Summary

SCI Hardware
Dolphin SCI Adapter Cards
Introduction
Overview of the Adapter Cards
Operating Modes of the SCI Cards
SCI Requester
Address Mapping
SCI Transaction Handling
SCI Packet Requester
SCI Responder
Mailbox
Access Protection
Atomic Access
Host Bridge Capabilities
DMA Transfers
DMA Transfers on the SBus Card
DMA Transfers on the PCI Card
Interrupter
Concurrency Issues
Write Assembly
Efficient Store Barrier
Performance
Applications and Topologies
SAN Interface Adapter
Remote I/O Connection and Data Acquisition
Switches and Topologies
Cluster Software
The TUM PCI/SCI Adapter
Introduction
The PCI/SCI Adapter Architecture
SCI Packet Encoding and Decoding
Overview of Packet Processing
Choosing the Technology
Internal Structure of the FPGA
Structure of the Packet Manager as a Microcode Sequencer
Microcode Examples
Benefits of the Microsequencer
The SCI Unit
Preliminary Results for the PCI/SCI Adapter
Related Work