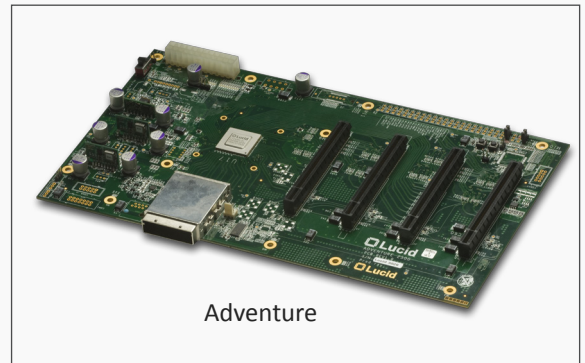


ADVENTURE 2500



Product Overview

The Adventure 2500 is a platform that allows connecting of up to 4 PCIe based devices to a standard PC using standard PCIe extension cable. The system provides solution for wide range of applications such as GPGPU high performance computing, mass storage, multi-display, digital imaging and medical imaging. Using the Adventure 2500 allows users to overcome the limitations of hosting high-end PCIe devices inside their workstation or PC systems such as space, power, number of PCIe ports and heat dissipation. The system is designed based on Lucids' HYDRA technology and is using HYDRA 200 system-on-chip PCIe switching capabilities. The PCIe based devices such as graphic cards or solid state drive can be easily plugged to a standard PCIe slots available on board. The system supports any type PCIe gen 2.0 device and benefits wire speed connectivity including peer 2 peer functionality.



Adventure

PCIe Switching

The Adventure 2500 functions as a wire-speed PCIe switch and have 2 operation modes, which are auto-configurable:

- Mode 1 - one x16 upstream and two x16 downstream ports
- Mode 2 - one x16 upstream and four x8 downstream ports

The system allows peer-to-peer communication between each of the PCIe ports and includes an internal RISC processor that can perform off-line internal tasks.



Features and Advantages

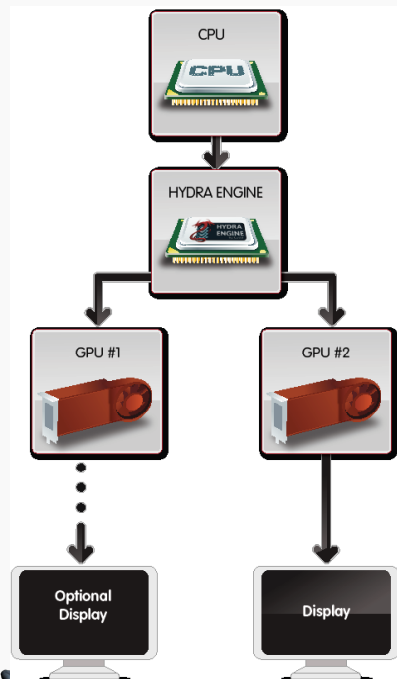
The Adventure 2500 is a unique PCIe extension system designed to enable users to connect multiple PCIe devices to their PC platform. The system is based on 48.5 Gbps SERDES lanes and a full PCI express switch with one x16 upstream port, two x16 or four x8 downstream ports and an embedded end point. The upstream port is typically connected to the user PC and the downstream ports are connected to the PCIe device by any vendor.

The embedded end point incorporates a RISC processor and allows peer-to-peer communication between all ports

Routing of data through the Adventure 2500 is software programmable and the system support multicast with address translation. The system includes packet generator and checker which allows users the easily evaluate the system performance.

The Adventure 2500 is based on the HYDRA 200 ASIC which is a very low power device and as such, the entire system power consumption is very low.

Typical PC Connection



SPECIFICATIONS

PCI EXPRESS INTERFACES

- PCI Express 2.0 compliant
- 48 5 Gbps SERDES lanes
- One x16 upstream ports
- Two x16 or one x16 and two x8 or four x8 downstream ports (Auto-configuration)
- Lane reversal on all ports
- Supports PCI Power Management Interface specification
- Supports advanced configuration and power interface specification, revision 2.0 (ACPI) supporting active link state

EMBEDDED RISC

- Tensilica Diamond Architecture 32-bit RISC
- 225 Mhz clock
- 16 Kbytes on-chip instruction memory
- 16 KBytes on-chip data memory
- On-chip DMA engine to enable PCIe packet generation and reception

PCI EXPRESS SWITCH

- Three or five PCI Express switch ports (one upstream and two or four downstream)
- Fully compliant with PCI Express logical protocol layers, Data Link Layer and transaction layer
- One virtual channel
- Eight traffic classes
- Max payload size of 256B
- Legacy PCI INTx emulation
- MSI support
- Support for ECRC checking and generation
- Support for PCI Express advanced error logging
- 32 Gbps throughput
- On chip packets memory and VoQs
- Store and forward switching architecture

OTHER

- Two LED outputs per PCIe interface
- JTAG interface with AC and DC JTAG support
- Optional four wire EEPROM interface
- Single 200 MHz reference clock

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