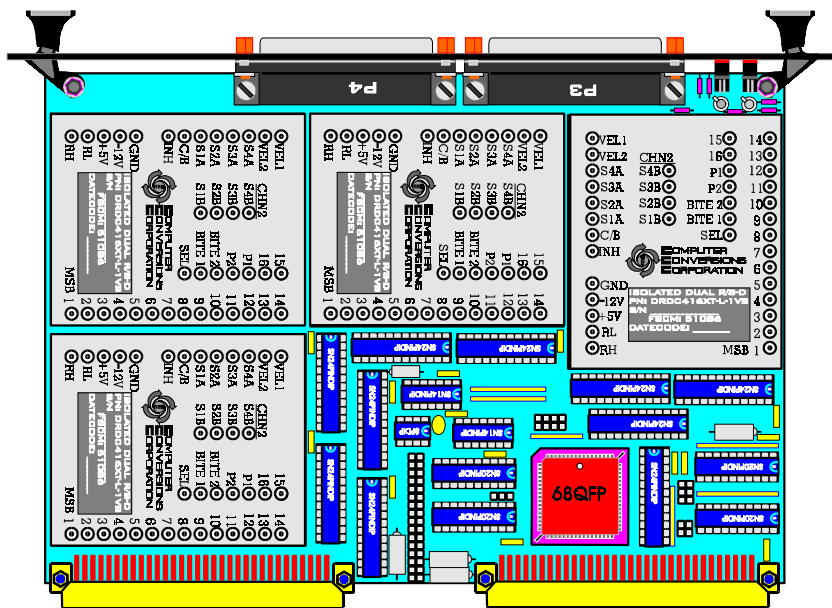# COMPUTER CONVERSIONS CORPORATION
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VBD SERIES
ULTRA-HIGH DENSITY
VME S/R CONVERTER CARDS

~~~ FEATURES ~~~

- ❑ *High Density, many configurations*
- ❑ *Up To 8 Channels of Tracking S-D/R-D Conversion/Card*
- ❑ *Up To 6 Channels of Complete D-S/ D-R Conversion/Card*
- ❑ *Transformer Isolated Signal & Reference Lines (Option)*
- ❑ *Multispeed S-D and D-S Cards*
- ❑ *Up To 8 Different Reference Source inputs per Card*
- ❑ *Single Slot 6U Height Models*
- ❑ *Self-Test Command Angle (option)*
- ❑ *Reference Suppiy output options*

Description

Computer Conversions **VBD Series** are ultra **high density Synchro & Resolver Converter** Cards designed specifically for VME Bus applications where density, isolation, and cost is of paramount importance.

Up to a full **8 channels of Synchro/Resolver to Digital or 6 channels of Digital to Synchro/** Resolver conversion are provided on a single slot width, 6U size, VME Bus Card.

Even with this high a density; the VBD cards are offered with a selection of solid-state or on-board **Transformer Isolated I/O**.

Isolation

Transformer isolated units are completely isolated from each other and the backplane for each converters set of signal lines, and the reference inputs are transformer isolated separately for each pair of converters, or optionally individual; allowing the user to run 8 different reference input sources, levels, or frequencies, into the same VME Converter Card.

This completely isolates the card and effectively the whole computer from all field wiring, eliminating concerns over troublesome ground loops, differing potentials, ground interjected spikes, ghostly or field noise that so frequently takes down entire systems.

Each pair of two Converters shares a **Status Register** having i**ndividual converter fault bits for each channel**, ±12 or ±15V power **loss detection**, and converter **configuration details**.

All the S-D/R-D Converters are complete ratiometric, continuously updating tracking converters employing the use of internal type-two solid state servo-loops for high-speed closed loop performance. They are **insensitive to amplitude, and frequency variations**, providing a lag free virtually **dynamic response** all the way up to their maximum specified tracking rate..

Built-In-Test/Self-Test

All units include a continuous built-in-test, converter and I/O fault detect, and -WS option units include a command to 30 degree test angle for self-test.

D-S/D-R Output Channels:

All the**D-S/D-R** Converters provide a fast 5 microsecond throughput, featuring **continuous outputs** and hybrid power short circuit protected amplifiers that will drive loads from 1.2 to 4.5VA.

D-S/D-R Converters with a 400 Hz. frequency drive 26 or 90 V.L-L signal outputs direct.

Two different external output transformers are available for 50 or 60 Hz. applications, and external power boosters can be provided.

Inherent Multiturn/Multispeed Support

VBD Series Hardware supports both eight channels of discreet S-D/R-D conversion and/ or **four channels of multispeed/multiturn** S-D/R-D conversion.

The standard Firmware supports simultaneous two channel store-to-read configuration required to properly interrogate multispeed/multiturn synchro's or resolvers.

Multispeed Specific Models

VBDM style Cards are offered with up to four channels of **specifically pre-combined** Multispeed Synchro/Resolver to Digital, or up to 2 full channels of Digital to Multispeed Synchro/ Resolver Converters on a double slot width 6U size card. The VBDM Converter Cards feature **pre-combined data**, using **a single** linear non-ambiguous **16 bit data word** for each multispeed channel. High Resolution single-slot width pre-combined units available too. Ratios of 1 & 36, 2 & 36, 1 & 32, 1 & 10, 1 & 8, etc. are standard available selections.

The primary advantages in using **natural multispeed converter** are: the single word 16 bit data handling, **no software overhead for combining**, and a **very powerful R-D/S-D built-in test bit** that automatically **tests** both that the Converter is a) tracking the input, and b) whether the **fine/coarse alignment error** is or goes out of synch as a result of mis-alignment or broken wires