COMPUTER CONVERSIONS CORPORATION
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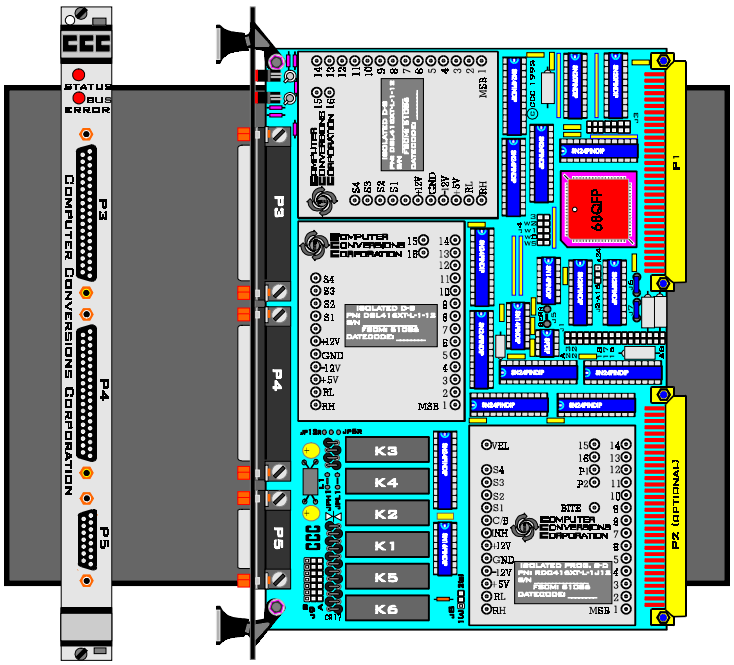
VBT & VBDT SERIES

VME BUS W/BUILT-IN TEST BUS SYNCHRO/RESOLVER CONVERTERS

~~~ FEATURES ~~~

- ❑ *True Wrap-Around Converter Testing*
- ❑ *On and Off Card Loop-Back Testing*
- ❑ *Expandable Off-Card Test Bus'*
- ❑ *Isolation Through-Out Implementation*
- ❑ *Real-Time and Off-Line Testing*
- ❑ *I/O Can Be Disconnected/Module*
- ❑ *Verification of On Verses Off Card Faults*
- ❑ *Intelligent Test Bus Routing Logic*
- ❑ *Dual Off-Card Buses Per Card*
- ❑ *Elaborate Backplanes Not Required*
- ❑ *Upto 6 Isolated Channels/Card*



Overview

The VBT and VBDT Cards are full function 3 and 6 channel VME Bus cards with added support logic for CCC's ***"Advanced Random Signal Test Bus ™" (ARS T-Bus ™).***

The "***ARS T-Bus™***" uses a ***interlocked relay switching matrix***, that allows all the signal lines ***from one converter*** module to be selectively routed ***to any other compatible converter*** modules, that reside ***on the same card, or any other VBT or VBDT Card tied into the system***.

Compatible modules on any board are allowed to be tied between, or to, each other for loopback, Wrap-around testing and real time systems test.

The***ARS T-Bus™*** facilities ***Real-Time on-line (live) and off-line testing***, and program controlled automatic testing ***down to the component converter level.***

Because the ARS T-Bus™ allows the program to run "live" (real-time testing) or, selectively disconnect the actual field wired signal lines in route to each converter;

Automatic System Debug, can easily discern converter verses field wiring or sensor faults in the overall system, and evaluate the differences between loaded and unloaded converter performance.

Multiple Inter-Board Test Paths

The on-board ***ARS T-Bus™*** may be user strapped for routing to any one of ***twodifferent and distinct inter-card test buses*** that are daisy chained between boards via the ***P2*** expansion port ***or the Front Panel*** (T-Bus™) connector ports.

The use of two-***different inter-card test buses*** allows the user to run ***separate high voltage synchro, and low voltage synchro buses within the same system***. Furthermore, the two different ***Inter-card buses can be staggered for expansion into a third*** RVDT/LVDT test bus, ***or*** even a ***fourth or fifth multichannel*** A-D/D-A ***test bus*** etc.

Test Bus Integrity

Unlike other test methods that employ stepping up/down signal voltages for testing, or fixed step changes to verify limited functionality; the "***ARS T-Bus™***" ***routes the real (true voltage) signal lines as they enter the circuit card, this permits 100% true testing ability.***

The use of real (true-voltage) signal lines, and a ***true isolated test bus*** for Loop-Back allows the program to ***discern positively, (with confidence) whether a failure is an on-board or field fault.*** .

