

DYNAMIC ENGINEERING

150 DuBois St. Suite 3, Santa Cruz Ca. 95060
831-457-8891 Fax 831-457-4793
sales@dyneng.com
www.dyneng.com
Est. 1988

User Manual

CPCI-J2-SCSI

**CPCI User IO for 3U
J2 ↔ SCSI connector
Rear Panel IO system**

Revision A1
Corresponding Hardware: Revision A/B
PROM revision N/A
10-2004-0501/2

cPCI-J2-SCSI Rear Panel IO for J2 in 3U cPCI system

This document contains information of proprietary interest to Dynamic Engineering. It has been supplied in confidence and the recipient, by accepting this material, agrees that the subject matter will not be copied or reproduced, in whole or in part, nor its contents revealed in any manner or to any person except to meet the purpose for which it was delivered.

Dynamic Engineering has made every effort to ensure that this manual is accurate and complete. Still, the company reserves the right to make improvements or changes in the product described in this document at any time and without notice. Furthermore, Dynamic Engineering assumes no liability arising out of the application or use of the device described herein.

The electronic equipment described herein generates, uses, and can radiate radio frequency energy. Operation of this equipment in a residential area is likely to cause radio interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

Dynamic Engineering's products are not authorized for use as critical components in life support devices or systems without the express written approval of the president of Dynamic Engineering.

This product has been designed to operate with cPCI Modules and compatible user-provided equipment. Connection of incompatible hardware is likely to cause serious damage.

©2004-2007 by Dynamic Engineering.

Other trademarks and registered trademarks are owned by their respective manufactures.
Revised July 6th, 2007



Table of Contents

PRODUCT DESCRIPTION	5
APPLICATIONS GUIDE	8
Interfacing	8
CONSTRUCTION AND RELIABILITY	9
THERMAL CONSIDERATIONS	9
WARRANTY AND REPAIR	10
SERVICE POLICY	10
OUT OF WARRANTY REPAIRS	10
FOR SERVICE CONTACT:	10
SPECIFICATIONS	11
ORDER INFORMATION	11



List of Figures

FIGURE 1	CPCI-J2-SCSI	5
FIGURE 2	CPCI-J2-SCSI CONNECTOR PINOUT	7

Product Description

Frequently in Compact PCI systems there are advantages to using cable options on the rear of the equipment rack. Modules can be inserted and removed from the front without all of the cables to deal with, plus it is a neater installation. For users with rear IO requirements the cPCI-J2-SCSI provides a path to the rear IO on the chassis.

The J2 connector in a 3U cPCI system can be used for IO or the upper half of the PCI bus. For systems with IO on J2, and using PMC's; the definitions on J2 will match the Pn4 connector on the PMC. The signals are routed to a 68 pin SCSI connector with the cPCI-J2-SCSI cable system. The SCSI connector has 4 extra pins which have fused power and ground references. The pin numbering follows the VITA specification for J2 IO.

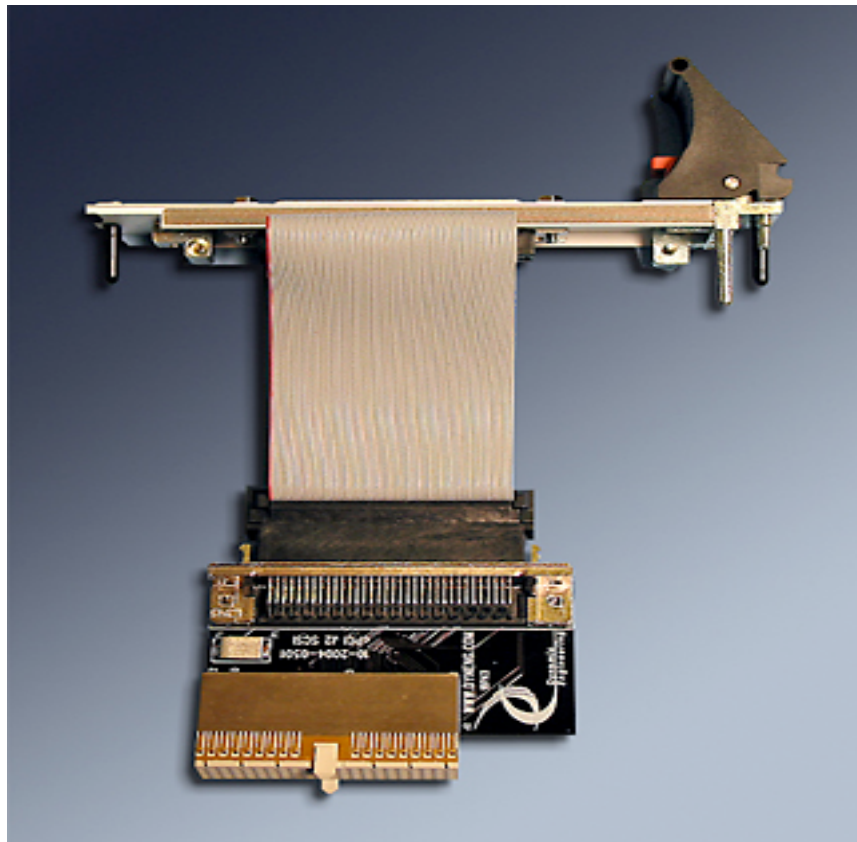


FIGURE 1

CPCI-J2-SCSI

Installation is easy – the J2 connector installs on the rear side of J2 on the cPCI backplane at the slot of interest. The PC board attached to the J2 connector

interconnects the J2 connector and the internal SCSI connector plus provides a mounting position for the fuse.

