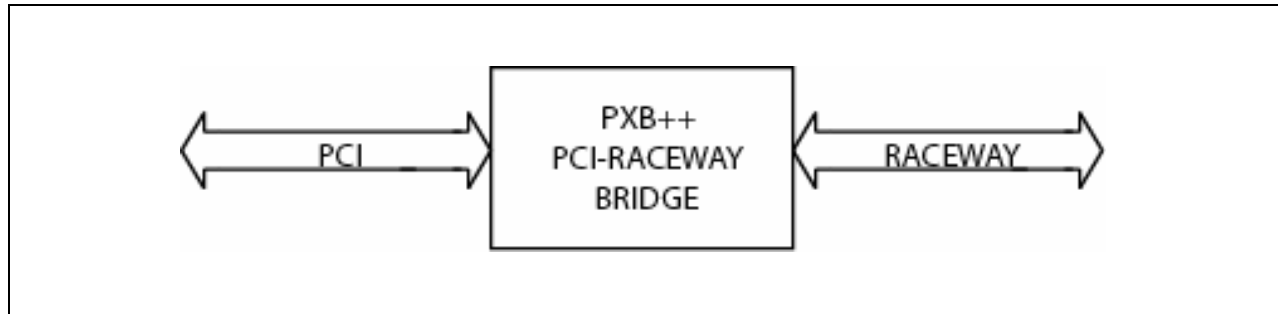


PowerRACE Bridge Products

RACEbridge-PMC



RACEbridge-PMC Block Diagram

TEK's RACEbridge-PMC provides a high performance interface that adds RACEway switch fabric technology to a wide range of third-party single board computers.

ANSI/VITA 5-1994 RACEway Interlink provides an open industry standard architecture for implementing scalable bandwidth. RACEway is well suited for applications such as signal processing or streaming I/O which require scalable real-time bandwidth with guaranteed latency.

The RACEbridge-PMC uses the PXB++ ASIC to implement a high-performance PCI-RACEway bridge, bringing the local carrier's PCI bus onto the RACEway fabric. The PXB++ may be used for data transfer with remote RACEway nodes running Mercury MC/OS, with TEK's PowerRACE family of I/O controllers, or with other RACEbridge-PMC-equipped cards. Data transfers are supported through direct software access or using the PXB++ linked-list DMA controller for throughputs up to 120 MB/s using RACEway and 240 MB/s using RACE++.

The RACEbridge-PMC is supported with a VxWorks driver which has been fully integrated and tested with a wide range of host carrier cards from Synergy, Motorola, Force Computer and others. MC/OS driver support is also in development.

Feature	Benefit
Fully compliant with ANSI/VITA 5-1994 RACEway Interlink	Interoperable with all RACEway systems
Compatible with RACE++	Migration path to future 66 MHz RACE++ systems
33 MHz PCI, 32/64 bit	Compatible with a wide range of carrier cards
Supports 3.3V and 5V PCI signaling levels	Electrically compatible with all PMC carriers.
Supports read prefetching	Improved performance and reduced read latency
VxWorks driver support	Drop-in integration with supported host carriers
Common driver suite with TEK's PowerRACE cards	Provides scalable I/O migration path to PowerRACE family



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Specifications

RACEway Interface	Compatible with 40 MHz ANSI/VITA 5-1994 RACEway Compatible with 66 MHz RACE++
PCI Interface	Compatible with PCI Local Bus 2.1 32/64 bit 33/50 MHz
Burst Data Rate	160 MB/s (RACEway) 267 MB/s (RACE++)
Sustained Data Rate	120 MB/s (RACEway) 240 MB/s (RACE++)
Interrupt Support	Maps inbound RACEway mailbox events to PCI message interrupts Maps PCI interrupts to RACEway mailbox events
DMA Support	Linked-list DMA controller
Power Requirements	+5 Volts, 250 mA
Operating Temperature	0 to +55 degrees C
Storage Temperature	-40 to +85 degrees C

Ordering Information

RACEbridge-PMC	RACEbridge-PMC module
RACEbridge-VXDRV	RACEbridge-PMC VxWorks driver (object)
RACEbridge-MCDRV	RACEbridge-PMC MC/OS driver (object)

VxWorks driver includes API functions for mapping RACEway addresses into local PCI space and managing DMA transfers between local and RACEway memory.

MC/OS driver includes API functions for interprocess communications between local carrier and RACEway CE nodes. Consult factory for availability with specific carrier cards and MC/OS versions.

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