H.265/HEVC 4K60p Real-time encoder MB86M31

**Overview**

“MB86M31” provides H.265/HEVC 4K60p real-time encoding by single chip. The MB86M31 is slave type device controlled by host CPU via PCIe interface.

**Features**

- HW base H.265/HEVC 4K60p real-time video encoder
- Support Main 4:2:2 10 profile necessary for broadcasting applications
- Support multi-channel video encoding: 1080p60 4ch, 720p60 8ch, 480p 16ch
- Low power consumption

**Applications**

- Broadcasting
- Video capture
- Medical
### Specifications

| **Video** | Encoding | • H.265/HEVC Main, Main 10, Main 4:2:2 10 profile  
- Multi channel encoding: 4K60p 1ch, 1080p60 4ch, 720p60 8ch, 480p 16ch |
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<tbody>
<tr>
<td><strong>Interface</strong></td>
<td>Control</td>
<td>• PCIe Gen2.0</td>
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| | Peripheral | • PCIe Gen 2.0 (4 lanes x2, 5.0 GT/s, Max payload size 1024 Bytes, Lane reversal supported)  
- UART(4 channels)  
- I2C(2 channels)  
- SPI(1 channel)  
- GPIO(64 pin) |
| | Video | • 20bit parallel interface(4 channels)  
support YUV4:2:2 10bit up to 4K  
- Support embedded sync(CEA-861) |
| **System** | CPU | • ARM Cortex-A7 400MHz single core |
| | Memory I/F | • DDR3 SDRAM 1333Mbps (16bit x2, 4channels) |
| | Boot Device | • Serial flash, Nor Flash |
| **Physical** | Power supply | • Internal Logic: 1.2V, Analog: 1.2V / 3.3V, I/O: 1.5V / 1.8V |
| | Operating temperature | • Ta = 0 to 70degree |
| | Package | • FCBGA-1764 (35mm x 35mm, 0.8mm pitch) |

### Deliverables for system development

- **Evaluation board**
  - PCIe card form
  - Support 4ch 3G-SDI input

- **Software Development Kit**
  - Including Host CPU driver, sample application(Source code)

- **Documentation**
  - MB86M31 datasheet, evaluation board schematic, board design database
  - Host CPU driver, Sample application software, Control command document