(Request full VBT/VBDT Data Sheets, Block Diagrams on following page)

Safe-Lock™ control logic

The***ARS T-Bus™*** uses a unique register based control structure employing the use of CCC's "***Safe-Lock ™ control logic***". A single ***Safe-Lock™ Command Register is provided to request the desired routing of signals***, and a ***Safe-Lock™ Status Register is provided to confirm if and when the commanded routing is set***.

All the ***ARS T-Bus™***; interlock, non-contention, bus-busy, time-out and signal compatibility checking logic, is transparent to the user, and ***automatically controlled with the on-board Safe-Lock™ control logic***.

Application Testing

Loop-back testing is primarily used immediately following power-ups, to step the converters through a user programmed exercise.

Real-time testing is performed by monitoring the signals and converters while in operation, and/or comparing the actual performance with another channel in the system (running concurrent to the live channel being tested), or a simulation of the expected.

The use of 100% transformer-isolated converters and a physically isolated test bus switching matrix; allows users to integrate Automatic Test Systems with guaranteed confidence and 100% assured performance.
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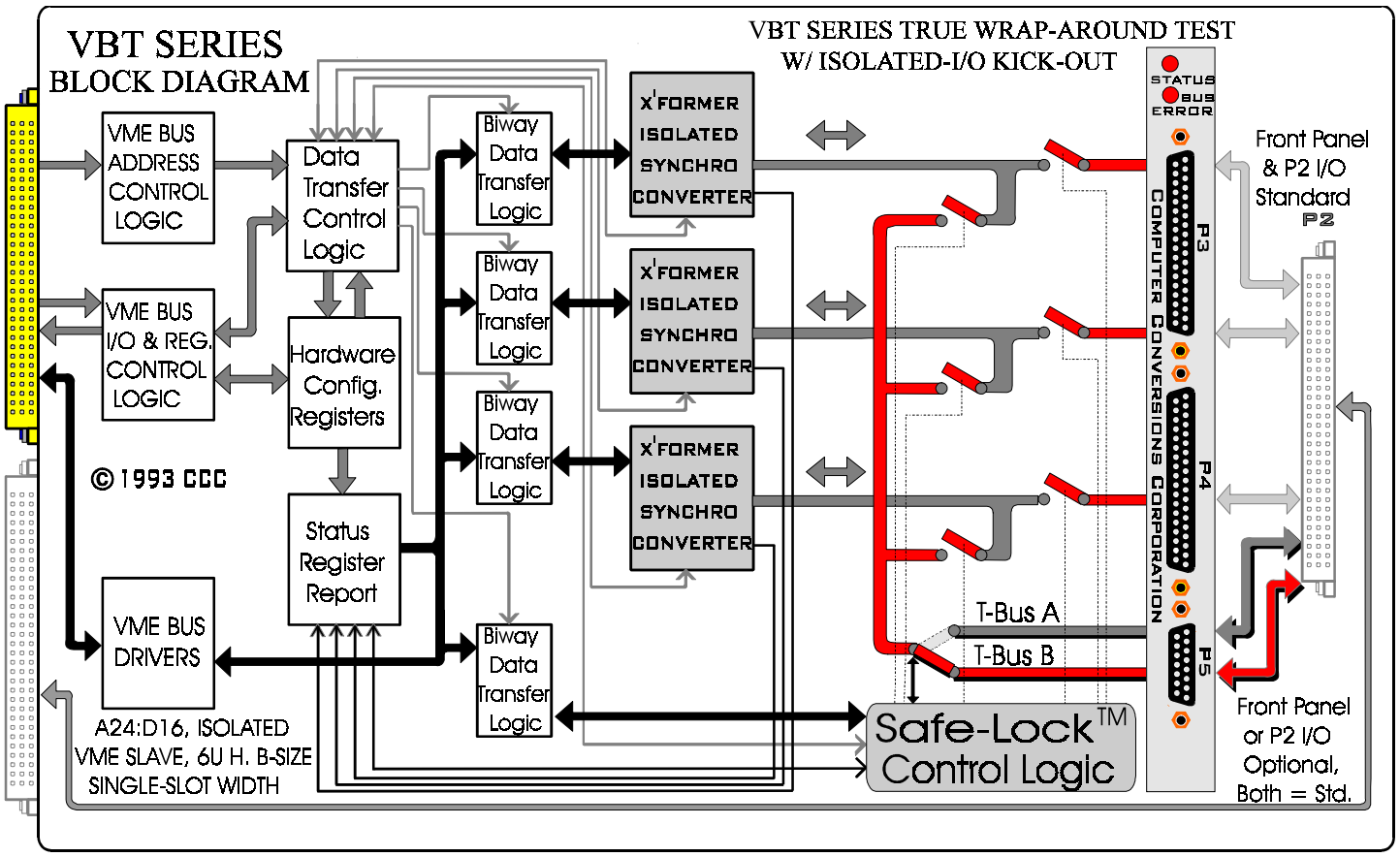
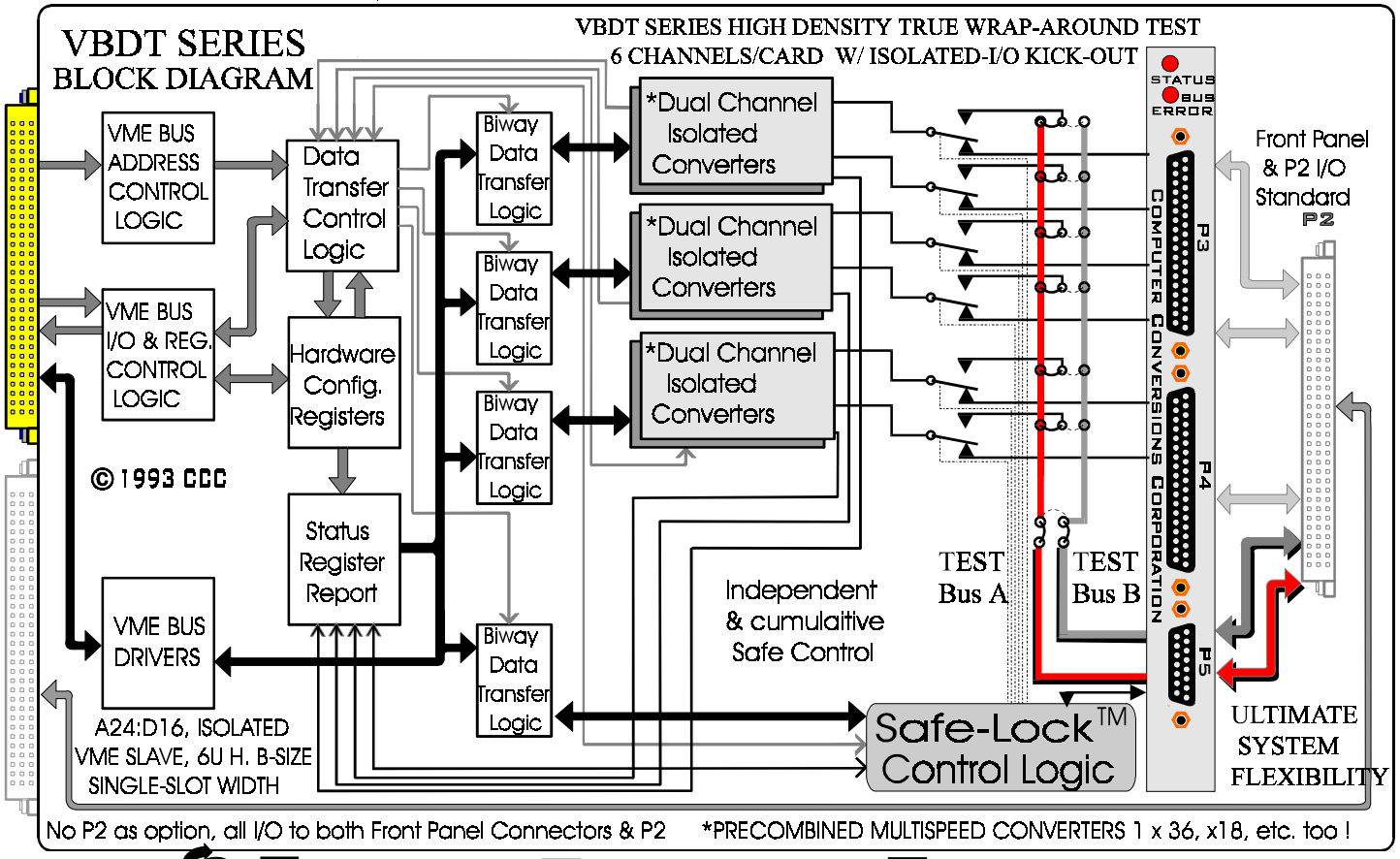
VBT and VBDT Block Diagrams, Extensive True Wrap-Around Self-Test , Request VBT/VBDT Data Sheets



NOTE: FOR INPUT CONVERTERS; COMPLIMENTRY OUTPUT CONVERTERS OR FIXED ANGLE TEST PLUGS CAN ALSO BE USED.



No P2 as option, all I/O to both Front Panel Connectors & P2 *PRECOMBINED MULTISPEED CONVERTERS 1 x 36, x18, etc. too !

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