cPCIS-6235R Series
2U Height Sub-System for
6U cPCI and Components
User's Guide

Recycled Paper

powerBridge Computer

Ehlbeek 15a
30938 Burgwedel
fon 05139-9980-0
fax 05139-9980-49
www.powerbridge.de
info@powerbridge.de

Table of Contents

How to Use This Manual ii

1 Introduction 1

1.1 Product Definition 1
1.2 Features 1
1.3 Mechanical Drawing 3
1.4 Available Models 4
1.5 Customized Systems 4

2 Getting Started 5

2.1 Shipping Contents 6
2.2 CompactPCI Card Installation 5
2.3 Rear Transition Module (RTM) Installation 8
2.4 Powering Up the System 8

3 Backplane Connectors 9

3.1 cBP-6103R 10
3.2 cBP-6403R 24
3.3 cBP-6403R/N110 38

4 Cooling Fans 51

4.1 Removing and Replacing the Air Filter 51
4.2 Mechanical Drawing 52
4.3 Specifications 53

5 Power Supply Unit 54

5.1 R2A-6300P 54

6 System Alarm Board 58

7 Specifications 61

Important Safety Instructions 62

Warranty Policy 64

How to Use This Manual

This manual is designed to help you use the cPCIS-6235R Series 6U CompactPCI Sub-system. 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 sub-system.

Chapter 3: Backplane Connectors, gives a detailed description of the backplanes used in the cPCIS-6235R Series sub-systems.

Chapter 4: Cooling Fans, describes the fans used to cool the sub-system and how to remove and replace the sub-system air filter.

Chapter 5: Power Supply Unit, describes the PSU of the cPCIS-6235R Series sub-systems.

Chapter 6: System Alarm Board, monitoring inner chassis temperature,fan status.

Chapter 7: Specifications, describes the sub-system's detailed specifications,

1 Introduction

1.1 Product Definition

The cPCIS-6235R Series sub-systems are designed for 6U cPCI boards with 80mm RTMs and are suitable for computer telephony applications.

The chassis is 2U height and standard 19” rack mount width.
The cPCIS-6235R series have a PICMG 2.1 Hot Swap compliant 32/ 64-bit 3-slot CompactPCI backplanes and a PICMG 2.5 H.110 CT Bus.

1.2 Features

General

- 19” Rackmount, 2U height for 6U cPCI boards with 80mm rear I/O
- Suitable for one dual-slot system module with two expansion boards
- Standard 6U CompactPCI and PICMG 2.5 H.110 CT Bus
- PICMG 2.1 Hot Swap compliant 32/64-bit 3-slot CompactPCI backplane with P3&P5 rear I/O
- Built-in 300W+300W Dual AC-input mini redundant power supply
- Built-in expansion board for one internal 2.5” HDD and one external IDE device
- Redundant cooling architecture with monitoring LED
- Alarm module for chassis temperature and fan status monitoring
- LED indicators for power statusfan statustemperature alarm
- Guarded power switch and alarm reset button

Boards Space

- Board space supports standard 6U height and 3-slot width
- Both front access and rear access are possible

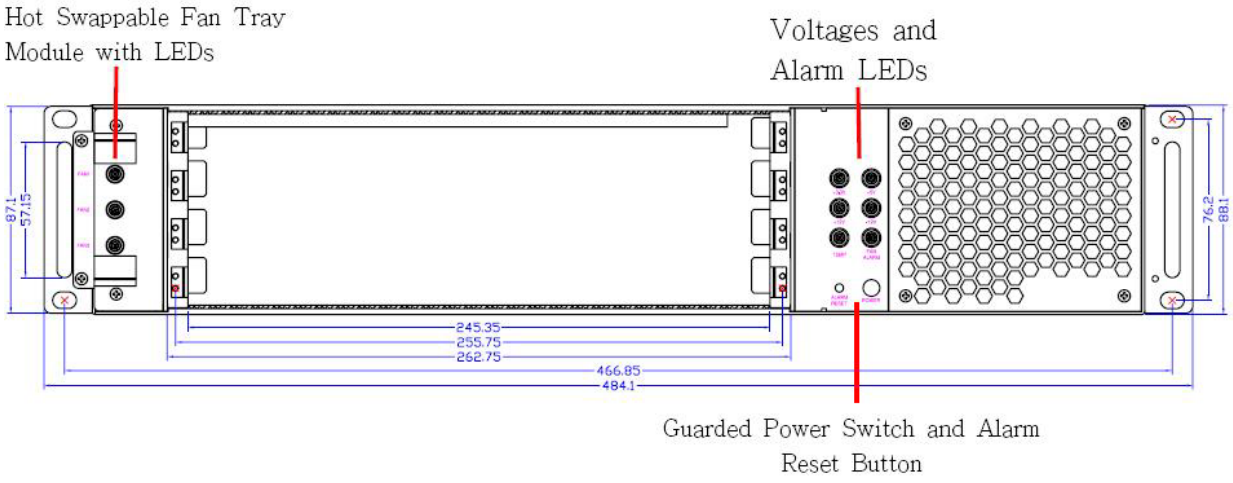
CompactPCI Compliancy

- PICMG 2.0 CompactPCI core specification R3.0
- PICMG 2.1 CompactPCI hot swap R2.0
- PICMG 2.5 CompactPCI Computer Telephony R1.0 (optional)

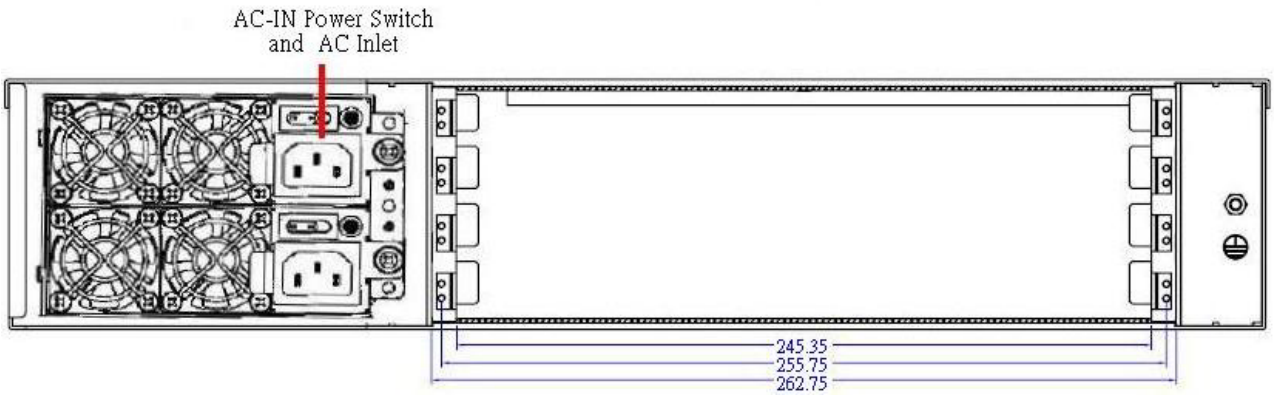
Enclosure

- EIA RS-310C 19” 2U height rackmount enclosure
- Coated metal plate outer covering

1.3 Mechanical Drawing



Chassis Front View



Chassis Rear View (AC in)

Chassis Front View

Chassis Real View

1.4 Available Models

The cPCIS-6235R Series comes in the following models:

- cPCIS-6235R- 32-bit, 3-slot, AC in PSU
- cPCIS-6235R/64 - 64-bit, 3-slot, AC in PSU
- cPCIS-6235R/64/N110- 64-bit, 3-slot, w/o H.110 bus, AC in PSU
- cPCIS-6235R/DC - 32-bit, 3-slot, DC in PSU
- cPCIS-6235R/64/DC - 64-bit, 3-slot, DC in PSU
- cPCIS-6235R/64/N110/DC - 64-bit, 3-slot, w/o H.110 bus, DC in PSU

1.5 Customized Systems

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

2 Getting Started

In this chapter, we will describe the unpacking procedure of the sub-system and installation procedure of the hard drive and CompactPCI cards.

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-6230R or cPCIS-6240R sub-system
- This User's Manual
- Accessory Package: includes power cords for 110V and 220V wall sockets, replacement air filter, ergonomic rackmount handles, and pouch containing screws, zip ties, etc..

2.2 CompactPCI Card Installation

CompactPCI connectors are rigid, and therefore require careful handling when inserted and removed. Improper manipulation of the cards will result in damage to the backplane.

System slots usually have some obvious indicators, something like red card guide rail, triangle mark enclosing the slot number on the backplane. The system card only can be installed in the system slot, and do not insert system card into any other slot, or insert any peripheral card into system slot.

The handles on CompactPCI card helps users to install or remove easily and safety. Please follow the procedures below to install a CompactPCI module into a chassis:

CompactPCI Card Installation Procedure

1. Place the sub-system 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 or peripheral card horizontally. Make sure that the handles are unlatched (i.e. that they are spread outwards). If necessary, unlatch the handle by pressing on the release 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 handles engage with the chassis.

5. Pull inwards on the handles for final insertion. Ensure that the red buttons on the handles fully latch into position as unless this is done the card is not correctly inserted.

