



ZMS-08

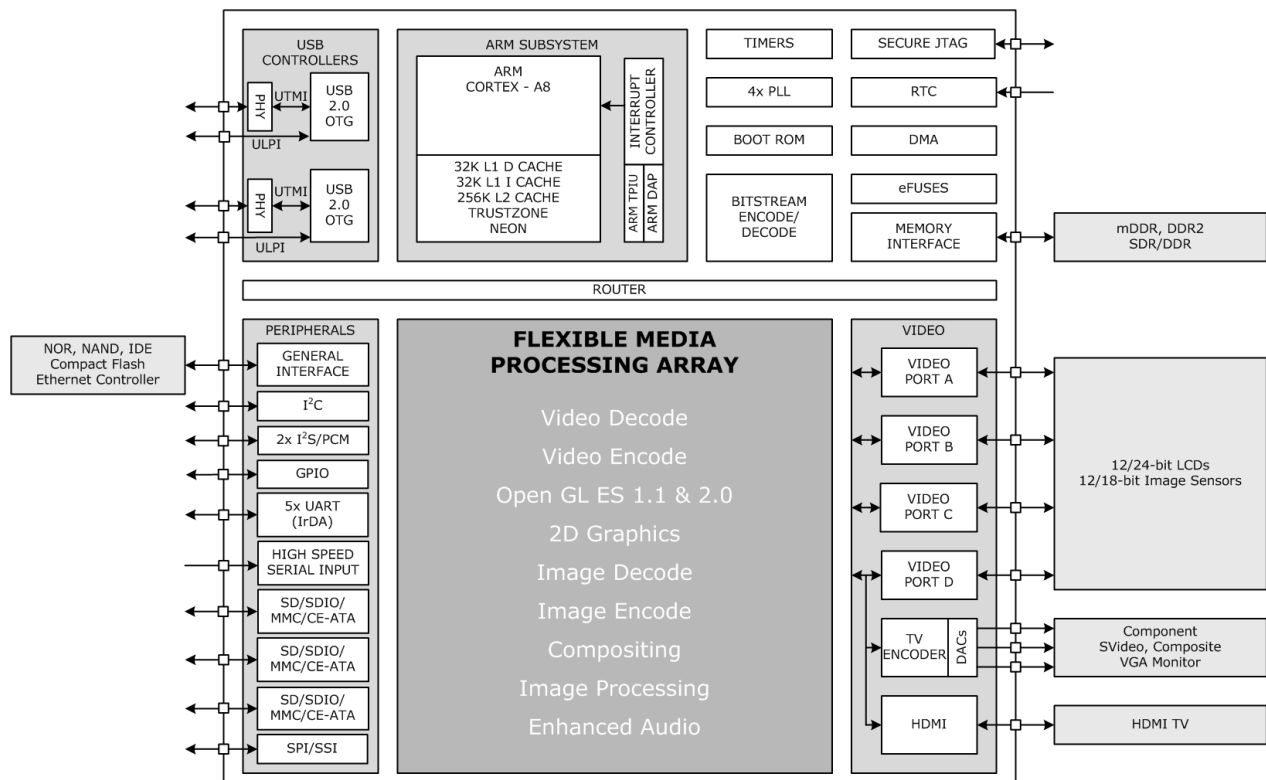
Media Rich Applications Processor

The ZMS-08 is a high performance, fully-integrated low-power processor for delivering the next generation of media-rich portable and embedded products.

- 1080p, H.264 CABAC and CAVLC High Profile, 30fps, 40Mbits/sec decode
- 720p simultaneous H.264 encode/decode
- Accelerated OpenGL[®] ES 1.1/2.0 and 2D
- Xtreme Fidelity[™] X-Fi Audio
- Advanced Image Processing
- Low-energy architecture
- ARM[®] Cortex[™] -A8 Core (up to 1 GHz)
- 64/32-bit Memory Interface
- Rich Peripheral Connectivity
- Advanced Power Management
- Complete Software and Platform Solutions



ZMS-08 Block Diagram



Media Processing Array

The unique ZiiLABS Stemcell Computing architecture is based on a SIMD media processing array that offloads the ARM CPU to provide superior low-power multi-format media acceleration.

- 64 processing elements
- Integer and 32-bit floating-point
- Wide range of CODECs and APIs
- Video decode and encode
- Simultaneous encode and decode
- Image encode and decode
- OpenGL ES 1.1/2.0 2D graphics
- OpenGL ES 1.1/2.0 acceleration
- Hardware compositing
- Xtreme Fidelity Audio Processing
- Advanced Image Processing
 - Scaling and rotation
 - De-interlacing
 - Color-space conversion/correction
 - Gamma correction
- Multi-format bitstream processing

Memory Interfaces

The optimised memory controller and advanced cache architecture ensure maximum memory bandwidth is sustained to meet the performance demands of video and graphics.

- 64 and 32-bit mDDR, DDR2 and DDR/SDR
- Up to 333MHz
- 1 GByte addressable

Advanced Power Management

- Dynamic clock and voltage scaling
- Independent power down regions
- Multiple clock domains and gating
- Suspend to RAM

Application Processor

The Cortex-A8 based ARM CPU subsystem delivers high-performance, low-power application processing.

- ARM Cortex-A8
- NEON™, TrustZone
- 32K I/D caches
- 256K L2-cache
- Trace and debug ports

Multiple Video Ports

The bi-directional video ports provide direct connection to a broad range of display and camera devices and support up to four independent video streams simultaneously.

- LCDs up to 24-bit
- High Resolution Cameras
- Integrated Analog HD-TV encoder
- Integrated HDMI transmitter

Integration and Connectivity

A rich suite of integrated functions and peripheral interfaces minimise system cost, complexity and footprint.

- 2x USB 2.0 OTG controllers, each with PHY and ULPI
- 3x SD/SDIO/MMC/CE-ATA controllers
- General Interface bus for connecting to a wide range of peripherals
 - NAND and NOR Flash
 - IDE, ATA, CF and Ethernet
 - 8/16/32-bit data connection
- 5x UART/IrDA
- I²C
- High Speed Serial Input HSSI
- SPI Master
- 113x GPIOs (10 dedicated)
- 2x digital audio ports (I²S and PCM)

Enhanced Security

Hardware security features support the effective implementation of DRM, e-commerce, encryption, secure boot and downloadable applications.

Xtreme Fidelity™ X-Fi audio

X-Fi provides a complete portfolio of advanced audio solutions for delivering great sounding products.

- Crystalizer - restores audio detail
- CMSS-3D - surround sound
- Smart Volume
- Dialogue Enhancer
- Acoustic Echo Cancellation
- Graphic equalizer
- Microphone beam former
- Noise Reduction

General

- 13x13mm, 424-pin BGA
- Internal Boot ROM
- eFuses
- Secure JTAG

Complete Solutions

ZiiLABS offer a range of solutions to help take products to market, including; reference designs, system modules, development boards, optimised codecs, middleware and BSPs supporting Linux and Android.

Find out more

URL: www.ZIILABS.com

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