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PCI2cPCI-XXX
User Manual
Adapter for cPCI to PCI slot
Models: -32, -32-IO, -64 bit PCI

cPCI-32 model shown

Key Features
Plug and Play operation
32/64 bit PCI bus supported
J2 IO connections supported on –IO version

Manual Revision A1
Corresponding Hardware: Revision 01
Fab Number 10-2016-3001

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PCI2cPCI-XXX

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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.

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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.

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Product Description

PCI2cPCI-32, PCI2cPCI-64, and PCI2cPCI-32-IO are related products used to adapt cPCI hardware into a PCI computer slot.

The first two models [-32 and -64] are for 32 and 64 bit cPCI models respectively. Both provide the PCI bus to the cPCI card installed. With the 32 bit model J1/P1 is supported. With the 64 bit model J1/P1 & J2/P2 are supported with J2/P2 covering the upper half of the PCI bus.

The -32-IO model has both connectors and J2/P2 covers the "rear IO" capability from the installed cPCI device. The cPCI IO connections are routed to two 50 pin headers [J1 & J2] and 4 additional bits on a 4 pin header J3. Suitable for carriers of PMC, IP models and standard rear IO cPCI-32 boards.

The connector table is best used as follows: determine which pin is used by the cPCI on J2 – this would mean looking at the cPCI design and [if present] the mezzanine and flowing through to the J2 connector. On the table find the pin on the header.

If you happen to use IP Modules the J1 and J2 connectors map directly into the rear IO specification for IP Modules. For PMC modules the IO will be spread across both J1 and J2 and potentially on J3 depending on the module.

Standard Ribbon cable and HDEterm50 can make an easy breakout for the rear IO.

IO Pin Assignment

Signal	Header Pin	cPCI Pin
A61	J3.1	P2.E1
A62	J3.2	P2.D1
A63	J3.3	P2.C1
A64	J3.4	P2.B1
IOA_1	J1.1	P2.A11
IOA_2	J1.2	P2.B11
IOA_3	J1.3	P2.C11
IOA_4	J1.4	P2.D11
IOA_5	J1.5	P2.E11
IOA_6	J1.6	P2.A10
IOA_7	J1.7	P2.B10
IOA_8	J1.8	P2.C10
IOA_9	J1.9	P2.D10
IOA_10	J1.10	P2.E10
IOA_11	J1.11	P2.A9
IOA_12	J1.12	P2.B9
IOA_13	J1.13	P2.C9
IOA_14	J1.14	P2.D9
IOA_15	J1.15	P2.E9
IOA_16	J1.16	P2.A8
IOA_17	J1.17	P2.B8
IOA_18	J1.18	P2.C8
IOA_19	J1.19	P2.D8
IOA_20	J1.20	P2.E8
IOA_21	J1.21	P2.A7
IOA_22	J1.22	P2.B7
IOA_23	J1.23	P2.C7
IOA_24	J1.24	P2.D7
IOA_25	J1.25	P2.E7
IOA_26	J1.26	P2.A6
IOA_27	J1.27	P2.B6
IOA_28	J1.28	P2.C6
IOA_29	J1.29	P2.D6
IOA_30	J1.30	P2.E6
IOA_31	J1.31	P2.A5
IOA_32	J1.32	P2.B5
IOA_33	J1.33	P2.C5
IOA_34	J1.34	P2.D5

IOA_35	J1.35	P2.E5
IOA_36	J1.36	P2.A4
IOA_37	J1.37	P2.B4
IOA_38	J1.38	P2.C4
IOA_39	J1.39	P2.D4
IOA_40	J1.40	P2.E4
IOA_41	J1.41	P2.A3
IOA_42	J1.42	P2.B3
IOA_43	J1.43	P2.C3
IOA_44	J1.44	P2.D3
IOA_45	J1.45	P2.E3
IOA_46	J1.46	P2.A2
IOA_47	J1.47	P2.B2
IOA_48	J1.48	P2.C2
IOA_49	J1.49	P2.D2
IOA_50	J1.50	P2.E2
IOB_1	J2.1	P2.A21
IOB_2	J2.2	P2.B21
IOB_3	J2.3	P2.C21
IOB_4	J2.4	P2.D21
IOB_5	J2.5	P2.E21
IOB_6	J2.6	P2.A20
IOB_7	J2.7	P2.B20
IOB_8	J2.8	P2.C20
IOB_9	J2.9	P2.D20
IOB_10	J2.10	P2.E20
IOB_11	J2.11	P2.A19
IOB_12	J2.12	P2.B19
IOB_13	J2.13	P2.C19
IOB_14	J2.14	P2.D19
IOB_15	J2.15	P2.E19
IOB_16	J2.16	P2.A18
IOB_17	J2.17	P2.B18
IOB_18	J2.18	P2.C18
IOB_19	J2.19	P2.D18
IOB_20	J2.20	P2.E18
IOB_21	J2.21	P2.A17
IOB_22	J2.22	P2.B17
IOB_23	J2.23	P2.C17
IOB_24	J2.24	P2.D17

