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4-CH 960H Video Decoders and Audio Codecs

TW2960

Features

Video Decoder

- NTSC (M, 4.43) and PAL (B, D, G, H, I, M, N, N combination), PAL (60) support with automatic format detection
- Software selectable analog inputs allows any of 2 CVBS per one video ADC
- Built-in analog anti-alias filter
- Four 10-bit ADCs and analog clamping circuit for CVBS input
- Fully programmable static gain or automatic gain control for the Y channel
- Programmable white peak control for CVBS channel
- 4-H adaptive comb filter Y/C separation
- PAL delay line for color phase error correction
- Image enhancement with peaking and CTI
- Digital sub-carrier PLL for accurate color decoding
- Digital Horizontal PLL for synchronization processing and pixel sampling
- Advanced synchronization processing and sync detection for handling non-standard and weak signal
- Programmable hue, brightness, saturation, contrast, sharpness
- Automatic color control and color killer
- Chroma IF compensation
- ITU-R 656 like YCbCr(4:2:2) output or time multiplexed output with 72/144MHz

Audio Codecs

- Integrated five audio ADCs processing and one audio DAC
- Provides multi-channel audio mixed analog output
- Support I2S/DSP Master/Slave interface for record output and playback input
- PCM 8/16-bit and u-Law/A-Law 8-bit for audio word length
- Programmable audio sample rate that covers popular frequencies of 8/16/32/44.1/48kHz

Miscellaneous

- Two-wire MPU serial bus interface
- Integrated clock PLL for 144MHz clock output
- Power save and Power down mode
- Low power consumption
- Single 36MHz crystal for all standards
- 3.3V tolerant I/O
- 1.8V/3.3V power supply
- 100-pin LQFP package

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Function Description

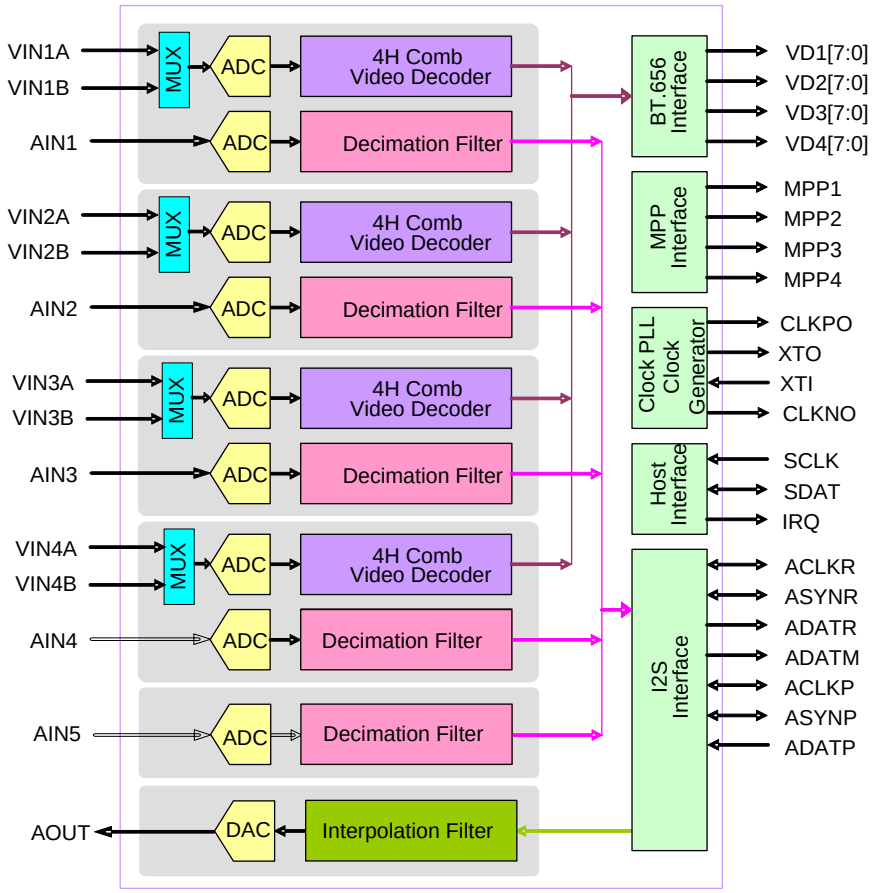


FIGURE 1. TW2960 BLOCK DIAGRAM

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