | GND | V(I/O) | AD[25] | AD[24] | GND |
| **7** | GND | AD[30] | AD[29] | AD[28] | GND | AD[27] | GND |
| **6** | GND | REQ# | GND | +3.3V | CLK | AD[31] | GND |
| **5** | GND | NC | NC | PCIRST# | GND | GNT# | GND |
| **4** | GND | IPMB_PWR | HEALTHY# | V(I/O) | INTP | INTS | GND |
| **3** | GND | INTA# | INTB# | INTC# | +5V | INTD# | GND |
| **2** | GND | TCK | +5V | TMS | TDO | TDI | GND |
| **1** | GND | +5V | -12V | TRST# | +12V | +5V | GND |
| **Pin** | **Z** | **A** | **B** | **C** | **D** | **E** | **F** |

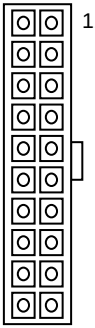
➢ [2 – P2] / [8 – P2] Peripheral Slot

| Pin | Z | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **22** | GND | GA4 | GA3 | GA2 | GA1 | GA0 | GND |
| **1-21** | GND | NC | NC | NC | NC | NC | GND |



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- CN1 / CN2 – ATX Power Connector




| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | +3.3V | 11 | +3.3V |
| 2 | +3.3V | 12 | -12V |
| 3 | GND | 13 | GND |
| 4 | +5V | 14 | PS_ON_L |
| 5 | GND | 15 | GND |
| 6 | +5V | 16 | GND |
| 7 | GND | 17 | GND |
| 8 | POWER GOOD | 18 | -5V |
| 9 | 5V STB | 19 | +5V |
| 10 | +12V | 20 | +5V |

- JP7 – connector




| Pin # | Signal Name |
|---|---|
| 1 | +12V |
| 2 | -12V Sense |

- JP8 – connector




| Pin # | Signal Name |
|---|---|
| 1 | INH# |
| 2 | GND |

- JP9 – connector



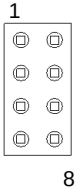

| Pin # | Signal Name |
|---|---|
| 1 | PRST# |
| 2 | GND |

- JP10 – connector




| Pin # | Signal Name |
|---|---|
| 1 | FAL# |
| 2 | GND |

- JP1- V (I/O), default: +5V




| Pin # | Signal Name | Pin # | Signal Name |
|---|---|---|---|
| 1 | +12V | 2 | GND |
| 3 | -12V | 4 | GND |
| 5 | +3.3V | 6 | GND |
| 7 | +5V | 8 | GND |



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## 3.2 cBP-3206[R] Backplane

The cBP-3206[R] is a 3U CompactPCI 32-bit backplane with optional rear I/O (designated by an "R" suffix). The cPCIS-2642[R] uses two of these backplanes.

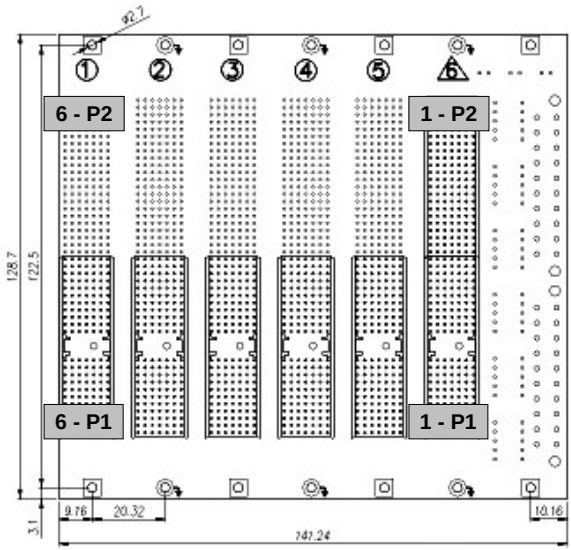
### Specifications

- Standard CompactPCI height for 3U cPCI cards
- CompactPCI Compliancy
  - PICMG 2.0 CompactPCI core specification R3.0
  - PICMG 2.1 CompactPCI hot swap R2.0
- Dimensions: 100.7 x 128.7 mm
- PCI bus clock: up to 32-bit/33MHz
- System Slot: one R-hand side dual-slot
- System Slot Rear I/O: P2 rear I/O with AB-type shroud
- Peripheral slots: 5
- Peripheral Slots Rear I/O: P2 rear I/O with AB-type shroud (optional)
- Power Connectors: ATX connector x2, DC screw terminals
- V (I/O): 3.3V or 5V selectable, default 5V
- Other connectors: INH#, Reset, PWR_FAL#

