

# **CPCI Backplane Manual**

## **PRODUCT DOCUMENTATION**

### **PD03 CP3-BP6-ATX**

Reference ID: 24229 PD03

Revision: 01

Issued: March 01, 2002



The product described in this manual is in compliance with all applied CE standards.



## Revision History

Manual/Product Title:		CPCI Backplane Manual: Product Documentation: CP3-BP6-ATX
Reference ID:		24229 PD03
Rev. Index	Brief Description of Changes	Date of Issue
01	Initial Issue	Mar. 01, 2002

## Imprint

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This manual was realized by: **TPD/Engineering, PEP Modular Computers GmbH.**



## 1. Introduction

The specific product description provided with this product documentation is part of the PEP's CPCI Backplane manual. For further information, in particular regarding general details as well as safety and warranty statements, refer to the CPCI Backplane Manual, ID 24229.

## 2. CP3-BP6-ATX ATX-Type Backplane

The main features of the 3U, 6-slot, ATX powered backplane CP3-BP6-ATX are described in the following table:

**Table 1: Distinctive Features of Backplane CP3-BP6-ATX**

Feature	Specification
Form Factor	3U
Size	120.7*128.7 mm
Number of Slots	6
Bus Resolution	64 bits: slots 1 to 4 32 bits: slots 5 and 6
Bus Frequency	33MHz: slots 1 to 6
Rear I/O Connectivity	P2 on slots 5 and 6
Hot-Swap Capability	—
Power Supply Connector	ATX
Redundant Power Supply	—
Flexible Grounding Option	Yes
Fan Connector	Yes
MSD Connector	Optional
Power LED Connector	Yes
PS-ON Connector	Yes
Reset Function Connector	Yes



### 3. Board Layout

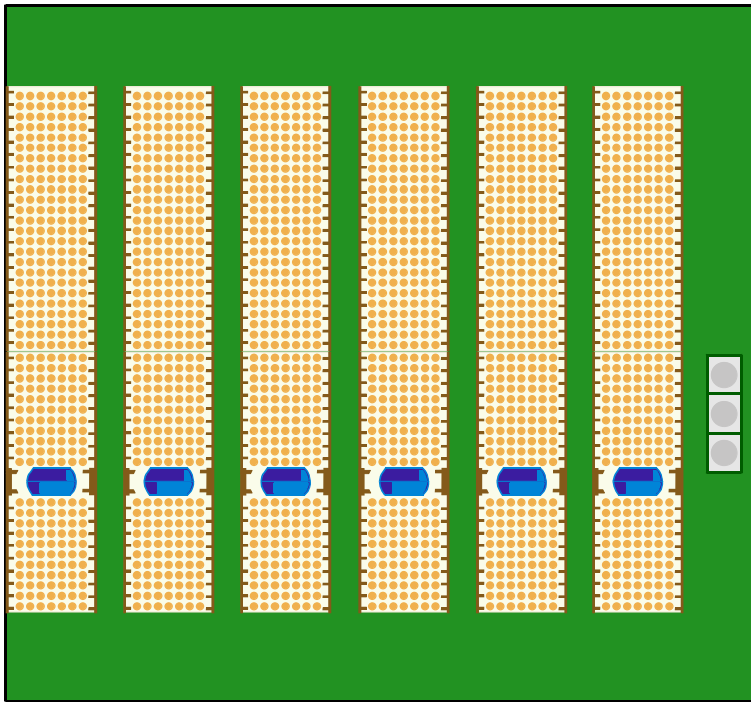
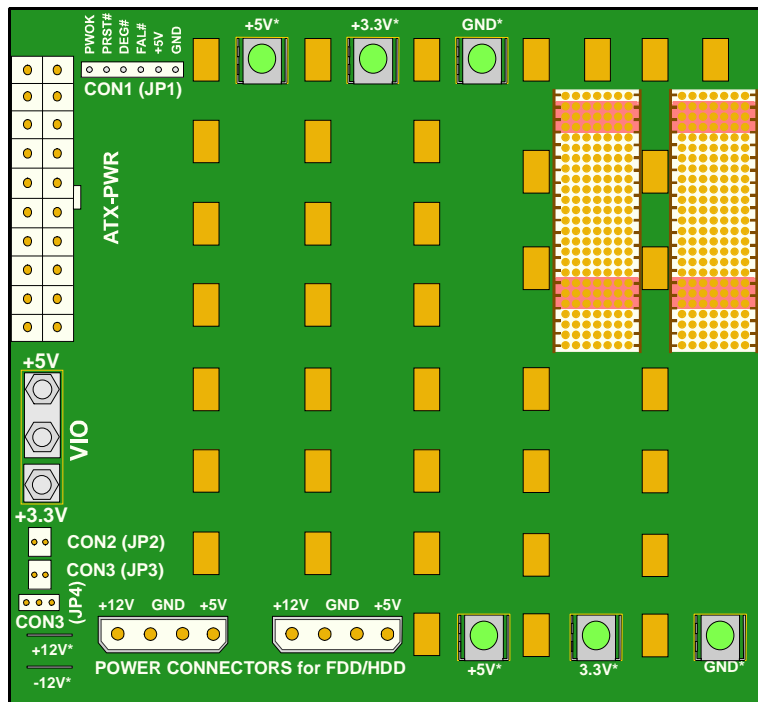


Figure 1: CP3-BP6-ATX Board Layout (Front)



Figure 2: CP3-BP6-ATX Board Layout (Reverse)



Components marked with an asterisk (\*) are optionally available.



