CONEXANT

8-Channel Audio/Video Decoder for Video Surveillance Systems

CX25838

Conexant's portfolio includes a comprehensive suite of semiconductor solutions for communications and consumer applications.

High Quality Audio and Video Decoders for Surveillance Applications

The CX25838 eight-channel audio/video decoder was designed for surveillance applications. The CX25838 contains eight high quality NTSC/PAL video decoders with 10-bit A/Ds and 5-line comb filtering, to generate the highest quality digital video output with the lowest possible noise. This creates not only the best image quality for viewing, but enables lower bitrates for compression devices using the output of the CX25838.

The video decoders within the CX25838 are optimized to lock to inputs with low signal levels as well as line-locked cameras, both of which are common in surveillance systems. Each video decoder may be scaled independently and the CX25838 supports BT.656 as well as a variety of other interleaved digital video output formats.

The CX25838 also contains eight high-quality mono audio A/Ds with I^2S outputs.

Direct-Connection to Multi-Channel H.264 CODECs

The CX25838 supports byte, line, or frame-interleaved digital video outputs at 27, 54, or 108 MHz. Byte and line interleaved outputs are supported entirely within the CX25838. Frame-interleaved outputs require that the CX25838 interface with external DDR2 memory. The CX25838 supports I^2S and multiplexed I^2S audio outputs.

Additional Features

There are two variants of the CX25838 offered — one with the external DDR2 interface, and one without the interface. When equipped with DDR2, the CX25838 supports frame-interleaved video outputs, as well as a 2x2 CIF tiling mode, in which four CIF images are tiled into a single D1 stream.

For systems that require resolutions of half-D1 or lower, two CX25838 devices may be cascaded together to share external memory and CODEC interfaces.

The CX25838 includes programmable motion detection logic, which can trigger flags over GPIO pins when motion is detected on incoming analog video streams.

The CX25838 contains 48 GPIO pins, which maximize flexibility and allow customization to a variety of applications and designs. The I^2C interface and motion detection flags are supported via GPIOs.

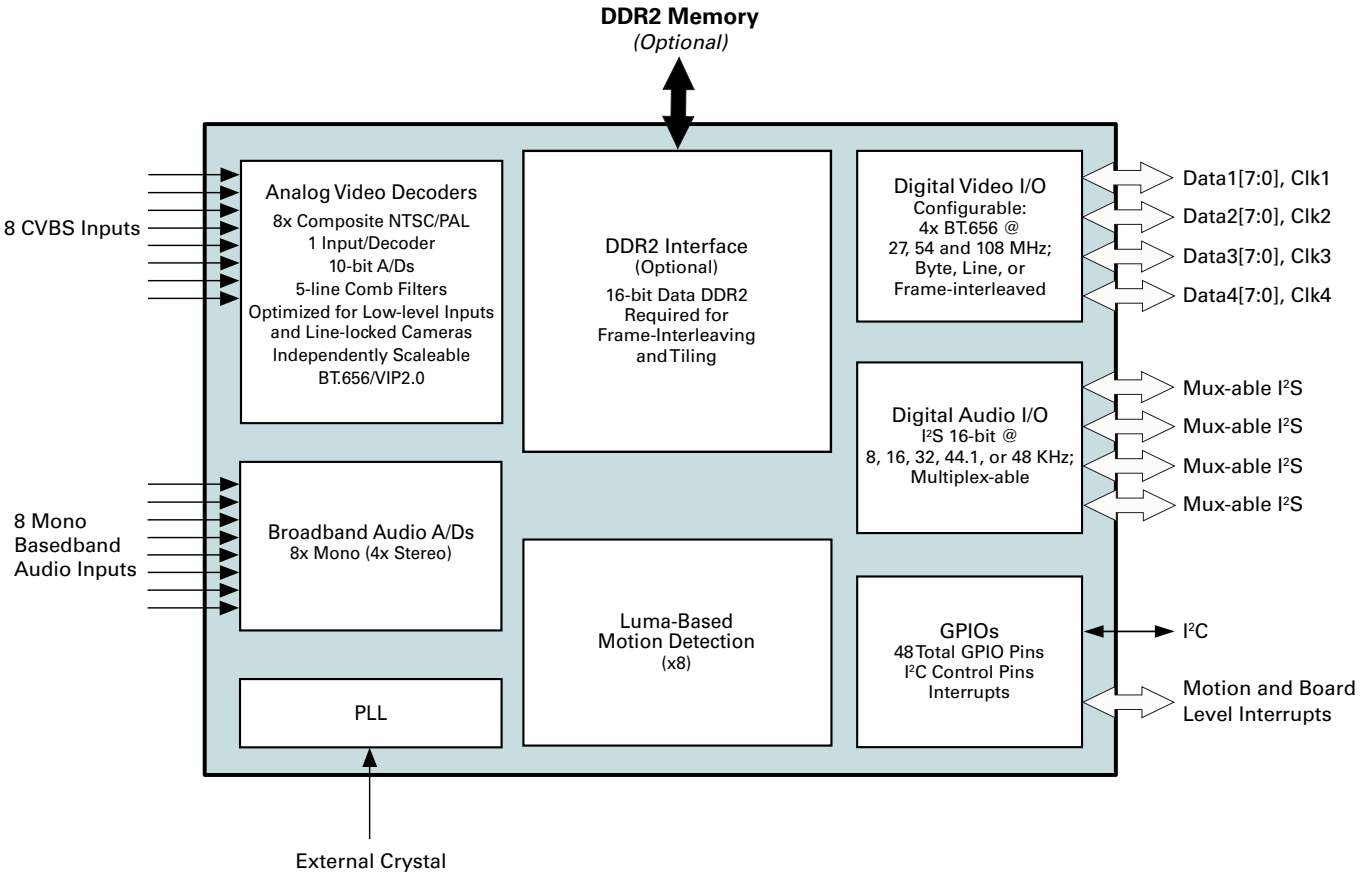


Distinguishing Features

- Eight High-Quality NTSC/PAL video decoders:
  - Anti-alias filters
  - 10-bit A/Ds
  - 5-line comb filtering
  - Independent scaling
- Eight Mono audio A/Ds
  - Variable sample rates
  - I^2S outputs
- Flexible digital video output formats at 27, 54, and 108 MHz
  - Byte-interleaved
  - Line-interleaved
  - Frame-interleaved (requires external DDR2 memory)
- Tiling and cascading functions (requires external DDR2 memory)
- Programmable Motion Detection
- 48 GPIO pins

Part Number CX25838

Description 8-Channel Audio/Video Decoder for Surveillance Systems



CX25838 Block Diagram

The CX25838-1x (contains DDR2 interface) is offered in a 23mm x 23mm, 288 pin fpBGA package.
The CX25838-2x (no DDR2 interface) is offered in a 14mm X 14mm, 233 pin fpBGA package.

Conexant Product Portfolio

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

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