Preliminary

Matiz-Advance

High-quality Full HD H.264 Encoder/Transcoder LSI

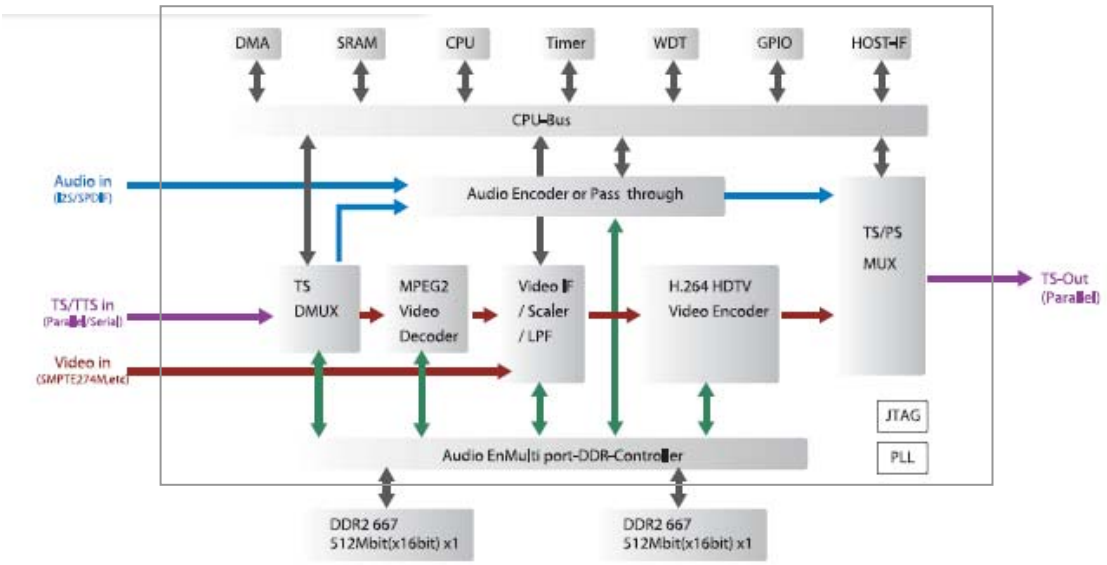
Matiz-Advance is a single-chip encoder/transcoder LSI for professional use that performs real-time transcoding of high-quality video. Since Matiz-Advance's encoding control is compatible with CBR and VBR as well as with the optional Capped VBR, it can be applied to a wide variety of video and audio equipment for professional use. Matiz-Advance also has an HDTV-SDTV downscaler and optionally supports flexible encoding control with its seamless bit rate change capability.

An increasing number of digital broadcasting systems are employing H.264/AVC as a video compression format these days because it provides both high compression and high quality video simultaneously. Most professional video equipment has traditionally used MPEG-2, but today's equipment is increasingly using H.264/AVC for applications such as image editing and archiving, which involves recording images, and for bandwidth-constrained services such as satellite broadcasting and IPTV. Matiz-Advance provides the best solution for these applications.

Matiz-Advance transcodes MPEG-2 images into the more compression-efficient H.264/AVC format, effectively reducing video data sizes by 50 percent or less while retaining high video quality. Matiz-Advance is especially useful in applications such as IPTV headends, video servers, and video editors. These applications require high-end encoders that can transcode content distributed and stored in MPEG-2 format into H.264/AVC format. The single-chip design of Matiz-Advance enables a more compact yet high-performance design of equipment.

Key Product Features:

- Support for encoding Full HD H.264/AVC
- Support for transcoding from MPEG-2 to H.264/AVC.
  -MPEG-2 HDTV to H.264/AVC HDTV/SDTV
  -MPEG-2 SDTV to H.264/AVC SDTV
- Supports converting video formats while retaining excellent video quality
  -HDTV to SDTV down-conversion
- Supports multiple video formats, including 1080i, 720p, 576i, and 480i
- Supports multiple audio formats, including MPEG-1 Layer 2 and MPEG-2 AAC



Matiz-Advance Block Diagram

Main Specifications

Compression Technology	H.264	Encoder:	ISO/IEC 14496-10(H.264/AVC) High Profile Level 4.0 Main Profile Level 3.0
	MPEG-2	Decoder:	ISO/IEC13818-2(MPEG-2 Video) MP@HL
Video Input	SMPTE274M / SMPTE296M-2001 / ITU-R BT.656-4		
Stream Input	ISO/IEC 13818-2(MPEG-2 Video)		
Stream Output	ISO/IEC 13818-1+Amd3		
Audio	Audio PES through(Transcode), various formats(Encode)		
Down Scaling	HDTV SDTV or through		
Host Interface	16bit data bus		
Power Supply	Core: 1.2±0.1v, I/O: 1.8±0.1v / 3.3±0.3v		
Power Consumption	1.4W (Encode mode)		
Package	27mm x 27mm, BGA		
External Memories	512Mbit DDR2-667 x 2		