Product Brief

CS8140 Multi-Format HEVC Video Decoder IP

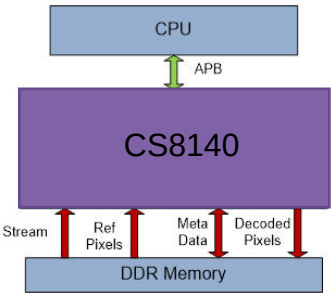
Multi-Format, Multi-Stream – Silicon Proven – UHD/4K – Video Decoder

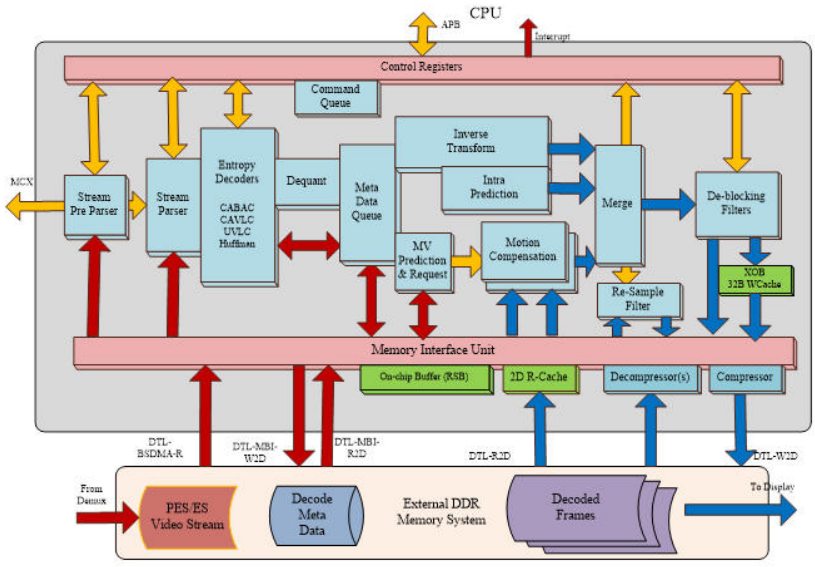
- Mature, multi-format, multi-stream video decoder
- Silicon proven in multiple STB and DTV chipsets
- Hardware decoder paired with a RISC controller to perform video decode
- Decodes 12 different video formats up to and including HEVC 4Kp60

Formats Supported	Features
• HEVC/H.265 MP@L5.1 (4KP60) • H.264 AVC CBP,MP,HP up to L4.2 • H.264 MVC 1080p30 each eye • MPEG-2 MP @ HL • MPEG 4.2 SP & ASP • MP4 (DivX3, Sorenson, H263) • VC1/WM9 SP, MP & AP • VP6, VP8 • RV8, RV9, RV10 • China AVS 1, AVS P16 • JPEG & MJPEG up to 150MP/s ○ Integrated scaler and colour space convertor	• Multi-stream & Multi-format • PES or ES stream input • High Latency Tolerance (CPU & Memory) • Low CPU load • Low Memory Bandwidth • Robust Error Resilience controlled by Firmware • Mature IP Silicon proven in multiple mass production STB and DTV SoCs down to 28nm • Production Verified Firmware • Extensively verified with a large library of third party test streams.

Operation

- CS8140 operates under direction of firmware
- Firmware pre-decodes headers and banks configuration commands
- Low CPU load allows CPU to run other hardware blocks in the system
- For multi-stream decoding, switching between streams occurs at frame boundaries





CS8140 Block Diagram

Deliverables

- Bit accurate C models
- Verilog RTL and production firmware
- Synthesis scripts
- Self-checking test environment
- Datasheet and user manual

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