6. To remove the module, press the red release buttons, and reverse steps 1 through 5 above.

2.3 Rear Transition Module (RTM) Installation

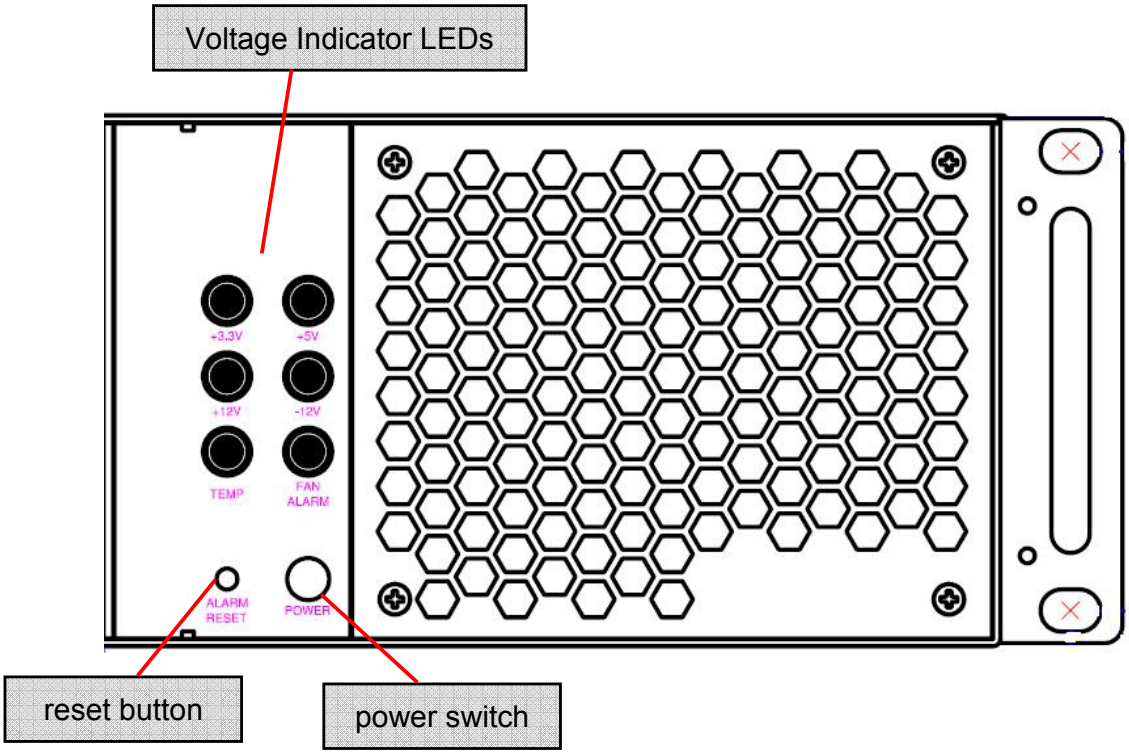
The installation and removal procedures for RTMs are the same as for CompactPCI cards. Since RTMs are shorter than the CompactPCI cards, they require more careful handling during installation and removal.

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

2.4 Powering Up the System

Before connecting the power cord to the system, make sure the AC-in power switch is in the **O** (off) position (see Section 1.3, Mechanical Drawing, Chassis Rear View).

The cPCIS-6230R/40R sub-systems feature a guarded power switch and reset button that provide ATX power control capability. Use the tool provided in the Accessory Packet or a suitably shaped object (such as a pen) to actuate the power switch and reset button.



3 Backplane Connectors

In this chapter, we will describe the backplanes for the cPCIS-6235R Series. The following list outlines the backplanes that correspond to each model.

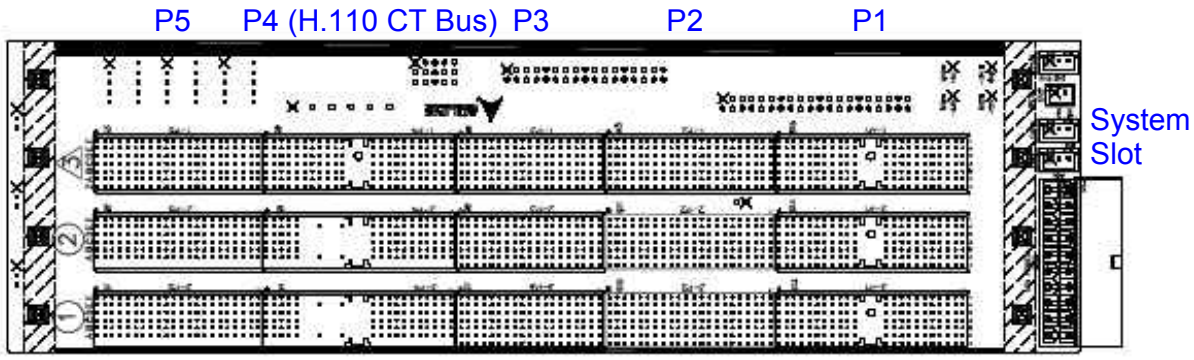
Model*	Type	Backplane
cPCIS-6235R	32-bit, 3-slot	cBP-6103R
cPCIS-6235R/64	64-bit, 3-slot	cBP-6403R
cPCIS-6235R/64/N110	64-bit, 3-slot	cBP-6403R/N110

* The DC input versions of the corresponding models have the same backplane.

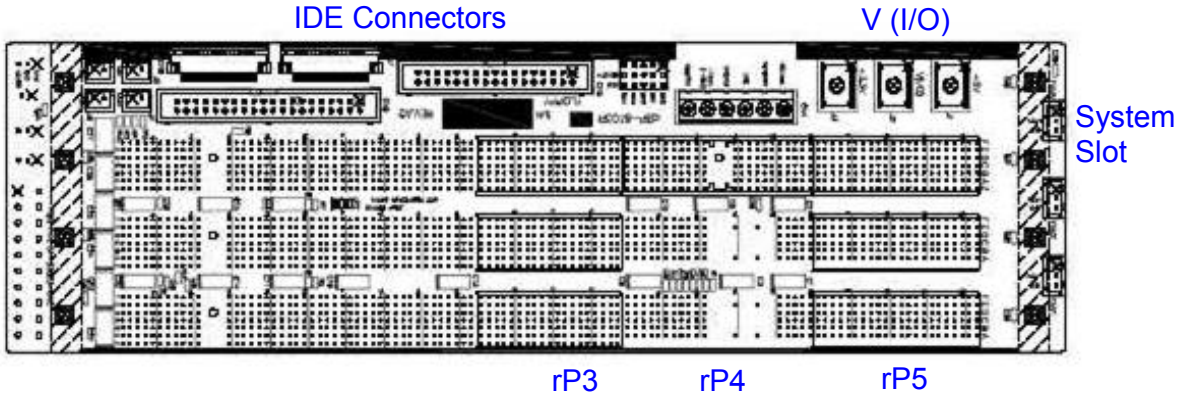
3.1 cBP-6103R

The backplane for the cPCIS-6235R 6U 32-bit, 3-slot chassis is the cBP-6103R, a 6U 3-slot H.110 32-bit CompactPCI backplane with rear I/O.

Mechanical Drawing



cBP-6103R Front View



cBP-6103R Rear View

Features

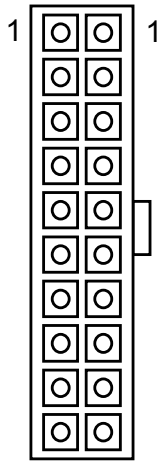
- Standard CompactPCI 2U height for 6U cPCI cards
- Support 80mm rear I/O for each slot
- Suitable for one dual-slot system module with two expansion cards
- Support PICMG 2.5 H.110 CT Bus
- PICMG 2.1 Hot Swap compliant 32-bit 3/4-slot CompactPCI backplane with P3&P5 rear I/O
- Support one 40pin IDE channel and one 34pin FDD channel

Specifications

- CompactPCI Compliancy
  - PICMG 2.0 CompactPCI core specification R3.0
  - PICMG 2.1 CompactPCI hot swap R2.0
  - PICMG 2.5 CompactPCI Computer Telephony R1.0
- Dimension: 279.2 x 81 (mm, W x H)
- PCI bus clock: 32-bit/33MHz
- System slot rear I/O: P3,P4 and P5 rear I/O with AB type shroud
- Peripheral slots: two
- H.110 bus: Compliant with PICMG 2.5, for all peripheral slots
- V (I/O): 3.3V or 5V selectable, default 5V
- Power Connectors: ATX connector x1
- System slot legacy I/O: FDD, IDE1 (pin compatible with cPCI-6760D and cPCI-6780 only)
- Other connectors: INH#, Reset, PWR_FAL#, Voltage LEDs

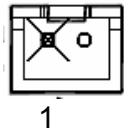
Pin Assignment

- CN1 - ATX Power Connector



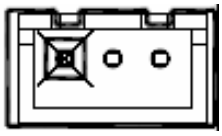
PIN	SIGNAL	PIN	SIGNAL
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GND	13	GND
4	+5V	14	PS_ON_L
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	POWER GOOD	18	-5V
9	5V STB	19	+5V
10	+12V	20	+5V

- CN2 - Reset Button



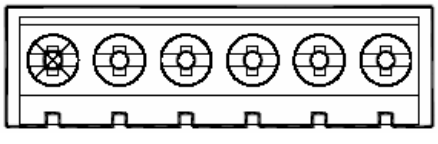
Pin #	Signal Name
1	PRST#
2	Ground

- CN3 - ATX Power Switch



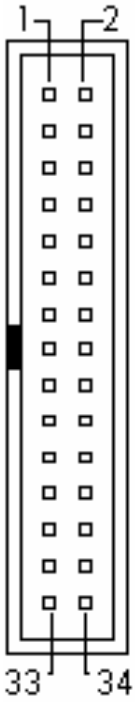
Pin #	Signal Name
1	INH#
2	Ground
3	DEG#

- CN4 - CT Power



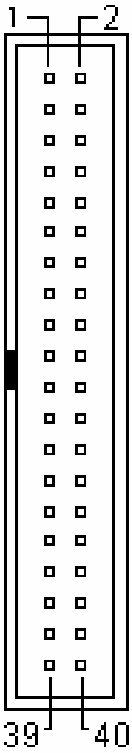
Pin #	Signal Name
1	-SEL Vbat
2	SEL VbatRtn
3	VRG
4	VRGRtn
5	-Vbat
6	VbatRtn

➢ CN5 - Floppy Drive Connector



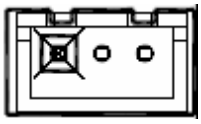
Signal Name	PIN #	PIN #	Signal Name
Ground	1	2	Drive density selection
Ground	3	4	No connect
Ground	5	6	Drive density selection
Ground	7	8	Index
Ground	9	10	Motor enable 0
Ground	11	12	Drive select 1
Ground	13	14	Drive select 0
Ground	15	16	Motor enable 1
Ground	17	18	Direction
Ground	19	20	Step
Ground	21	22	Write data
Ground	23	24	Write gate
Ground	25	26	Track 00
Ground	27	28	Write protect
Ground	29	30	Read data
Ground	31	32	Side 1 select
Ground	33	34	Diskette change

➢ CN6 - IDE Drive Connector



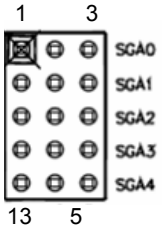
Signal Name	Pin #	Pin #	Signal Name
Reset IDE	1	2	Ground
Host data 7	3	4	Host data 8
Host data 6	5	6	Host data 9
Host data 5	7	8	Host data 10
Host data 4	9	10	Host data 11
Host data 3	11	12	Host data 12
Host data 2	13	14	Host data 13
Host data 1	15	16	Host data 14
Host data 0	17	18	Host data 15
Ground	19	20	N.C
DRQ0 / DRQ1	21	22	Ground
Host IOW	23	24	Ground
Host IOR	25	26	Ground
IOCHRDY	27	28	Host ALE
DACK0 / DACK1	29	30	Ground
IRQ14 / IRQ 15	31	32	No connect
Address 1	33	34	No connect
Address 0	35	36	Address 2
Chip select 0	37	38	Chip select 1
Activity	39	40	Ground

