OXUFS946DSE Dual SATA RAID Controller with Encryption

OXUFS946DSE Highlights

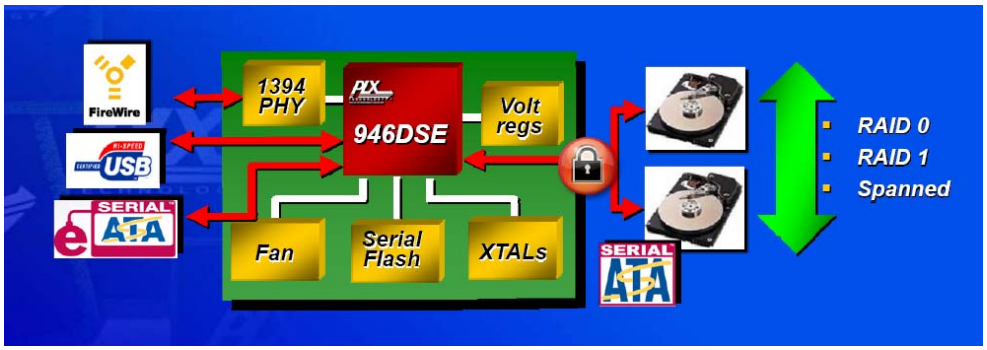
- **General Features**
  - o High performance, dual SATA RAID storage controller with Encryption

- **Key Features**
  - o High performance, dual SATA RAID storage controller with Encryption
  - o Hardware RAID engine supporting RAID 0, 1 and spanning
  - o Integrated dual port SATA II compliant core and PHY
    - Supports 3.0 Gbps and 1.5 Gbps interfaces
    - Supports Interface Power Management (IPM)
  - o Integrated 480 Mbps USB 2.0 high speed core and PHY
  - o Market proven 1394b PHY interface and Link Layer with industry leading performance
    - Supports PHY power down modes
  - o Integrated eSATA core and PHY
  - o Integrated hardware cipher engine supporting AES encryption / decryption:
    - Support for 128-bit and 256-bit keys
    - Support for AES-ECB and AES-CBC algorithms
    - Support for AES-XTS as defined by IEEE P1619
    - Host software and driver supplied for password application for PC and Mac
  - o SPI interface for serial flash
  - o 19 GPIOs allow easy product customization
  - o Support for USB Human Interface Device (HID)
  - o Support for button push apps

OXFORD Storage Solutions by PLX Technology

The OXUFS946DSE is a high performance dual storage controller bridging between eSATA or FireWire 800 or USB 2.0 interface and 2 SATA hard disks.

Delivering best-in-class performance across all interfaces, the OXUFS946DSE enables a range of secure and non-secure personal storage applications, including dual disk RAID configurations.



The integrated hardware RAID engine supports a range of RAID modes which deliver either maximum performance (RAID 0), maximum data protection (RAID 1) or maximum capacity (spanning).

The integrated cipher engine provides advanced encryption and decryption capabilities in hardware and enables OEMs to rapidly deploy full disk encryption solutions, providing end users with peace-of-mind that their private content is safe and secure in the event of theft or loss.

Integrating a USB 2.0 device, a FireWire 800 link layer, eSATA* device and a 2-port SATA host controller, the OXUFS946DSE enables designers to create products with a minimal number of external components and a low cost BOM.

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.

USB 2.0

The embedded USB2.0 PHY supports both full and high speed, using bulk-only transport Mass Storage Class device protocol. Its fast 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 applications.

FireWire

The embedded 1394 PHY and link layer supports FireWire 800, is backward compatible with FireWire 400 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 3 GHz SATA host controller supports the latest revisions of the SATA II specifications. In addition the eSATA* device port also supports the Gen2m interface. Interface speeds of 3 GHz and 1.5 GHz deliver maximum performance with minimum latency for external SATA storage.

RAID

The integrated hardware RAID engine supports the following modes over all interfaces:

- RAID 0, or data striping, delivers the highest performance but provides no data redundancy or fault tolerance
- RAID 1, or data mirroring, provides the highest level of fault tolerance with 100% data redundancy
- Spanning provides a single high-capacity logical volume with the same performance and fault tolerance

Additionally over USB 2.0 & FireWire JBOD (Just a Bunch of Disks) is also supported.

Encryption

The integrated hardware cipher engine supports on-the-fly encryption / decryption of the data to the Advanced Encryption Standard (AES), providing a means whereby a users' data can be securely stored, and made unavailable to unauthorized users. The cipher engine supports the ECB (Electronic Code Book), CBC (Cipher Block Chaining) and XTS (XEX-based Tweaked CodeBook with CipherText Stealing) algorithms.

The OXUFS946DSE is complemented by a robust software password authentication solution, and a customizable host application, the PLX Technology Authenticator, is provided for both PCs and Mac hosts to:

- Define and manage up to 10 passwords
- Authenticate and mount the drive
- Safely de-authenticate and un-mount the drive

Development Support

For external Mac and PC storage solutions, PLX Technology offers a comprehensive support package including:

- Reference designs comprising both hardware and software components
- Evaluation boards with pre-built application firmware
- Software Development Kit (SDK) comprising source code and debug boards
- Extensive range of application notes to shorten learning curves and simplify implementation

Product Ordering Information

Part Number	Description
OXUFS946DSE-LQCG	eSATA, FireWire 800, USB 2.0 to SATA controller with Encryption

Product Documentation

http://www.plxtech.com/OXUFS946DSE

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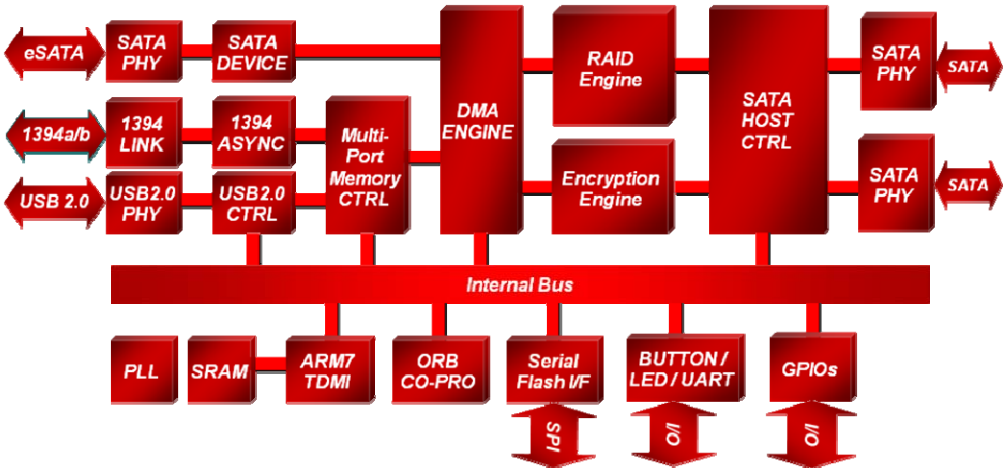
Block Diagram



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В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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