

Progressive Out Video Encoder

DVD

Digital Camera

Digital TV

Imaging

IP Cores

Product Brief

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Description

Zoran's CVE4 Progressive Out Video Encoder is a silicon-efficient, high-quality Intellectual Property Core for video IC designs requiring the progressive scan TV output function. The CVE4 encodes YCrCb, 4:2:2 digital video into the 480p and 576p standards. All NTSC, PAL, or SECAM TV standards for interlaced output are also supported. CVE4 supports vertical blanking interval (VBI) encoding, including closed caption, teletext, WSS and CGMS-A encoding. CVE4 also includes support for Macrovision 7.1.L1, the copy protection scheme used in DVD players and set-top boxes. Six separate output busses for Y,

Composite, Chroma, and RGB provides for flexibility in connection and multiplexing to DACs.

Proven in silicon and shipping in the millions, the CVE4 progressive out video encoder greatly reduces the risk and time involved when integrating the progressive out video encoding function into an IC. When combined with Zoran's Frame-It-1 Video Deinterlacer, CVE4 provides an industry recognized standard for quality progressive scan output. CVE4 is incorporated into Zoran's own Vaddis DVD playback ICs.

Features

- 480p and 576p progressive output supported
- Encodes 4:2:2 YCrCb into all variations of NTSC, PAL or SECAM TV standards for interlaced output
- Simultaneous output of composite video, S-video and component video supported
- Dual chroma paths for optimal output of both composite video and S-Video component video
- CCIR 601, 604 and 656 and SMTPE 253 standards supported
- Macrovision 7.1.L1 copy protection
- 47-tap luma filter
- Outputs 10-bit data to DACs
- Vertical Blanking Interval (VBI) encoding support
- Closed caption, teletext, WSS & CGMS Encoding
- Uniform 54 MHz clock; fully synchronous design
- 4x oversampling of luminance and chrominance filter for interlace mode
- 2x oversampling for progressive scan mode
- Process technology independent "softcore"

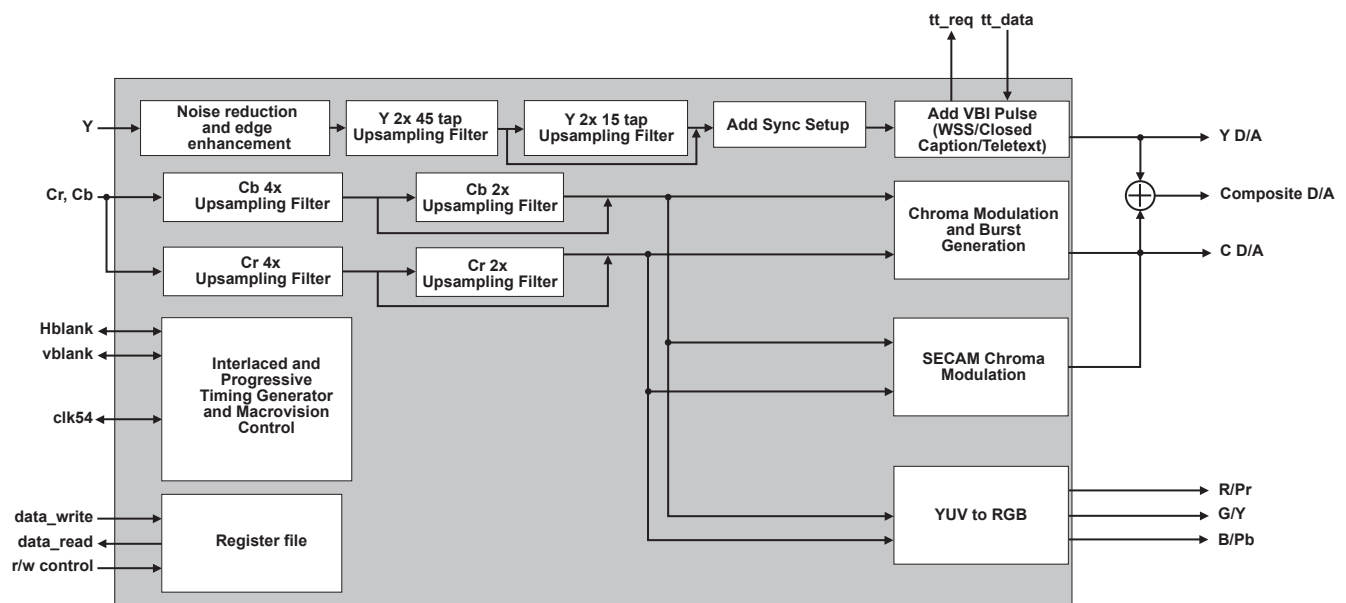
Integrated Circuit Applications

- PC video
- Digital TV
- Set top box decoders
- Any system requiring progressive TV output