➢ FAN1/FAN2/FAN3/FAN4/FAN5 - Fan power connector



Pin #	Signal Name
1	NC
2	+12v
3	Ground

➢ JP1 - Shelf Enumeration Bus signals

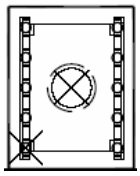


Pin #	Signal Name	Pin #	Signal Name	Pin #	Signal Name
1	NC	2	SGA0	3	Ground
4	NC	5	SGA1	6	Ground
7	NC	8	SGA2	9	Ground
10	NC	11	SGA3	12	Ground
13	NC	14	SGA4	15	Ground

- JP2 - M66EN (short 33MHz, open 66MHz, default setting: short)

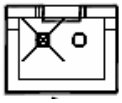
Pin #	Signal Name
1	M66EN
2	Ground

- J1/J2/J3 - V (I/O), default: +5V



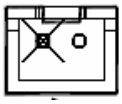
Pin #	Signal Name
1	NC
2	+12v
3	Ground

- J4 - +3.3V LED connector



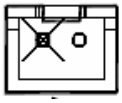
Pin #	Signal Name
1	+3.3V VCC
2	Ground

- J5 - +5V LED connector



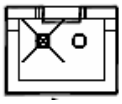
Pin #	Signal Name
1	+5V VCC
2	Ground

- J6 - +12V LED connector



Pin #	Signal Name
1	+12V VCC
2	Ground

- J7 - -12VLED connector



Pin #	Signal Name
1	Ground
2	-12V VCC

- S1/S2/S3 - Peripheral/System Slot P5

Pin	Z	A	B	C	D	E	F
22	GND	NC	NC	NC	NC	NC	GND
21	GND	NC	NC	NC	NC	NC	GND
20	GND	NC	NC	NC	NC	NC	GND
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

➢ S4/S5 - Peripheral Slot P4

Pin	Z	A	B	C	D	E	F
25	GND	SGA4	SGA3	SGA2	SGA1	SGA0	GND
24	GND	GND	GND	NP	GND	NP	GND
23	GND	+12V	/CT_RST	GND	-12V	CT_MC	GND
22	GND	PFS0#	NP	NP	NP	NP	GND
21	GND	-SEL Vbat	PFS1#	NP	NP	SEL VbatRtn	GND
20	GND	NP	NP	NP	NP	NP	GND
19	GND	NP	NP	NP	NP	NP	GND
18	GND	VRG	NP	NP	NP	VRGRtn	GND
17	GND	NP	NP	NP	NP	NP	GND
16	GND	NP	NP	NP	NP	NP	GND
15	GND	-Vbat	NP	NP	NP	VbatRtn	GND
12-14	Key						
11	GND	CT_D29	CT_D30	CT_D31	V(I/O)	/CT_FRAME_A	GND
10	GND	CT_D27	+3.3V	CT_D28	+5V	/CT_FRAME_B	GND
9	GND	CT_D24	CT_D25	CT_D26	GND	/FR_COMP	GND
8	GND	CT_D21	CT_D22	CT_D23	+5V	CT_C8_A	GND
7	GND	CT_D19	+5V	CT_D20	GND	CT_C8_B	GND
6	GND	CT_D16	CT_D17	CT_D18	GND	CT_NETREF_1	GND
5	GND	CT_D13	CT_D14	CT_D15	+3.3V	CT_NETREF_2	GND
4	GND	CT_D11	+5V	CT_D12	+3.3V	SCLK	GND
3	GND	CT_D8	CT_D9	CT_D10	GND	SCLK-D	GND
2	GND	CT_D4	CT_D5	CT_D6	CT_D7	GND	GND
1	GND	CT_D0	+3.3V	CT_D1	CT_D2	CT_D3	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

➢ S7/S8 - Peripheral Slot P3

Pin	Z	A	B	C	D	E	F
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

➢ S13/S14 - Peripheral Slot P1

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**

➢ S6 - System Slot P4

Pin	Z	A	B	C	D	E	F
25	GND	NC	NC	NC	NC	NC	GND
24	GND	NC	NC	NC	NC	NC	GND
23	GND	NC	NC	NC	NC	NC	GND
22	GND	NC	NC	NC	NC	NC	GND
21	GND	NC	NC	NC	NC	NC	GND
20	GND	NC	NC	NC	NC	NC	GND
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	GND
12-14	Key						
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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- S9 - System Slot P3

Pin	Z	A	B	C	D	E	F
19	GND	PPWRGD	PDCS16#	PIORDY	NC	PIRQ	GND
18	GND	PDACT#	NC	PCS3#	PCS1#	PPDIAG	GND
17	GND	PDD15	PDD14	PDD13	PDD12	NC	GND
16	GND	PDD11	PDD10	PDD9	PDD8	DDAK0#	GND
15	GND	PDA0	PDA1	NC	PDA2	DDRQ0	GND
14	GND	PDD7	PDD6	PDD5	PDD4	DIOW#	GND
13	GND	PDD3	PDD2	PDD1	PDD0	DIOR#	GND
12	GND	DR0#	MSEN0	MTR0#	INDEX#	WDATA#	GND
11	GND	DR1#	DSKCHG#	MTR1#	DENSL	RDATA#	GND
10	GND	WP#	HDSEL#	DIR#	TRACK0#	STEP#	GND
9	GND	WGATE#	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	MSDATA	BUZZER	KBDATA	NC	GND
4	GND	NC	MSCLK	NC	KBCLK	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- S12 - System Slot P2

Pin	Z	A	B	C	D	E	F
22	GND	GND	GND	GND	NC	NC	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**

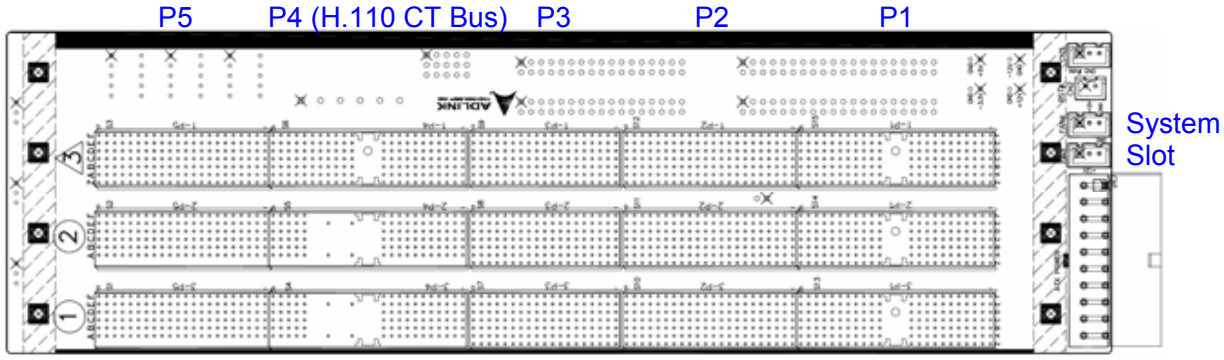
➢ S15 - System Slot P1

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64#	ENUM#	+3.3V	+5V	GND
24	GND	S1AD[1]	+5V	V(I/O)	S1AD[0]	ACK64#	GND
23	GND	+3.3V	S1AD[4]	S1AD[3]	+5V	S1AD[2]	GND
22	GND	S1AD[7]	GND	+3.3V	S1AD[6]	AD[5]	GND
21	GND	+3.3V	S1AD[9]	S1AD[8]	M66EN	S1C/BE[0]#	GND
20	GND	S1AD[12]	GND	V(I/O)	S1AD[11]	S1AD[10]	GND
19	GND	+3.3V	S1AD[15]	S1AD[14]	GND	S1AD[13]	GND
18	GND	S1SERR#	GND	+3.3V	S1PAR	S1C/BE[1]#	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	S1PERR#	GND
16	GND	S1DEVSEL#	GND	V(I/O)	S1STOP#	S1LOCK#	GND
15	GND	+3.3V	S1FRAME#	S1IRDY#	BDSEL	S1TRDY#	GND
12-14	Key						
11	GND	S1AD[18]	S1AD[17]	S1AD[16]	GND	S1C/BE[2]#	GND
10	GND	S1AD[21]	GND	+3.3V	S1AD[20]	S1AD[19]	GND
9	GND	S1C/BE[3]#	IDSEL	S1AD[23]	GND	S1AD[22]	GND
8	GND	S1AD[26]	GND	V(I/O)	AD[25]	S1AD[24]	GND
7	GND	S1AD[30]	S1AD[29]	S1AD[28]	GND	S1AD[27]	GND
6	GND	REQ#	GND	+3.3V	S1CLK	S1AD[31]	GND
5	GND	Reserved	Reserved	S1PCIRST#	GND	S1GNT#	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**

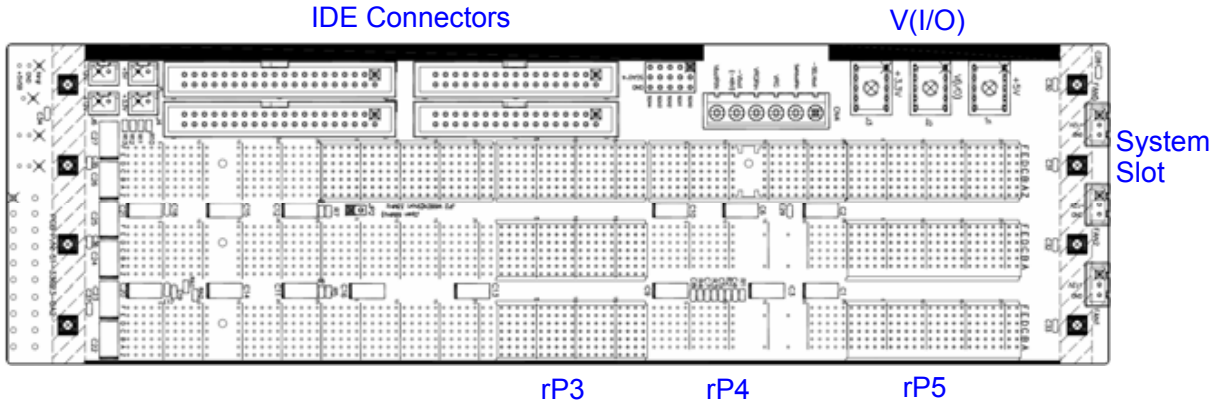
3.2 cBP-6403R

The backplane for the cPCIS-6235R/64 6U 64-bit, 3-slot chassis is the cBP-6403R, a 6U 64-bit, 3-slot, H.110 CompactPCI backplane with rear I/O.

