CYCLONE Microsystems
Intelligent I/O Controllers

PCIe-423 PCI Express Riser Card for Intel's SR2500 Server Chassis or PAL5000 Motherboard

Features

- x8 PCI-Express Upstream Port
- Three x8 PCI-Express Down-stream Ports
- 32 Lane PCI-Express Switch Supporting
  - Transparent Bridging
  - Non-Blocking Switch Fabric
  - Data Integrity
  - Quality of Service
  - Peer-to-Peer Transactions
- Screwless Installation into Intel SR2500 Server Chassis
- Compatible with Intel PAL5000 Motherboard
- RoHS Compliant

PCI EXPRESS

RoHS Compliant

Cyclone Microsystems
370 James Street
New Haven, CT 06513-3051
(203) 786-5536
information@cyclone.com

PCIe-423 Data Sheet September 2006

Product Description

The PCIe-423 is a switched PCI Express active riser card for Intel's SR2500 Server or Intel's PAL5000 Motherboard. By replacing the passive low-profile riser card with the PCIe-423, users can improve system I/O performance and capacity with three additional low-profile x8 PCI Express slots, peer-to-peer communications, and better utilization of the I/O bandwidth.

More Slots

The PCIe-423 provides up to three x8 PCIe low profile slots. Intel's riser card only provides two x4 slots or one x8 slot.

Peer-to-Peer Communications

The PCIe-423 allows the I/O boards to communicate with each other at the full 20 Gb/s of the x8 PCIe interface.

Better Utilization of the I/O Links

The PCIe-423 allows several I/O boards to share the x8 PCIe link to the host processor and to host memory in a more efficient manner. The Intel riser card allows two I/O boards access to the host processor and memory over two x4 Links. The PCie-423 allows the I/O boards to share a single x8 link prompting faster data transfers to the host system.

Non-Blocking Switch Fabric

The PCIe-423 PCI Express Switch supports a non-blocking switch fabric between the three PCI Express slots and the host system. The non-blocking switch fabric supports complex peer-to-peer data flows.

Quality of Service

QoS features allow different applications to route packets through the fabric with differentiated priorities and bandwidths, and deterministic latencies. Two Virtual Channels per lane and eight traffic classes allow for different traffic priorities. Virtual Channel arbitration algorithms are user selectable and allow the QoS to be optimized for different traffic requirements.

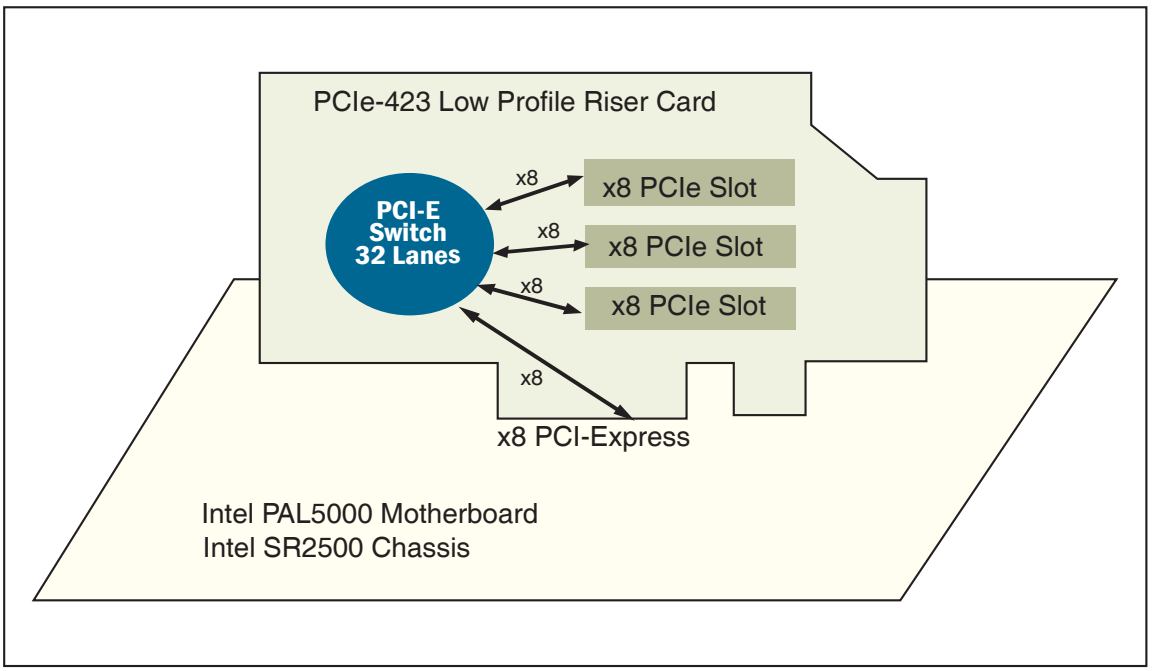
End-to-End Packet Integrity

PCI Express Expansion Systems provide end-to-end CRC protection and Poison bit support to guarantee error free data transmission. Corrupted packets are automatically re-transmitted by the hardware with no software intervention.

CYCLONE Microsystems
Intelligent I/O Controllers

PCIe-423 PCI Express Riser Card for Intel's SR2500 Server Chassis or PAL5000 Motherboard

PCIe-423 Block Diagram



Environmental

Physical Dimensions	Intel SR2500 Low Profile Riser Card 6.063" Long and 2.943" High
Operating Temperatures	0 to 55 Degrees Celsius
Storage Temperatures	– 55 to 125 Degrees Celsius
RoHS Compliant	
Regulatory	UL Recognition

Relative Humidity	0 – 95%

Power Requirements

	Typical	Maximum
+3.3V	0.60A	0.85A
+12V	0.45 A	0.65A

PCIe-423 Ordering Information

CM423-3	PCIe-423 Three Slot Riser Card
800-0423	PCIe-423 User's Manual

Cyclone Microsystems
370 James Street
New Haven, CT 06513-3051
(203) 786-5536
information@cyclone.com

PCIe-423 Data Sheet September 2006