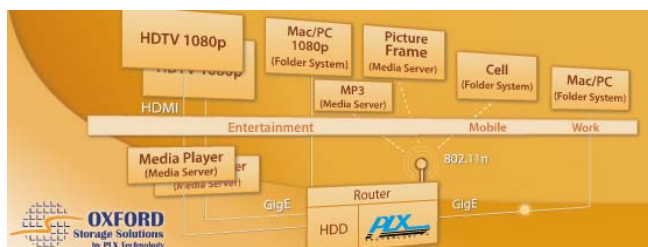
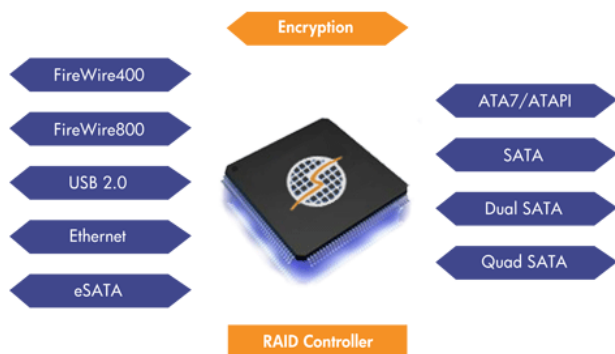


OXE810 Highlights

- Highly integrated storage SoC specifically designed for consumer market with ARM9 Processor running at 370MHz
- TCP segmentation offload (TSC) for higher throughput at lower CPU utilization
- On chip encryption engine for added security
- Booting from HDD without Flash for lower BOM cost (support of Flash is optional)
- Integrated 1/2 SATA3G/s ports with RAID0, RAID1, and JBOD support in hardware
- Rich set of interfaces: USB2.0, 2xUSB1.1, PCI, UART, JTAG, and GMII
- Highly optimized Linux kernel for higher throughput per CPU clock
- Supported file system: SMB, XFS, EXT3, and NTFS (Read)
- Streaming multiple HD videos, music, and photos with high quality-of-service (QoS)
- Support of many third party application partners for media serving, remote access, back-up, and media content management



Application:

Networked Attached Storage (NAS)

PLX Product:

OXE810DSE/SE System on a Chip (SoC)

Key Benefit:

Cost and performance optimized for consumer market

Why consumer NAS?

The digital lifestyle is going through major changes. More and more people are creating, purchasing, and downloading digital content (video, photo, and music) than any time before. This explosion of content has created a need for a new approach to home storage that consumers can store and retrieve their content securely, reliably and easily.

For years, marketing gurus were in search of the elusive “killer application” of consumer network-attached storage (NAS) -- with no luck. The challenge they faced was that no single application itself was compelling enough to lure consumers. Now, though, NAS is emerging as a viable consumer-focused applications solution, where many key applications such as backup, streaming video, and networking in the home are converging into a single solution and creating a synergy not available in any other home electronics. This emerging home-storage environment presents new challenges to system designers, as these new consumer devices now must evolve from a one-dimensional model of a single user/application to a complicated, multi-client model running simultaneous applications.

PLX OXE810 highly integrated consumer NAS system on a chip (SoC)

Long gone are the times that a general purpose processor could provide the right feature-set and cost structure for the cost sensitive consumer market. The key in the design of this new generation of products is the high level of feature integration while maintaining low BOM costs; for example, the integration of SATA ports. PLX’s Oxford OXE810 SoC is specifically designed to meet the new requirements of cost, high performance, and support for the application rich environment of today’s new NAS systems.

The OXE810 SoC is powered by an ARM9EJS processor running @ 370MHz. Furthermore, OXE810 benefits from an independent co-processor that assists the main processor with certain network offloading such as TCP/IP segmentation offload (TSO) for higher performance at lower CPU utilization. Another hardware block is an

encryption engine. Security is becoming an important concern to many consumers. OXE810 provides encryption such as AES-128 using a hardware engine for added security and higher performance. Another security feature includes secure booting for extra content protection.

A unique advantage of OXE810 is its support of RAID0, RAID1, and JBOD in hardware. Hardware support provides higher performance at lower CPU utilization.

The OXE810 provides many other interfaces such as GMII for network connectivity, USB2.0 for added storage drives, 2xUSB1.1 for print server functionality, and PCI for wireless LAN.

The use of Flash to boot is optional. OXE810 can boot from a hard drive which reduces the BOM cost. OXE810 supports DDR1 & II x16 and up to 256MB. The OXE810 evaluation board only requires 64MB of memory. In addition, there is 128KB of internal SDRAM.

Optimized Firmware and Rich Application Environment

One of the key advantages of OXE810 is its highly optimized Linux kernel for storage applications. This has resulted in improving the overall performance of the system and higher throughput per CPU clock.

One main application of modern consumer NAS is media streaming. The OXE810 can simultaneously stream between three to six video streams including HD format with processor cycle to spare for other applications. Other applications are back-up, remote access, and content management.

In order to provide the best class of applications, PLX has partnered with the key leading application vendors. These applications are fully tested and integrated so each one could be independently offered based on the marketing and product requirements of each customer.

Complete Rapid Development Kits (RDK)

The PLX NAS solution delivers the complete development package:

Hardware

- Development board for product demo and rapid product development
- Reference design schematics for reduced time-to-market

Software Development Kit (SDK)

- Advanced software development tools including source package and script for Linux kernel, bootloader, root file system, and web pages
- Compilers, drivers, and complete documentation
- Full source code to facilitate product differentiate and customization by enabling vendors to modified supplied modules or create new functional modules

Additional PLX Advantages

- Superior storage expertise
- Custom support team for each customer for fast time-to-market
- Turk key SDK with full feature set
- Schematic and Layout Design Reviews

Available on PLX Website:

Product Brief, Databook, Application Notes, technical support
<http://www.plxtech.com/products/consumer/#nas>

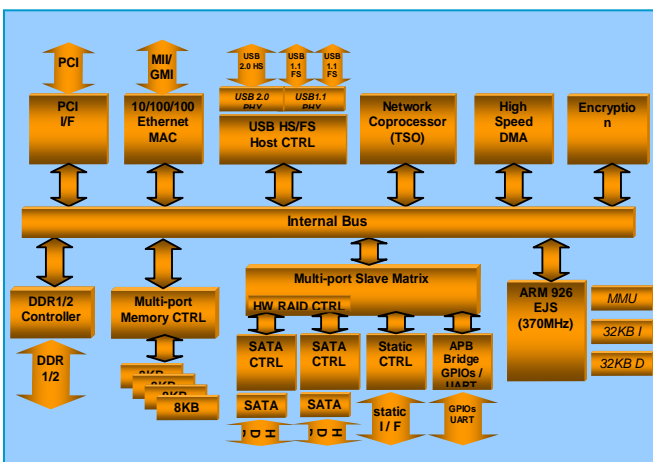


Figure 1: OXE810 architecture overview