

AL-E200

MULTI FORMAT VIDEO ENCODER

- State of the art video encoding quality
- True multi-format architecture sharing resources between H.264/AVC, H.265/HEVC and VP9 video formats
- Single core 4K@30fps encoding
- Scalable from HD to 8K resolution
- Supports smart encoding features
- Designed for minimum gate count, low power consumption and low memory bandwidth usage
- Designed for applications such as digital cameras, video surveillance, video transcoding, wireless display, VR/AR, ADAS, etc.



AL-E200 Encoder IP

H.264/AVC, H.265/HEVC, VP9 AND JPEG UP TO 8K RESOLUTION

VIDEO IP

Allegro DVT's AL-E200 encoder IP features a new hardware architecture that minimizes the silicon area while enabling 4K resolution encoding in a single core. The AL-E200 encoder is built around a true multi format architecture that shares resources between the H.264/AVC, H.265/HEVC, VP9 and JPEG compression standards, while providing superior video encoding quality. The AL-E200 also has multiple new smart encoding features allowing customers to considerably reduce the bitrate to meet their application specific requirements.

AL-E200 encoder IP targets high-end applications such as:

- Digital still and digital video cameras
- Video surveillance
- Video transcoding and broadcasting
- Wireless display
- VR/AR
- ADAS

Key advantages

- New hardware implementation minimizing area and power consumption and enabling 4K resolution encoding with a single core solution
- Unique true multi-format and scalable architecture
- Flexible, user configurable software
- Fast and easy integration within a wide range of System-On-Chip (SoC) designs
- Advanced architecture optimized to fit memory bandwidth and latency requirements of consumer SoCs
- Support for multi-stream encoding

Features

Supported Standards

H.264/AVC Baseline, Main, High, High10 and High 4:2:2 profiles
H.265/HEVC Main, Main 10 and Main 4:2:2 10 profiles and Scalable High efficiency Video Coding (SHVC) profile
VP9 Profile 0 (4:2:0, 8-bit) and Profile 2 (4:2:0, 10-bit)
JPEG Baseline

Optional Smart Features

Ultra low latency coding
Gradual Decoder Refresh
Dynamic changes in the encoding parameters
Region Of Interest
Static Region Detection
Noise Reduction Filter
Scene Change Detection
Dual pass encoding
Crop/Resize
Motion Estimation only mode

Interfaces

AMBA APB interface for control registers programming
AMBA AXI interface for data access

Deliverables

- RTL source code
- C control software
- Bit accurate reference model
- Documentation



Allegro DVT is a leading provider of H.264/AVC, H.265/HEVC, AVS2, VP9 and AV1 solutions, including industry standard compliance test suites, H.264/AVC, H.265/HEVC and VP9 encoder, codec and decoder hardware (RTL) IPs. Allegro DVT products have been chosen by more than 100 major IC providers, OEMs and broadcasters.

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