Mechanical Drawing



cBP-6403R Front View



cBP-6403R Rear View

Features

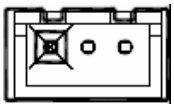
- Standard CompactPCI 2U height for 6U cPCI cards
- Support 80mm rear I/O for each slot
- Suitable for one dual-slot system module with two expansion cards
- Support PICMG 2.5 H.110 CT Bus
- PICMG 2.1 Hot Swap compliant 64-bit 33/66MHz 3-slot CompactPCI backplane with P3&P5 rear I/O

Specifications

- CompactPCI Compliancy
  - PICMG 2.0 CompactPCI core specification R3.0
  - PICMG 2.1 CompactPCI hot swap R2.0
  - PICMG 2.5 CompactPCI Computer Telephony R1.0
- Dimension: 279.2 x 81 (mm, W x H)
- PCI bus clock: up to 64-bit/66MHz
- System slot rear I/O: P3,P4 and P5 rear I/O with AB type shroud
- Peripheral slots: two
- H.110 bus: Compliant with PICMG 2.5, for all peripheral slots
- V (I/O): 3.3V or 5V selectable, default 5V
- Power Connectors: ATX connector x1
- Other connectors: INH#, Reset, PWR_FAL#, Voltage LEDs

Pin Assignment

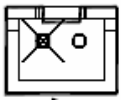
- CN1 - ATX Power Switch



1

Pin #	Signal Name
1	INH#
2	Ground
3	DEG#

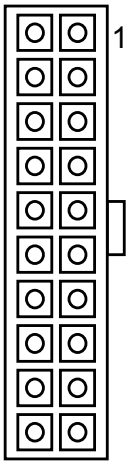
- CN2 - Reset Button



1

Pin #	Signal Name
1	PRST#
2	Ground

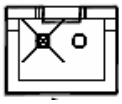
- CN5 - ATX Power Connector



1 11

PIN#	Signal Name	PIN#	Signal Name
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	PW-OK	18	-5V
9	5V STB	19	+5V
10	+12V	20	+5V

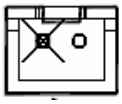
- CN6 - +5V LED connector



1

Pin #	Signal Name
1	+5V VCC
2	Ground

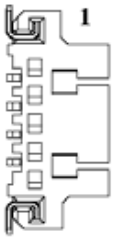
- CN7 - +12V LED connector



1

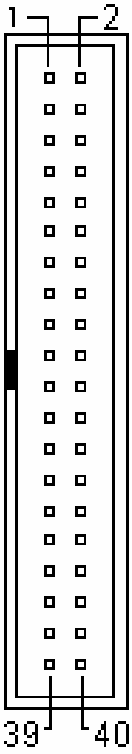
Pin #	Signal Name
1	+12V VCC
2	Ground

- CN8 - IPMB connector



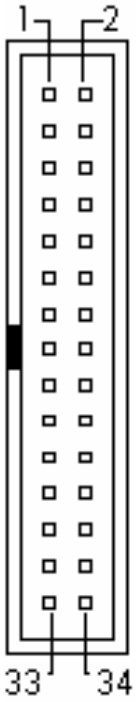
Pin #	Signal Name
1	IPMB SCL
2	Ground
3	IPMB SCA
4	IPMB PWR
5	ALERT#

- CN9/15 - IDE Drive Connector



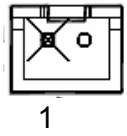
Signal Name	Pin #	Pin #	Signal Name
IDE1	1	2	IDE21
IDE2	3	4	IDE22
IDE3	5	6	IDE23
IDE4	7	8	IDE24
IDE5	9	10	IDE25
IDE6	11	12	IDE26
IDE7	13	14	IDE27
IDE8	15	16	IDE28
IDE9	17	18	IDE29
IDE10	19	20	IDE30
IDE11	21	22	IDE31
IDE12	23	24	IDE32
IDE13	25	26	IDE33
IDE14	27	28	IDE34
IDE15	29	30	IDE35
IDE16	31	32	IDE36
IDE17	33	34	IDE37
IDE18	35	36	IDE38
IDE19	37	38	IDE39
IDE20	39	40	IDE40

- CN10/16 - Floppy Drive Connector



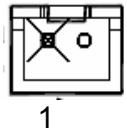
Signal Name	PIN#	PIN#	Signal Name
FDD1	1	2	FDD18
FDD2	3	4	FDD19
FDD3	5	6	FDD20
FDD4	7	8	FDD21
FDD5	9	10	FDD22
FDD6	11	12	FDD23
FDD7	13	14	FDD24
FDD8	15	16	FDD25
FDD9	17	18	FDD26
FDD10	19	20	FDD27
FDD11	21	22	FDD28
FDD12	23	24	FDD29
FDD13	25	26	FDD30
FDD14	27	28	FDD31
FDD15	29	30	FDD32
FDD16	31	32	FDD33
FDD17	33	34	FDD34

- CN11 - +3.3V LED connector



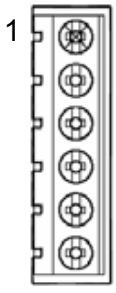
Pin #	Signal Name
1	+3.3V VCC
2	Ground

- CN12-12V LED connector



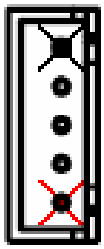
Pin #	Signal Name
1	Ground
2	-12V VCC

- CN13 - Telecom Power Bus Pins



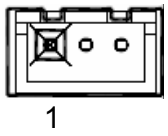
Pin #	Signal Name	Description
1	-SEL VBAT	short loop battery
2	SEL VBATRTN	short loop battery return
3	VRG	bus for ringing voltage
4	VRGRTN	bus for ringing voltage
5	-VBAT	telecom power distribution bus
6	VBATRTN	return bus pin for -Vbat

- CN14 - Power Sense connector



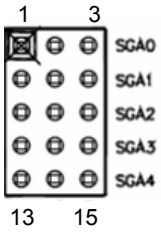
Pin #	Signal Name
1	+5V
2	Ground
3	+3.3V
4	+12V
5	NC

- FAN1/FAN2/FAN3/FAN4/FAN5 - Fan power connector



Pin #	Signal Name
1	NC
2	+12V
3	Ground

- JP1 - Shelf Enumeration Bus signals

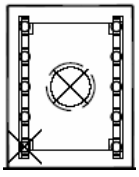


Pin #	Signal Name	Pin #	Signal Name	Pin #	Signal Name
1	NC	2	SGA0	3	Ground
4	NC	5	SGA1	6	Ground
7	NC	8	SGA2	9	Ground
10	NC	11	SGA3	12	Ground
13	NC	14	SGA4	15	Ground

- JP2 - M66EN (short 33MHz, open 66MHz, default setting: short)

Pin #	Signal Name
1	NC
2	M66EN
3	Ground

- J1/J2/J3 - V (I/O), default: +5V



Pin #	Signal Name
1	+3.3V
2	V(I/O)
3	+5V

- P1/P6/P11 - System/Peripheral Slot CPCI-P5

Pin	Z	A	B	C	D	E	F
22	GND	NC	NC	NC	NC	NC	GND
21	GND	NC	NC	NC	NC	NC	GND
20	GND	NC	NC	NC	NC	NC	GND
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P9/P14 - Peripheral Slot CPCI-P4

Pin	Z	A	B	C	D	E	F
25	GND	SGA4	SGA3	SGA2	SGA1	SGA0	GND
24	GND	GND	GND	NC	GND	NC	GND
23	GND	+12V	CT_RST	GND	-12V	CT_MC	GND
22	GND	PFS0J	NC	NC	NC	NC	GND
21	GND	SEL VBAT	PFS1J	NC	NC	SEL VBATRTN	GND
20	GND	NC	NC	NC	NC	NC	GND
19	GND	NC	NC	NC	NC	NC	GND
18	GND	VRG	NC	NC	NC	VRGRTN	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	VBAT	NC	NC	NC	VBATRTN	GND
12-14	**Key Area (keep unobstructed on backplane to ease routing constraints)**						
11	GND	CT_D29	CT_D30	CT_D31	V(I/O)	CT_FRAME_A	GND
10	GND	CT_D27	+3.3V	CT_D28	+5V	CT_FRAME_B	GND
9	GND	CT_D24	CT_D25	CT_D26	GND	RFCOMP	GND
8	GND	CT_D21	CT_D22	CT_D23	+5V	CT_C8_A	GND
7	GND	CT_D19	+5V	CT_D20	GND	CT_C8_B	GND
6	GND	CT_D16	CT_D17	CT_D18	GND	CT_NET_1	GND
5	GND	CT_D13	CT_D14	CT_D15	+3.3V	CT_NET_2	GND
4	GND	CT_D11	+5V	CT_D12	+3.3V	SCLK	GND
3	GND	CT_D8	CT_D9	CT_D10	GND	SCLK-D	GND
2	GND	CT_D4	CT_D5	CT_D6	CT_D7	GND	GND
1	GND	CT_D0	+3.3V	CT_D1	CT_D2	CT_D3	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P3/P8/P13 - System/Peripheral Slot CPCI-P3

Pin	Z	A	B	C	D	E	F
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

-

- P7/P12 - Peripheral Slot CPCI-P2

Pin	Z	A	B	C	D	E	F
22	GND	GND	GND	NC	NC	NC	GND
21	GND	NC	GND	NC	NC	NC	GND
20	GND	NC	GND	NC	GND	NC	GND
19	GND	GND	GND	NC	NC	NC	GND
18	GND	RVA43	RVB43	RVC43	GND	RVE43	GND
17	GND	RVA42	GND	NC	NC	NC	GND
16	GND	RVA41	RVB41	NC	GND	RVE41	GND
15	GND	RVA40	GND	NC	NC	NC	GND
14	GND	AD35	AD34	AD33	GND	AD32	GND
13	GND	AD38	GND	V(I/O)	AD37	AD36	GND
12	GND	AD42	AD41	AD40	GND	AD39	GND
11	GND	AD45	GND	V(I/O)	AD44	AD43	GND
10	GND	AD49	AD48	AD47	GND	AD46	GND
9	GND	AD52	GND	V(I/O)	AD51	AD50	GND
8	GND	AD56	AD55	AD54	GND	AD53	GND
7	GND	AD59	GND	V(I/O)	AD58	AD57	GND
6	GND	AD63	AD62	AD61	GND	AD60	GND
5	GND	CBE5J	GND	V(I/O)	CBE4J	PAR64	GND
4	GND	V(I/O)	RVB29	CBE7J	GND	CBE6J	GND
3	GND	NC	GND	NC	NC	NC	GND
2	GND	NC	NC	GND	NC	NC	GND
1	GND	NC	GND	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

