ZR36888
Product Brief

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Overview

Vaddis® 888 is an advanced DVD multimedia processor with an integrated state-of-the-art 8 channel Class D modulator which enables a new generation of DVD players featuring universal audio (DVD-A and SACD2.0). The Vaddis 8 processor enables HDTV connectivity via HDMI and analog component HD-video with six 14-bit 165Mhz video DACs. It also offers SD-to-HD upconversion enabling HD content from standard DVD discs. The HD-JPEG feature enables display of high definition JPEG images.

Vaddis 888 supports DivX, XviD, MPEG-4, and Nero playback. It is the newest member of the Vaddis product line with a unified shared memory architecture controlled by a single internal CPU allowing Zoran customers to leverage current software and system development to deliver new features and products.

Vaddis 888 de-blocking and de-ringing maximizes video quality by reducing artifacts in low bit rate streams. Audio post processing includes bass management and 3D effects. These integrated video and audio post processing features enhance the total entertainment experience.

This processor enables new system features such as direct FLASH card interface, USB2.0 HS and enables Ethernet connectivity with the MaestroLink chip. This flexibility makes Vaddis 888 ideal for combo, standalone and portable DVD players.

Universal Audio Player
Vaddis 888 supports DVD-Audio including decryption, decoding, and audio post processing functions. This processor performs CPPM decryption, Meridian Lossless Packing (MLP), LPCM decoding, and bass management. The full fidelity offered by DVD-Audio is available with the use of 192kHz/24-bit audio DACs. Vaddis 888 supports the new SACD2.0 including playback of HD-JPEG content, and is backward compatible with SACD1.3 or lower.

HDMI
High Definition Multimedia Interface (HDMI) is an emerging display standard enabling a fully digital high definition video and audio connection from the DVD player to an HDTV.

DivX and MPEG4 Support
Vaddis 888 utilizes hardware accelerators for maximum MPEG4 performance, playing streams of up to 10 Mbits per second at full D1 resolution and 720x480 @ 30 frames per second. With support for Quarter PEL (QPEL) and Global Motion Compensation (GMC), it provides full compatibility with high-resolution streams.

FLASH Card and USB Applications
A direct interface from Vaddis 888 supports Secure Digital (SD), Memory Stick (MS), Memory Stick Pro (MSPro), Compact Flash (CF), and XD eliminating the need for an external interface IC and reducing system costs. Vaddis 888 supports playback of JPEG, MP3, WMA, and MPEG-1/2/4 files from Flash card or from USB-on-a-key. It also enables a direct interface to digital cameras offering playback of still images or video on TV.

Single Pixel Processing (SPP) Progressive Scan
Zoran's proprietary progressive scan technology enables exceptional video quality for viewing on a progressive scan television. SPP enables pixel-by-pixel processing of the video, while the Vaddis 888 applies high quality deinterlacing to all areas of the scene, including areas with limited or fast motion. In addition to four 10-bit 54 MHz DAC outputs, the Vaddis 888 supports progressive digital video output.

