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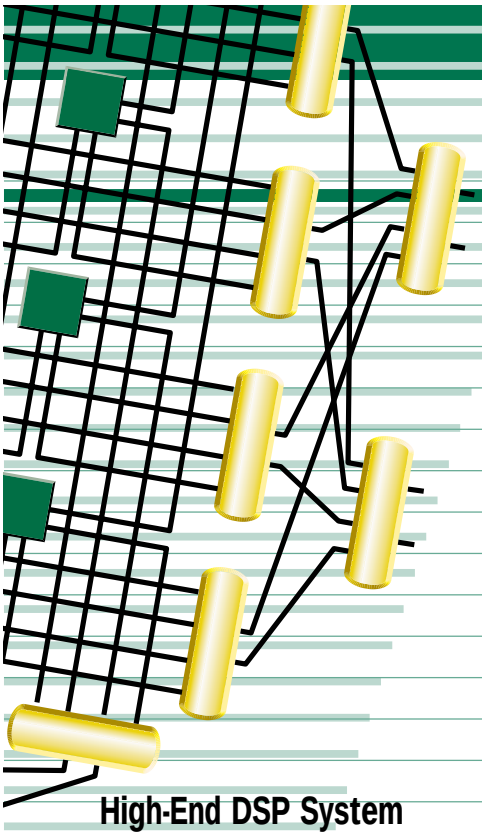
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Find the *Mercury Computer Systems RACE MCJ6* at our website: *Click HERE*



RACE® Series MultiPort™ Systems

Computer Systems, Inc.
MERCURY

High-End DSP System Platform

Single System Meets Both Commercial and Rugged Environments

Multiple Systems Scale with RACEway Interconnect

Support for 100s of SHARCs and PowerPCs

Compute-intensive applications such as space-time adaptive processing (STAP) radar, foliage- and ground-penetrating radar (GPEN, FOPEN), and signal intelligence require ever-increasing levels of performance in real-time DSP computing systems.

Mercury's new RACE Series MultiPort family meets these challenges by offering a new level of performance in a single commercial off-the-shelf (COTS) system package. The MultiPort solutions are forging new territory in embedded real-time DSP applications with highly scalable systems – to more than 1,000 processors – in a package that accommodates both laboratory and deployed rugged environments. The MultiPort systems provide ultra-high bandwidth and massive processing power – without taking up a lot of space.

The challenging environmental constraints of land, air, and sea operating platforms mandate reliable, efficient systems that minimize valuable real estate. Mercury's MultiPort footprint sets a new standard in DSP processing performance per cubic foot, with up to a tenfold increase over current offerings.

MultiPort Defined

The RACE Series MultiPort systems address a new class of applications that require ultra-high performance over existing high-end, VME-based DSP systems. A high-bandwidth interconnect subsystem, implemented with Mercury's RACEway technology, includes an interconnect backplane that links four RACEway ports to each 9U-size slot, providing 640 Mbytes/s bandwidth per slot.

The RACE Series MultiPort family of products is offered as a chassis-level solution. The family includes the MP-410 system and the MP-420 expansion chassis. Both are available in 19-inch rack-mountable chassis.

The MP-410 contains a VME card cage that can accommodate up to 10 VME 6U motherboards: three of which are for the host, and four that are configured with the ANSI-standard RACEway interface. In addition, the MP-410 has 10 9U form-factor MultiPort slots which can be expanded with the MP-420.

The MP-420 expansion chassis contains 20 MultiPort slots. Both the MP-410 and the MP-420 have four high-density connectors that plug into the RACE Series MultiPort backplane. The RACE Series MultiPort backplane has an array of high-

RACE SERIES

MultiPort™

PRELIMINARY INFORMATION

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speed crossbars that allows simultaneous high-performance communication between boards – providing unmatched system performance.