➢ P10/P15 - Peripheral Slot CPCI-P1

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64J	ENUMJ	+3.3V	+5V	GND
24	GND	AD[1]	+5V	V(I/O)	AD[0]	ACK64J	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	CBE0J	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	SERRJ	GND	+3.3V	PARJ	CBE1J	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERRJ	GND
16	GND	DEVSELJ	GND	V(I/O)	STOPJ	LPCKJ	GND
15	GND	+3.3V	FRAMEJ	IRDYJ	GND	TRDYJ	GND
12-14	**Key Area (keep unobstructed on backplane to ease routing constraints)**						
11	GND	AD[18]	AD[17]	AD[16]	GND	CBE2J	GND
10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	CBE3J	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	REQ0J	GND	+3.3V	CLK0	AD[31]	GND
5	GND	RVA5	RVB5	RSTJ	GND	GNT0J	GND
4	GND	IPMB_PWR	HEALTHY2J	V(I/O)	INTP	INTS	GND
3	GND	INTDJ	INTAJ	INTBJ	+5V	INTCJ	GND
2	GND	TCK	+5V	TMS	TDO2	TDO1	GND
1	GND	+5V	-12V	TRSTJ	+12V	+5V	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P4 - System Slot CPCI-P4

Pin	Z	A	B	C	D	E	F
25	GND	NC	NC	NC	NC	NC	GND
24	GND	NC	NC	NC	NC	NC	GND
23	GND	NC	NC	NC	NC	NC	GND
22	GND	NC	NC	NC	NC	NC	GND
21	GND	NC	NC	NC	NC	NC	GND
20	GND	NC	NC	NC	NC	NC	GND
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	GND
12-14	**Key Area (keep unobstructed on backplane to ease routing constraints)**						
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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P2 - System Slot CPCI-P2

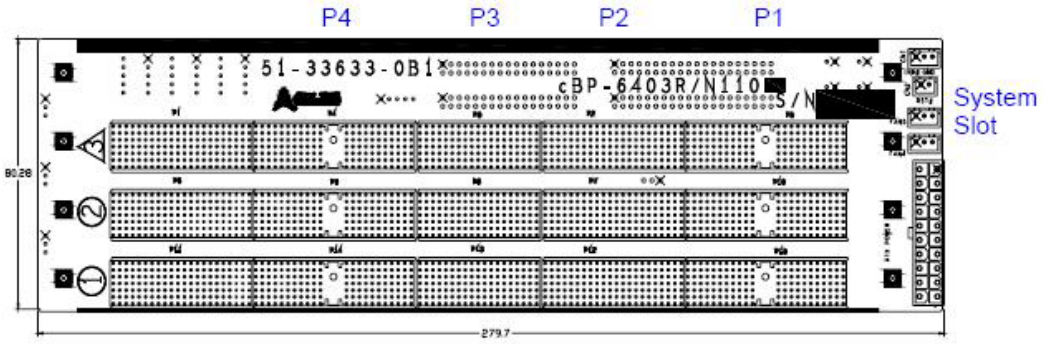
Pin	Z	A	B	C	D	E	F
22	GND	GND	NC	GND	GND	GND	GND
21	GND	NC	GND	NC	NC	NC	GND
20	GND	NC	GND	NC	GND	NC	GND
19	GND	GND	GND	NC	NC	ARERTJ	GND
18	GND	RVA43	RVB43	RVC43	GND	RVE43	GND
17	GND	RVA42	GND	PRSTJ	NC	NC	GND
16	GND	RVA41	RVB41	DEGJ	GND	RVE41	GND
15	GND	RVA40	GND	FALJ	NC	NC	GND
14	GND	AD35	AD34	AD33	GND	AD32	GND
13	GND	AD38	GND	V(I/O)	AD37	AD36	GND
12	GND	AD42	AD41	AD40	GND	AD39	GND
11	GND	AD45	GND	V(I/O)	AD44	AD43	GND
10	GND	AD49	AD48	AD47	GND	AD46	GND
9	GND	AD52	GND	V(I/O)	AD51	AD50	GND
8	GND	AD56	AD55	AD54	GND	AD53	GND
7	GND	AD59	GND	V(I/O)	AD58	AD57	GND
6	GND	AD63	AD62	AD61	GND	AD60	GND
5	GND	CBE5J	GND	V(I/O)	CBE4J	PAR64	GND
4	GND	V(I/O)	RVB29	CBE7J	GND	CBE6J	GND
3	GND	NC	GND	NC	NC	NC	GND
2	GND	CLK2	NC	GND	GNT2J	NC	GND
1	GND	CLK1	GND	REQ1J	GNT1J	REQ2J	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P5 - System Slot CPCI-P1

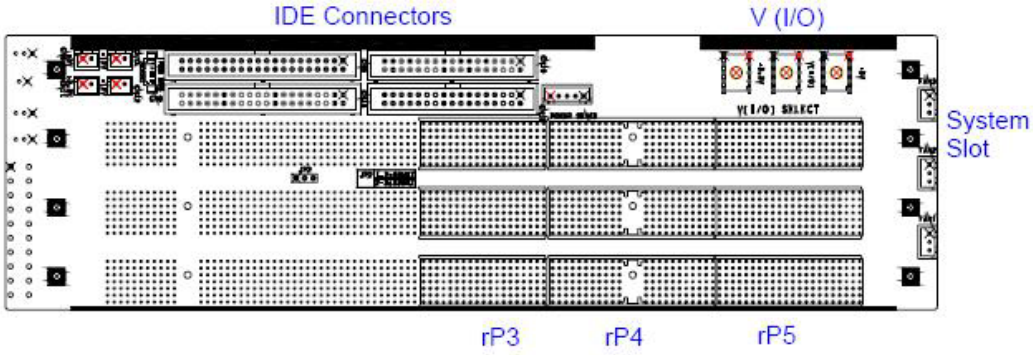
Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64J	ENUMJ	+3.3V	+5V	GND
24	GND	AD[1]	+5V	V(I/O)	AD[0]	ACK64J	GND
23	GND	+3.3V	AD[4]	AD[3]	+5V	AD[2]	GND
22	GND	AD[7]	GND	+3.3V	AD[6]	AD[5]	GND
21	GND	+3.3V	AD[9]	AD[8]	M66EN	CBE0J	GND
20	GND	AD[12]	GND	V(I/O)	AD[11]	AD[10]	GND
19	GND	+3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERRJ	GND	+3.3V	PARJ	CBE1J	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERRJ	GND
16	GND	DEVSELJ	GND	V(I/O)	STOPJ	LPCKJ	GND
15	GND	+3.3V	FRAMEJ	IRDYJ	GND	TRDYJ	GND
12-14	**Key Area (keep unobstructed on backplane to ease routing constraints)**						
11	GND	AD[18]	AD[17]	AD[16]	GND	CBE2J	GND
10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	CBE3J	GND	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	REQ0J	GND	+3.3V	CLK0	AD[31]	GND
5	GND	RVA5	RVB5	RSTJ	GND	GNT0J	GND
4	GND	IPMB_PWR	HEALTHY2J	V(I/O)	INTP	INTS	GND
3	GND	INTDJ	INTAJ	INTBJ	+5V	INTCJ	GND
2	GND	TCK	+5V	TMS	TDO2	TDO1	GND
1	GND	+5V	-12V	TRSTJ	+12V	+5V	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

3.3 cBP-6403R/N110

The backplane for the cPCIS-6235R/64/110 a 6U 64-bit, 3-slot chassis is the cBP - 6403R/N110, a 6U 64-bit, 3-slot. CompactPCI backplane with rear I/O.



cBP-6403R/N110 Front View



cBP-6403R/N110 Rear View

Features

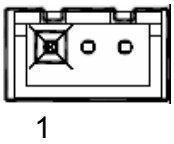
- Standard CompactPCI 2U height for 6U cPCI cards
- Support 80mm rear I/O for each slot
- Suitable for one dual-slot system module with two expansion cards
- PICMG 2.1 Hot Swap compliant 64-bit 33/66MHz 3-slot CompactPCI backplane with P3&P5 rear I/O

Specifications

- CompactPCI Compliancy
  - PICMG 2.0 CompactPCI core specification R3.0
  - PICMG 2.1 CompactPCI hot swap R2.0
- Dimension: 279.2 x 81 (mm, W x H)
- PCI bus clock: up to 64-bit/66MHz
- System slot rear I/O: P3,P4 and P5 rear I/O with AB type shroud
- Peripheral slots: two
- V (I/O): 3.3V or 5V selectable, default 5V
- Power Connectors: ATX connector x1
- Other connectors: INH#, Reset, PWR_FAL#, Voltage LEDs

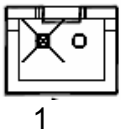
Pin Assignment

- CN1 - ATX Power Switch



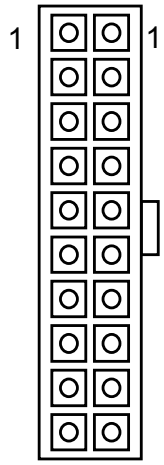
Pin #	Signal Name
1	INH#
2	Ground
3	DEG#

- CN2 - Reset Button



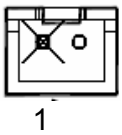
Pin #	Signal Name
1	PRST#
2	Ground

- CN5 - ATX Power Connector



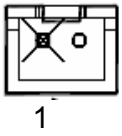
PIN#	Signal Name	PIN#	Signal Name
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GND	13	GND
4	+5V	14	PS_ON_L
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	PW-OK	18	-5V
9	5V STB	19	+5V
10	+12V	20	+5V

- CN6 - +5V LED connector



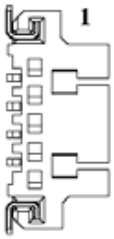
Pin #	Signal Name
1	+5V VCC
2	Ground

- CN7 - +12V LED connector



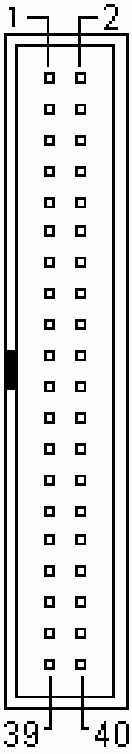
Pin #	Signal Name
1	+12V VCC
2	Ground

- CN8 - IPMB connector



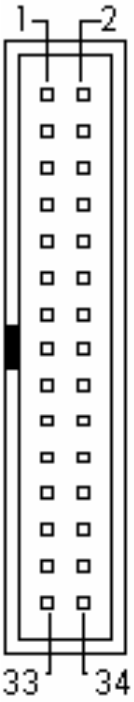
Pin #	Signal Name
1	IPMB SCL
2	Ground
3	IPMB SCA
4	IPMB PWR
5	ALERT#

