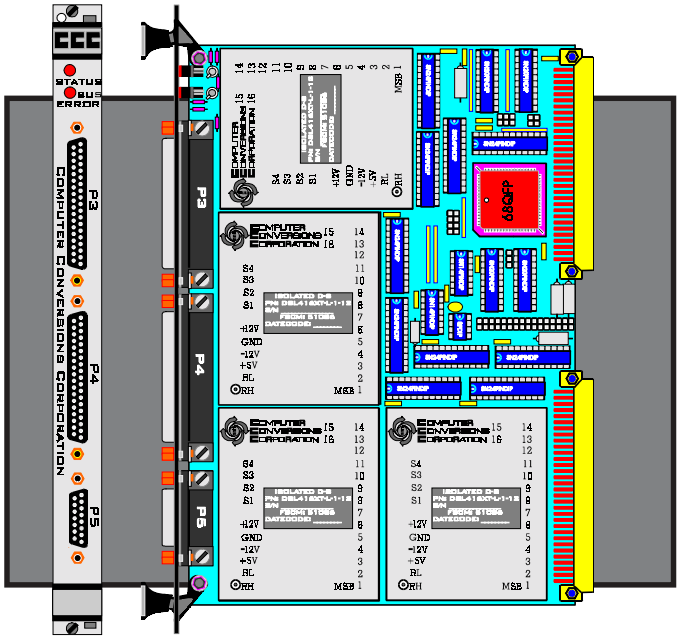
COMPUTER CONVERSIONS CORPORATION
WWW.COMPUTERCONVERSIONS.COM
PHONE: (631)261-3300 FAX. 261-3308
6 DUNTON CT., E. NORTHPORT, NEW YORK, USA 11731

VBR SERIES
SYNCHRO & RESOLVER TO DIGITAL VME BUS INPUT CARDS

AVAILABLE FEATURES

- ❑ Resolution 10 to 18 Bits
- ❑ Transformer Isolated Inputs
- ❑ Ratiometric Tracking Converters
- ❑ Tracking Rates of 600 RPS
- ❑ DC Velocity & Incremental Outputs
- ❑ Insensitive to Frequency & Amplitude Variations
- ❑ IND. TEMP/Mil Spec./Hi Rel Options
- ❑ 1 to 4 Channels Per Card, VBD for 8
- ❑ Proven "Industry Standard Converters"
- ❑ On-Board Reference Supplies



Description

The VB S/R series are 1-4 channel continuously tracking synchro or resolver to VME card converters, employing a type 2 ratiometric conversion loop for high speed/ high performance applications. They will accept any of 4 individual, or paired 3-wire ***synchro*** or 4-wire ***resolver*** inputs over a frequency range of 50 to 10KHZ., and convert them simultaneously into 10-16 bit words of natural binary data. Data is addressable in a single word 16 bit format over the VME backplane.

Data made available to the bus is continuously updated (tracking) without interruption; output ***data is stable, accurate, and always fresh*** up to the maximum tracking rate of the converter. When address and control variables are set, all data bits are latched simultaneously into separate buffered registers to prevent false reads.

Isolation

No external transformers, modules or signal conditioning is required. The synchro/resolver converters used feature internal solid-state or transformer Scott T's that accept ***direct field voltage inputs***.

Transformer isolated units are completely isolated from each other and the backplane for all the reference and signal lines. 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, ***or ghostly field noise*** that so frequently takes down entire systems.

Multispeed/Multiturn

The VBR Hardware ***inherently supports*** four channels of discreet S-D/R-D conversion, two channels of ***multispeed/multiturn*** S-D/R-D conversion, or a combination of both.

The Firmware supports simultaneous two channel store-to-read configuration required to properly interrogate multispeed/multiturn resolvers and synchro's. Furthermore, precombined converters can be supplied as an option.

Bus Powered

Power required is ±15 and +5VDC as standard; ±12VDC is optioned, and the source for the ±12 or ±15V input is strap selectable for ***power sourcing via the backplane or externally*** powered via the I/O connector.

