

# Multichannel H.264 Audio/Video Codec

## TW2819

### Features

TW2819 is a high performance and cost effective multi-channel H.264 codec solution designed for the security surveillance market. It is capable of receiving and encoding maximum 16 channels standard definition (SD) or 960H (WD) video. It can also support up to 8 channel high definition (HD) 720p or 4 channel 1080p encode. It supports D1/WD1/720p/1080p decode also up to 4 channels. Each video channel can be independently controlled in terms of encode/decode mode, frame rate, bit rate, and resolution.

### Video Features

- Real time full-duplex video codec compliant to H.264 main profile standard
- Four BT.656 byte-interleaved video input port up to 144MHz
- Four BT.656/1120 video output port up to 74.25MHz
- Four dedicated BT.1120 video input ports @ 148.5MHz
- Four BT.1120 bi-directional video input/output port @ 148.5MHz
- Supports up to 16 channel real time SD encode and/or 4 channel SD decode
- Support up to 16 channel 960H encode and/or 4 channel 960H decode
- Supports up to 8 channel HD 720p encode and/or 4 channel HD 702p decode
- Supports up to 4 channel HD 1080p encode and/or 4 channel HD 1080p decode

- Supports CIF JPEG or H.264 network stream encode
- Supports video mux function for 4CH, 8CH of live display
- Support simple OSD function on the H264 encoding path
- Provide video encoding parameters for video analysis tool

### Audio Features

- Real time 16 channel encode and 1 channel decode compliant to ADPCM standard.
- Four digital audio input I/F compliant to  $I^2S$  standard
- One digital audio output I/F compliant to  $I^2S$  standard
- Audio sample rate from 8kHz to 48kHz Peripheral I/F

### Peripheral

- Two external 16-bit DDR2 SDRAM @ 460MHz
- 32-bit PCI target for host communications @ 33/66MHz

### Voltage and Power Consumption

- 1.2V for core
- 3.3V for I/O pad
- 1.8V for DDR2 DRAM I/O
- 4.7W typical case power consumption

### Package

- TEPBGA-676, 35mmx35mm, 1.0mm lead pitch

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