- CN9/15 - IDE Drive Connector



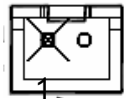
Signal Name	Pin #	Pin #	Signal Name
IDE1	1	2	IDE21
IDE2	3	4	IDE22
IDE3	5	6	IDE23
IDE4	7	8	IDE24
IDE5	9	10	IDE25
IDE6	11	12	IDE26
IDE7	13	14	IDE27
IDE8	15	16	IDE28
IDE9	17	18	IDE29
IDE10	19	20	IDE30
IDE11	21	22	IDE31
IDE12	23	24	IDE32
IDE13	25	26	IDE33
IDE14	27	28	IDE34
IDE15	29	30	IDE35
IDE16	31	32	IDE36
IDE17	33	34	IDE37
IDE18	35	36	IDE38
IDE19	37	38	IDE39
IDE20	39	40	IDE40

- CN10/16 - Floppy Drive Connector



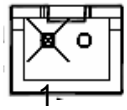
Signal Name	PIN#	PIN#	Signal Name
FDD1	1	2	FDD18
FDD2	3	4	FDD19
FDD3	5	6	FDD20
FDD4	7	8	FDD21
FDD5	9	10	FDD22
FDD6	11	12	FDD23
FDD7	13	14	FDD24
FDD8	15	16	FDD25
FDD9	17	18	FDD26
FDD10	19	20	FDD27
FDD11	21	22	FDD28
FDD12	23	24	FDD29
FDD13	25	26	FDD30
FDD14	27	28	FDD31
FDD15	29	30	FDD32
FDD16	31	32	FDD33
FDD17	33	34	FDD34

- CN11 - +3.3V LED connector



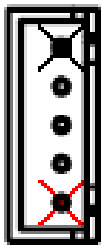
Pin #	Signal Name
1	+3.3V VCC
2	Ground

- CN12-12V LED connector



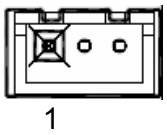
Pin #	Signal Name
1	Ground
2	-12V VCC

- CN14 - Power Sense connector



Pin #	Signal Name
1	+5V
2	Ground
3	+3.3V
4	+12V
5	NC

- FAN1/FAN2/FAN3/FAN4/FAN5 - Fan power connector

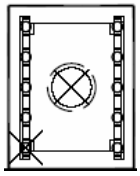


Pin #	Signal Name
1	NC
2	+12V
3	Ground

- JP2 - M66EN (short 33MHz, open 66MHz, default setting: short)

Pin #	Signal Name
1	NC
2	M66EN
3	Ground

- J1/J2/J3 - V (I/O), default: +5V



Pin #	Signal Name
1	+3.3V
2	V(I/O)
3	+5V

- P1/P6/P11 - System/Peripheral Slot CPCI-P5

Pin	Z	A	B	C	D	E	F
22	GND	NC	NC	NC	NC	NC	GND
21	GND	NC	NC	NC	NC	NC	GND
20	GND	NC	NC	NC	NC	NC	GND
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P4/P9/P14 - System/Peripheral Slot CPCI-P4

Pin	Z	A	B	C	D	E	F
25	GND	NC	NC	NC	NC	NC	GND
24	GND	NC	NC	NC	NC	NC	GND
23	GND	NC	NC	NC	NC	NC	GND
22	GND	NC	NC	NC	NC	NC	GND
21	GND	NC	NC	NC	NC	NC	GND
20	GND	NC	NC	NC	NC	NC	GND
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	GND
12-14	**Key Area (keep unobstructed on backplane to ease routing constraints)**						
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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P3/P8/P13 - System/Peripheral Slot CPCI-P3

Pin	Z	A	B	C	D	E	F
19	GND	NC	NC	NC	NC	NC	GND
18	GND	NC	NC	NC	NC	NC	GND
17	GND	NC	NC	NC	NC	NC	GND
16	GND	NC	NC	NC	NC	NC	GND
15	GND	NC	NC	NC	NC	NC	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	NC	NC	NC	NC	NC	GND
3	GND	NC	NC	NC	NC	NC	GND
2	GND	NC	NC	NC	NC	NC	GND
1	GND	NC	NC	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

-

- P7/P12 - Peripheral Slot CPCI-P2

Pin	Z	A	B	C	D	E	F
22	GND	GND	GND	NC	NC	NC	GND
21	GND	NC	GND	NC	NC	NC	GND
20	GND	NC	GND	NC	GND	NC	GND
19	GND	GND	GND	NC	NC	NC	GND
18	GND	RVA43	RVB43	RVC43	GND	RVE43	GND
17	GND	RVA42	GND	NC	NC	NC	GND
16	GND	RVA41	RVB41	NC	GND	RVE41	GND
15	GND	RVA40	GND	NC	NC	NC	GND
14	GND	AD35	AD34	AD33	GND	AD32	GND
13	GND	AD38	GND	V(I/O)	AD37	AD36	GND
12	GND	AD42	AD41	AD40	GND	AD39	GND
11	GND	AD45	GND	V(I/O)	AD44	AD43	GND
10	GND	AD49	AD48	AD47	GND	AD46	GND
9	GND	AD52	GND	V(I/O)	AD51	AD50	GND
8	GND	AD56	AD55	AD54	GND	AD53	GND
7	GND	AD59	GND	V(I/O)	AD58	AD57	GND
6	GND	AD63	AD62	AD61	GND	AD60	GND
5	GND	CBE5J	GND	V(I/O)	CBE4J	PAR64	GND
4	GND	V(I/O)	RVB29	CBE7J	GND	CBE6J	GND
3	GND	NC	GND	NC	NC	NC	GND
2	GND	NC	NC	GND	NC	NC	GND
1	GND	NC	GND	NC	NC	NC	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P10/P15 - Peripheral Slot CPCI-P1

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64J	ENUMJ	+3.3V	+5V	GND
24	GND	AD[1]	+5V	V(I/O)	AD[0]	ACK64J	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	CBE0J	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	SERRJ	GND	+3.3V	PARJ	CBE1J	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERRJ	GND
16	GND	DEVSELJ	GND	V(I/O)	STOPJ	LPCKJ	GND
15	GND	+3.3V	FRAMEJ	IRDYJ	GND	TRDYJ	GND
12-14	**Key Area (keep unobstructed on backplane to ease routing constraints)**						
11	GND	AD[18]	AD[17]	AD[16]	GND	CBE2J	GND
10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	CBE3J	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	REQ0J	GND	+3.3V	CLK0	AD[31]	GND
5	GND	RVA5	RVB5	RSTJ	GND	GNT0J	GND
4	GND	IPMB_PWR	HEALTHY2J	V(I/O)	INTP	INTS	GND
3	GND	INTDJ	INTAJ	INTBJ	+5V	INTCJ	GND
2	GND	TCK	+5V	TMS	TDO2	TDO1	GND
1	GND	+5V	-12V	TRSTJ	+12V	+5V	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P2 - System Slot CPCI-P2

Pin	Z	A	B	C	D	E	F
22	GND	GND	NC	GND	GND	GND	GND
21	GND	NC	GND	NC	NC	NC	GND
20	GND	NC	GND	NC	GND	NC	GND
19	GND	GND	GND	NC	NC	ARERTJ	GND
18	GND	RVA43	RVB43	RVC43	GND	RVE43	GND
17	GND	RVA42	GND	PRSTJ	NC	NC	GND
16	GND	RVA41	RVB41	DEGJ	GND	RVE41	GND
15	GND	RVA40	GND	FALJ	NC	NC	GND
14	GND	AD35	AD34	AD33	GND	AD32	GND
13	GND	AD38	GND	V(I/O)	AD37	AD36	GND
12	GND	AD42	AD41	AD40	GND	AD39	GND
11	GND	AD45	GND	V(I/O)	AD44	AD43	GND
10	GND	AD49	AD48	AD47	GND	AD46	GND
9	GND	AD52	GND	V(I/O)	AD51	AD50	GND
8	GND	AD56	AD55	AD54	GND	AD53	GND
7	GND	AD59	GND	V(I/O)	AD58	AD57	GND
6	GND	AD63	AD62	AD61	GND	AD60	GND
5	GND	CBE5J	GND	V(I/O)	CBE4J	PAR64	GND
4	GND	V(I/O)	RVB29	CBE7J	GND	CBE6J	GND
3	GND	NC	GND	NC	NC	NC	GND
2	GND	CLK2	NC	GND	GNT2J	NC	GND
1	GND	CLK1	GND	REQ1J	GNT1J	REQ2J	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

- P5 - System Slot CPCI-P1

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64J	ENUMJ	+3.3V	+5V	GND
24	GND	AD[1]	+5V	V(I/O)	AD[0]	ACK64J	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	CBE0J	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	SERRJ	GND	+3.3V	PARJ	CBE1J	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERRJ	GND
16	GND	DEVSELJ	GND	V(I/O)	STOPJ	LPCKJ	GND
15	GND	+3.3V	FRAMEJ	IRDYJ	GND	TRDYJ	GND
12-14	**Key Area (keep unobstructed on backplane to ease routing constraints)**						
11	GND	AD[18]	AD[17]	AD[16]	GND	CBE2J	GND
10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	CBE3J	GND	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	REQ0J	GND	+3.3V	CLK0	AD[31]	GND
5	GND	RVA5	RVB5	RSTJ	GND	GNT0J	GND
4	GND	IPMB_PWR	HEALTHY2J	V(I/O)	INTP	INTS	GND
3	GND	INTDJ	INTAJ	INTBJ	+5V	INTCJ	GND
2	GND	TCK	+5V	TMS	TDO2	TDO1	GND
1	GND	+5V	-12V	TRSTJ	+12V	+5V	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

4 Cooling Fans

The cPCIS-6230R/6240R Series sub-systems are equipped with four fans in the chassis to provide cooling for the system board and peripheral cards. There are two intake and two exhaust fans each rated at 28.8 CFM and a removable/replaceable air filter accessible through a panel below the CD-ROM/floppy drives.

