**4K/60p HEVC Multi Format Codec MB86M30**

**Overview**

“MB86M30” provides video and audio encoding, decoding, and transcoding with supporting HEVC/H.265, AVC/H.264 and MPEG2 standard. MB86M30 is slave type device controlled by host CPU via 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 (Option)
- HEVC encoding algorithm supporting HDR(High Dynamic Range) Video
- Low power consumption(6.3W at 4K/60p HEVC encoding) and embedding four DRAMs in package enable high density in the system

**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
- Decoding
- Pass through
  - LPCM, AAC-LC, MPEG1-Layer2

### Stream processing
- TS MUX
- 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.