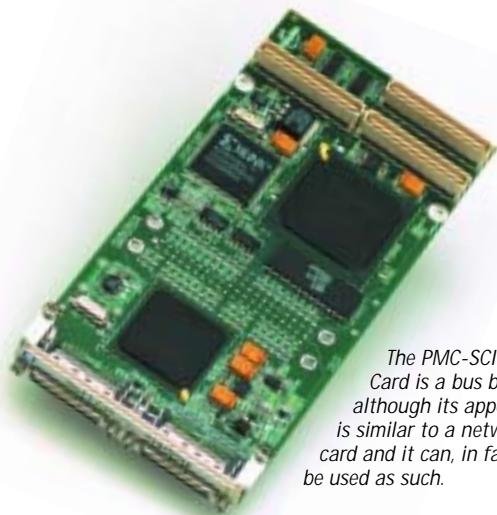




PMC-64/66 PMC-SCI Adapter Card



The PMC-SCI Adapter Card is a bus bridge, although its appearance is similar to a network card and it can, in fact, be used as such.

For clustering, SANs, networking and bus bridging

The Dolphin PMC-SCI Adapter Card is a standard, high performance solution for clustered systems, bus bridging and system area network applications. The PMC-64/66 Adapter Card is a general purpose interface for connecting PMC-based systems through SCI (Scalable Coherent Interface) links, and provides a transparent memory-mapped link. The adapter is used in applications such as computer clusters, system area networks, networking, I/O, fat pipes and for bus bridging. The card is compatible with the PCI to SCI Adapter Card, PCI-64/66 and the 8-Port Expandable Modular X-Bar SCI Switch, MS-8X.

SCI's industry-leading throughput and low latency result in outstanding application performance and scalability. Its 1.333 GBytes/s link speed (bi-directional) makes SCI excellent at moving large volumes of data. The ultra-low 1.4 microsecond latency application-to-application reduces the overhead of inter-node control messages, leading to the best possible scalability for multi-node applications.

The superior performance of the Dolphin PMC Adapter Card is achieved by taking maximum advantage of the SCI standard with its fast point-to-point links and bypassing of time consuming operating system calls and protocol software overhead required in networking approaches.

For high-availability requirements, the SCI standard provides hot-swappable connections. Plus, with the use of redundant SCI cards this technology can be used to enhance fail-over performance and increase fault tolerance, ultimately reducing downtime. Large clusters can be built using Dolphin Interconnect adapter cards combined with a range of scalable switches. Dolphin Interconnect also offers comprehensive software support, including the open source (GPL) SISI API currently available for a variety of popular operating systems.

FEATURES AND BENEFITS

- PMC-IEEE 1386.1 compliant
- PCI 2.2 local bus compliant, 64/32 bits, 66/33 MHz
- ANSI/IEEE 1596-1992 Scalable Coherent Interface (SCI) compliant
- ANSI/IEEE 1159.1 (JTAG) support
- Industry lowest latency and high data throughput efficiently support scalable clustering applications
- High-availability operation with support for redundant PMC-SCI Cards
- Application-level latency as low as 1.4 μ s using remote shared memory access from application to remote-application memory
- Supports both direct memory access (DMA) and programmed remote memory access (RMA)
- Based on latest Dolphin SCI chip technology, LC3 and PSB-66 with 128-byte packet support
- PCI-PMC connectivity
- CompactPCI and VME carrier cards available

PMC-64/66 Application Examples

Technical Specifications

Link Speeds

667 MBytes/s (1.333 GBytes/s duplex)

Performance

Up to 326 MBytes/s throughput (depending on the PCI chipset) 1.4 microsecond latency (depending on chipset)

SCI Link Standard

ANSI/IEEE 1596-1992 scalable coherent interface (SCI)

PCI Specification

PCI local bus specification 2.2, 64/32 bit 66/33 MHz

Topologies

Ring and switch topologies

Physical Specifications

Cable Connection

Parallel STP copper cable (0.2-10m)

Power Consumption

Static 5W, dynamic 6W

Universal PCI Adapter

3.3V and 5V

Mechanical Dimensions

PMC-IEEE 1386.1 compliant

Operating Environment

Operating Temperature: 0° C – 55° C

Relative Humidity: 5% – 95% non-condensing

Altitude: 0 – 3000 meters

Product Code

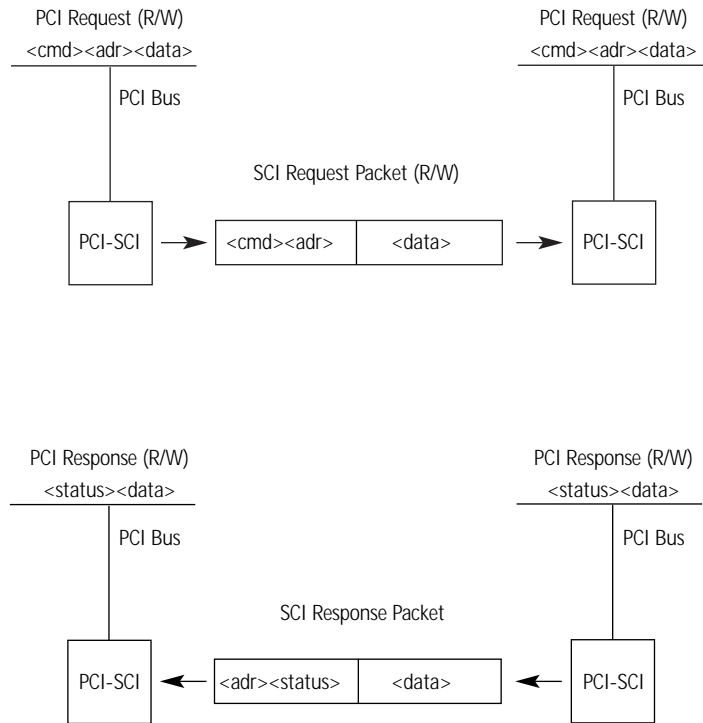
PMC-64/66

Product No.

D333

Software/Chipset Support

Supported by Dolphin IRM and SISCi software on a range of processors, PCI host bridges and operating systems. Refer to website for details.



The PMC-SCI Adapter Card provides highly reliable throughput, low latency, and a transparent, memory-mapped link between PCI/CompactPCI/PMC-based computers and workstations and embedded systems such as VME bus computers. The physical transport is based on the scalable coherent interface (SCI) protocols defined by the ANSI/IEEE 1596/1992 standard. The basic module is the PMC-SCI

Adapter Card. CompactPCI and VME configurations are possible by combining the basic module and suitable adapters or carrier cards available from other vendors. PCI configurations are served by using the Dolphin PCI-SCI Adapter Card, PCI-64/66. Dolphin will also introduce a CompactPCI-SCI adapter card with similar specifications.

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