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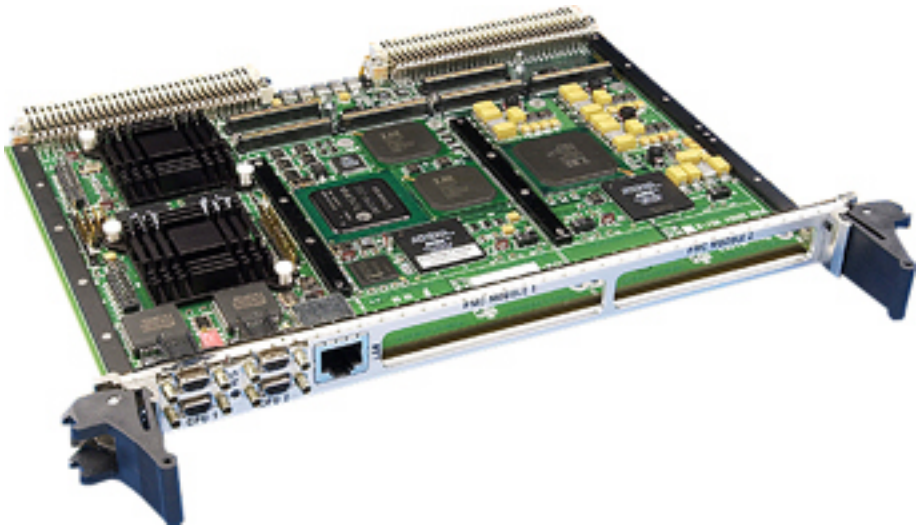
Find the *Tek Microsystems PowerRACE-2A* at our website: *Click HERE*

Tekmicro

Building the Path Your Data Takes

PowerRACE I/O Controllers

PowerRACE-2A



Fabric-interconnected I/O technology from the company that delivered the first RACE++ product, first PowerPC-based PMC carrier and first bundled client-server I/O solution for RACE++.

The PowerRACE-2A is the entry-level member of the PowerRACE family of high-performance fabric-enabled I/O carriers. As with Tekmicro's higher performance carriers, the PowerRACE-2A is fully fabric enabled - with supporting software and drivers - allowing PMC devices to sustain 250+ MB/sec per PMC site.

I/O performance such as this, coupled with the local 824x PowerPC processor, make the PowerRACE-2A an ideal platform for streaming I/O in applications such as camera interfaces, serial and/or parallel links, network protocols, or high-speed custom protocol implementations.

All of these I/O solutions leverage Tekmicro's investment in a front-end/back-end PMC implementation. This architecture enables the front-end (protocol interface) to change while utilizing standardized back-ends (PCI and/or XMC) to interface to the PowerRACE carrier. A standardized back-end hardware interface also allows Tekmicro to reuse a majority of its software investment across the vast range of supported I/O modules (see sidebar). This brings powerful advantages at many levels for customers who need to integrate, maintain, or upgrade multiple I/O modules.

Technology insertions and upgrades are seamless via the “tekX” client-server architecture, which provides a consistent API across all PowerRACE platforms as well as Tekmicro’s I/O modules and selected third-party modules. The tekX API allows drop-in integration in both MCOE and non-Mercury RACEway systems.

Tekmicro’s I/O architecture is a powerful combination of hardware and software components that allows for customization to fully meet demanding I/O requirements. Customers can leverage Tekmicro’s understanding and expertise in I/O and fabrics to reduce their time to market whether utilizing standard product, enhancing an existing product, or developing a custom solution.