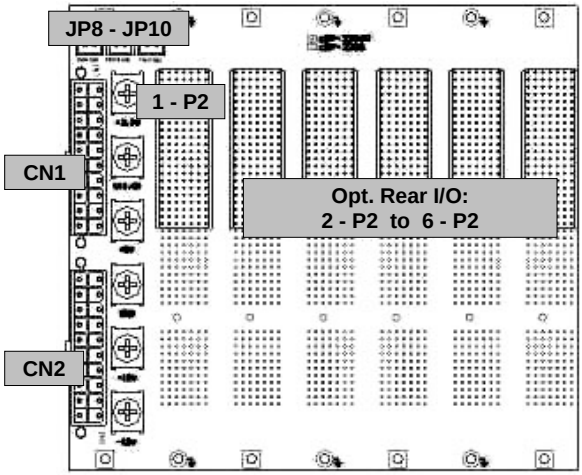


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## Mechanical Drawing




**cBP-3206[R] Front View**




**cBP-3206[R] Rear View**



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## Pin Assignment

- [1 – P1] System Slot

| Pin | Z | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **25** | GND | +5V | REQ64# | ENUM# | +3.3V | +5V | GND |
| **24** | GND | AD[1] | +5V | V(I/O) | AD[0] | ACK64# | GND |
| **23** | GND | +3.3V | AD[4] | AD[3] | +5V | AD[2] | GND |
| **22** | GND | AD[7] | GND | +3.3V | AD[6] | AD[5] | GND |
| **21** | GND | +3.3V | AD[9] | AD[8] | M66EN | C/BE[0]# | GND |
| **20** | GND | AD[12] | GND | V(I/O) | AD[11] | AD[10] | GND |
| **19** | GND | +3.3V | AD[15] | AD[14] | GND | AD[13] | GND |
| **18** | GND | SERR# | GND | +3.3V | PAR | C/BE[1]# | GND |
| **17** | GND | +3.3V | IPMB_SCL | IPMB_SDA | GND | PERR# | GND |
| **16** | GND | DEVSEL# | GND | V(I/O) | STOP# | LOCK# | GND |
| **15** | GND | +3.3V | FRAME# | IRDY# | BDSEL | TRDY# | GND |
| **12-14** | Key | | | | | | |
| **11** | GND | AD[18] | AD[17] | AD[16] | GND | C/BE[2]# | GND |
| **10** | GND | AD[21] | GND | +3.3V | AD[20] | AD[19] | GND |
| **9** | GND | C/BE[3]# | IDSEL | AD[23] | GND | AD[22] | GND |
| **8** | GND | AD[26] | GND | V(I/O) | AD[25] | AD[24] | GND |
| **7** | GND | AD[30] | AD[29] | AD[28] | GND | AD[27] | GND |
| **6** | GND | REQ# | GND | +3.3V | CLK | AD[31] | GND |
| **5** | GND | Reserved | Reserved | PCIRST# | GND | GNT# | GND |
| **4** | GND | IPMB_PWR | HEALTHY# | V(I/O) | INTP | INTS | GND |
| **3** | GND | INTA# | INTB# | INTC# | +5V | INTD# | GND |
| **2** | GND | TCK | +5V | TMS | TDO | TDI | GND |
| **1** | GND | +5V | -12V | TRST# | +12V | +5V | GND |
| **Pin** | **Z** | **A** | **B** | **C** | **D** | **E** | **F** |



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- [1 – P2] System Slot

| Pin | Z | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **22** | GND | GA4 | GA3 | GA2 | GA1 | GA0 | GND |
| **21** | GND | CLK6 | GND | NC | NC | NC | GND |
| **20** | GND | CLK5 | GND | NC | NC | NC | GND |
| **19** | GND | GND | GND | NC | NC | NC | GND |
| **18** | GND | NC | NC | NC | NC | NC | GND |
| **17** | GND | NC | NC | PRST# | REQ6# | GNT6# | GND |
| **16** | GND | NC | NC | DEG# | NC | NC | GND |
| **15** | GND | NC | NC | FAL# | REQ5# | GNT5# | GND |
| **14** | GND | NC | NC | NC | NC | NC | GND |
| **13** | GND | NC | NC | NC | NC | NC | GND |
| **12** | GND | NC | NC | NC | NC | NC | GND |
| **11** | GND | NC | NC | NC | NC | NC | GND |
| **10** | GND | NC | NC | NC | NC | NC | GND |
| **9** | GND | NC | NC | NC | NC | NC | GND |
| **8** | GND | NC | NC | NC | NC | NC | GND |
| **7** | GND | NC | NC | NC | NC | NC | GND |
| **6** | GND | NC | NC | NC | NC | NC | GND |
| **5** | GND | NC | NC | NC | NC | NC | GND |
| **4** | GND | V(I/O) | NC | NC | NC | NC | GND |
| **3** | GND | CLK4 | GND | GNT3# | REQ4# | GNT4# | GND |
| **2** | GND | CLK2 | CLK3 | GND | GNT2# | REQ3# | GND |
| **1** | GND | CLK1 | GND | REQ1# | GNT1# | REQ2# | GND |
| **Pin** | **Z** | **A** | **B** | **C** | **D** | **E** | **F** |



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- [2 – P1] – [6 – P1] Peripheral Slot