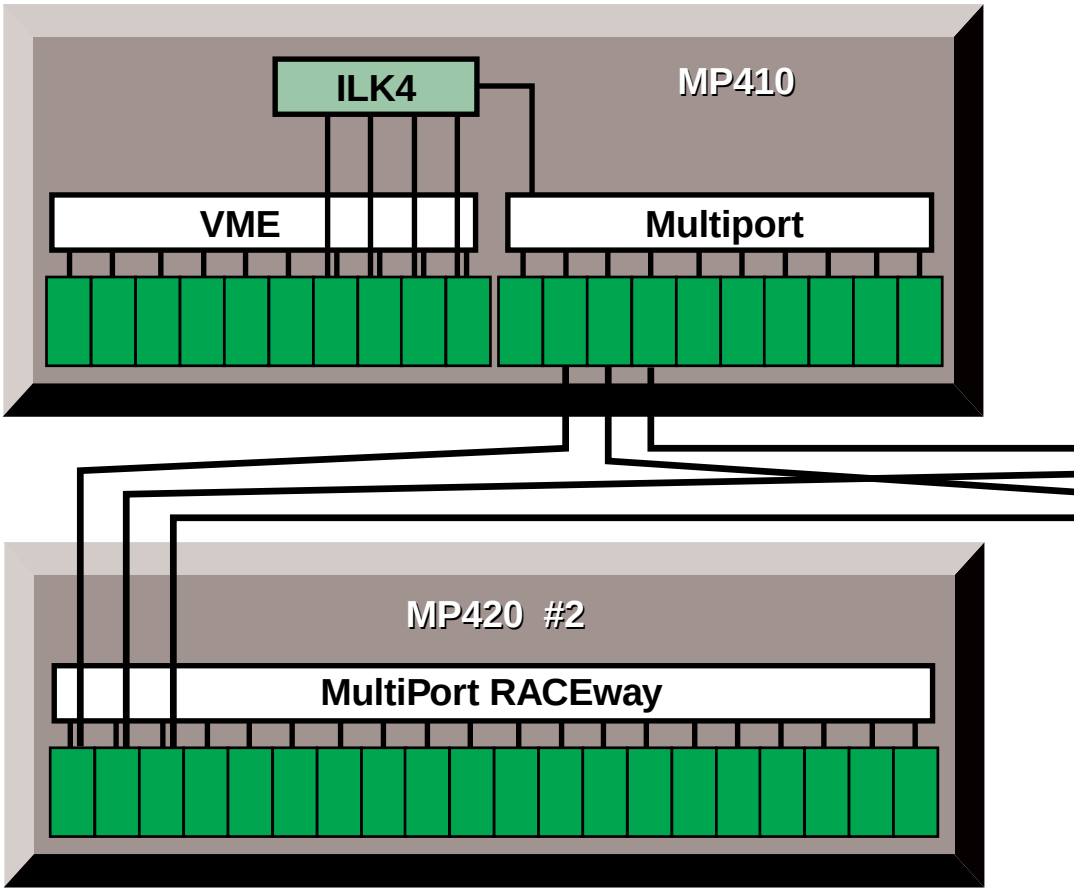
The RACE Series MultiPort boards are configured with processor compute nodes (CNs) or I/O daughtercards which include SHARC™, PowerPC™, RIN-T™, and ROUT-T™ configurations. Daughtercards used on Mercury's MCH6™ and MCH9™ VME-based product line can be used on the RACE Series MultiPort motherboards. Each MultiPort motherboard can have up to eight CN daughtercards.

Commitment to Standards

Mercury is committed to open standards, and as such provides a 10-slot, 6U VME-compliant expansion card cage in the MP-410. The ANSI-standard RACEway is available to interface with the MP-410 on four of the 10 6U VME expansion slots.

System Expansion Through RXB*

Several MultiPort system chassis can be used in combination to create larger systems (see diagram below). Chassis are interconnected with high-speed remote RACEway bridge interfaces (RXBs). This transparent interface enables communication between MP-410, MP-420, and standard 6U VME chassis, and allows multiple-chassis configurations for a single application.



Built-in-Test (BIT) Software*

The MultiPort product family is designed for both lab use and deployed use; as such, BIT software is available to assure system readiness, and if there is a need, quick isolation.

