Preliminary Data Sheet

VSC7203

1 GB/s SCI Compliant Switch
Node Bypass Circuit

Features

- 2-port Switch Capable of Passing SCI Packets
- Multiplexers Allow Bypassing Around any Port for Faulty Node Isolation.
- Sends and Receives SCI Symbols Every 2 ns for 1 GB/s Data Rate Per Port.
- One Port Conforms to Low Voltage Differential Signalling (LVDS) Standard (IEEE Std. 1596.3)
- +3.3V and +2V Power Supplies
- 301 BGA Package (50 mil spacing, 27mm/side)
- IEEE Std 1149.1 Test Access Port for Diagnostics and Boundary Scan

Introduction

This Node Bypass circuit is intended to serve the purpose of isolation of SCI nodes. Multiple copies of this circuit would be interposed in a SCI ringlet, as required, and in normal operation pass SCI packets from one node to another while introducing minimum latency.

A faulty node can be electronically bypassed by assertion of the proper control signals.

The LVDS input and output busses are intended to connect SCI nodes controlled by VSC7201A “Data Pump” circuits. The other input and output busses use level-shifted ECL signaling (VECL) and are intended to connect to other VSC7203 Node Bypass circuits.

The node bypass circuit uses the input strobe for each input port as the source for the clock driving the two register pipeline to the selected output port. An internal 1 GHz PLL regenerates the selected input clock phase so that an unlimited number of circuits can be interconnected.

VSC7203 Functional Block Diagram