| Pin | Z | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **25** | GND | +5V | REQ64# | ENUM# | +3.3V | +5V | GND |
| **24** | GND | AD[1] | +5V | V(I/O) | AD[0] | ACK64# | GND |
| **23** | GND | +3.3V | AD[4] | AD[3] | +5V | AD[2] | GND |
| **22** | GND | AD[7] | GND | +3.3V | AD[6] | AD[5] | GND |
| **21** | GND | +3.3V | AD[9] | AD[8] | M66EN | C/BE[0]# | GND |
| **20** | GND | AD[12] | GND | V(I/O) | AD[11] | AD[10] | GND |
| **19** | GND | +3.3V | AD[15] | AD[14] | GND | AD[13] | GND |
| **18** | GND | SERR# | GND | +3.3V | PAR | C/BE[1]# | GND |
| **17** | GND | +3.3V | IPMB_SCL | IPMB_SDA | GND | PERR# | GND |
| **16** | GND | DEVSEL# | GND | V(I/O) | STOP# | LOCK# | GND |
| **15** | GND | +3.3V | FRAME# | IRDY# | GND | TRDY# | GND |
| **12-14** | Key | | | | | | |
| **11** | GND | AD[18] | AD[17] | AD[16] | GND | C/BE[2]# | GND |
| **10** | GND | AD[21] | GND | +3.3V | AD[20] | AD[19] | GND |
| **9** | GND | C/BE[3]# | IDSEL | AD[23] | GND | AD[22] | GND |
| **8** | GND | AD[26] | GND | V(I/O) | AD[25] | AD[24] | GND |
| **7** | GND | AD[30] | AD[29] | AD[28] | GND | AD[27] | GND |
| **6** | GND | REQ# | GND | +3.3V | CLK | AD[31] | GND |
| **5** | GND | NC | NC | PCIRST# | GND | GNT# | GND |
| **4** | GND | IPMB_PWR | HEALTHY# | V(I/O) | INTP | INTS | GND |
| **3** | GND | INTA# | INTB# | INTC# | +5V | INTD# | GND |
| **2** | GND | TCK | +5V | TMS | TDO | TDI | GND |
| **1** | GND | +5V | -12V | TRST# | +12V | +5V | GND |
| **Pin** | **Z** | **A** | **B** | **C** | **D** | **E** | **F** |

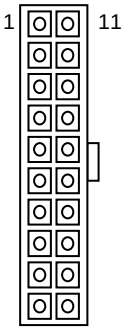
- [2 – P2] – [6 – P2] Peripheral Slot

| Pin | Z | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| **22** | GND | GA4 | GA3 | GA2 | GA1 | GA0 | GND |
| **1-21** | GND | NC | NC | NC | NC | NC | GND |



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- CN1 / CN2 – ATX Power Connector




| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | +3.3V | 11 | +3.3V |
| 2 | +3.3V | 12 | -12V |
| 3 | GND | 13 | GND |
| 4 | +5V | 14 | PS_ON_L |
| 5 | GND | 15 | GND |
| 6 | +5V | 16 | GND |
| 7 | GND | 17 | GND |
| 8 | POWER GOOD | 18 | -5V |
| 9 | 5V STB | 19 | +5V |
| 10 | +12V | 20 | +5V |

- JP8 – connector




| Pin # | Signal Name |
|---|---|
| 1 | INH# |
| 2 | -12V Sense |

- JP9 – connector




| Pin # | Signal Name |
|---|---|
| 1 | PRST# |
| 2 | GND |

- JP10 – connector




| Pin # | Signal Name |
|---|---|
| 1 | FAL# |
| 2 | GND |



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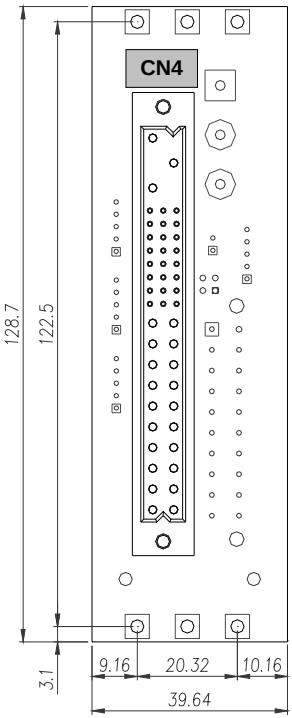
## 3.3 cBP-3061 Power Backplane

The cBP-3061 is a PICMG 2.11 CompactPCI 3U 47-pin power backplane for one power module. It is used by the cPCIS-2631/2642[R].

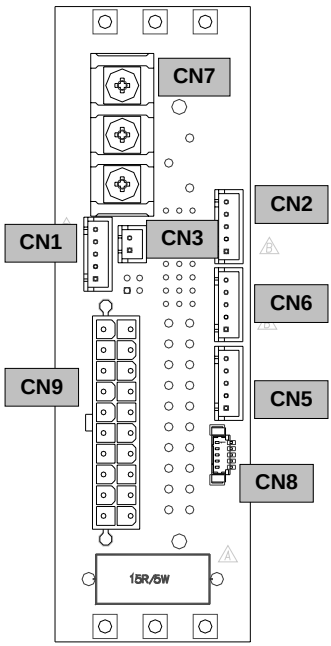
### Specifications

- CompactPCI Compliancy: PICMG 2.11 CompactPCI Power Interface
- Dimensions: 40.64x 128.7 mm
- Power Module Sockets: one
- AC/DC input screw terminal: yes
- DC output (ATX connector): one
- Cascading voltage Sense: Built-in ATX connector
- INH#/FAL#/DEG# Distribution: Built-in ATX connector

### Mechanical Drawing




**cBP-3061[R] Front View**




**cBP-3061 [R] Rear View**



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## Pin Assignment

- CN1 – Power Sense Connector




| Pin # | Signal Name |
|---|---|
| 1 | V1_Sense |
| 2 | GND_S |
| 3 | V2_Sense |
| 4 | V3_Sense |
| 5 | NC |