Deliverables

- Compilable Verilog source code
- Bit accurate, cycle accurate C model
- Synopsis synthesis scripts
- Test input files
- Documentation

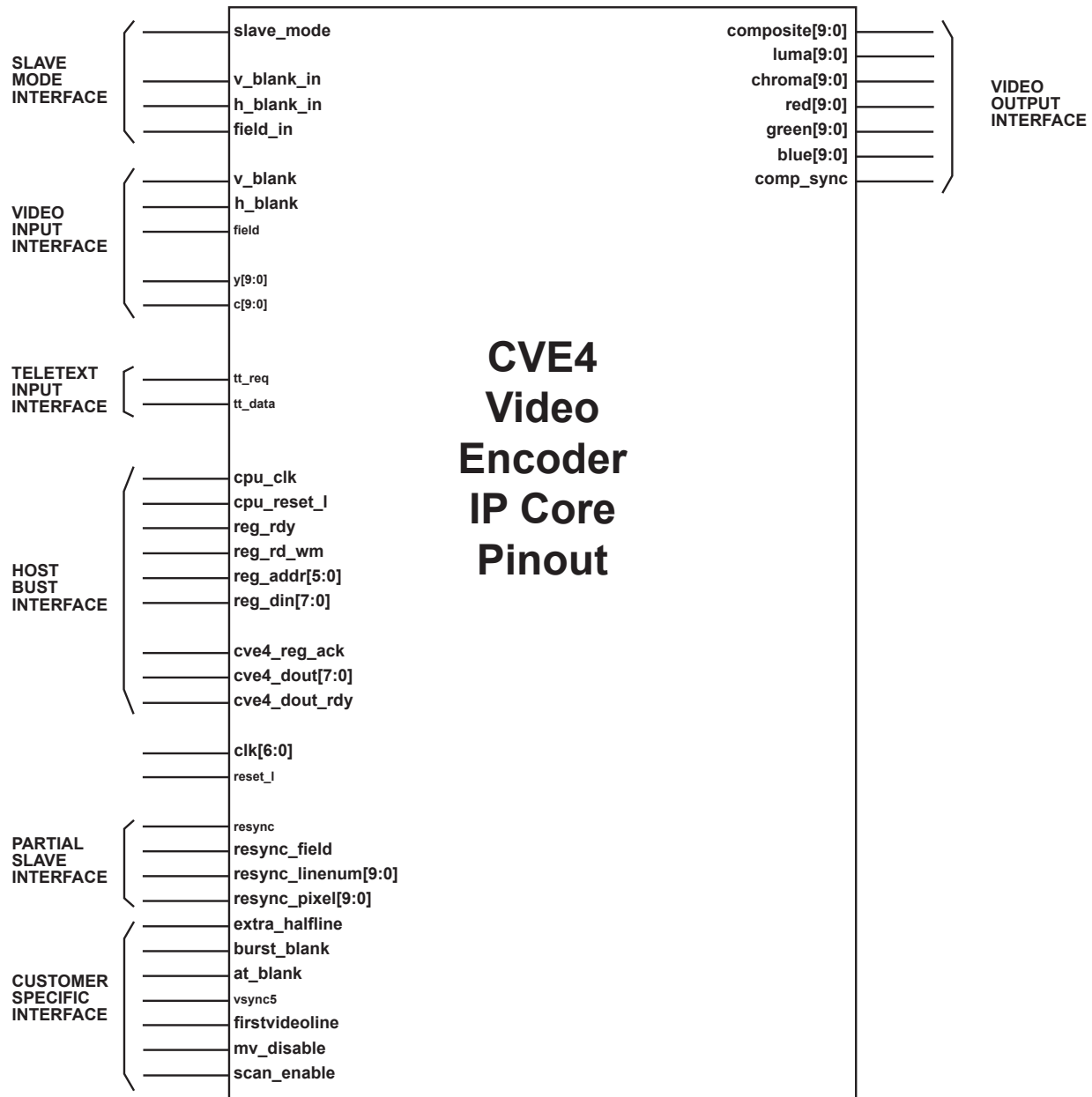
CVE4 Progressive Out Video Encoder Block Diagram



Progressive Out Video Encoder

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CVE4 Progressive Out Video Encoder Logical Pinout



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