Enhanced Audio Capability
Vaddis 888 incorporates a 135 MHz 32-bit audio processor enabling post-processing audio applications. It is capable of supporting Dolby Digital and Dolby Digital EX, ProLogic I/II, DTS and DTS-ES, MPEG Layer II, multichannel LPCM, CD-DA, MP3 and Microsoft Windows Media Audio (WMA) standards, with up to 8+2 audio channels. Audio post-processing algorithms from Zoran's SiliconSoftware® library can be applied to enhance the listening experience. These algorithms include Virtual Surround Sound, 3D Headphones, Graphic Equalization, Karaoke and Music Modes. Virtual Surround Sound gives the listener a multichannel effect with only two speakers.
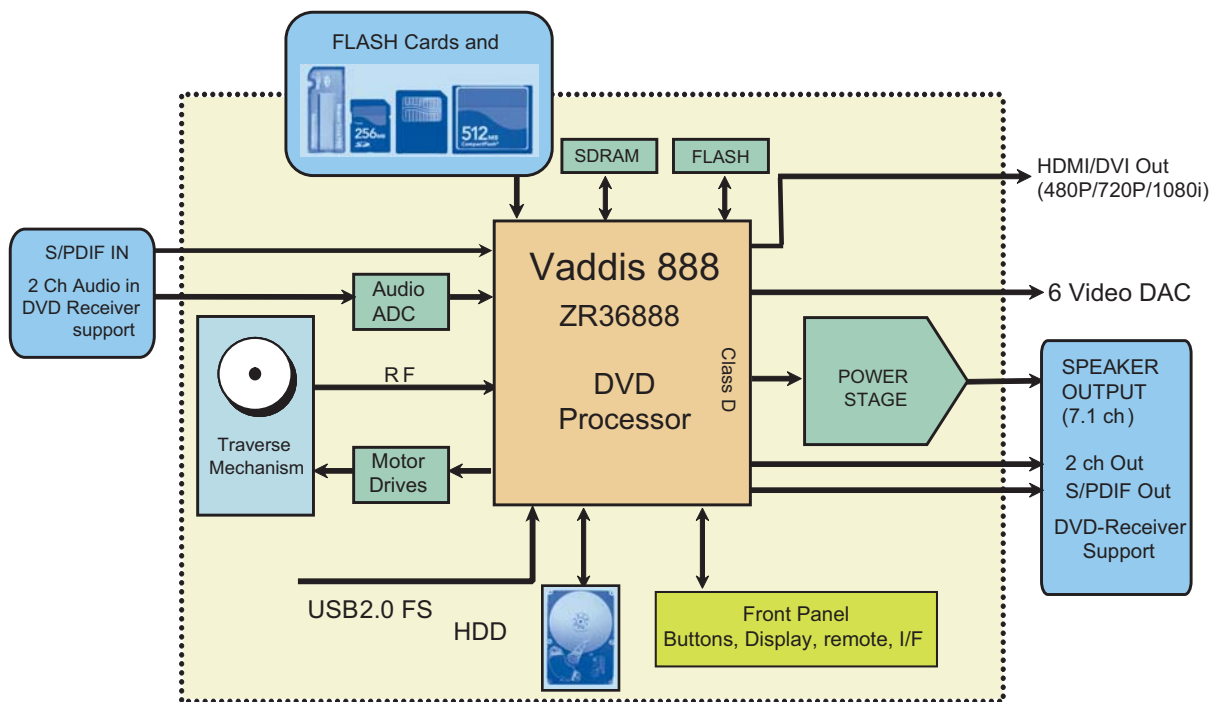
S/PDIF Receiver
The integrated S/PDIF receiver makes Vaddis 888 optimal for DVD-Receiver applications. The S/PDIF audio signal from a set top box or other source can be decoded (e.g. Dolby Digital or Dolby ProLogic II) using the embedded audio processor.

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Key Features

- HDMI1.0 supporting HDCP, direct connectivity to HDTV
- Full DVD-Audio support: CPPM, MLP/LPCM, Audio Watermarking
- SACD2.0 including HD-JPEG
- DivX versions 3.x, 4.x, and 5.1, XviD full-D1 support (with QPEL and GMC support)
- MPEG-4 720x480 @ 30fps (with QPEL and GMC support)
- Single Pixel Processing (SPP) Progressive Scan Video Output
- Interlaced or progressive Digital Video out
- Accelerated JPEG decoding, simultaneous JPEG and MP3 decoding for slide show
- Supports JPEGXtreme to enable high-resolution image display
- Direct interface to FLASH memory cards (Secure Digital, Memory stick, Compact Flash, Smart Media and XD) Proprietary video post processing filters for improving quality of low bit rate MPEG streams
- Integrated S/PDIF receiver
- Supports: DVD-Video, DVD-Audio, DVD-RW, DVD+RW, CVD, SuperVCD, VideoCD, DVCD, Audio CD, Kodak
- PictureCD, Dolby Digital, Pro Logic, Pro Logic II, DTS, MPEG 5.1, HDCD, WMAAudio Decoding ZoranZoom™ and panning

- Image Enhancement: Sharpness and Brightness Adjustments and Gamma correction
- 8+2 Channels and S/PDIF Audio Outputs
- Virtual Surround Sound, 3D Headphones, Music Modes Enhanced Karaoke
- Flexible support for OPUs and mechanisms with superior playbility
- Embedded NTSC/PAL encoder w/six 14bit video DACs up to 165Mhz sampling rate
- Software compatible with Vaddis family
- On-Screen Display (OSD) processor with up to 256 entries of 24-bit YUV color palette and 3-bit transparency
- Interfaces for front panel and IR remote I/O
- External Flash/ROM/Peripheral Interfaces
- Supports 32, 64 and 128-Mbit SDRAM configurations
- 256-pin LQFP Package for ZR36886 and ZR36888
- 208-pin LQFP Package for ZR36882
- Enables system power consumption of less than 1W in standby mode

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