CX25824

4-Channel Video/Audio Decoder with Integrated Audio DAC

The CX25824 four-channel video decoder was designed for surveillance applications. The CX25824 contains four high-quality NTSC/PAL video decoders, five audio ADCs, and one audio DAC.

The video decoders are designed with 10-bit ADCs and 5-line comb filtering for optimal luma-chroma separation to generate the highest-quality digital video output with the lowest possible noise and cross-luma/cross-chroma artifacts. They are also designed to lock to low-level inputs, as well as line-locked cameras, both of which are common in video surveillance systems. Each video decoder includes a scaler for down-scaling the video, both horizontally and vertically, and controls for adjusting brightness, contrast, hue, saturation, and sharpness.

The CX25824 supports the standard ITU-R BT.656 digital video format and byte- multiplexed output at 27 MHz, 54 MHz, and 108 MHz. In addition, each video decoder includes a motion detection and image analytical engine. With adjustable luma thresholds, adjustable temporal sensitivity, and block masks, this feature can be utilized to notify host controllers to start recording or wake from sleep during detected events.

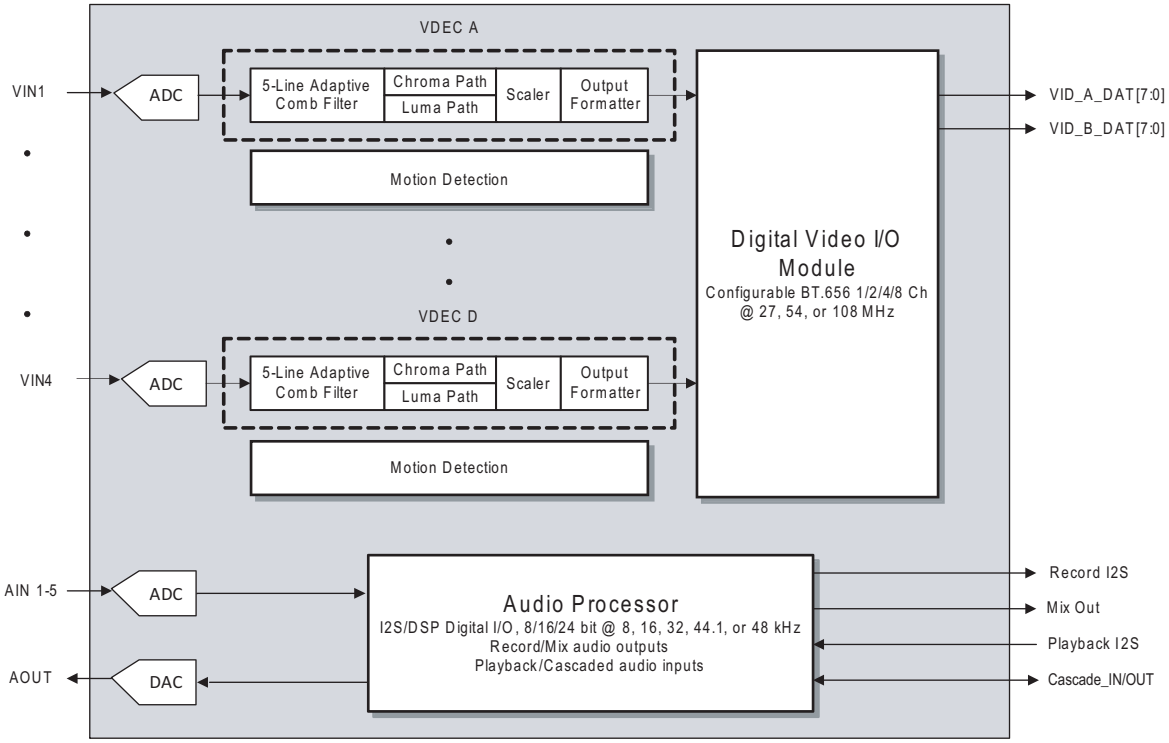
The CX25824 includes an audio codec with five ADCs and one DAC for audio playback or two-way communication applications. The CX25824 was designed with maximum flexibility in mind, providing bi-directional bridging of video and audio data, as well as generic connectivity through GPIO and I^2C interfaces.

Applications

- Video Surveillance

Part Number CX25824

Description CX25824 4-Channel Video/Audio Decoder with Integrated Audio DAC

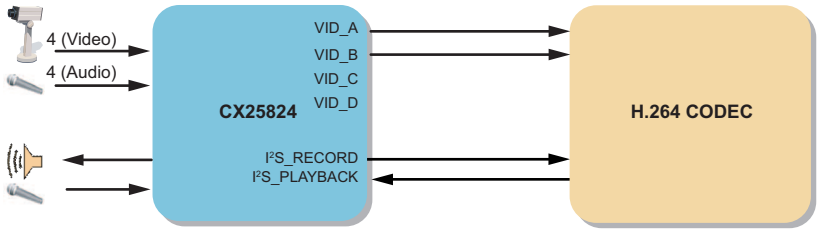


CX25824 Features

- Four High-Quality NTSC/PAL video decoders:
  - Anti-aliasing filters
  - 10-bit ADCs
  - 5-line comb filtering
  - Independent scaling
  - Brightness/Contrast/Hue/ Saturation/Sharpness controls
  - Excellent low level-signal locking
- Audio Codec
  - 5 ADCs (4 ADCs for each camera input and one pair audio codec for two-way communication function)
  - 1 DAC
  - Support for 8/16/32/44.1/48k Hz sample rates
  - 4 I^2S interfaces for record, mix, cascade, and playback
  - Support interleaved I^2S/DSP style output
  - A-law/u-law encoding
  - 8/16/24 bit PCM audio data
- Flexible digital video output formats
  - ITU-R BT.656
  - Byte-interleaved of multiple sources at 27/54/108 MHz
- Programmable Motion Detection
- I^2C interface
- The CX25824 is packaged in a 128-pin eTQFP package.

Typical Application Diagram

4-Channel DVR Application



Conexant Product Portfolio

Conexant's comprehensive product portfolio includes solutions for imaging, audio, video surveillance, and embedded modem applications.

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