

MB86H52

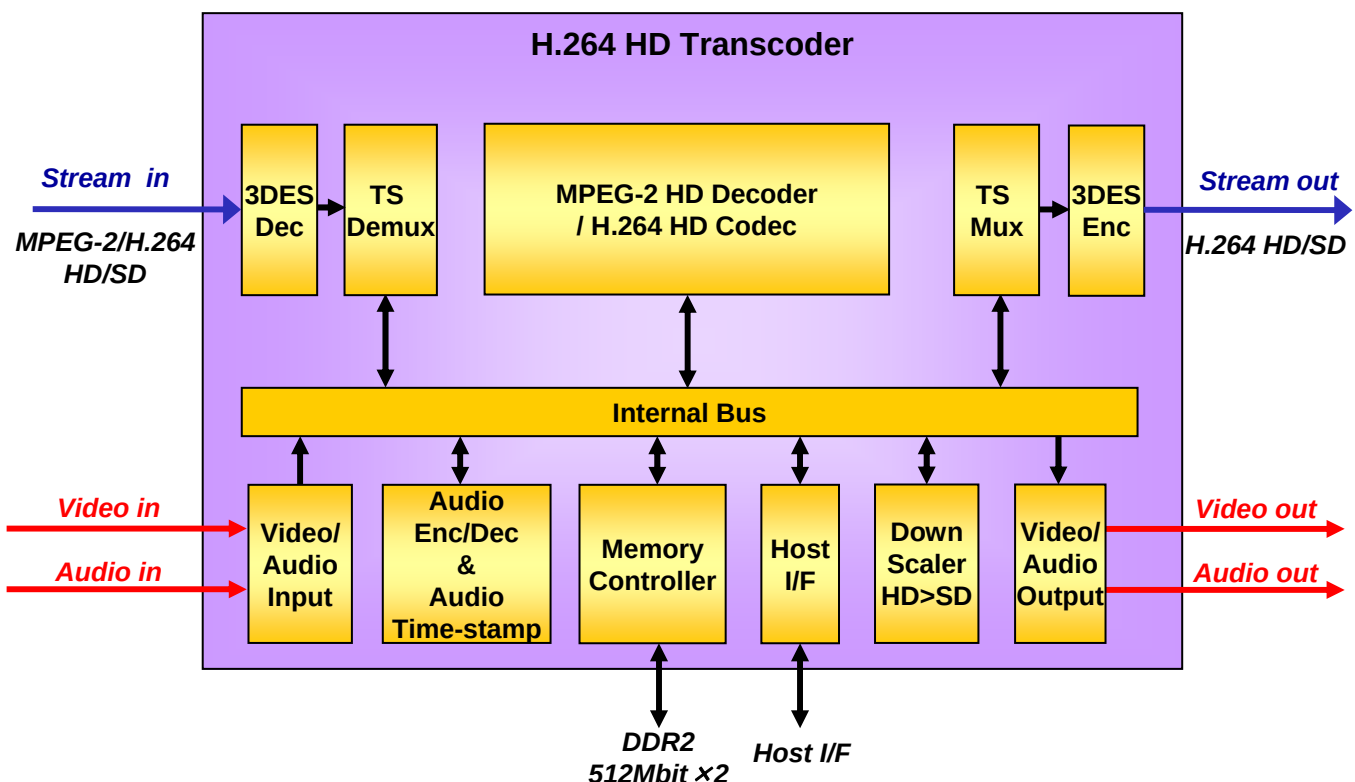
MPEG-2 HL to H.264 HD Transcoder

◆Introduction

The Fujitsu MB86H52 can compress full HD (1920dot x 1080line) MPEG-2 video data to H.264 data. The new chip, the MB86H52, is a transcoder that can compress MPEG-2 video to less than half the data size.

The transcoder functionality is based on the video processing technology of the presently shipping full HD H.264 CODEC (Encode / Decode) LSI product, MB86H51. Utilizing proprietary high quality video technology developed by Fujitsu Laboratories, the quality of the inputted MPEG-2 video data is maintained when transcoding to H.264 format video data.

When used in recording equipment like hard disk recorders etc., for the same hard disk storage capacity, the recording time can be lengthened by more than 2.5 times. The transcoded data size is reduced in the H.264 format so it also allows transmission of full HD video over narrow bandwidth networks in the home etc.



MB86H52 MPEG-2 HL to H.264 HD Transcoder



◆Features

Transcoding MPEG-2 format HD video data to the H.264 format
H.264 delivers the same quality as MPEG-2 at a half the data size.

Proprietary technologies for compression and high quality video
This LSI utilizes a proprietary algorithm developed by Fujitsu Laboratories that automatically applies less compression to areas in the image where compression artifacts are most noticeable to human vision, such as human faces or slow-moving objects, and greater compression to other areas. Thus high image quality for the critical zones is maximized. Due to that, the same video quality is maintained when transcoding from MPEG-2 to H.264.

Includes Full HD H.264 CODEC
The LSI includes a full HD H.264 CODEC for video encoding and decoding, so uncompressed video data can be compressed to the H.264 format. Also, this product can decompress video data from compressed or transcoded H.264.

Specifications			
Function	Transcode	Video	MPEG-2 HD ⇒ H.264 HD/SD MPEG-2 SD ⇒ H.264 SD
		Audio	Time stamp re-allocation
	H.264 Codec	Video	VBS ^{*1} ⇔ H.264 HD/SD
		Audio	ABS ^{*2} ⇔ MPEG-1 Audio Layer2, etc.
Video	Spec	MPEG-2 Video Main profile / High Level Decoder H.264 High profile / Level 4.0 Half -Duplex Codec	
	Resolution	1920 x 1080 x 60i/50i, 1440 x 1080 x 60i/50i, 1280 x 720 x 60p/50p, 720 x 480 x 60i, 720 x 576 x 50i	
	Interface	SMPTE 274M / SMPTE296M-2001, ITU-R BT.656	
Audio	Format	MPEG-1 Audio Layer2, MPEG-2 AAC(LC profile), Linear PCM, Dolby [®] Digital(AC-3) ^{*3}	
	Channels	2channels	
	Interface	LR Serial	
System	Format	MPEG-2 TS CBR / VBR	
	Stream Interface	8bit parallel or Serial	
Host Interface		General 16bit interface	
Input clock		27MHz	
Operating frequency		Internal:216MHz, DDR2 IF:324MHz	
Power consumption		1.7W (typ., 1.2V, MPEG-2 HL to H.264 HD TRC)	
Package		PBGA 496pin 27mm square (Ball pitch 1.0mm)	

*1 Video Baseband

*2 Audio Baseband

*3 Dolby is a registered trademark of Dolby Laboratories.

FUJITSU LIMITED

Business Development Dept.
TV and STB Solution Div.
Electronic Devices

Shinjuku Dai-Ichi Seimei Bldg.
7-1, Nishishinjuku 2-chome, Shinjuku-ku, Tokyo 163-0721, Japan
Tel: +81-3-5322-3354 Fax: +81-3-5322-3365
e-mail: edevice@fujitsu.com

<http://www.fujitsu.com/microelectronics>

Copyright 2007 FUJITSU LIMITED

Disclaimer: The contents of this document are subject to change without notice. Customers are advised to consult with FUJITSU sales representatives before ordering. The information and circuit diagrams in this document are presented "as is", no license is granted by implication or otherwise.