Modular Computers®

CPCI Backplane Manual

PRODUCT DOCUMENTATION

PD02

CP3-BP4-M

Reference ID: 24229 PD02
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-BP4-M
Reference ID:	24229 PD02

Rev. Index	Brief Description of Changes	Date of Issue
01	Initial Issue	Mar. 01, 2002

Imprint

Modular Computers ®

DISCLAIMER:

PEP Modular Computers GmbH rejects any liability for the correctness and completeness of this manual as well as its suitability for any particular purpose.

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-BP4-M DIN Type M Backplane

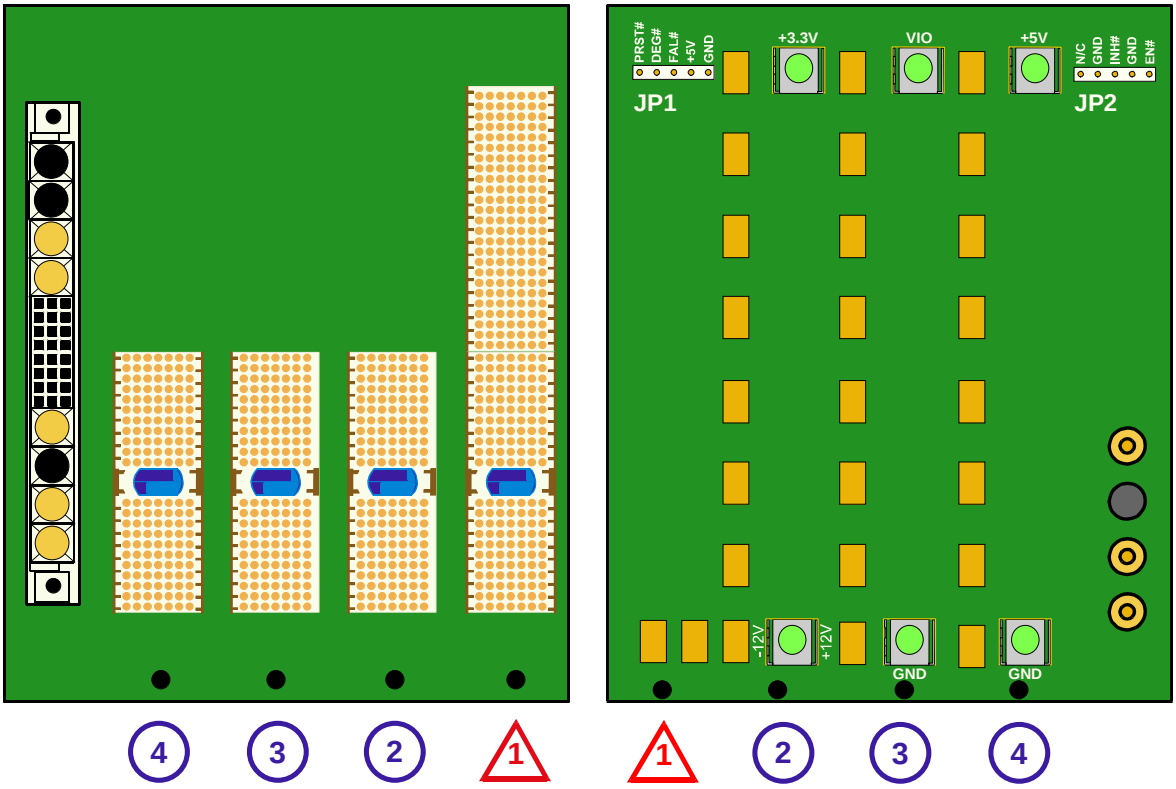
The main features of the 3U, 4-slot, DIN type M backplane CP3-BP4-M are described in the following table:

Table 1: Distinctive Features of Backplane CP3-BP4-M

Feature	Specification
Form Factor	3U
Size	100.7*128.7mm
Number of Slots	4
Bus Resolution	32 bits: slots 1..4
Bus Frequency	33MHz: all slots
Rear I/O Connectivity	—
Hot-Swap Capability	—
Power Supply Connector	DIN type M
Redundant Power Supply	—
Flexible Grounding Option	Yes
Fan Connector	—
MSD Connector	—
Power LED Connector	Yes
PS-ON Connector	Yes
Reset Function Connector	Yes

3. Board Layout

Figure 1: CP3-BP4-M Board Layout (Front and Reverse Side)



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 Connector

Instead of a 3-pole Mate-N-Lok connector the power supply to the backplane is connected by means of 3 separate pins on the reverse side of the backplane, to which power supply cables should be soldered.

