



FEATURES

- Access Library for PIO, DMA, and Memory Mapping
- Standard and Spinlock REFLECTIVE MEMORY[®]
- High Performance MEMORY CHANNEL[™]
- Diagnostics
- Software Support Service

BENEFITS

- No Driver to Write
- Easy to Install and Maintain
- Flexible Programming Model
- Interconnectivity with Tru64 UNIX[®], Solaris 8[™], Linux[®] and Windows NT4[®]

PCI-RMS Software (Win2000/XP)

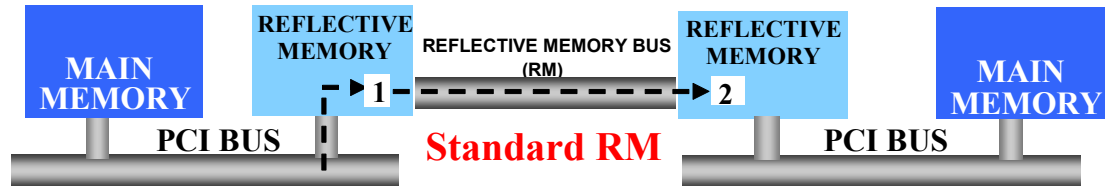
Overview

PCI-RMS Software for Windows 2000/XP is one of several licensed software support packages offered by Compro. The PCI-RMS Node License package provides a driver, an Access Library, and an online Diagnostic.

Reflective Memory Space

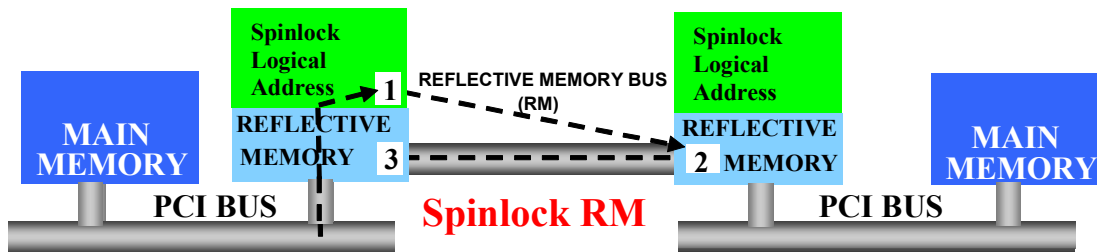
The PCI-RMS board supports up to 256 MB of physical memory space. This space is divided into three segments: Standard Reflective Memory, Spinlock Reflective Memory, and Memory Channel memory. Each memory type has particular strengths and they can be used simultaneously to match the programming model desired. In each mode, block move data transfers (DMA) are supported.

Standard Reflective Memory is an SRAM buffer located on the physical PCI-RMS circuit card. Data written into this buffer is also reflected to the Standard Reflective Memory address space on remote nodes. Standard Reflective Memory is very flexible and easy to use.



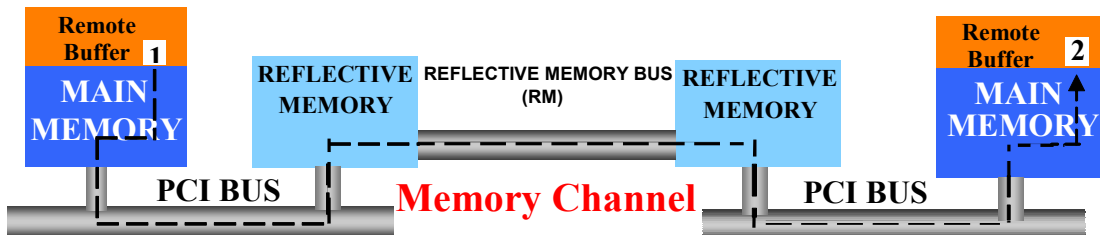
Writes into the Reflected Area are Transmitted to Other Nodes/Reflected Areas

Spinlock Reflective Memory actually overlays the Standard Reflective Memory. The only difference is that the local buffer is not updated until each node in the ring receives the write request. By testing that the Spinlock write completed, the application program is assured that the message has been passed to all nodes in the ring.



Write to Spinlock address. Update the Remote Reflective address. Update the Local Reflective address when all remote node updates are completed.

Memory Channel uses the local processor's system memory instead of a buffer on the PCI-RMS circuit card. Memory Channel writes reflect through each PCI-RMS board on the ring into local processor memory on the other nodes. Memory Channel reads are fulfilled from local processor memory. Thus, reads do not require access to the PCI bus and are fully cached.



Write to Memory Mapped Region or write to Local Main Memory. Block DMA from Local Main Memory Buffer (addressable range) to Remote Main Memory (addressable range) using on-board DMA engine.

PCI-RMS Access Library

Typically, a Windows device driver is required when controlling PCI devices. Writing device drivers is a time intensive task. This Compro product provides a driver and an Access Library to ease the programmers' use of PCI Reflective Memory, eliminating the need to write a custom device driver.

With the Access Library, the mechanics of accessing PCI-RMS is simplified by providing RMS access functions.

The Access Library supports Programmed I/O (PIO), Memory Mapped, and Direct Memory Access (DMA) modes. All three modes can be used concurrently by the user applications.

PIO mode uses routines to read and write individual data words.

Memory Mapped mode lets an application map PCI-RMS memory into its virtual address space. Since kernel calls are not required to access memory, latency is very low. DMA mode moves blocks of data without consuming valuable CPU cycles.

Functions are provided to transfer data from the local processor's memory to the PCI-RMS or from PCI-RMS to a local processor's memory. This mode provides the highest throughput for moving blocks of data from one memory space to another.

Diagnostics

The PCI-RMS Diagnostic is an online program that exercises the functionality of the PCI-RMS board and the Fiber Channel ring. The diagnostic enables the operator to verify individual node and multiple node functionality. This assists the engineer in installing and verifying proper PCI-RMS operation without the need for application programs.

Summary

The PCI-RMS software support is extensive and focused on the needs of the user's operation: performance options for the user and tools are provided to make installation and integration a snap.

Compro also makes available for purchase several levels of hardware and software support to meet your long term logistics needs.

Support for Windows NT4, Tru64 UNIX, Solaris, and Linux are also available. This set of tools combined with the PCI-RMS hardware make Real-Time Clustering a reality.

Prerequisites



105 East Drive
Melbourne, FL 32904
PH: (321) 727-2211
Fax: (321) 727-7009

www.compro.net

Compro, the Compro logo, and other branded items are trademarks or registered trademarks of Compro Computer Services, Inc.

UNIX is a registered trademark that is licensed exclusively through X/Open Company, Ltd.

Sun, Solaris, Reflective Memory, and RMS are trademarks or registered trademarks of Sun Microsystems, Inc.

Linux is a registered trademark of Linus Torvalds.

All other product, service, and company names are trademarks or registered trademarks of their respective owners.

Compro products are subject to a continuing program of enhancement and refinement, and the specifications contained herein are therefore subject to change without notice.

© 2004 All Rights Reserved

Pub. No. 204-307-01

Printed in the U.S.A.

- Windows 2000/XP based system with 512MB of memory, 1GHz processor
- One full length 32bit PCI slot
- PCI capable Model 2546 or 2547 Type 5 PCI-RMS card
- 8 MB Free System Memory
- Minimum 10 MB Free Disk Space