VELA

XStream® HD Encoder

HD/SD H264(AVC)/MPEG2 ENCODING SOLUTION

SD / HD

H.264 AVC
MPEG-2

Vela's XStream HD® encoding system is a real-time, hardware based encoding solution designed for a broad range of professional applications. The XStream HD® solution supports High Definition H.264 (AVC) and MPEG-2 encoding at 1920x1080i and 1280x720P resolutions at both NTSC and PAL frame rates, and 1920x1080P encoding up to 60 frames per second. Additionally, the XStream HD® supports Standard Definition H.264 (AVC) and MPEG-2 encoding profiles in both NTSC and PAL, making it one of the most flexible encoding solutions on the market.

APPLICATIONS

- **STREAMING VIDEO**
- **VIDEO OVER IP**
- **HOSPITALS**
- **EDUCATION**
- **POINT-OF-INFORMATION (POI)**
- **LOCAL PROGRAMMING**
- **INTERNET UNICAST**
- **INTRANET UNICAST OR MULTICAST**

Based on Vela's Emmy winning hardware encoding and video processing technology, the XStream HD® utilizes an SOIC (System on IC) design to eliminate the need for a host PC and comes in a half length PCIe x 1 form factor. Designed with streaming in mind, the XStream HD® produces unparalled video quality at any bitrate from 300 kbps up to 40 Mbps making full resolution (720x480) Standard Definition encoding possible at video bitrates as low as 300 kbps with remarkable video quality and High Definition (1920x1080i or 1280x720P) at bitrates as low as 750 kbps.

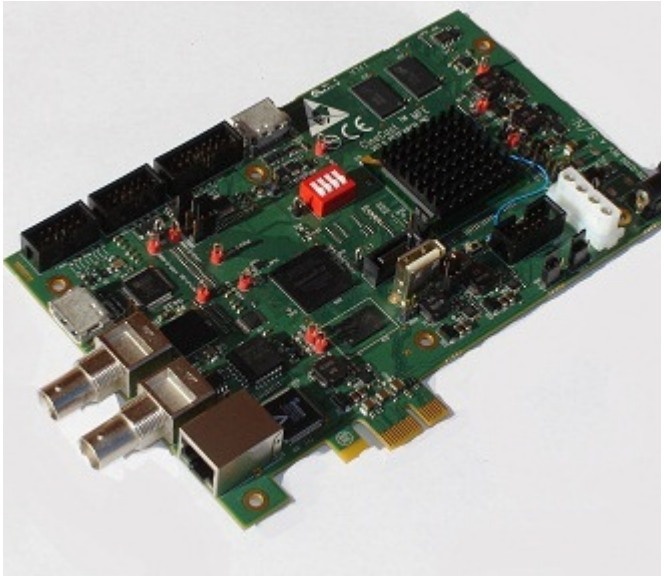
The XStream HD® supports HD-SDI/SD-SDI and 3G SDI inputs with embedded audio encoding. Support for EIA 708B and 608B Closed Captioning will be available for broadcast and cable applications as well as access to other VANC data.

The XStream HD® supports streaming via IP in Unicast or Multicast modes using UDP or RTP and RTSP.

The encoding solution also incorporates an intuitive web based graphical user interface (GUI), for quick configuration and ease of operation within a time-saving and user-friendly encoding environment.

AT A GLANCE

- **MULTI FORMAT**
- **HD/SD H.264 (AVC) AND MPEG2**
- **HD/SD/3G SDI INPUT**
- **HDMI AND ANALOG INPUTS**
- **OPTIONAL ASI OUTPUT**
- **IP OUTPUT**
- **ENCODE TO FILE STORAGE**
- **708/608 CLOSED CAPTIONING SUPPORT**
- **WEB BASED INTUITIVE EASY TO USE GRAPHICAL USER INTERFACE**



XStream® HD Hardware Encoder 2000-0700

XStream® HD Encoder

Professional Broadcast Encoder

AUDIO & VIDEO FEATURES

- Realtime encoding of HD or SD H.264 (AVC)
- Realtime encoding HD or SD MPEG-2
- PAL and NTSC television formats
- HD/SD/3G SDI Inputs
- Closed Caption support EIA-708B and 608B
- SDI Embedded audio support
- Dolby® Digital bitstream pass-through audio
- MPEG1 Layer 2
- AAC LC and AAC HE
- Intuitive, easy to use web based graphical user interface
- File Storage output
- Optional DVB/ASI output
- IP output over UDP or RTP
- IP Unicast and Multicast support
- 1920 x 1080P @ 24/25/29.97/30/60
- 1920 x 1080I @ 25/29.97/30
- 1280 x 720P @ 50/59.94/60
- 720/704/640/544/528/352x480 @ 29.97
- 720/704/640/544/528/352x576 @ 25

ENCODE PARAMETERS

MPEG Standard

MPEG-2 HD: MP@HL up to 40 Mbps

MPEG-2 SD: MP@ML up to 15 Mbps

H.264 HD: HP@L4.1 up to 40 Mbps

H.264 SD: HP@L3.1 up to 14 Mbps

Stream Format

H.264 AVC: MP4 File format or MPEG2 Transport Stream

MPEG2: MPEG2 Transport Stream or Program Stream

GOP Structure

I, IBP, IBBBP, IP open or closed

GOP Size

Programmable up to 130 frames

Audio Mode

MPEG-1 layer 2, AAC LC, HE AAC

Audio Sampling Rate

48 kHz

SPECIFICATIONS

System Specifications

- SOIC Design
- Half Length PCIe x 1

Video Signal Inputs

- SD/HD/3G SDI - BNC
- HDMI
- Analog Component/Composite - Multi IO D-Sub

Audio Signal Inputs

- SDI Embedded - BNC
- Digital SPDIF - Multi IO D-Sub
- Analog - Multi IO D-Sub

MPEG Outputs

- Local or Network File Storage
- DVB/ASI - BNC
- IP - RJ45

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