

# COMPUTER CONVERSIONS CORPORATION

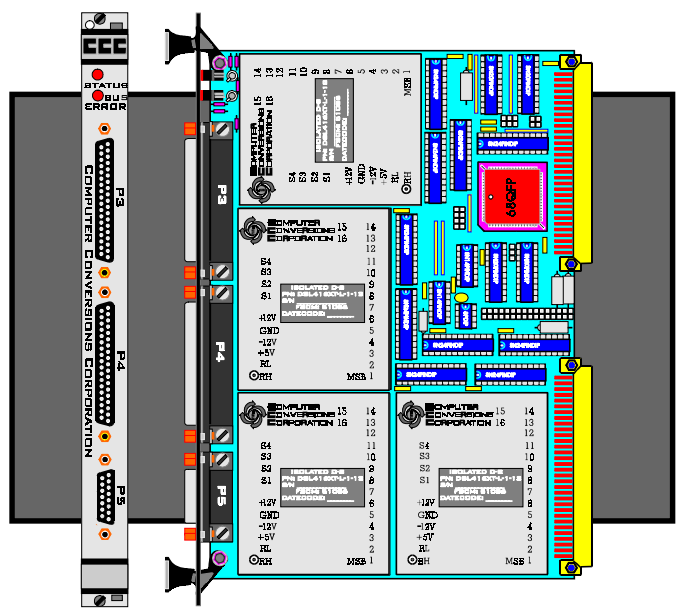
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## VB SERIES SYNCHRO-RESOLVER-ENCODER VME CARD OVERVIEW

VBR, VBW, VBE, VBB, VBT, VBDT Series Introduction

### FEATURES

- Up to 8 Isolated Input Channels/Card
- Synchro, Resolver and LVDT I/O
- Independent Tracking Converters
- Mix-Match upto 8 Converters/Card
- 100% Transformer Isolated I/O units
- Loop-Back Testing Cards Available
- Self-Test Models w/Continuous Flt.
- Proven "Industry Std. Converters"
- Reliable Register Based "LSI" Logic
- Quadrature Incremental Encoder Outputs for Motion Controllers' Input
- On-Board Reference Supplies
- Absolute Multi-Speed/Multiturn I/O



### Overview

The "VB Series" products line contains VME compatible synchro/resolver converters and absolute encoder systems. These particular cards are ideal for any rotary motion and related process, control, or simulator type application with any VME compatible system.

The **VB Series** provide up to **eight channels** of resolver or synchro conversion on a single-width, standard 6U height VME card.

The **VBE Series** Resolver/Encoder systems feature up to 6 axis of shaft angle position encoding with a choice of single or multiturn resolvers used as the sensor inputs.

CCC's full line of "Industry Standard" Synchro/Resolver converters, and Absolute Encoder products, are used to populate standard multi-function VME decoder cards. Differing converters may be mixed to minimize real estate for a particular application.

Both **industrial and military grade** (extended) temperature range versions are available, with forced air or conduction cooled models having thermal layers and expansion wedge style card locks. Accuracy applies over the operating temperature range, and 883 level B/38510 parts/processing is available on all units.

**Transformer isolation** is offered for all inputs and outputs, eliminating concerns for ground loops, differing potentials and high voltage field transients affecting the card itself and the VME Bus backplane.

All input cards feature Built-In Fault Detect, Self-Test command angle is optional, and models with True Wrap Around Test (VBT's).

Maximum versatility has been employed on all "VB" products to assure universal compatibility in addressing, timing, system, and microcomputer independence.

All VB Series converter cards are configured as **A24:D16 DTB Slaves**. They will respond to address modifier codes "3D" or 39 for standard addressing, and "2D" or "29" when selected for short I/O type addressing.

The VME interface is a very straight-forward register based design; simply address the channel and read or write the data.