- CN2 – Power Sense Connector




| Pin # | Signal Name |
|---|---|
| 1 | V1_Sense |
| 2 | GND_S |
| 3 | V2_Sense |
| 4 | V3_Sense |
| 5 | NC |

- CN3 – connector

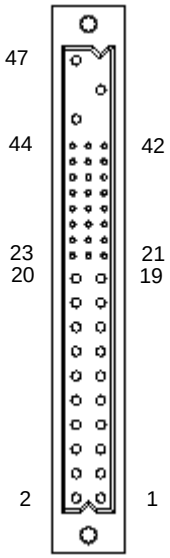



| Pin # | Signal Name |
|---|---|
| 1 | INHJ |
| 2 | GND |



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- CN4 – Modular Power 47P Connector




| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 47 | ACL/-DC IN | 31 | GA2 |
| 46 | ACN/+DC IN | 30 | V1 SENSE |
| 45 | CGND | 29 | V1ADJ |
| 44 | V3 SHARE | 28 | GA1 |
| 43 | IPMB_PWR | 27 | EN# |
| 42 | +FAL# | 26 | RESERVED |
| 41 | V2 SHARE | 25 | GA0 |
| 40 | IPMB_SDA | 24 | RTN |
| 39 | INH# | 23 | RESERVED |
| 38 | DEG# | 22 | RTN |
| 37 | IPMB_SCL | 21 | V4 |
| 36 | V3 SENSE | 20 | V3 |
| 35 | V1 SHARE | 19 | RTN |
| 34 | S RTN | 13-18 | V2 |
| 33 | V2 SENSE | 5-12 | RTN |
| 32 | V2ADJ | 1-4 | V1 |

- CN5 – Current Share Connector




| Pin # | Signal Name |
|---|---|
| 1 | V1_Share |
| 2 | GND |
| 3 | V2_Share |
| 4 | V3_Share |
| 5 | NC |

- CN6 – Current Share Connector

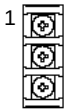



| Pin # | Signal Name |
|---|---|
| 1 | V1_Share |
| 2 | GND |
| 3 | V2_Share |
| 4 | V3_Share |
| 5 | NC |



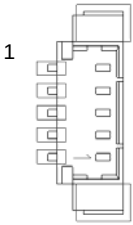
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- CN7 –AC/DC in Let Connector



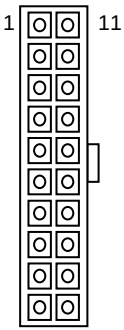

| Pin # | Signal Name |
|---|---|
| 1 | ACN/DC+ |
| 2 | ACL/DC- |
| 3 | CGND |

- CN8 – IPMB Connector




| Pin # | Signal Name |
|---|---|
| 1 | IPMB_SCL |
| 2 | GND |
| 3 | IPMB_SDA |
| 4 | IPMB_PWR |
| 5 | ALERT |

- CN9 – ATX Power Connector




| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | +3.3V | 11 | +3.3V |
| 2 | +3.3V | 12 | -12V |
| 3 | GND | 13 | GND |
| 4 | +5V | 14 | PS_ON_L |
| 5 | GND | 15 | GND |
| 6 | +5V | 16 | GND |
| 7 | GND | 17 | GND |
| 8 | POWER GOOD | 18 | -5V |
| 9 | 5V STB | 19 | +5V |
| 10 | +12V | 20 | +5V |



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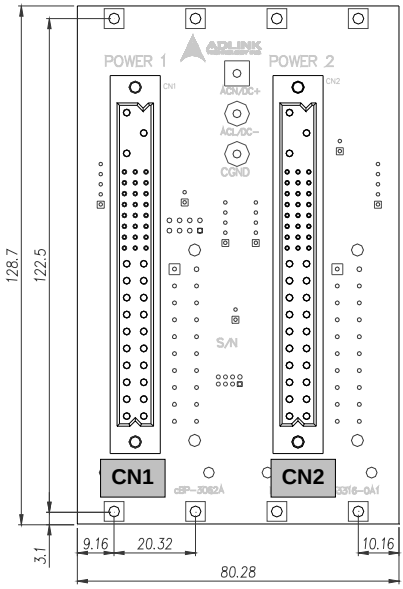
## 3.4 cBP-3062 Power Backplane

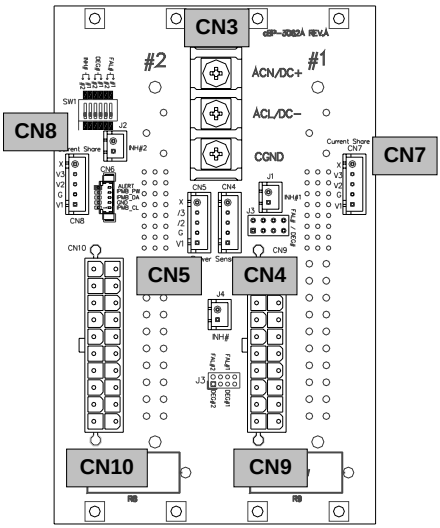
The cBP-3062 is a PICMG 2.11 CompactPCI 3U 47-pin power backplane for two power modules. It is used by the cPCIS-ET2632[R].