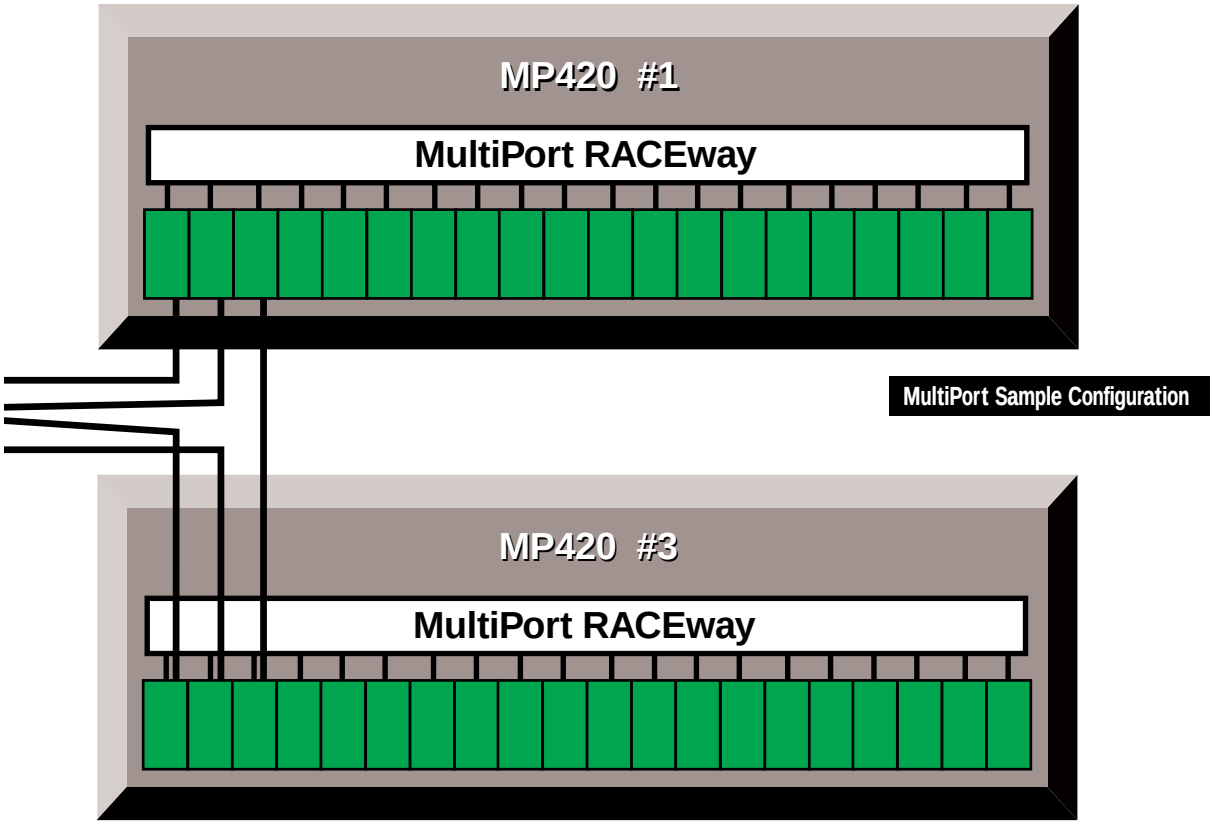
The BIT software provides:

- Power-Up BIT that performs a self-test on the system when it is powered up.
- Continuous BIT functions that run in the background while the system is in operation, checking system status and network connections. The system can be shut down while deployed, reconfigured, and powered up again.
- Commanded BIT that is run off-line, when the system is shut down after completing its task.

The Solution Experts

The RACE Series MultiPort family are fully integrated systems backed by Mercury's expertise in the design and integration of embedded real-time solutions. Mercury's system engineers work closely with customers to maximize system performance for their applications.

* RXB and BIT support are not included in the first release; consult Mercury for availability.



MultiPort Sample Configuration

MultiPort System Specifications

	MP-410	MP-420
Enclosure	19" rack mount	19" rack mount
Height	24.5" (14U)	24.5" (14U)
Depth	26"	26"
MultiPort slots	10	20
VME slots (6U form factor)	10	none
Available 6U VME slots	7	none
Available 6U VME with ANSI RACEway	4	none
Host Support		
Host computer	Force 20VT	n/a
Operating system	Solaris	
Host memory	64 Mbytes	
Peripherals		
Disk drive (removable)	4 GB	n/a
CD-ROM (external)	SCSI-2	n/a
Tape drive	8 MM	n/a

Sample System Configurations

	Base System MP-410	Expansion MP-420	System Total
Example I (2 chassis, RISC-based)			
PowerPC processors	150	300	450
Example II (2 chassis, mostly DSP)			
PowerPC processors	20	20	40
SHARC processors	354	630	984

Ordering Information

Model	Order Number
MP-410	901-06100
MP-420	901-06200

Rugged Specifications

Both the MP-410 and MP-420 are designed to meet rugged environments typical of defense-oriented deployed systems. Contact Mercury for assistance in determining rugged fit for your specific application.

PRELIMINARY INFORMATION

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MERCURY
The Ultimate Performance Machine

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978-256-1300 · Fax 978-256-3599
800-229-2006 · http://www.mc.com

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