



4-CH WD1 (960H)/D1 Compatible Video Decoders and Audio Codecs with Video Encoder

TW2965

Features

Video Decoder

- WD1 (960H) and D1 compatible video decoding operation and each channel is programmable
- 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
- ITU-R 656 like YCbCr(4:2:2) output or time multiplexed output with 36/72/144MHz for WD1 or 27/54/108MHz for D1 format

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 144/108MHz clock output
- Embedded video encoder
- Power save and Power down mode
- Low power consumption
- Single 27MHz crystal for all standards and both WD1 and D1 format
- 3.3V tolerant I/O
- 1.0V/3.3V power supply
- 128-pin LQFP package

Function Description

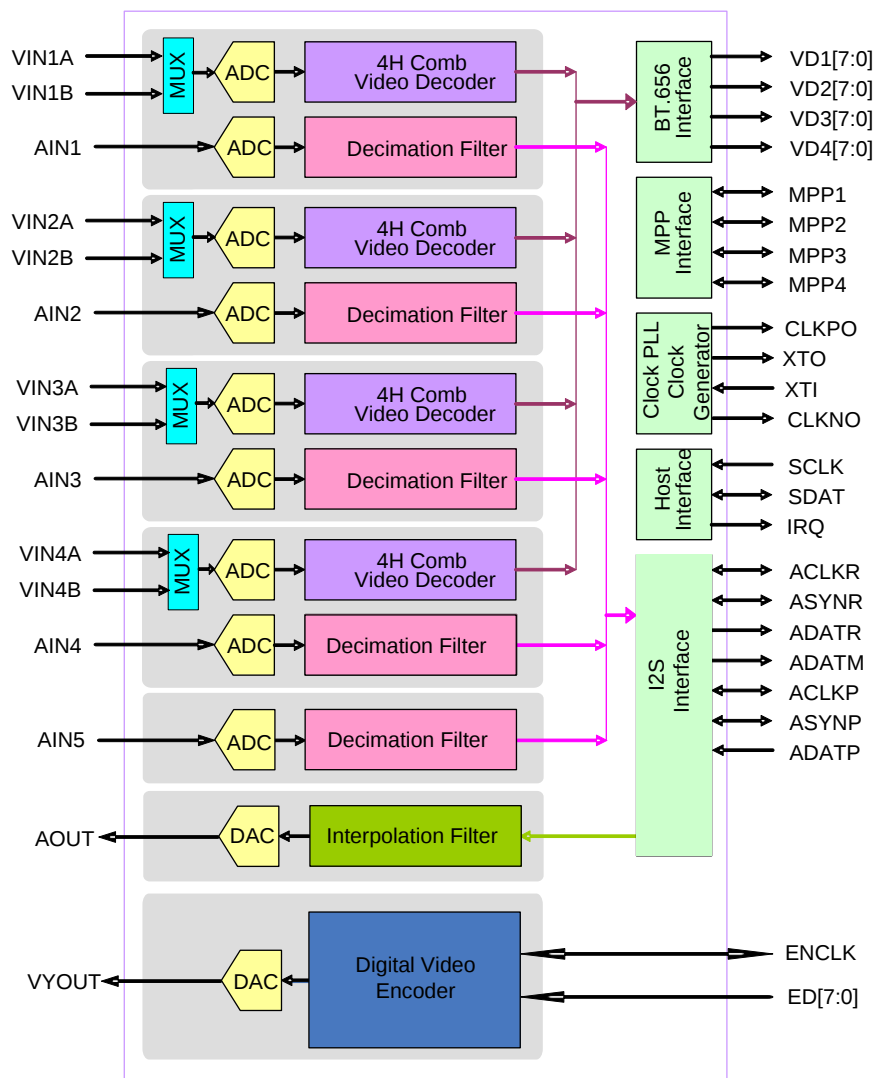


FIGURE 1. TW2965 BLOCK DIAGRAM

For additional products, see www.intersil.com/product_tree

Intersil products are manufactured, assembled and tested utilizing ISO9001 quality systems as noted in the quality certifications found at www.intersil.com/design/quality

Intersil products are sold by description only. Intersil Corporation reserves the right to make changes in circuit design, software and/or specifications at any time without notice. Accordingly, the reader is cautioned to verify that data sheets are current before placing orders. Information furnished by Intersil is believed to be accurate and reliable. However, no responsibility is assumed by Intersil or its subsidiaries for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Intersil or its subsidiaries.

For information regarding Intersil Corporation and its products, see www.intersil.com

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Intersil:](#)

[TW2965-LA2-CR](#)