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Dual HEVC / H.265 and AVC / H.264 Hardware Encoder

MSVU265

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Video-Unified introduces MSVU265, the world first versatile and compact HEVC / H.264 hardware encoder. MSVU 265's advanced HEVC compression enables users to stream broadcast quality HD/SD video with up to 50% bandwidth savings compared to today's H.264 standards.

Designed to support a diverse set of video streaming applications – MSVU 265 features a HDMI inputs, user-intuitive web management software with full control of two embedded encoder for H.265 compression settings and MPEG4-H.264. The chipset offers the ability to stream two videos formats in same time.

MSVU 265 boasts an all-hardware compression chip for real time encoding with advanced audio – all packaged in a compact device with low power consumption. MSVU 265 makes it possible to take next generation HEVC encoding from the server rooms into the field for professional and industrial applications with easy integration to cable TV, 3G/4G GSM systems, transport cases, TV trucks, military/police vehicles and U AV.

Next-Generation HEVC / H.265 Streaming Reduces IPTV Bandwidth Costs

Whether it's live news broadcasting from the field, Point-to-Point contribution of HD video, live streaming from or within sports venues or distribution of TV on IP demand for high quality real-time video anywhere, anytime is growing. The exponential increase of video services translates to rising expenses for purchasing more satellite, cellular or other dedicated network bandwidth. MSVU 265 Encoder's cutting edge HEVC compression and streaming capabilities allows broadcasters, A/V teams, corporate IT as well as as ISP and GSM operators to reduce Operating Expenses (OPEX) for video streaming projects while managing demand for more video services and requests for higher quality video on existing bandwidth capability.

Flexible Connectivity Options with H.264 Backward Compatibility

Integrating with any video environment to both the HEVC and H.264 compression cores for generating streams in both H.265 and H.264 formats. The on-board hardware scaler can be used for real-time downscaling and frame-sampling delivering the most optimized video output for your application.

The Most Complete HEVC Offering for IPTV and Situational Awareness Video

MSVU 265 Encoder can be used as stand-alone or integrated seamlessly into a Turn-Key HEVC solution. Vvideo-Unified's comprehensive HEVC solutions offering includes encoders and streaming appliances, IPTV decoding appliances, video portal for distribution, archiving and playback, mobile video players. Take advantage of the revolutionary compression technology for deploying bandwidth-efficient video solutions that dramatically reduce bandwidth costs, extend high quality video reach to disadvantaged users and allow more content to be streamed on existing network capacity.

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Applications

- Satellite News Gathering and Field Broadcasting
- Point-to-Point contribution over the Internet
- Streaming Situational Awareness and FMV content across LANs and WANs
- Intelligence, Surveillance and Reconnaissance (ISR) video from ground and airborne vehicles
- Full HD 1080p monitoring and Command and Control
- Encoding and multicasting High-Res HDMI / DVI / Computer sources
- Sharing PC Screen views over IP with local and remote users
- Streaming Full Motion Video to Desktop, TV and Mobile Devices over bandwidth-limited pipes

Benefits

- Next-generation HEVC / H.265 compression reduces network bandwidth by up to 50% compared to H.264
- Reduces costs associated with dedicated Satellite, Cellular, Broadband network pipes
- Transport infrastructure agnostic: Satellite, xDSL, LANs, WANs, 3G/4G/LTE and FTTx
- Portable, low-power hardware design – optimized for field use and for vehicles (12VDC power input)
- Supports both HEVC and H.264 – built for the future without losing support for legacy receivers/decoders
- Encode and broadcast 2 video streams in same time: 2 x H.265, 2 x H.264 or 1 x H.265 / 1 x H.264



Technical Specifications

Video Inputs

- 1 x HDMI v1.4 (support for HDCP and non-HDCP protected sources)
or
- 1 x 3G/HD-SDI/SD-SDI

Audio Inputs

- 1 x HDMI Embedded audio
or
- 1 x SDI Embedded audio (HD-SDI version)

Video Output - HEVC (H.265)

- MPEG-H HEVC (ISO/IEC 23008-2)
- Main Profile up to Level 4.1
- Bit Rate: 50 Kbps - 40Mbps
- Frame Rate: 5-60 fps : Down sampling only
- Bit Rate Regulation Modes: Constant (CBR), Variable (VBR), Constant quality (CQP)
- Output Resolutions: Configurable from qCIF up to 1920x1080
- Encoding Latency: 100 Milliseconds

Video Output - MPEG-4 AVC/H.264

- MPEG-4 AVC/H.264 (ISO/IEC 14496-10 MPEG-4 AVC – Rec. ITU-T H.264)
Modes:
 - o Baseline Profile up to L4.1
 - o Main Profile up to L4
 - o High Profile up to L4.1
- Bit Rate: 50 Kbps - 20 Mbps
- Frame Rate: 5-60 fps. Down sampling only
- Bit Rate Regulation Modes: Constant (CBR), Variable (VBR), Constant quality (CQP)
- Output Resolutions: Configurable from qCIF up to 1920x1080
- Encoding Latency: less than 100 Milliseconds

Audio Output

- MPEG-4 AAC-LC (ISO/IEC 14496-3)
- Bit Rate: 24Kbps - 256Kbps
- Sampling Rate: 32 kHz, 44.1kHz, 48 kHz

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Network Protocols and File format

- Streaming Protocol:
 - RTMP (H264 only)
 - MPEG DASH (eMMBS for 4G network)
 - Http Live Streaming (native player: iOS, Android since v3.1)
 - Microsoft Smooth Streaming
 - TCP TS
 - UDP TS
 - RTP TS
 - RTSP (native player : Android 2 to Android 4.0)
- File Format (on memory card and file transfer):
 - MPEG TS
 - MP4
 - MOV
 - ISMV
- File transfer:
 - FTP
 - HTTP

Management

- Web interface for remote management
- Autostart mode recovers saved configuration after power cycle
- Remote firmware and software upgrade capability via browser and command line
- Hardware push-button for restoring unit to factory settings

Security

- Real-time AES encryption for video and audio
- Password-protected HTTP and CLI control interfaces

Environmental - Physical

- Operating Temperatures: -17° C to +55° C (0° F to 130° F)
- Relative Humidity: 5% to 90% (non-condensing)
- Power: 7VDC-17VDC, 10W Max (6W average)
- Dimensions: 30mm H x 80mm W x 80mm D

Advanced Features

- Hardware based resolution and frame rate scaling
- Automatically adjust encoding format when input source changes while streaming
- Encode and stream single source in multiple formats (HEVC and H.264) to one or more destinations
- Motion-adaptive adjustment of bit-rate utilization during static scenes