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. Options currently available include DC velocity output, a ***built-in-test*** output representing the tracking mode, internal reference supplies, quadrature ***incremental pulse train outputs***, mil-grade ***extended temperatures***, and 883 level B processing.

APPLICATIONS

- ❍ Antenna Monitoring
- ❍ Closed Loop Servo Controls
- ❍ Avionic & Naval Systems
- ❍ Conveyor Controls
- ❍ Ship Speed & Navigation
- ❍ Machine Control Systems
- ❍ Shaft Angle Encoding
- ❍ Engine Test Stands
- ❍ Material Handling Systems

Specifications						
		10 Bits	**12 Bits**	**14 Bits**	**16 Bits**	**18 Bits**
Accuracy:	Standard;	+/-30'	+/-4' + 1 LSB		+/-4'	+/-1'
	-GA Models		+/-4.5' + 1 LSB			
	-HA Models	+/-21'		+/-2.7 + 1 LSB		+/-10 sec.
Tracking Rate:	60Hz.	12.5	10	2.5	0.625	0.25
(RPS)	400Hz.	40	40	10	2.5	1
	2.5KHz.	100	80	30	5	1.2
-HS Models	2.5KHz.	200	200	50	10	
Acceleration:	60Hz.	770	295	20		
(for a 1 LSB lag)	400Hz.	12600	4500	610	124	
	2.5KHZ.	2500	9000	1620		
-HS Models		1400	350	70		
	400Hz.	22000	5500	1100		
	2.5Hz.	160K	40000	8100		
Step Response:	60Hz.	200ms.	360ms.	800ms.	1200ms.	
	2.5KHz.	95ms.	95ms.	150ms.	600ms.	2000ms.
Frequency Range:	60Hz. units 47-100Hz.			400Hz. units 360-2000Hz.		
	2.5KHz. units 2000-4800Hz.			Higher Frequencies Available		
Reference Inputs:	26VRMS into 90K ohms					
	115VRMS into 360K ohms					
Signal Inputs:	11.8VRMS L-L into 26K ohms Minimum L-L Balanced					
	26VRMS L-L into 26K ohms Minimum L-L Balanced					
	90VRMS L-L to 200K ohms Minimum L-L Balanced					
Breakdown (volts):	500 VDC Minimum to Ground on Transformer Units					
Common Mode:	80 Db. Minimum on Solid State Units					
Power Supplies:	+5VDC@0.8 Amp., +125ma./channel					
	+12VDC@35ma./chn, -12VDC@45ma./chn (-12 units), -WR units add 450 ma. ea.+					
	or, +15VDC@25ma./chn, -15VDC@35ma./chn, -WR units add 400ma. ea.					
Temperature:	0C to 55C on card level units, 0C to +70C on conv., (-1 units)					
	-40C to +75C on card level, units -40C to +85C on conv. (-3 units)					
(operating)	-55C to +85C on card level units, 55C ti +105C on conv. (-2 units)					
Storage	-55C to +125C					

Notes:
1.) ALL UNITS AVAILABLE WITH SOLID STATE OR TRANSFORMER ISOLATED SIGNAL & REF INPUTS
2.) Accuracy applies over the operating temp. range, +/-10% amplitude & frequency, +/-5% power
3.) Different input voltages and frequencies available, Fixed and Programmable Reference Supplies
4.) For units with solid state input line may be grounded. Common mode upto max. L-L input is acceptable, and 80 Db. common mode std.
5.) Higher accuracy, faster settling times and higher rates available
6.) 883 Level B/38510 WA High Rel. available on select units
*7.) 16 Bit units with accuracy of +/-20arc. seconds $ 20 Bit units available

COMPUTER CONVERSIONS CORPORATION
6 Dunton Ct., E. Northport, NY 11731 www.computerconversions.com Phone (631)261-3300 Fax 261-3308