### Specifications

- CompactPCI Compliancy: PICMG 2.11 CompactPCI Power Interface
- Dimensions: 40.64x 128.7 mm
- Power Module Sockets: two
- AC/DC input screw terminal: yes
- DC output (ATX connector): two
- Cascading Current Sharing: yes
- Cascading Voltage Sense: Built-in ATX connector
- INH#/FAL#/DEG# Distribution: Selectable common INH#/FAL#/DEG# or separated INH# for each power module, dedicated connector
- PICMG 2.0 IPMB Socket: yes

### Mechanical Drawing



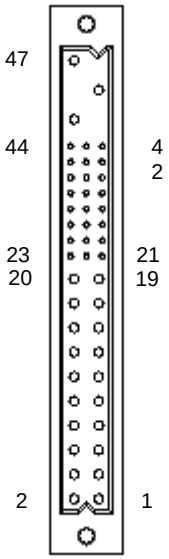



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**cBP-3062[R] Front View** **cBP-3062[R] Rear View**

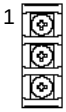
## Pin Assignment

- CN1 / CN2 – Modular Power 47P Connector




| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 47 | ACL/-DC IN | 31 | GA2 |
| 46 | ACN/+DC IN | 30 | V1 SENSE |
| 45 | CGND | 29 | V1ADJ |
| 44 | V3 SHARE | 28 | GA1 |
| 43 | IPMB_PWR | 27 | EN# |
| 42 | +FAL# | 26 | RESERVED |
| 41 | V2 SHARE | 25 | GA0 |
| 40 | IPMB_SDA | 24 | RTN |
| 39 | INH# | 23 | RESERVED |
| 38 | DEG# | 22 | RTN |
| 37 | IPMB_SCL | 21 | V4 |
| 36 | V3 SENSE | 20 | V3 |
| 35 | V1 SHARE | 19 | RTN |
| 34 | S RTN | 13-18 | V2 |
| 33 | V2 SENSE | 5-12 | RTN |
| 32 | V2ADJ | 1-4 | V1 |

- CN3 –AC/DC in Let Connector




| Pin # | Signal Name |
|---|---|
| 1 | ACN/DC+ |
| 2 | ACL/DC- |
| 3 | CGND |

- CN4 – Power Sense Connector




| Pin # | Signal Name |
|---|---|
| 1 | V1_Sense |
| 2 | GND_S |
| 3 | V2_Sense |
| 4 | V3_Sense |
| 5 | NC |



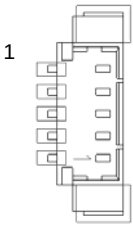
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- CN5 – Power Sense Connector




| Pin # | Signal Name |
|---|---|
| 1 | V1_Sense |
| 2 | GND_S |
| 3 | V2_Sense |
| 4 | V3_Sense |
| 5 | NC |

- CN6 –Connector




| Pin # | Signal Name |
|---|---|
| 1 | IPMB_SCL |
| 2 | GND |
| 3 | IPMB_DA |
| 4 | IPMB_PWR |
| 5 | ALERT |

- CN7 – Current Share Connector




| Pin # | Signal Name |
|---|---|
| 1 | V1CS |
| 2 | GND_S |
| 3 | V2 CS |
| 4 | V3 CS |
| 5 | NC |

- CN8 – Current Share Connector

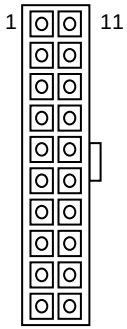



| Pin # | Signal Name |
|---|---|
| 1 | V1 CS |
| 2 | GND_S |
| 3 | V2 CS |
| 4 | V3 CS |
| 5 | NC |



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- CN9 / CN10 – ATX Power Connector




| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | +3.3V | 11 | +3.3V |
| 2 | +3.3V | 12 | -12V |
| 3 | GND | 13 | GND |
| 4 | +5V | 14 | PS_ON_L |
| 5 | GND | 15 | GND |
| 6 | +5V | 16 | GND |
| 7 | GND | 17 | GND |
| 8 | POWER GOOD | 18 | -5V |
| 9 | 5V STB | 19 | +5V |
| 10 | +12V | 20 | +5V |

- JP1 – connector



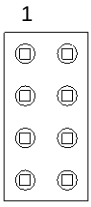

| Pin # | Signal Name |
|---|---|
| 1 | INH#2 |
| 2 | GND |

- JP2 – connector




| Pin # | Signal Name |
|---|---|
| 1 | INH#1 |
| 2 | GND |

- JP3 – connector




| Pin # | Signal Name |
|---|---|
| 1 | DEG#1 |
| 2 | FAL#1 |
| 3 | RSV23A |
| 4 | RSV26A |
| 5 | DEG#2 |
| 6 | FAL#2 |
| 7 | RSV23B |
| 8 | RSV26B |

- JP4 – connector




| Pin # | Signal Name |
|---|---|
| 1 | INH# |
| 2 | GND |



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# 4 Cooling System

The cPCIS-ET2600 Series subsystems with CompactPCI PSUs are equipped five front-access hot swappable low noise fans on the bottom of the chassis to provide an effectively cooled environment. The fans are push-in and ventilate out the rear of the chassis. The chassis is equipped with air filters that are removable for cleaning and replacement. An embedded alarm board monitors fan status and initiates a visible and audible alarm upon fan failure.

