

Product Profile

MB86H52

MPEG-2 HL to H.264 HD Transcoder

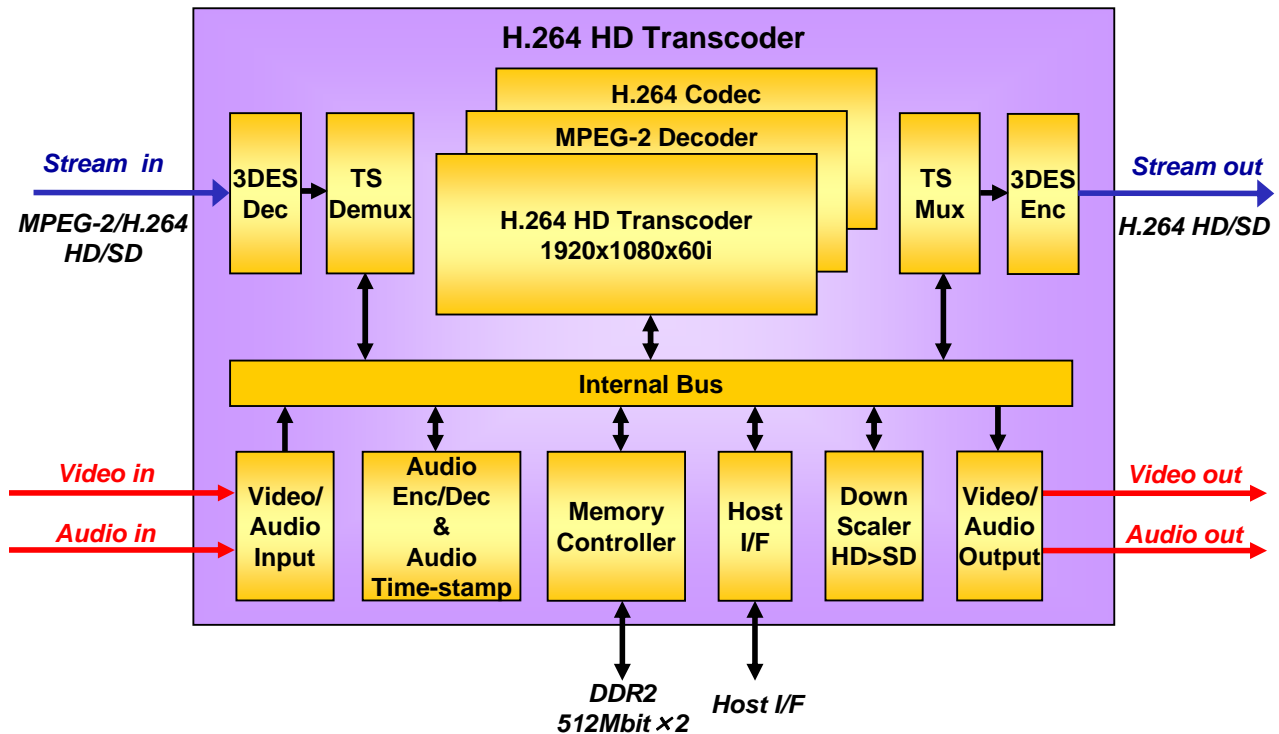
August 2007

◆ 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.



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◆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.

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