Figure 2: Orientation and Pinouts of CP3-BP4-M Power Supply Connector Pins

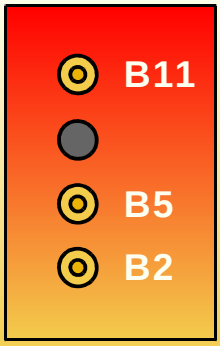


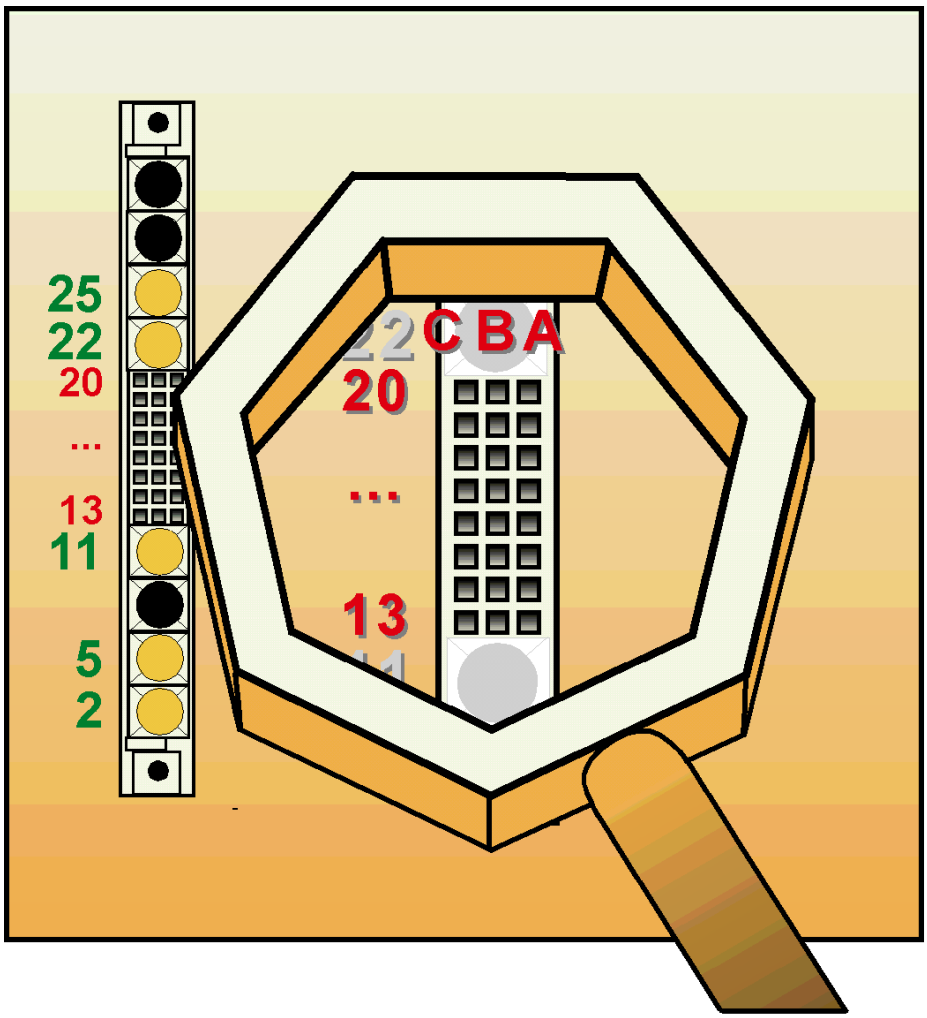
Table 2: Pinouts of CP3-BP4-M Power Supply Connector

Pin	Function
B2	L or +DC
B5	N or -DC
B11	PE

5.2 Power Supply Connector

The input voltages to the power supply unit and the V1 ... V4 output voltages from the power supply unit to the backplane are connected via a 32-position, DIN type M, female power supply connector.

Figure 3: Orientation and Pinouts of CP3-BP4-M Power Supply Connector



Warning!

System integrators must ensure that only power supplies which comply with the pinout as provided in Table 3 are used with this connector!

Pins B2, B5, B28, and B31 do not comply with the CompactPCI Power Interface Specification.

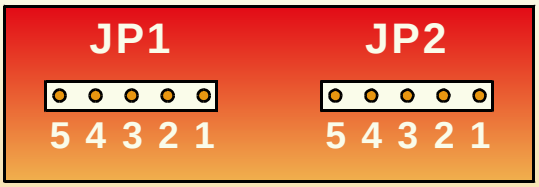
Table 3: DIN Type M Connector Pinout

Pin	Function	Pin	Function	Pin	Function
		B.2	L or +DC		
		B.5	N or -DC		
		B.8	No Pin Loaded		
		B.11	PE		
C.13	EN#	B.13	+3.3V	A.13	Spare
C.14	DEG#	B.14	+3.3V	A.14	INH#
C.15	FAL#	B.15	+3.3V	A.15	ISH
C.16	+3.3V	B.16	+3.3V	A.16	5V Sense -
C.17	+3.3V	B.17	+3.3V	A.17	5V Sense +
C.18	+3.3V	B.18	+3.3V	A.18	+3.3V
C.19	+12V	B.19	+12V	A.19	+12V
C.20	-12V	B.20	-12V	A.20	-12V
		B.22	+5V		
		B.25	GND		
		B.28	No Pin Loaded		
		B.31	No Pin Loaded		
L = line, N = neutral, PE = protective earth;					

5.3 Auxiliary Signal Connectors

The connection of the auxiliary signals is accomplished via two 5-contact, 2.54 mm pin-row, male connectors, JP1 and JP2, which can be soldered or wrapped or be used with appropriate connectors.

Figure 4: Orientation and Pinouts of CP3-BP4-M Connectors JP1 and JP2



Legend:

[1] Also sense for power supply;
[2] N/C = not connected.

Table 4: Pinouts of CP3-BP4-M Connectors JP1 and JP2

Pin		Function
JP1	1	GND[1]
	2	+5V[1]
	3	FAL#
	4	DEG#
	5	PRST#
JP2	1	EN#
	2	GND
	3	INH#
	4	GND
	5	N/C[2]