## 4.1 Removing and Replacing the Air Filters
### cPCIS-ET2600 Series models with CompactPCI PSU(s)

To ensure proper performance, the air filters of cPCIS-ET2600 Series subsystems with CompactPCI PSUs should be cleaned or replaced as necessary. Replacement air filters are supplied and can be found in the Accessory Packet.

**Air Filter Removal and Replacement Procedure**

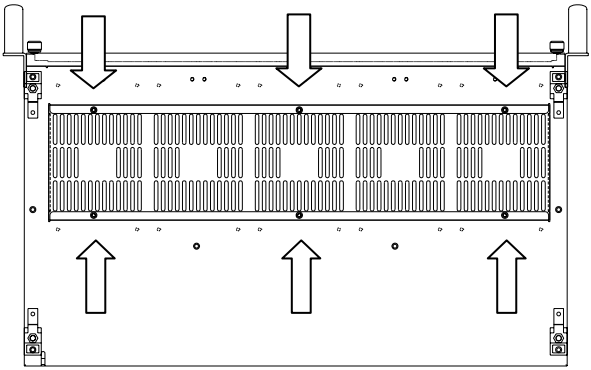
1. Remove the screws attaching the front filter cover at the base of the chassis (2 screws) and remove the cover.





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2. After cleaning or replacing the filter, place it back in position and re-attach the filter cover.
3. Remove the screws attaching the bottom filter cover on the bottom of the chassis (6 screws – see diagram below).



BOTTOM VIEW



4. After cleaning or replacing the filter, place it back in position and re-attach the filter cover.

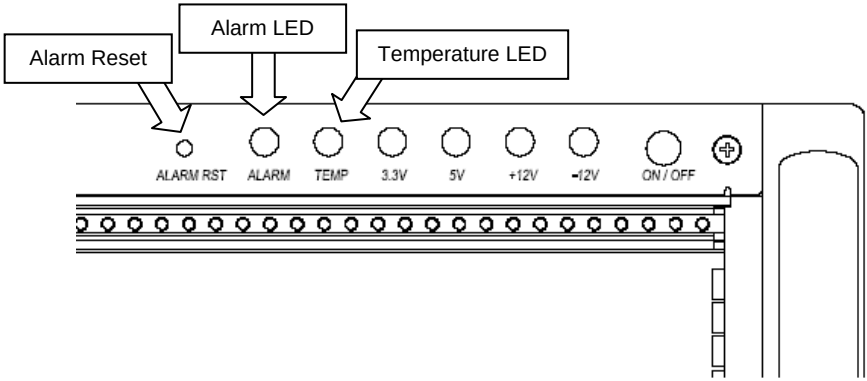


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## 4.2 Fan Alarm: Fan Removal and Replacement

The embedded alarm board monitors temperature & fan status. Should a fan become disabled, the Alarm LED will light up and an audible warning will be heard. The LED corresponding to the faulty fan will flash, indicating which fan needs to be replaced.

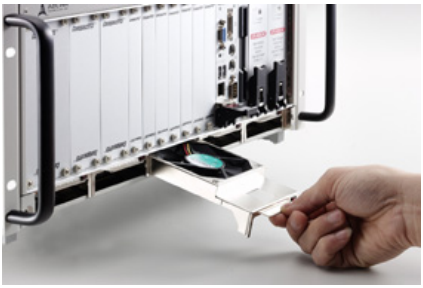
To disable the audible warning, press the Alarm RST button. The Alarm LED will continue to flash until the faulty fan is replaced.




**Fan Removal and Installation Procedure (cPCI PSU models)**

1. Remove the screws attaching the front filter cover at the base of the chassis (2 screws) and remove the cover (see **Air Filter Removal and Replacement Procedure** above).
2. Pull the faulty fan module out of the fan tray and replace with a functional fan.





3. Reverse steps 1-2 to replace the filter cover.

For replacement fan modules, please contact your ADLINK distributor.



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## 4.3 Temperature Alarm

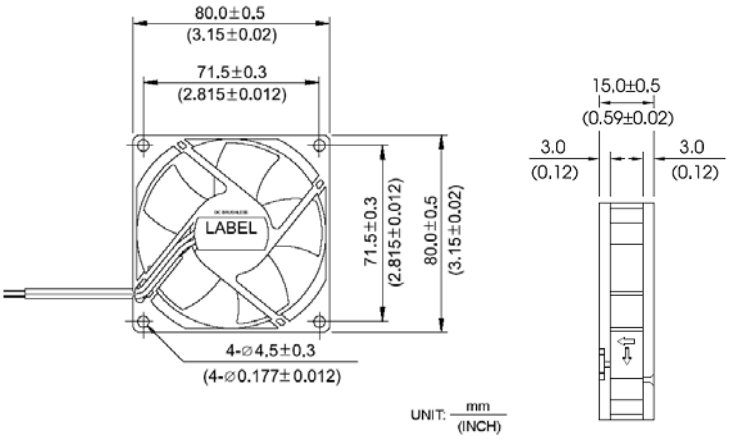
When the subsystem's internal temperature exceeds 50°C, the TEMP LED will flash and an audible warning will be heard. To reset the alarm and disable the audible warning, press the Alarm RST button.

In order to protect the system from damage resulting from overheating, it should be shut down immediately. Inspect the operating environment for causes of the overheating condition. After the system has cooled down sufficiently, power it up and be observant of any future temperature alarm conditions.

