

CX23416 Features

Video Encoding

- High-quality real-time encoding (I-, B-, and P-frames)
- Supports MPEG-2 (MP@ML, SP@ML) and MPEG-1
 - 525/60 (NTSC) up to 720x480 @ 30 fps
 - 625/50 (PAL) up to 720x576 @ 25 fps
- HDTV MPEG capture
- Variable and constant bit rate up to 15-Mbit/sec
- Programmable GOP lengths
- Adaptive field/frame (motion compensation type 8 DCT)
- Field/frame motion estimation
 - B-frame: ±296(H) x ±184(V)
 - P-frame: ±326(H) x ±202(V)
 - Half-pel accuracy
- 4:2:2 to 4:2:0 conversion
- Speckle noise reduction
- Sharpness control
- Recursive noise reduction
- Inverse telecine (3:2 pulldown)
- Scene change detection
- Adaptive quantization
- Supports elementary program, and transport streams
- Automatic VBI extraction

Audio Encoding

- MPEG-1 Layer II
- Sampling rates of 32 kHz, 44.1 kHz, and 48 kHz
- Compressed bit rates up to 448 kbit/sec

Interfaces

- Video input: 4:2:2 YUV CCIR-656
- Audio input: Stereo Sony I²S
- MPEG input and output supports one of the following
 - PCI DMA master or PCI slave
 - 8-bit parallel program data
 - 8-bit parallel SPI transport data
 - 1-bit serial transport data
- One 64 Mbit SDRAM
- Host interface supports one of the following
 - 32-bit, 33 MHz PCI
 - 8-bit microcontroller
- General-purpose input/output with 16 programmable pins

Package

- 233 BGA

Conexant provides complete software support for the CX23416, including an on-chip API function call layer and binary and source code examples. Evaluation boards are also available for the CX23416 encoder. Please contact Conexant for more details on these reference designs.