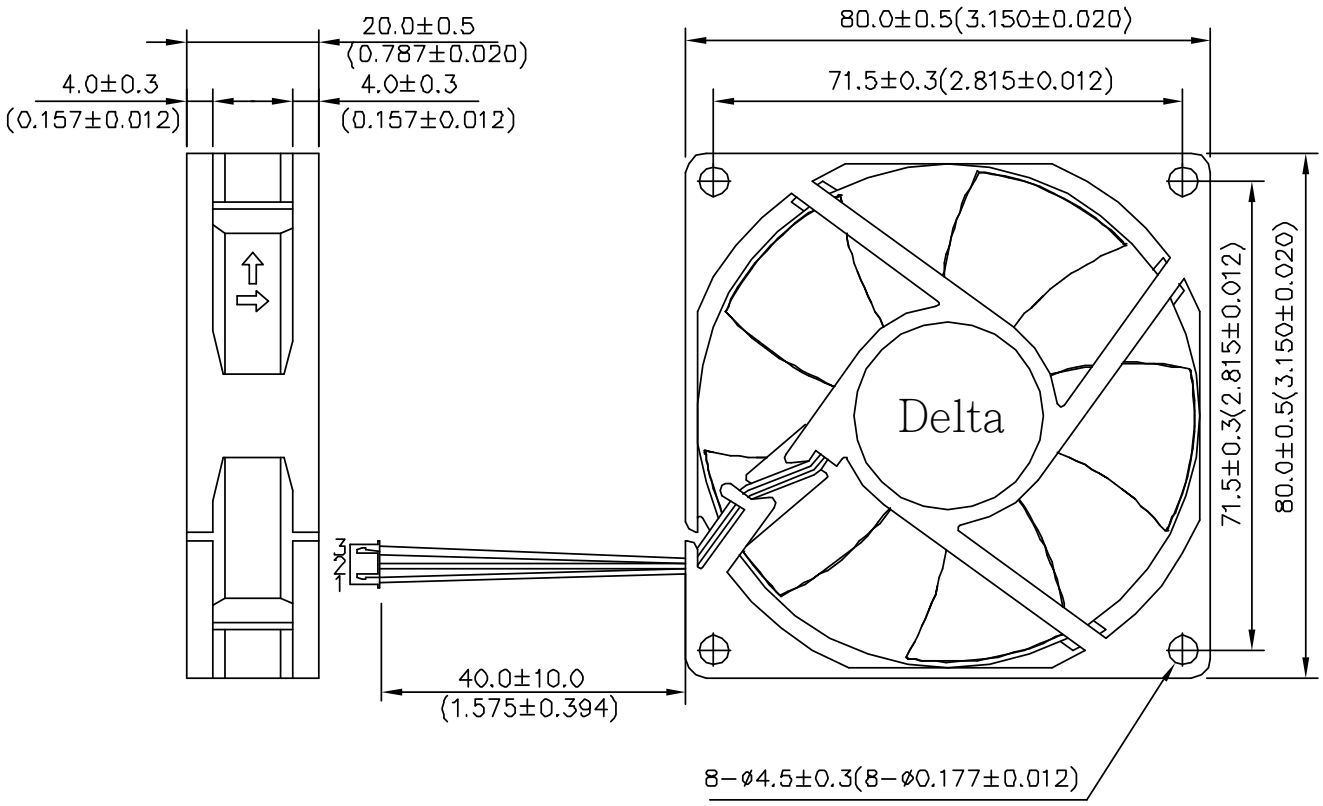
4.1 Removing and Replacing the Air Filter

To ensure proper performance of the system, the air filter should be cleaned or replaced as necessary. A replacement air filter is supplied and can be found in the Accessory Packet.

Air Filter Removal and Replacement Procedure

1. Remove lid and filter cover as described in Section 2.2, Installing the Hard Drive (p. 6).
2. Clean the existing filter or replace it with the one provided.
3. Place the filter back in position and replace the filter cover and lid by reversing the above procedure.

4.2 Mechanical Drawing



4.3 Specifications

Model: Delta AFB0812SHD-F00

- Rated Speed for each fan: 4000rpm
- Rated Current for each fan: 0.22A
- Rated Power for each fan: 2.64W
- Dimensions: 80 x 80 x 20mm
- Weight: 74 g
- Type: 12V DC brushless, with ball bearing.
- Rated voltage: 12V
- Operation Voltage: 7.0 – 13.8 VDC
- Starting Voltage: 4.0 VDC(25°C power on/off)
- Rated Current: 0.22 A
- Rated Power: 2.64 Watts
- Fan speed: 4000RPM
- Max air flow: 48.2 CFM
- Acoustical Noise: 41 dB(A)
- Operating Temperature: -10 to +70°C
- Storage Temperature: -40 to +75°C
- MTBF: 70000 hours

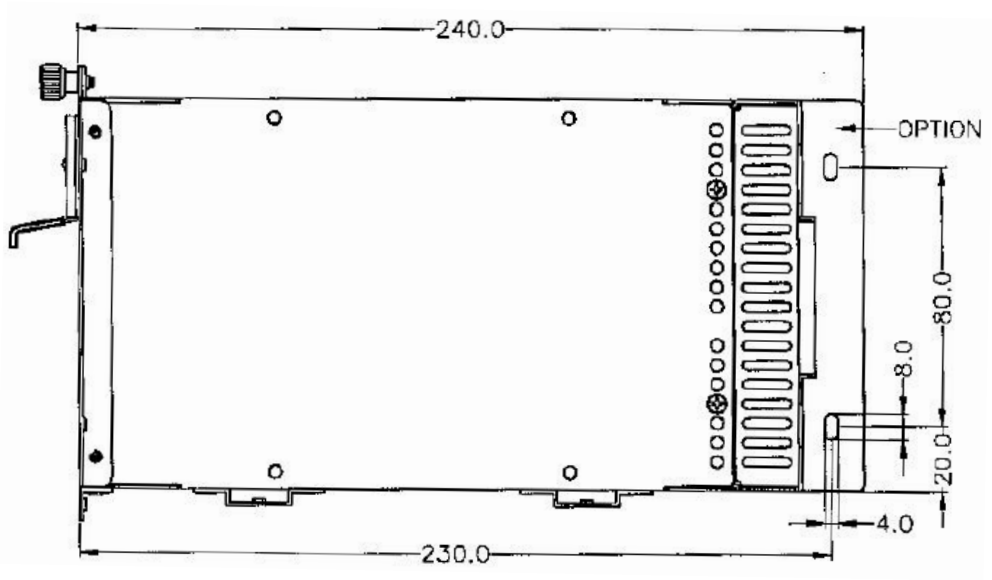
5 Power Supply Unit

The power supply options for the cPCIS-6235R Series are as follows:

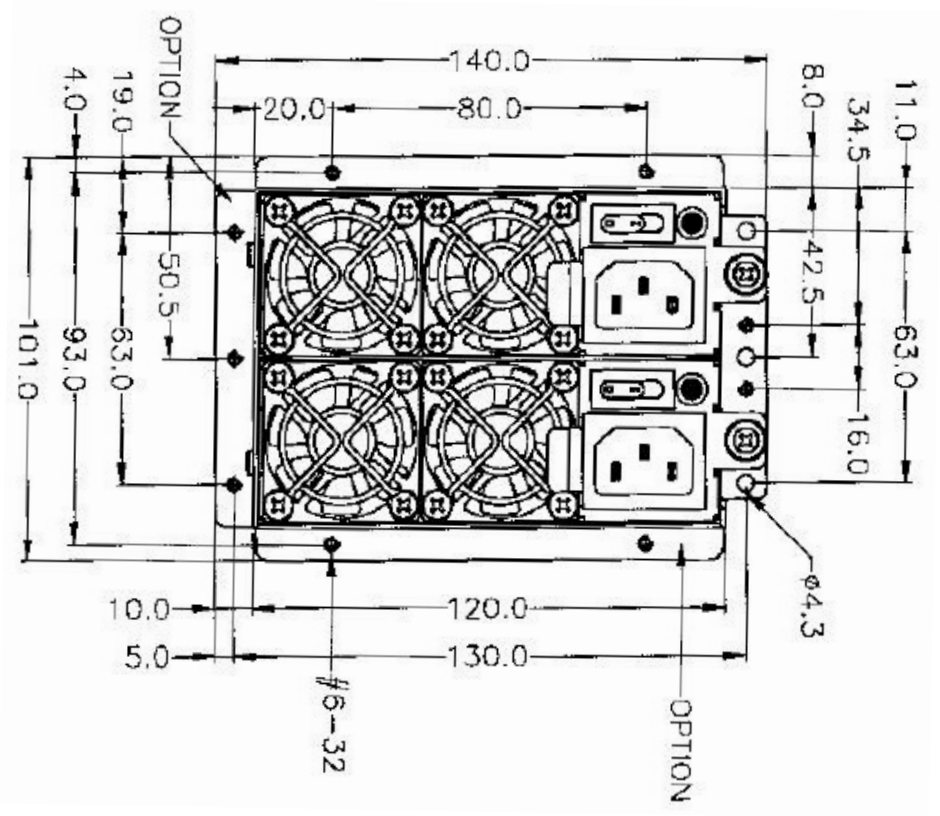
- R2A-6300P

5.1 R2A-6300P

Mechanical Drawing



Power Supply Top View



Power Supply Side View

Features

- Active PFC (full range), meet IEC-1000-3-2 CLASS D
- Temperature range:Operating 0 to 40°C, Storage –20 to 80°C
- EMI noise filter: FCC CLASS B, CISPR22 CLASS B
- Safety: UL 1950, CSA 22.2 NO/ 950, TUV IEC 950
- Cooling: Two 40 mm DC fans per module

Input Characteristics

- Cooling: Two 40 mm DC fans per module
- Voltage: 90 – 264VAC full range
- Frequency: 47 – 63 Hz
- Input Current: 6.0A for 115VAC
  3.0A for 230VAC
- Inrush Current: 50.0A max for 80VAC; 80.0A max for 230VAC

Output Characteristics

OUTPUT VOLTAGE	OUTPUT CURRENT			REGULATION		OUTPUT
	MIN.[A]	MAX.[A]	PEAK(A)	LOAD	LINE	RIPPLE & NOISE MAX. [P-P]
5V	3.0	32		± 5%	± 1%	50mV
12V	2	16	20	± 7%	± 1%	120mV
-5V	0.05	0.5		±10%	± 1%	150mV
-12V	0.05	0.8		±10%	± 1%	150mV
3.3V	1.0	20		± 5%	± 1%	50mV
+5VSB	0.1	1.5		± 5%	± 1%	60mV