Supported I/O

Fibre Channel
- JBOD/RAID with FAT32
- Point to Point
- 1.062 and 2.125 Gbps

ANSI/VITA 17.1 Serial FPDP
- 1.0 and 2.5 Gbps

Gigabit Ethernet

TAXI, HOTLink, and HOTLink II

FPDP, FPDP II*

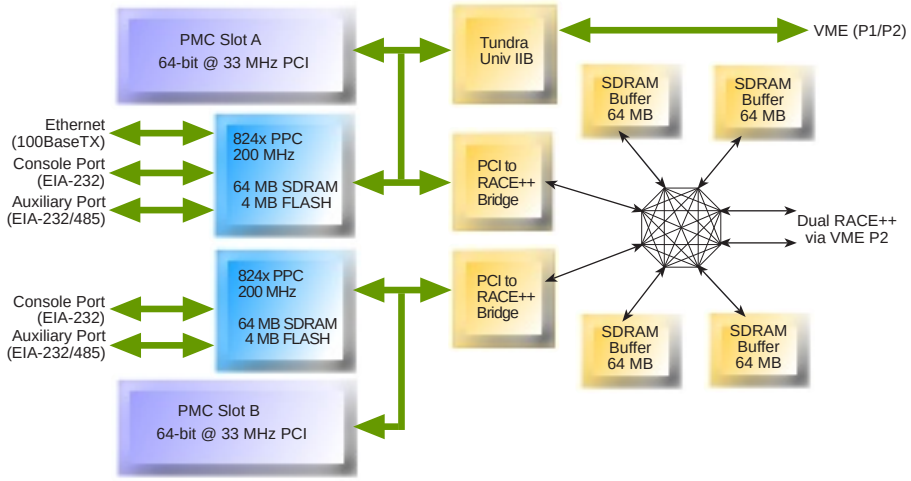
Parallel ECL, PECL, EIA-485, LVDS*

Channel Link

Camera Link*

* - In Development

PowerRACE-2A



Specifications:

VMEbus Interface	ANSI/VITA 1-1994 (R2002) VME and ANSI/VITA 1.1-1997 VME64x compatible Supports data transfer modes including A64:D64 MBLT Supports Slot 1 system controller functions
RACEway Interface	ANSI/VITA 5.1-1999 Dual RACEway compatible Mercury TC-RWI-FS-1 (11/08/00) RACE++ compatible Transfers performed at 267 MB/s burst throughput tekX support available for MCOS 4.x and 5.x, MCOE 6.x
Processor (2)	Motorola MPC824x PowerPC 200 MHz 603e core with Floating Point Unit 64 MB SDRAM (64-bit, 533 MB/s bandwidth) 4 MB FLASH 32-bit 33 MHz PCI interface
Buffer Memory (4)	64 MB SDRAM, 240 MB/s sustained throughput Customizable FPGA core for application-specific functions
Built-In I/O	EIA-232 console port for each CPU EIA-232/485 auxiliary port for each CPU IEEE 802.3 Fast Ethernet (100BaseTX auto-negotiating) for CPU A
Modular I/O	Two IEEE 1386.1-2001 PMC slots 64-bit 33 MHz, 5V signaling level 250+ MB/s sustained throughput per PMC slot
Operating System	VxWorks 5.4 (BSP available)
Mechanical	6U x 160mm x 4HP (standard VMEbus, single slot)
Power Requirements	+5V ±5%, 5A typical, 6A maximum ±12V ±10%, 50 mA Power requirements do not include power used by PMC modules.
Operating Temperature	0° to +55°C (Commercial) -25° to +70°C (Rugged Level 1) -40° to +70°C (Rugged Level 2)
Storage Temperature	-40° to +85°C (Commercial) -55° to +85°C (Rugged Levels 1 and 2)
Cooling Airflow	15 CFM at sea level
Ruggedization	Available commercial grade, Rugged Level 1, or Rugged Level 2. See Tekmicro Ruggedization Data Sheet for definition of environmental performance specifications.
Warranty	One year limited hardware warranty Ninety day limited software warranty

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I/O Connectors:

P1/P2: VMEbus

P2: Dual RACE++ ports

J1 (Front Panel):
CPU A EIA-232/485 Auxiliary Port

J2 (Front Panel):
CPU A EIA-232 Console Port

J3 (Front Panel):
CPU B EIA-232/485 Auxiliary Port

J4 (Front Panel):
CPU B EIA-232 Console Port

J5 (Front panel):
100BaseTX Ethernet

Features

Dedicated CPU per PMC slot:

Local 200 MHz processor with FPU available for I/O protocol processing, supports high throughput I/O without host processor overhead

MCOE compatible tekX API:

Supports widest range of I/O solutions for RACE++ with a common API and modular hardware/software architecture

Onboard RACE++ fabric:

Easily supports any required system architecture with a single hardware model

Technical Support:

Knowledgeable, accessible, and friendly technical and applications support that assures customer success

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