## 4. Signalling Environment

### 4.1 V(I/O) Setting

The backplane provides a block of three high-current terminals (designated as V(I/O)) for connecting V(I/O) to either the +5V or +3.3V power supply. V(I/O) must be connected either to the +5V or the +3.3V input power. It is the responsibility of the system integrator to ensure that the required signalling voltage is implemented and that the backplane P1 connector coding corresponds to the implemented signalling voltage.



#### **Warning!**

Using both 3.3V and 5V boards within the same system may result in damage to your equipment. Please note that the presence of only one 5V board determines a 5V signalling environment. The default setting is 5V.

### 4.2 P1 Connector Coding for V(I/O)

The CompactPCI Specification foresees coding of the P1 connector to correspond to the signalling environment of the PCI bus. For this reason, only boards with universal or the corresponding coding can be physically inserted into the backplane. PEP's factory default setting for V(I/O) is +5V and male, 1567 code, brilliant blue coding keys are used.



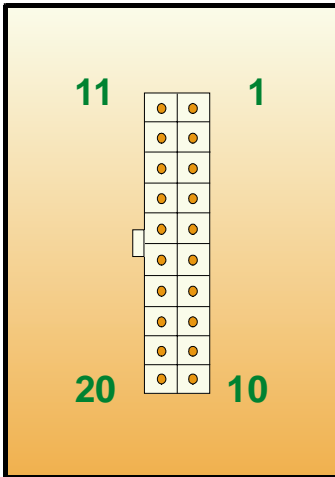
#### **Warning!**

Using boards with an inadequate signalling voltage may result in damage to your equipment. Therefore, when changing the signalling environment from 5V to 3.3V or vice versa, it is mandatory that proper coding keys are used (refer to chapter 3 of the CPCI Backplane Manual, ID 24229, for details).



## 5. Interfaces

### 5.1 Line/Power Supply Connector



**Figure 3: Orientation and Pinouts of CP3-BP6-ATX ATX Connector**

The main input power voltage is fed directly to the power supply unit without any throughput via a backplane power supply connector. The power supply unit's V1 ... V4 output power is distributed to the backplane by means of the 20-contact, male, Molex Mini-Fit Junior Connector "ATX".

For the pinouts of the ATX power supply connector please refer to table below.

**Table 2: ATX Connector Pinouts**

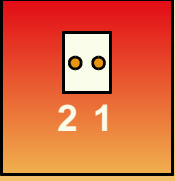
Pin	Function	Pin	Function
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GND	13	GND
4	+5V	14	PS_ON#
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	PWR_OK	18	-5V
9	+5 VSB	19	+5V
10	+12V	20	+5V



### 5.2 Fan Connector

The backplane is equipped with the lockable Molex male connector JP3 for the connection of fans to the 12V power supply of the bus.

Figure 4: Orientation and Pinouts of CP3-BP6-ATX Connector JP3



**Table 3: Pinouts of CP3-BP6-ATX Connector JP3**

Pin	Function
1	GND
2	+12V

### 5.3 Power LED Connector


The 3-contact, 2.54 mm pin-row, male connector, JP4, offers the possibility of connecting a "Power ON/OFF" LED. Voltage is supplied by the 5V line.



**Warning!**

By default, voltage is applied by the 5V supply line without any resistor being serially connected to the LED. However, such a resistor must be inserted in the circuit to protect the LED from possible over current.

Figure 5: Orientation and Pinouts of CP3-BP6-ATX Connector JP4



**Table 4: Pinouts of CP3-BP6-ATX Connector JP4**

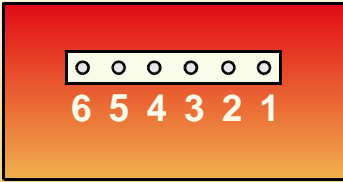
Pin	Function
1	GND
2	N/C
3	+5V



### 5.4 Auxiliary Signal Connector

The connection of the auxiliary signals is accomplished by means of the 6-contact, 2.54 mm pin-row, male connector, JP1.

Figure 6: Orientation and Pinouts of CP3-BP6-ATX Connector JP1I



**Legend:**  
<sup>1</sup> Also sense for power supply

**Table 5: Pinouts of CP3-BP6-ATX Connector JP1**

Pin	Function
1	GND <sup>1</sup>
2	+5V <sup>1</sup>
3	FAL#
4	DEG#
5	PRST#
6	PWOK

### 5.5 PS\_ON Connector

The 2-contact, Molex male connector, JP2, offers the possibility to connect an external power supply switch for remote ON/OFF control of the power supply unit.

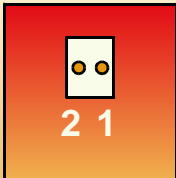
This connector is jumpered by default. To connect the external power supply switch it must be de-jumpered.



**Note...**

The remote control function must be supported by the power supply unit. Please refer to the description of your specific power supply unit for any further details.

Figure 7: Orientation and Pinouts of CP3-BP6-ATX Connector JP2



**Table 6: Pinouts of CP3-BP6-ATX Connector**

Pin	Function
1	GND
2	PS_ON#