4K/60p HEVC Multi Format Codec MB86M30

Overview

The Socionext MB86M30 or "M30" provides video and audio encoding, decoding, and transcoding of HEVC/H.265, AVC/H.264 and MPEG2 standards. The M30 is a slave device controlled by a host CPU via a PCIe interface.

Features

- 4K/60p HEVC/H.265 or AVC/H.264 real-time encoding/decoding
- 4K/60p HEVC/H.265 encoding with 10ms ultra low latency (Optional)
- HEVC encoding algorithm supporting HDR (High Dynamic Range) video
- Low power consumption (6.3W at 4K/60p HEVC encoding) with four DRAMs embedded in package to increase system density

Applications

- Broadcasting
- IP Video distribution
- Medical
- Signage
### Specifications

| Video | Encoding   | HEVC/H.265 4:2:2 10bit (up to 4096 x 2160p60)  
|       |           | AVC/H.264 4:2:2 10bit (up to 2160p60)  
|       |           | MPEG2 4:2:0 8bit (up to 1080i59.94, 1080p30)  
|       | Ultra Low Latency Encoding *1 | HEVC/H.265 4:2:2 10bit (up to 4096 x 2160p60)  
|       |           | Latency : 10ms  
|       | Decoding *2 | HEVC/H.265 4:2:2 10bit (up to 4096 x 2160p60)  
|       |           | AVC/H.264 4:2:2 10bit (up to 2160p60)  
|       |           | MPEG2 4:2:0 8bit (up to 1080i59.94, 1080p30)  
|       | Transcoding *3 | HEVC to HEVC, H.264 to HEVC, MPEG2 to HEVC, etc.  
|       | Pre-Processing | De-Interlacing, Scaling, Filtering, Video overlay  
|       | Multiple channel operation | Up to 4ch @HEVC/H.265 encoding, 1080p60  
|       | HDR ready |  
| Audio | Encoding | LPCM, AAC-LC, MPEG1-Layer2  
|       | Decoding | LPCM, AAC-LC, MPEG1-Layer2  
|       | Pass through |  
| Stream processing | TS MUX | Up to 4ch  
|       | TS DEMUX | Up to 4ch  
| Interface | Control | PCIe 2.0  
|       | Stream | PCIe 2.0, TS-Serial Input x 4ch, TS-Serial Output x 4ch  
|       | Video | PCIe 2.0, Video Parallel Input x 4ch, Video Parallel Output x 4ch  
|       | Audio | I2S Input x 4 stereo pair, I2S Output x 4 stereo pair  
| System | Internal Memory | LPDDR4-2400 8Gbits x 4pcs  
|       | External Memory | LPDDR4-2400 (16bit x 2ch) x 2pcs  
|       | Boot Device | SPI Flash  
|       | Package | FCBGA 47.5mm x 47.5mm  

*1: Ultra Low Latency Encoding is optional.  
*2: Decode function is verified with the stream generated by MB86M30. Regarding support status of other streams, please contact us.  
*3: Transcoding function is optional.