



**THE DATASHEET OF
TW2868-LA1-CR**



8-Channel Video Decoders and Audio Codecs and Video Encoder for Security Applications

TW2868

Introduction

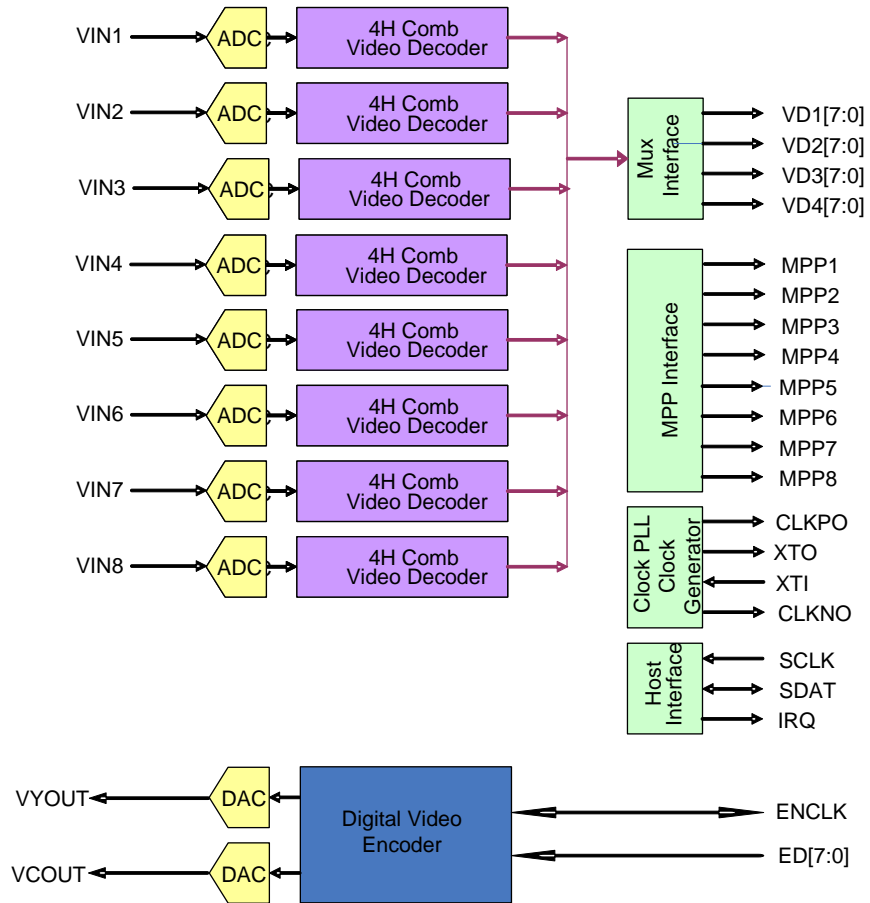
The TW2868 includes eight high quality NTSC/PAL/SECAM video decoders that convert analog composite video signal to digital component YCbCr data for security application. Each channel contains 10 bit ADC and proprietary clamp and gain controllers and utilizes 4H comb filter for separating luminance & chrominance to reduce cross noise artifacts. The TW2868 adopts the image enhancement techniques, such as IF compensation filter, CTI and programmable peaking. TW2868 also includes one NTSC/PAL video encoder with two 10 bit DAC's to support CVBS and YC output. The TW2868 also includes audio CODEC, which has ten audio Analog-to-Digital converter processing and one Digital-to-Analog converter. A built-in audio controller can generate digital outputs for recording/mixing and accepts digital input for playback.

Features

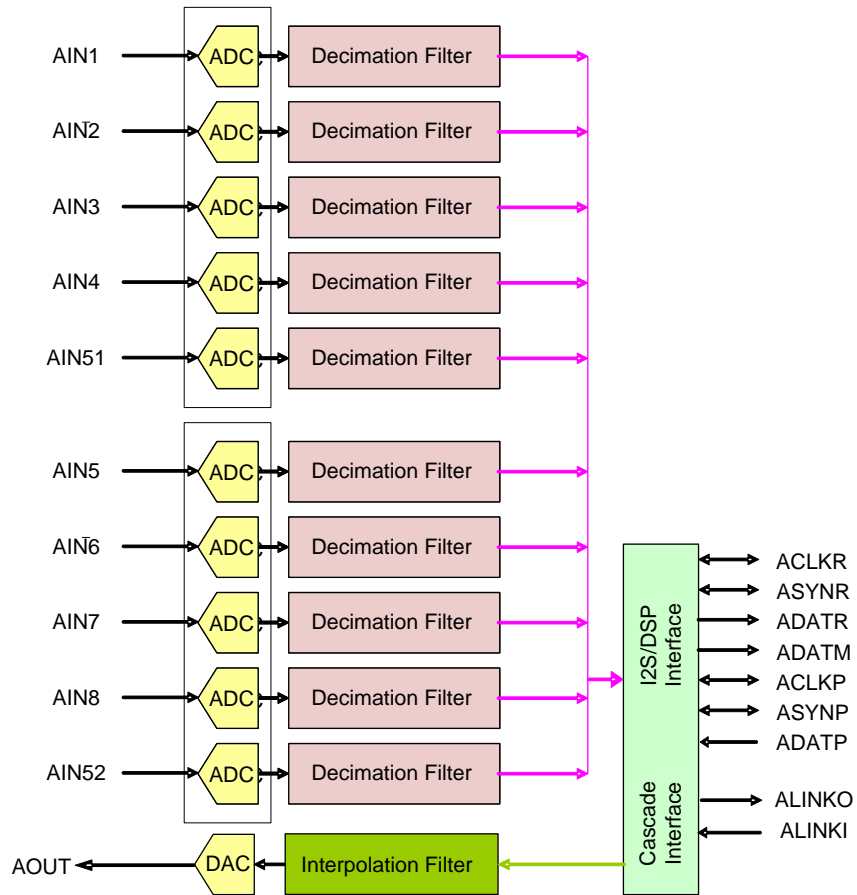
- Accepts all NTSC(M/4.43) / PAL(B/D/G/H/I/K/L/M/N/60)/SECAM standards with auto detection
- Integrated eight video analog anti-aliasing filters and 10 bit CMOS ADCs
- High performance adaptive 4H comb filters for all NTSC/PAL standards
- IF compensation filter for improvement of color demodulation
- Color Transient Improvement (CTI)
- Automatic white peak control
- Programmable hue, saturation, contrast, brightness and sharpness
- Proprietary fast video locking system
- Supports ITU-R BT.656 type time multiplexed output with 54/108MHz
- Provides simultaneous 2x four channel Full D1 with 108MHz and 2x CIF with 54MHz by time-multiplexed output format
- Integrated ten audio ADC processing and one audio DAC
- Provides multi-channel audio mixed analog output
- Supports I2S/DSP Master/Slave interface for record output and playback input
- PCM 8/16 bit and u-Law/A-Law 8bit for audio word length
- Programmable audio sample rate that covers popular frequencies of 8/16/32/44.1/48kHz
- Supports a two-wire serial host interface
- Integrated one video encoder and two 10bit video CMOS DACs.
- Integrated clock PLL for 108MHz clock output.
- Ultra low power consumption (Typical 867.36mW)
- 128 pin LQFP package

Block Diagram

Video, Clock and Host Interface



Audio



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