

Preliminary Data Sheet

VSC7201a

1 GByte/Sec SCI
Compliant Link Controller

Features

- Conforms to IEEE SCI Standards: IEEE Standard 1596-1992
- Sends and Receives SCI Data in 2ns for 1GByte/s Data Rate
- 18 Signal Parallel Link Interface
- High Speed Link Interface Conforms to Low Voltage Differential I/O Standard (IEEE P1596.3)
- 64-Bit Bi-Directional GTL System Interface
- +3.3V and +2V Power Supplies Required
- 4 Entry Send Queue, 8 Entry Receive Queue Buffers
- 269 Tape Ball Grid Array Package (TBGA - 50 mil centers)
- IEEE Std 1149.1 Test Access Port for Diagnostics

1.0 Introduction

The Scalable Coherent Interface (SCI) provides services similar to those commonly offered in a computer bus architecture. In a multiprocessor environment, however, the scalability of a traditional bus is limited by physics; specifically, problems associated with tapped transmission lines, reflections and capacitive loading. To overcome these problems SCI uses a collection of fast point-to-point unidirectional links instead of a physical bus.

A packet transfer protocol is used by SCI to implement various transactions on the high speed links. This arrangement scales very well from a small number of nodes to a large number of nodes. And SCI has specified protocol and link management to guarantee deadlock free transmission ensuring forward progress on all nodes.

The VSC7201a SCI DataPump implements the link physical transport layer of SCI including guaranteed delivery and forward progress protocol.

VSC7201a - Block Diagram

