

## FEATURES

- Access Library for DMA, and Memory Mapping
- Standard and Spinlock Reflective Memory<sup>®</sup>
- Software Support Service

## BENEFITS

- No Driver to Write
- Easy to Install and Maintain
- Flexible Programming Model
- Interconnectivity with UNIX<sup>®</sup> and Linux<sup>®</sup>

# PCI-RMS Software (Win-NT)

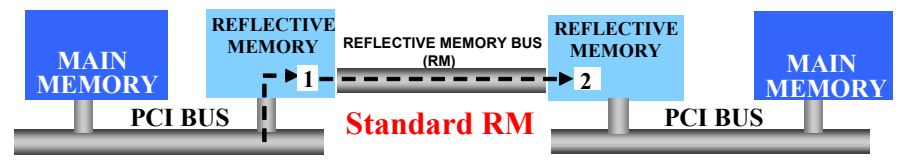
## Overview

PCI-RMS Software for Windows NT is one of several licensed software support packages offered by Compro. The PCI-RMS Node License package provides a driver and Access Library.

## Reflective Memory Space

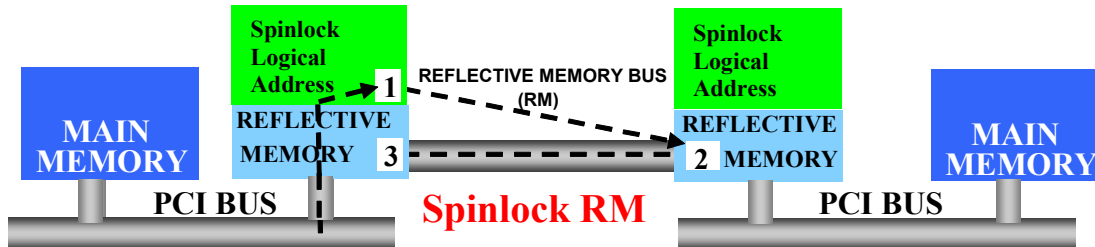
For ease of use PCI-RMS supports two types of memory space: Standard Reflective Memory and Spinlock Reflective Memory. Each memory type has particular strengths and they can be used simultaneously to match the programming model desired. In each mode, block move data transfers are supported.

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



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

Spinlock 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.**

## *PCI-RMS Driver and Access Library*

Typically, a Windows NT device driver is required when controlling PCI devices, and writing the driver is a time intensive task. This Compro product provides a driver and 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 low level RMS access functions. These low level routines use raw PCI addresses.

The Access Library supports Memory Mapped, and Direct Memory Access (DMA) modes. Both modes can be used concurrently by the user applications. 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.

## *Summary*

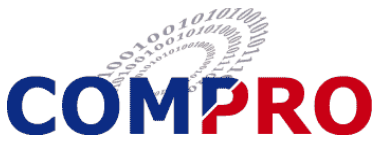
The PCI-RMS software support is extensive and focused on the needs of the user's operation: performance options for the user and tools are provided to simplify installation and integration.

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

Support for UNIX and Linux is also available. This set of tools combined with the PCI-RMS hardware make Real-Time Clustering a reality.

## *Prerequisites*

- Windows NT Rev 4 or later
- Pentium® -based system
- PCI capable Model 2546 Type 5 PCI-RMS
- 8 MB Free System Memory
- Minimum 10 MB Free Disk Space



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Printed in the U.S.A.