## 4.4 Fan Specifications

- Model: ADDA AD0812XB-D93GP
- Dimensions: 80 x 80 x 15mm.
- Weight: 63 Gram.
- Type: 12VDC brush-less with ball bearing motor.
- Rated voltage: 12V @ 0.38A.
- Rated power: 4.56 W each.
- Fan speed: 4000 RPM.
- Maximum Air flow: 46.3 CFM each (when zero static pressure).
- Noise: 42.7 dBA each.

### Mechanical Drawing






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# 5 Power Supply Unit

The cPCIS-ET2600 Series subsystems are equipped with ADLINK's cPS-P325/AC CompactPCI power module.

## 5.1 CompactPCI: cPS-P325/AC

### Features

- 250W 3U X 8HP Eurocard package
- Meets EN 61000-3-2 active power factor correction
- Internal OR-ing diodes for N+1 redundancy
- Hot-swappable
- Active current sharing
- EMI meets EN 55022 / FCC CLASS A
- CE marking compliance
- Fully compliant with PICMG

### Specifications

- Operating Temperature Range: -25°C to +50°C
- Storage Temperature: -40 to +85 °C
- Temperature Coefficient: Typ. ±0.3% / °C
- Cooling: >400 LFM moving air required to achieve full rated power
- Dimensions: Eurocard 3U X 8HP X 160mm CompactPCI format
- Efficiency: 81.5-82.6% typical
- Switching Frequency: 135K Hz
- Safety: IEC60950-1,CSA60950-1 & China CCC
- Circuit Topology: Forward circuit



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## Input Characteristics

- Input Voltage: Typ. 90-264VAC
- Power Factor Correction: Meets Harmonic Correction EN 61000-3-2.
- Input Connector: CompactPCI 47-pin power connector
- Input Frequency: 47-63Hz
- Inrush Current: Less than 15A@240VAC
- Input Current: 3.6A@230VAC/ 4A@260VAC
- EMI: Meets EN55022 / FCC Class A
- Hold-up Time: 20mS after power fail signal
- Remote ON/OFF: Available at [INH#] & [EN#] pins
- Power Fail Signal: Available at [FAL#] pin
- Status LED: <Green> means valid input voltage; <Amber> means a critical fault.
- Thermal Protection (OTP): Installed NTC and thermostat for thermal sensor at [DEG#] pin
- Power OK: Installed at all outputs
- Leakage Current: 1.18mA at 254VAC/60Hz

## Output Characteristics

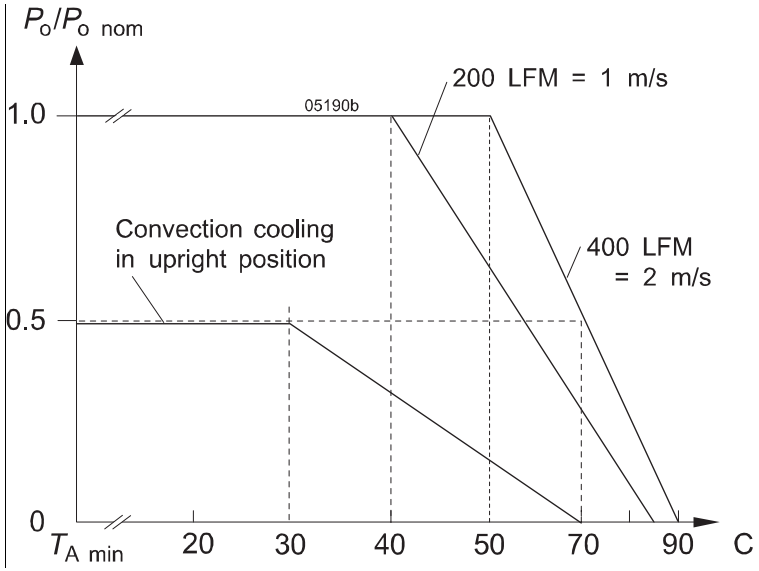
| Output Voltage | Output Current (A) | | | |
|---|---|---|---|---|
| | Min. | Max. | Typ. | Peak |
| **5V** | 0 | 40.0 | 25.0 | – |
| **3.3V** | 0 | 40 | 20 | – |
| **12V** | 0 | 5.5 | 4 | – |
| **-12V** | 0 | 2 | 1 | – |

- Over Load Protection: Fully protected against output overload or short circuit. Typical 120% max. load.
- Over Current Protection: Installed at each rail
- Output Wattage: Typ. 250W continuous.
- Output Connector: CompactPCI 47-pin power connector.
- Line Regulation: Max. ±10mV
- Load Regulation: 3.3V & 5V: ± 10mV, +12V: ± 30mV & -12V: -380 mV.



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- Noise & Ripple: 60 mV@5V and 3.3V output; 120mV@.± 12V output.
- OVP: Built-in at all outputs.
- Adjustability: Available at VO1, 2 & 3.
- Output Trim: Electrical trim available at VO1/VO2 [ADJ #].
- Remote Sensing: Available at VO1, VO2 & VO3.
- Hot-Swap: Available.
- N+1 Redundancy: Installed with internal OR-ing diodes at all outputs for N+1 redundancy operation.
- Current Sharing: Third-wire current sharing at VO1,2 &3.
- Power OK Signal: Available for all output.
- Over Current Protection: Installed at each rail.
- Overload Protection: Fully protected against output overload or short circuit. Typical 120% max. load.




