OXUFS936DS

Universal Interface to Dual SATA RAID Controller

Description

The OXUFS936DS is a Universal Interface (eSATA, FireWire800, FireWire400, USB2.0) to dual SATA storage controller with integrated hardware RAID engine. Delivering best-in-class performance across all interfaces, the OXUFS936DS enables a range of external storage applications, including dual disk RAID configurations.

The intgrated hardware RAID controller supports a range of RAID modes which can deliver maximum performance (RAID 0) or maximum data protection (RAID 1).

Integrating an eSATA device port, IEEE1394b link, USB2.0 device and dual SATA host controllers the OXUFS936DS requires a minimal number of external components and reduces total system BOM cost.

Features

- High performance Universal Interface (eSATA, FireWire800, FireWire400 or USB2.0) to dual SATA storage controller
- Integrated hardware RAID controller supporting:
  - Disk striping (RAID0) for maximum performance
  - Disk mirroring (RAID 1) for maximum data protection
  - Disk spanning for large capacity single volume
- Supports SATA II Gen2m specification and 3.0Gbps and 1.5Gbps interfaces
- Hardware RAID rebuild engine (up to HDD transfer rate)
- Sustained transfer rates in excess of 150Mbytes/s (limited only by HDD or interface transfer rates)
- Flexible RAID User Agent (LED & LCD support)
- Integrated PWMs
- Integrated Fan-Tachometer control
- USB mass-storage class compliant
- 47 GPIO (24 dedicated, 23 multiplexed)

HI-SPEED CERTIFIED USB

OXFORD SEMICONDUCTOR

Embedded ARM Processor

By managing the data flow, the on-chip ARM7 processor enables a whole new series of standalone consumer electronic product to be developed in a simple C/C++ programming environment.

USB2.0

The embedded USB2.0 PHY supports both full and high speed, using bulk-only transport Mass Storage Class device protocol. Fast read and write transfers ensure that the maximum possible host performance is maintained.

No additional USB host drivers are required, for either Windows® or Mac® operating systems, for standard storage, button notification or GPIO control applications.

FireWire

The embedded 1394 PHY and link layer supports both FireWire800 and FireWire400 and complies with the 1394-1995 and 1394-2000 specifications.

No additional 1394 host drivers are required, for either Windows® or Mac® operating systems for standard storage applications.

SATA Interface

The embedded 3GHz SATA host interfaces supports the latest revisions of the SATA II specifications. In addition the eSATA device port also supports the Gen2m interface. Interface speeds of 3GHz and 1.5GHz deliver maximum performance with minimum latency for external SATA storage.

RAID

The chip supports several RAID functions, including:

- Striping (RAID 0) delivers the highest performance but provides no data integrity or redundancy.
- Mirroring (RAID 1) provides the highest level of data integrity with 100% data redundancy.
- Spanning (concatenation) presents all drives as a single large volume.

Development Tools

For external Mac and PC storage solutions, Oxford Semiconductor offers a comprehensive support package including:

- Reference designs comprising both hardware and software components
- Evaluation boards
- Software Development Kit (SDK) comprising source code and debug boards
- Extensive range of application notes

OXUFS936DS Block Diagram

OXUFS936DS

Ordering Information

Device	Evaluation Kit
OXUFS936DS	EK-OXUFS936DS

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