SCSI and **Ultra-ATA Disk Drive Storage**

Design Note #10



Motorola Power PC delivers peak distributed disk drive performance.

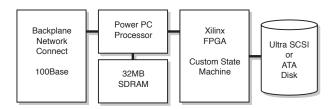
Massive data storage systems make use of distributed computing and storage resources to improve overall system data throughput. Working with technology from Motorola, Xilinx, Seagate, and IBM, Orchid Technologies crafted the highperformance distributed data engine shown below.

Motorola Power-PC

Based on a 200Mhz Motorola Power-PC processor, this distributed data engine packs 32 Megabytes of parity protected high-speed SDRAM, and on-board magnetic-less Ethernet. The Motorola Power PC provides unmatched data processing performance in a highly integrated, feature-packed package.

Custom FPGA State Machine Design

Data throughput is significantly enhanced with custom designed state machine logic implemented within Xilinx FPGAs. FPGA functionality may be tuned during runtime with various downloadable Xilinx FPGA state machine options. Runtime reconfiguration permits wide-scale product feature enhancement without compromising data throughput performance.



Ultra-ATA5 Disk Drive Interface

High speed disk drive interfaces present the designer with new challenges. Orchid Technologies has carefully crafted its disk drive interface electronics techniques to provide top-speed data transfer performance.

Ultra-SCSI Disk Drive Interface

Like the Ultra-ATA interface, Ultra-SCSI presents design challenges of its own. Top-speed 80 Megabyte per second data transfer rates are achieved with careful attention to bus termination details.

Custom Electronic Hardware Solutions

Power-PC Microprocessors coupled with Xilinx FPGA technology can satisfy almost any state-of-the-art computing requirement. Call Orchid today. We're ready to architect, design, and implement the next high-performance computing solutions for you too.



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