VECTOR
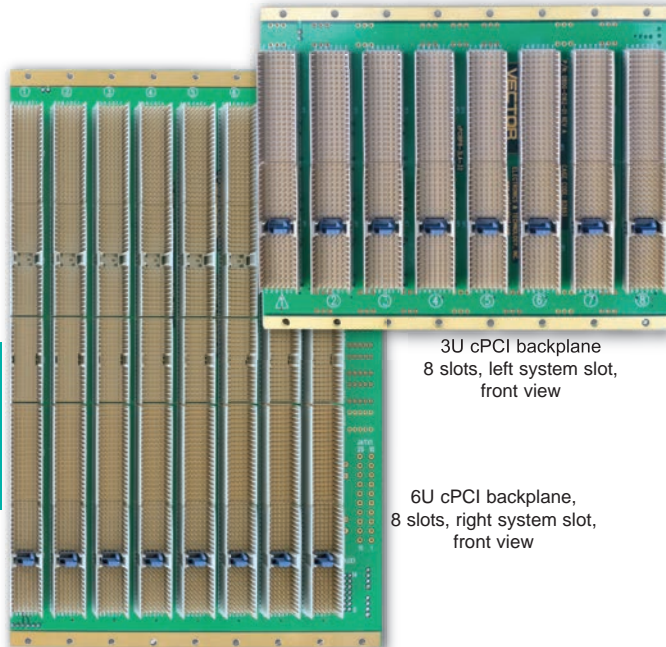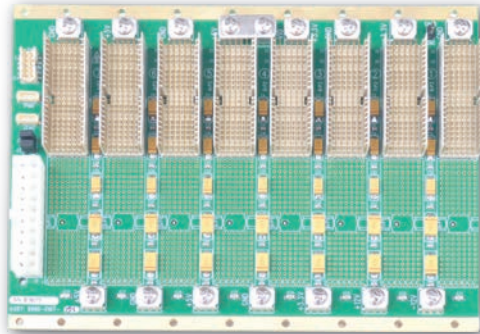ELECTRONICS & TECHNOLOGY, INC.

Vectorbord® Backplanes
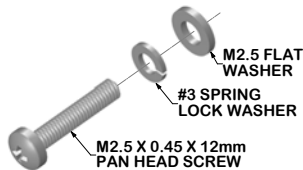## cPCI®

3U cPCI backplane
8 slots, left system slot,
front view

6U cPCI backplane,
8 slots, right system slot,
front view

3U cPCI backplane
8 slots, right system slot, rear view

Power Bug
(2.5 amps/pin)

M2.5 FLAT WASHER

#3 SPRING LOCK WASHER

M2.5 X 0.45 X 12mm PAN HEAD SCREW

Backplane Mounting Hardware
Each Set includes:
      M2.5 X 12MM Screw
      #3 Lockwasher
      M2.5 (DIN#125) Flat Washer
HD56-1   42 sets
HD56   12 sets

RoHS Compliant

cPCI® Backplanes, 3U and 6U

The specification for PCI based industrial computers is called CompactPCI. It is electrically a superset of desktop PCI with IEEE 1101.10 mechanical form factor. Vector offers RoHS compliant 3U and 6U cPCI backplanes sold separately or integrated into any VectorPak™ subrack or chassis. Designed to meet PICMG 2.0 Rev 3, Hot-swap PICMG 2.1 Rev 1 and available in 2 to 8 slots.

Features :

* Slot Count : 2-8 slot options
* Size : 3U or 6U
* Version with left or right system slot, right slot version with ATX connector
* 33MHz (2-8 slots), 66MHz (2-5 slots)
* Easily changeable +3.3V (cadmium yellow) or +5V (brilliant blue) V I/O with movable bus bar
* IPMB, JTAG and P1 utility conectors
* 10-layer FR-4 construction, UL94V-0, RoHS compliant
* Exellent power distribution, best signal integrity, virtually zero cross talk, and minimum clock skew
* EMI shielding
* Controlled impedance
* Screw terminal (power bug) or Faston input power connections
* 4.05mm thick PCB eliminates need for backplane stiffner rail
* Compatible with IEEE 1101.10 subracks and accessories, pages 26-33
* Conformal coating available on request
* Custom configurations available, please contact factory
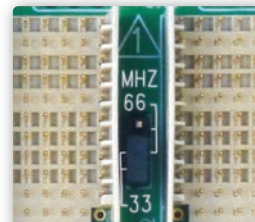* Fully assembled and tested

Connectors:

The CompactPCI connectors are shielded 2mm pitch, 5+2 row connector, compliant to IEC 61076-4-101. Main features of this connectors are the pin staging for hot swap and shielding for EMI/RFI protection.