Notes:

1. TOTAL CURRENT OF +5V AND + 3.3V NOT EXCEED 35 A
2. TOTAL +5V AND 3.3V AND 12V POWER NOT EXCEED 285/305 W

Specifications

- Cooling: Two 40 mm DC fans per module
- Temperature operating range: Operating 0 to 40°C, Storage –20 to 80°C
- Hold up time: 16 ms minimum at full load & 90 VAC input voltage
- Dielectric withstand: input / output 1500 VAC for 1 second
- Efficiency: 63% typical at full load
- Power good signal: on delay 100 ms to 500 ms, off delay 1 ms
- Over load protection: 110 % to 160 %
- Over voltage protection: 5V: 5.7V to 6.5V
  3.3V: 3.9V to 4.3V
  12V: 13.6V to 15.0V
- Short circuit protection: +5V, -5V, +12V, -12V, +3.3V
- EMI noise filter: FCC CLASS B, CISPR22 CLASS B
- Safety: UL 1950, CSA 22.2 NO/ 950, TÜV IEC 950
- Remote on / off control
- Hot-Swappable / Hot-Pluggable redundancy function
- Balance load sharing design
- Dimensions: 205 (D) x 100 (W) x 40.5 (H) mm
- MTBF : 106,081 hours

6 System Alarm Board

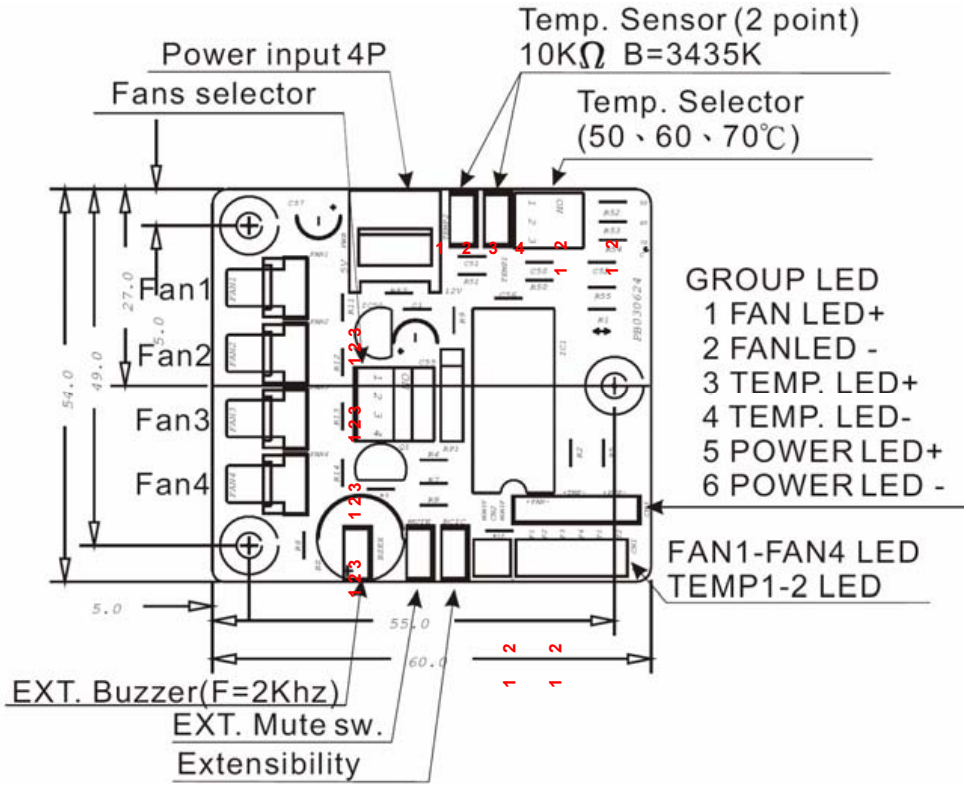
Six LEDs indicate power voltage status on +3.3V,+5V +12V and -12V, fan status and temperature alarm.

Alarm Module- LY-E42BM

Feature:

1. Support 4 fans connection. If any of them break down the correlative LED will be flashing and the buzzer will start alarm to remind users.
2. Support temperatures. (Temp.1 and Temp.2) If any of them over level, the correlative LED will be flashing and the buzzer will start alarm to remind users.
3. Three options for temperature. (50°C 60°C or 70°C)
4. Fans and Temperatures have group LED display.
5. External mute switch available
6. Extensibility - To detect more than 4 fans, only need to connector on new Environment Control Board by a wire set.

Drawing:



Pin Assignment:

Fan1, Fan2, Fan3, Fan4- Fan Connector

Pin #	Signal Name
1	GND
2	+12V
3	F Type Signal

Power Input 4P Connector

Pin #	Signal Name
1	+5V
2	GND
3	GND
4	+12V

Temp. Sensor Connector (Temp1, Temp2)

Pin #	Signal Name
1	Temp. Sensor Signal
2	GND

Temp. Detect Selector (Only one can be selected, default: 50°C)

Jumper	Temp. Limit
1	50°C
2	60°C
3	70°C

Group LED Connector

Pin #	Signal Name
1	Fan LED +
2	Fan LED -
3	Temp. LED +
4	Temp. LED -
5	Not Use
6	Not Use

Fan& Temp. LED Connector

Pin #	Signal Name
F1	Fan 1 LED
F2	Fan 2 LED
F3	Fan 3 LED
F4	Fan 4 LED
T1	Not Use
T2	Not Use

Extension Mute Switch

Pin #	Signal Name
1	GND
2	Buzzer Reset

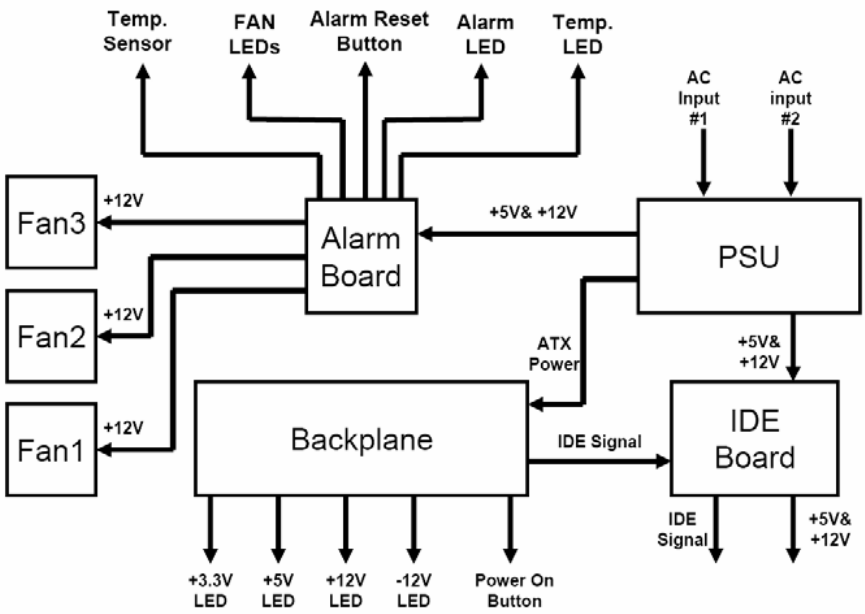
Extension Connector

Pin #	Signal Name
1	GND
2	Ext. Signal

Fan Selector (Default: Fan1, Fan2, Fan3 On)

Pin #	Signal Name
1	Fan 1
2	Fan 2
3	Fan 3
4	Not Use

cPCIS-6235R System Block Diagram



7 Specifications

cPCIS-6235R Series

Mechanical

- Form Factor: 6U CompactPCI with 80 mm depth rear I/O
- Enclosure: 19” 9U height rack-mount enclosure
  Coated metal plate outer covering
- Dimensions: 482.6(W)mm x 88.5(H)mm x 296.2(D)mm.(w/o handle).
- Usable width: 3 slots.
- Weight: cPCIS-6235R models :17.1kg
- Built-in 300W+300W Dual AC-input mini redundant power supply
- Internal space for one 2.5”HDD and one external IDE device

Environment

- Operating Temperature: 0 to 40°C
- Storage Temperature: -20 to 80°C
- Humidity: 5% to 95%, non-condensed
- Shock: 15G peak to peak, 11ms duration, non-operation
- Vibration: 1.88 Grms, 5-500Hz, each axis, non-operation
  “ “ 0.50 Grms, 5-500Hz, each axis, operating with 2.5”HDD

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.

- 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, have 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.

Warranty Policy

Thank you for choosing ADLINK. To understand your rights and enjoy all the after-sales services we offer, please read the following carefully.

1. Before using ADLINK's products please read the user manual and follow the instructions exactly. When sending in damaged products for repair, please attach an RMA application form which can be downloaded from: http://rma.adlinktech.com/policy/.
2. All ADLINK products come with a two-year guarantee
   - The warranty period starts from the product's shipment date from ADLINK's factory.
   - Peripherals and third-party products not manufactured by ADLINK will be covered by the original manufacturers' warranty.
   - For products containing storage devices (hard drives, flash cards, etc.), please back up your data before sending them for repair. ADLINK is not responsible for loss of data.
   - Please ensure the use of properly licensed software with our systems. ADLINK does not condone the use of pirated software and will not service systems using such software. ADLINK will not be held legally responsible for products shipped with unlicensed software installed by the user.
   - For general repairs, please do not include peripheral accessories. If peripherals need to be included, be certain to specify which items you sent on the RMA Request & Confirmation Form. ADLINK is not responsible for items not listed on the RMA Request & Confirmation Form.
3. Our repair service is not covered by ADLINK's two-year guarantee in the following situations:
   - Damage caused by not following instructions in the user's manual.
   - Damage caused by carelessness on the user's part during product transportation.
   - Damage caused by fire, earthquakes, floods, lightening, pollution, other acts of God, and/or incorrect usage of voltage transformers.
   - Damage caused by unsuitable storage environments (i.e. high temperatures, high humidity, or volatile chemicals).
   - Damage caused by leakage of battery fluid during or after change of batteries by customer/user.
   - Damage from improper repair by unauthorized technicians.
   - Products with altered and/or damaged serial numbers are not entitled to our service.
   - Other categories not protected under our warranty.
4. Customers are responsible for shipping costs to transport damaged products to our company or sales office.
5. To ensure the speed and quality of product repair, please download an RMA application form from our company website: http://rma.adlinktech.com/policy. Damaged products with attached RMA forms receive priority.

If you have any further questions, please email our FAE staff: service@adlinktech.com.