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IOB_25      J2.25      P2.E17
IOB_26      J2.26      P2.A16
IOB_27      J2.27      P2.B16
IOB_28      J2.28      P2.C16
IOB_29      J2.29      P2.D16
IOB_30      J2.30      P2.E16
IOB_31      J2.31      P2.A15
IOB_32      J2.32      P2.B15
IOB_33      J2.33      P2.C15
IOB_34      J2.34      P2.D15
IOB_35      J2.35      P2.E15
IOB_36      J2.36      P2.A14
IOB_37      J2.37      P2.B14
IOB_38      J2.38      P2.C14
IOB_39      J2.39      P2.D14
IOB_40      J2.40      P2.E14
IOB_41      J2.41      P2.A13
IOB_42      J2.42      P2.B13
IOB_43      J2.43      P2.C13
IOB_44      J2.44      P2.D13
IOB_45      J2.45      P2.E13
IOB_46      J2.46      P2.A12
IOB_47      J2.47      P2.B12
IOB_48      J2.48      P2.C12
IOB_49      J2.49      P2.D12
IOB_50      J2.50      P2.E12
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FIGURE 1   IO PIN ASSIGNMENT

Construction and Reliability

PCI2cPCI-XX is constructed out of 0.062 inch thick high temperature ROHS compliant FR4 material.

Through hole and surface mounting of components are used. High insertion and removal forces are required, which assists in the retention of components.

Thermal Considerations

PCI2cPCI-XX is a passive design with very low thermal dissipation. The installed cPCI card will not be in a standard cPCI chassis when using these adapters.   Adequate cooling should be provided to enhance your development experience.

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. 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:

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Specifications

Logic Interfaces: PCI Interface 32/64 bit, universal signaling

Access types: All PCI supported

CLK rates supported: 33/66 MHz. PCI

Software Interface: NA

Access Modes: Standard PCI accesses

Access Time: Passive design with "no" delay added to accesses.

Interrupt: INTA-D are supported

DMA: REQ/GNT signals connected through

Onboard Options: -32, -32-IO, -64

Interface: -IO model has 2 x 50 pin Header Connectors plus 4 pin header for complete rear IO availability.

Dimensions: Minimized board – PCI-32 or PCI-64 in width.

Construction: High Temp ROHS compliant FR4 Multi-Layer Printed Circuit, Through Hole.

Power: All rails connected through with mini-planes (+12, -12, 5, 3.3, VIO, Gnd).

User   NA

Other LED   NA.

Slots   NA

Temperature Range   -40C⇔+85C Components Standard

Temperature Coefficient: 2.17 W/^{o}C for uniform heat across adapter

MTBF   TBD

Order Information

Standard temperature range -40⇔85ºC

PCI2cPCI-32   http://www.dyneng.com/PCI2cPCI.html
32 bit PCI adapter for cPCI

PCI2cPCI-32-IO   http://www.dyneng.com/PCI2cPCI.html
32 bit PCI adapter for cPCI with rear IO support

PCI2cPCI-64   http://www.dyneng.com/PCI2cPCI.html
64 bit PCI adapter for cPCI

HDRterm50   http://www.dyneng.com/HDRterm50.html
50-pin header to 50 screw terminal converter with DIN rail mounting.

HDRcabl50   50 pin ribbon cable compatible with PCI5IP and HDRterm50. Various lengths off-the-shelf, and custom

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