OVERVIEW

The demand for live video streaming has become a critical business need. Video service providers are faced with balancing high-quality experiences for their customers, while managing their infrastructure and operating costs. Given the computational intensity of converting video, transcoding has prompted the need for adaptable hardware acceleration.

Xilinx has assembled a high-performance video transcoding package that delivers the power and performance service providers need without altering existing infrastructure.

In addition, the solution utilizes the very powerful industry proven FFmpeg command-line based processing from which anyone can develop a transcoding application or easily bolt into an existing application or their own infrastructure.

PRODUCT OVERVIEW

> Highest quality live encoding for low bitrate or high density applications
> Accelerated encoding with minimal host CPU requirements
> HEVC and H.264 encoding streams with ABR Ladder on a Alveo U50 and U30 accelerator cards
> Simple API based on FFmpeg industry standard
INTELLIGENT PARTIONING

Xilinx provides the highest performance at the system level. By offloading the encoding from the CPU ensures the CPU can support other critical functions like audio and ad insertion.

FFmpeg API support enables customers to integrate up to eight Alveo HHHL U50 or U30 accelerator cards and software into their 1 RU server with ease.

FEATURES

> Real-time encoding at visual quality up to x265 ‘slow’ preset levels
> Lowest bitrate encoding for broadcasts with a large number of viewers on U50
> Low bitrate = lowest internet bandwidth costs
> High Density encoding when many encoders are needed such as User Generated Content (UGC)
> 10x lower power consumption than CPU
> 2x lower power than GPU
> Full ABR Ladder Support with advanced scaler
> Flexible multiple ABR Ladder outputs with up to 32 streams with a single instance
> Consistent output quality, independent of number of encoding channels
> FFmpeg plugins for decoder, scaler, and encoders
> HEVC: Main 10 profile up to Level 5.1 HD/SD 4:2:0 8 bit on U50, 4:2:2 10bit on U30.
> H.264: Main 10 profile up to Level 5.1 HD/SD 4:2:0 8 bit on U50, 4:2:2 10bit on U30.
> Constant bitrate (CBR), capped VBR, and ABR modes
> Bitrates: Configurable from 100 Kb/s to 40 Mb/s
> Latency: Configurable from 30ms to 20s
> Slice types: I, P, and B with flexible open/closed GOP modes and GOP lengths

TAKE THE NEXT STEP

Learn more about Xilinx Real-Time Video Server Appliance
Contact Sales: RTVideoServer@Xilinx.com

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