The cable provides a flexible connection to the rear panel. The External SCSI connector is mounted to a 3U rear bezel and mounts directly to the mounting holes on the rear of the chassis. The bezel has a lock and release handle, alignment pins etc for installation and removal.



CPCI-J2-SCSI Pin Assignment

The figure below gives the pin assignments. Pn4 is shown for reference and is based on the VITA definition. Also see the User Manual for your carrier board for more information.

J2	Pn4	SCSI
E13 D13	1 2	1 2
C13 B13	3 4	3 4
A13 E12	5 6	5 6
D12 C12	7 8	7 8
B12 A12	9 10	9 10
E11 D11	11 12	11 12
C11 B11	13 14	13 14
A11 E10	15 16	15 16
D10 C10	17 18	17 18
B10 A10	19 20	19 20
E9 D9	21 22	21 22
C9 B9	23 24	23 24
A9 E8	25 26	25 26
D8 C8	27 28	27 28
B8 A8	29 30	29 30
E7 D7	31 32	31 32
C7 B7	33 34	33 34
A7 E6	35 36	35 36
D6 C6	37 38	37 38
B6 A6	39 40	39 40
E5 D5	41 42	41 42
C5 B5	43 44	43 44
A5 E4	45 46	45 46
D4 C4	47 48	47 48
B4 A4	49 50	49 50
E3 D3	51 52	51 52
C3 B3	53 54	53 54
A3 E2	55 56	55 56
D2 C2	57 58	57 58
B2 A2	59 60	59 60
E1 D1	61 62	61 62
C1 B1	63 64	63 64
Fused +5V 500 mA total		65 66
Ground		67 68

FIGURE 2

CPCI-J2-SCSI CONNECTOR PINOUT



Applications Guide

Interfacing

The pin-out tables are displayed with the pins in the same relative order so you can read across the table and see the connector pin numbers. The pin definitions are defined with straight through non differential signaling in mind. Pin 1 on the SCSI matches Pin 1 on the PMC rear IO connector.

If you need a differential version we can group 1,3 5,7 etc on the Pn4 side to match with 1,35 2,36 etc. on the SCSI side. Please contact Dynamic Engineering if you are interested in a differential version.

Some general interfacing guidelines are presented below. Do not hesitate to contact the factory if you need more assistance.

Watch the system grounds. All electrically connected equipment should have a fail-safe common ground that is large enough to handle all current loads without affecting noise immunity. Power supplies and power-consuming loads should all have their own ground wires back to a common point.

Power all system power supplies from one switch. Connecting external voltage to the PMC when it is not powered can damage it, as well as the rest of the host system. This problem may be avoided by turning all power supplies on and off at the same time.

Custom cables can be manufactured with discrete wire header and direct connection to your mating equipment.

Terminal Block. We offer a high quality 68-screw terminal block that directly connects to the SCSI cable and connector. The terminal block can mount on standard DIN rails. HDEterm68: [<http://www.dyneng.com/HDEterm68.html>]

We provide the components. You provide the system. Safety and reliability can be achieved only by careful planning and practice. Inputs can be damaged by static discharge, or by applying voltage outside of the PMC device's rated voltages.



Construction and Reliability

The PCB for the cPCI-J2-SCSI is engineered for rugged industrial environments. Constructed out of 0.062 inch thick high temp FR4 material.

Through hole and surface mounting of components are used.

The design is passive with few components for a highly rated system.

Thermal Considerations

The power dissipation due to internal circuitry is very low. A minor amount of heat will be generated due to capacitive loading at the connectors and power dissipated at the fuse. For this board if something is getting warm there is a something wrong that should be corrected.



Warranty and Repair

Please refer to the warranty page on our website for the current warranty offered and options.

<http://www.dyneng.com/warranty.html>

Service Policy

Before returning a product for repair, verify as well as possible that the suspected unit is at fault. Then call the Customer Service Department for a RETURN MATERIAL AUTHORIZATION (RMA) number. Carefully package the unit, in the original shipping carton if this is available, and ship prepaid and insured with the RMA number clearly written on the outside of the package. Include a return address and the telephone number of a technical contact. For out-of-warranty repairs, a purchase order for repair charges must accompany the return. Dynamic Engineering will not be responsible for damages due to improper packaging of returned items. For service on Dynamic Engineering Products not purchased directly from Dynamic Engineering, contact your reseller. Products returned to Dynamic Engineering for repair by other than the original customer will be treated as out-of-warranty.

Out of Warranty Repairs

Out of warranty repairs will be billed on a material and labor basis. The current minimum repair charge is \$100. Customer approval will be obtained before repairing any item if the repair charges will exceed one half of the quantity one list price for that unit. Return transportation and insurance will be billed as part of the repair and is in addition to the minimum charge.

For Service Contact:

Customer Service Department
Dynamic Engineering
150 DuBois St. Suite 3
Santa Cruz, CA 95060
831-457-8891
831-457-4793 fax
support@dyneng.com



Specifications

IO	64 PMC IO routed from J2 through to SCSI connector 1:1
Power:	Typical 500 mA @ 5V available as fused power at the SCSI connector
Temperature Range	Industrial Temperature rated $-40 + 85C$. Conformal Coating option for condensing environments

Order Information

CPCI-J2-SCSI	J2 to SCSI adapter for PMC in 3U cPCI rear IO designs
-CC	Add for conformal coating

All information provided is Copyright Dynamic Engineering