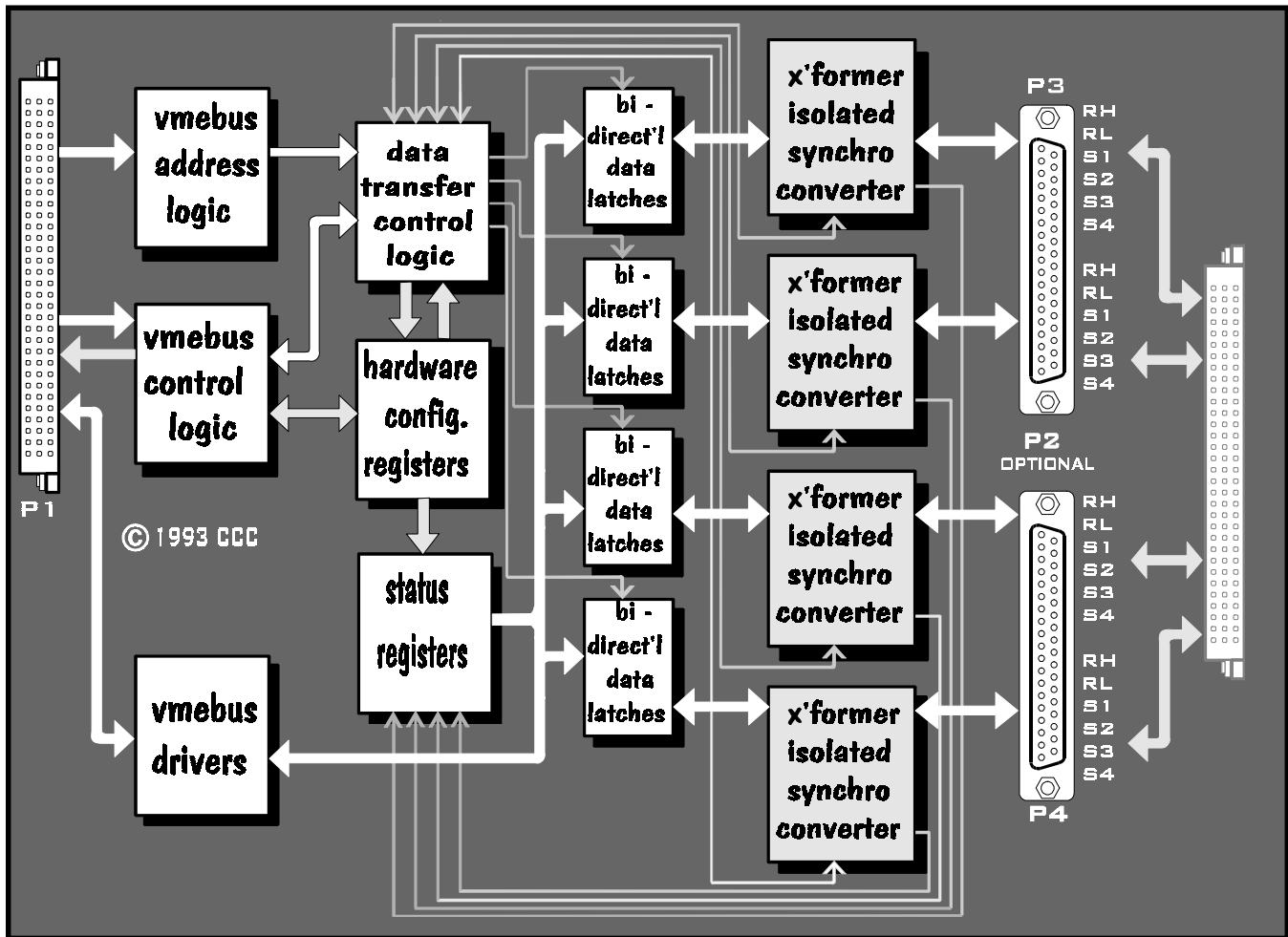
**Status registers** are used to provide card configuration data, and on a per channel basis, to provide channel config. and fault status.

The high speed register based interface allows these cards to operate reliably in any software environment, with uninhibited **Real-Time** performance.

Buffered latches are provided on all data lines to assure stable read and write cycles as commanded by the host. Address and control lines feature single point terminations to minimize any loading of the backplane. All signal output converters are provided with **inherent read-back** ability.

### BUS CONVERTER SELECTIONS:

- Synchro/Resolver to Digital
- Absolute Encoder/Resolver Systems
- Digital to Synchro/Resolver
- Multispeed & Multiturn Converters
- Multifunction Dynamic Rotators
- DC Sine/Cos. Vector Generators
- 2 & 3 Wire LVDT/RVDT to Digital
- Digital to LVDT/RVDT Simulators
- Active CDX Control Differentials
- Active CT Control Transformers
- Active Incremental Outputs & Ref.
- Isolated D-A,s and Tracking A-D's
- Built-In Fault Detect, Forced-Test and True Isolated Wrap-Around Test.
- Programmable Reference Supplies



**No external Power Supplies** are required, every card is available as powered with standard  $\pm 12$  and  $+5$  VME Bus standard supplies.

Power source jumpers are provided to select the  $\pm 12$  VDC power input source, via the external connector port, or the VME BUS P1 backplane.

CCC's VB cards include two 25 pin polarized "D" style subminiature connectors on the **front panel** for all external I/O, **and/or the P2** connector I/O is available as an option.

The availability of Self-Test Command Angle options (-WS), and True Wrap-Around loop back-test boards (VBT and VBDT Series), allow the user to configure automatic self test and simulation type programs at any level.

Because the VB Series uses **proven, and reliable "whole" converter products**, coupled with the use of leading edge LSI interface technology, the VB Series cards offer quick availability, **competitive pricing and the best density** verses performance ratio available in the marketplace.

**VBR,VBW,VBE, & VBB SERIES ADDRESS MAP**

HEX Select	Address Bits				Converter Function	Chan
	A4	A3	A2	A1		
00h	0	0	0	0	Read/Write Chan.	0
02h	0	0	0	1		1
04h	0	0	1	0		2
06h	0	0	1	1	3	
08h	0	1	0	0	Read-Back Chan.	0
0Ah	0	1	0	1		1
0Ch	0	1	1	0		2
0Eh	0	1	1	1	3	
10h	1	0	0	0	*Read Status Chan.	0
12h	1	0	0	1		1
14h	1	0	1	0		2
16h	1	0	1	1		3

\*-WS Units, Write Command Self-Test Angle



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