**Output power versus temperature $T_A$ at $V_{i\ nom}$**



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# 6 Specifications

## 6.1 Features

- Standard 19” Rack-mount 3U CompactPCI form factor (4U height).
- Board Space:
  - o Supports both front and rear access for I/O, CPU, and power supply.
  - o Standard 3U, 21-slot width chassis.
- Five front-access hot swappable fans with removable air filter for self-cooling.
- Suitable for both rack-mount and desktop applications.
- Side handles for portability.
- Built-in alarm module to monitor chassis temperature and fan status.
- Comprehensive EMC shielding [EMC gaskets are installed on front rails (top and bottom), rear rails, and side panels].
- Impact resistant power switch.
- Power status LEDs to easily monitor power status (+12V,-12V,+5V,+3.3V).

## 6.2 Mechanical

- CompactPCI Standard: 2.0 R3.0.
- Form Factor: 3U CompactPCI with 50mm depth rear I/O.
- Enclosure: 19” 4U height rack-mount enclosure
  - o Coated metal plate outer covering.
  - o Guarded power switch and reset button.
- Dimensions: 448.4mm (W) x 177.8mm (H) x 258mm (D). Width with rack-mounting kit is 482.6mm (19”).
- Usable width: 21 slots (84HP).



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## 6.3 Environmental

- Operating Temperature: -20°C to 50°C (Supports operation up to 70°C but with derating above 50°C. Power efficiency will be derated by 2.5% for every degree Celsius with only 50% power efficiency at 70°C, i.e. 125W/PSU.)
- Storage Temperature: -40 to 85°C.
- Humidity: 5% - 95%, non-condensed.
- Shock: 15G peak-to-peak, 11ms duration, non-operation.
- Vibration:
  - Non-operation:1.88Grms, 5 – 500Hz, each axis.
  - Operation: 0.5Grms, 5 – 500Hz, each axis.

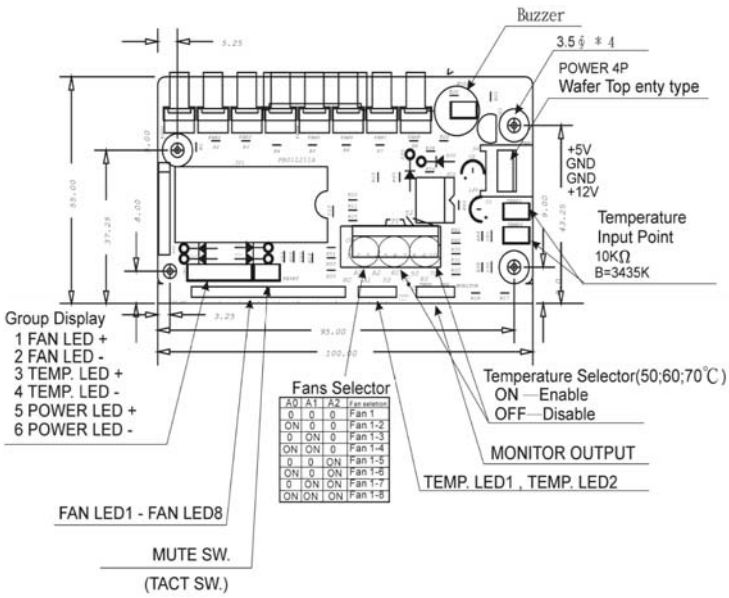
## 6.4 System Alarm Board

- Supports fault alarm for up to 8 fans. If any fan faults, the ALARM LED will flash and an audible alarm will sound
- Can detect temperature at two different locations.
- Trigger temperature for each sensor can be set independently (50°C, 60°C, 70°C).
- Alarm mute
- LED indicators for fan and temperature status



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## Mechanical Drawing






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# Important Safety Instructions

Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.

- Please read these safety instructions carefully.
- Please keep this User‘s Manual for later reference.
- The equipment can be operated at an ambient temperature of 50ºC.
- The equipment should be operated only from the type of power source indicated on the rating label. Make sure the voltage of the power source when connect the equipment to the power outlet.
- If your equipment has a voltage selector switch, make sure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.
- For pluggable equipment, that the socket-outlet shall be installed near the equipment and shall be easily accessible.
- Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
- If the equipment is not use for long time, disconnect the equipment from mains to avoid being damaged by transient overvoltage.
- All cautions and warnings on the equipment should be noted.
- Please keep this equipment from humidity.
- Do not use this equipment near water or a heat source.
- Lay this equipment on a reliable surface when install. A drop or fall could cause injury.
- Never pour any liquid into opening; this could cause fire or electrical shock.
- Openings in the case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space around the system for ventilation when you set up your work area. Never insert objects of any kind into the ventilation openings.
- To avoid electrical shock, always unplug all power cables and modem cables from the wall outlets before removing covers.



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- Lithium Battery provided (real time clock battery)

  **"CAUTION – Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions"**

- If one of the following situations arises, get the equipment checked by a service personnel:

  A. The power cord or plug is damaged.

  B. Liquid has penetrated into the equipment.

  C. The equipment has been exposed to moisture.

  D. The equipment has not work well or you can not get it work according to user's manual.

  E. The equipment has dropped and damaged.

  F. If the equipment has obvious sign of breakage.



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