Marvell's Award-winning 88DE3010 High-Definition Media Processor System-on-Chip

PRODUCT OVERVIEW

The Marvell® ARMADA™ 1000 (88DE3010) high-definition media processor system-on-chip (SoC) is a high-definition (HD) advanced video and audio decoder with two high-performance Sheeva™ processors and a complete set of peripherals. It enables support for dual-stream, multi-standard video and audio decode functionalities, along with a graphics pipeline, that can enable rich and sophisticated User Interfaces (UI), and also provides support for the Blu-ray 3D specifications. All applications and the operating system are run on one of the Sheeva processors, which operates at up to 1.2Ghz. Additionally, the ARMADA 1000 also integrates a video/image processing subsystem that implements the award-winning Qdeo™ processing, performing per-pixel 3D noise reduction, 3D de-interlacing, scaling, natural depth expansion, intelligent color remapping and adaptive contrast enhancement.

Marvell's ARMADA 1000 provides a high-performance and cost-efficient solution for Blu-ray players, digital media adapters (DMA), HD STB and networked DTV applications.

BLOCK DIAGRAM

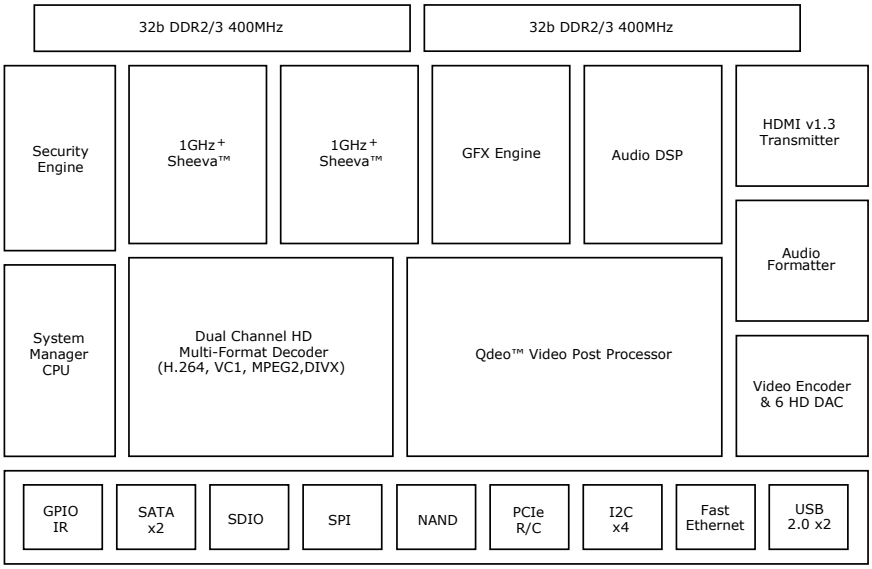

Fig 1. Block Diagram of the ARMADA 1000 (88DE3010) HD Media Processor SoC

KEY FEATURES AND BENEFITS

FEATURES	BENEFITS
• Hardware accelerated dual-stream multi-standard video decode and audio decode	• Multi-format AV decode support enables adoption in a number of different platforms and allows for lower power consumption
• Low-power SoC	• Enables fanless design
• Award-winning Qdeo video processing	• Delivers an immersive viewing experience
• Integrated Sheeva™ CPU cores	• Dual cores with the application processor running up to 1.2 GHz for quick start up and loading times, as well as uncompromised performance for many networked and Java applications
• Full suite of peripherals integrated (such as USB, Ethernet, HDMI, SATA)	• Allows for the design of highly cost-effective products
• Full software stack for Blu-ray applications, media players, and networked DTV applications	• Enables turnkey reference designs for fast time-to-market

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APPLICATION EXAMPLE

Marvell provides a complete go-to-market solution for a Blu-ray player:

- Optical front-end SoC
- HD media processor SoC
- Comprehensive software development kit enables a fast time-to-market solution
  - DVD/VCD/CD-DA navigation
  - HDMV, BD-J
  - GUI/OSD

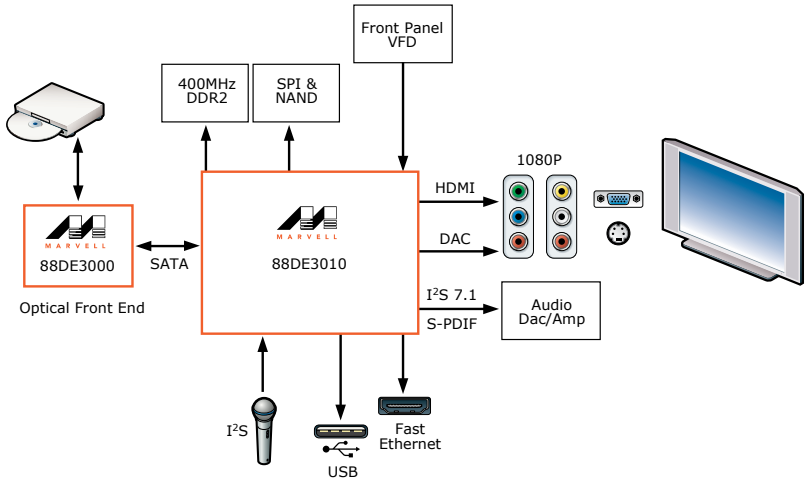

Fig 2. Blu-ray Player Application Diagram

THE MARVELL ADVANTAGE: Marvell chipsets come with complete reference designs which include board layout designs, software, manufacturing diagnostic tools, documentation, and other items to assist customers with product evaluation and production. Marvell's worldwide field application engineers collaborate closely with end customers to develop and deliver new leading-edge products for quick time-to-market. Marvell utilizes world-leading semiconductor foundry and packaging services to reliably deliver high-volume and low-cost total solutions.

ABOUT MARVELL: Marvell is a leader in storage, communications, and consumer silicon solutions. Marvell's diverse product portfolio includes switching, transceiver, communications controller, processor, wireless, power management, and storage solutions that power the entire communications infrastructure, including enterprise, metro, home, storage, and digital entertainment solutions. For more information, visit our Web site at www.marvell.com.

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