cPCI connector pin assignments see pages 82-85.
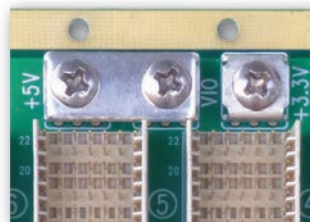
V I/O busbar

33 or 66 MHz jumper
2-5 slots backplanes

Vectorbord® Backplanes
cPCI®

VECTOR
ELECTRONICS & TECHNOLOGY, INC.

cPCI® Backplanes, 3U and 6U

Technical Data :

PCB design :	FR-4 epoxy glass, 10 layer
Assembly :	SMT/ press-fit assembly
Impedance of bare PCB :	65 ohm +/- 10%
Resistance of signal lines:	< 1.5 ohm
Current loading :	+5V up to 8A per slot
	+3.3V up to 10A per slot
Clock frequency :	33MHz (2-8 slots)
	66MHz (2-5 slots)
PCI bus width :	32 bit (3U), 64 bit (6U)
V I/O :	+5V blue key,
	+3.3V yellow key,
	field changeable
Operating temperature :	-40°C to +85°C
Humidity :	95% non condensing
Flammability :	UL 94V-0

Utility Connector, P1
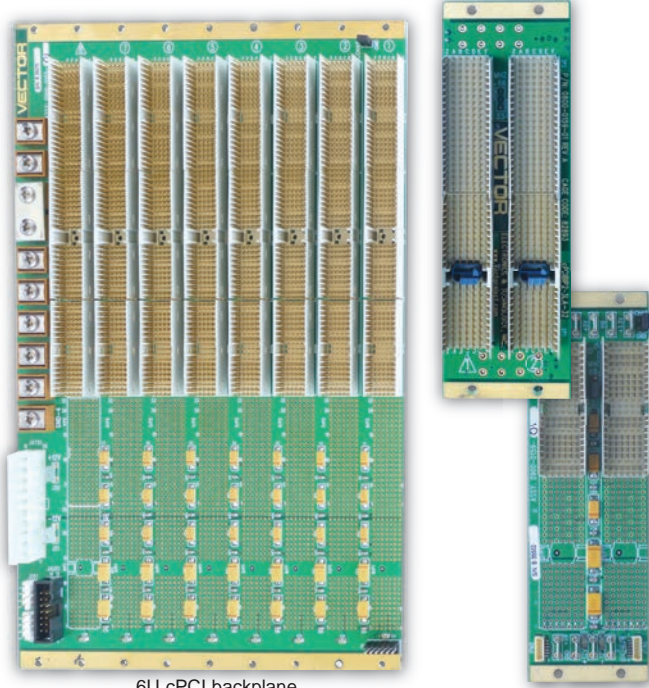
IPMB Connector

JTAG Connector

6U cPCI backplane
with 8 slots, rear view

3U cPCI backplane with
2 slots, front & rear view

Backplanes
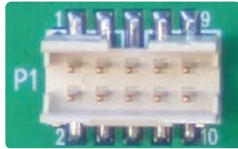
CompactPCI utility connectors pin assignments

PIN #	10-PIN UTILITY CONNECTOR (P1)	IPMB CONNECTOR	JTAG CONNECTOR
1	PRST#	IPMB_SCL	GND
2	FAL#	GND	TCK
3	DEG#	IPMB_SDA	TMS
4	+3.3V SENSE	IPMB_PWR	TRST#
5	+3.3V	SMB_RSV	TDI
6	GND SENSE (3.3V)	GND	TDO
7	+5V		
8	+5V SENSE		
9	GND		
10	GND SESNSE (5V)		

CompactPCI ATX connector pin assignments

PIN #	ATX CONNECTOR	PIN #	ATX CONNECTOR
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GND	13	GND
4	+5V	14	PS_ON OR INH# (NOTE 2)
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	PW_OK OR FAL# (NOTE 1)	18	-5V
9	+5V SB	19	+5V
10	+12V	20	+5V

NOTE 1 : Via jumper J1 to DEG#
NOTE 2 : Via jumper J2 to GND

cPCI Backplane Ordering Information

CPCI BP 2 - 3 LA - 32 - 0

No of Slots
2 = 2-slot
3 = 3-slot
4 = 4-slot
5 = 5-slot
6 = 6-slot
7 = 7-slot
8 = 8-slot

Height
3 = 3U
6 = 6U

System slot
LA = Left system slot
RB = Right system slot

Bus width
32 = 32-bit (for 3U version)
64 = 64-bit (for 6U version)

Clock Frequency & V(I/O)
0 = 33MHz, V(I/O) +5V (coding key blue)
3 = 33MHz, V(I/O) +3.3V (coding key yellow)
6 = 66MHz, V(I/O) +3.3V (coding key yellow), up to 5-slots only