

## TW9912

# NTSC/PAL/SECAM Video Decoder with Component Input and Progressive Output Support

FN7945

Rev. 2.00

October 17, 2013

## Features

### Video Decoder

- NTSC (M, 4.43) and PAL (B, D, G, H, I, M, N, N combination), PAL (60), SECAM support with automatic format detection
- Software selectable analog input control
- Built-in analog anti-alias filter
- Fully programmable static gain or automatic gain control for the Y channel
- Programmable white peak control for the Y 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, and sharpness
- Automatic color control and color killer
- Chroma IF compensation
- VBI slicer supporting CC and WSS data services
- Programmable output control

### Analog Video Input

- Triple 10-bit ADCs with independent clamping and gain control
- Supports 480i/480p/576i/576p analog component input with SOG

### Digital Output

- ITU-R 656 compatible YCbCr(4:2:2) output format
- Progressive ITU-R 656 output format support for both interlaced and progressive inputs

### Miscellaneous

- Two wire MPU serial bus interface
- Power save and Power down mode
- Low power consumption
- Single 27MHz crystal for all operations
- 3.3V tolerant I/O
- 1.8V/3.3 V power supply
- 48 pin QFN package

## Functional Description

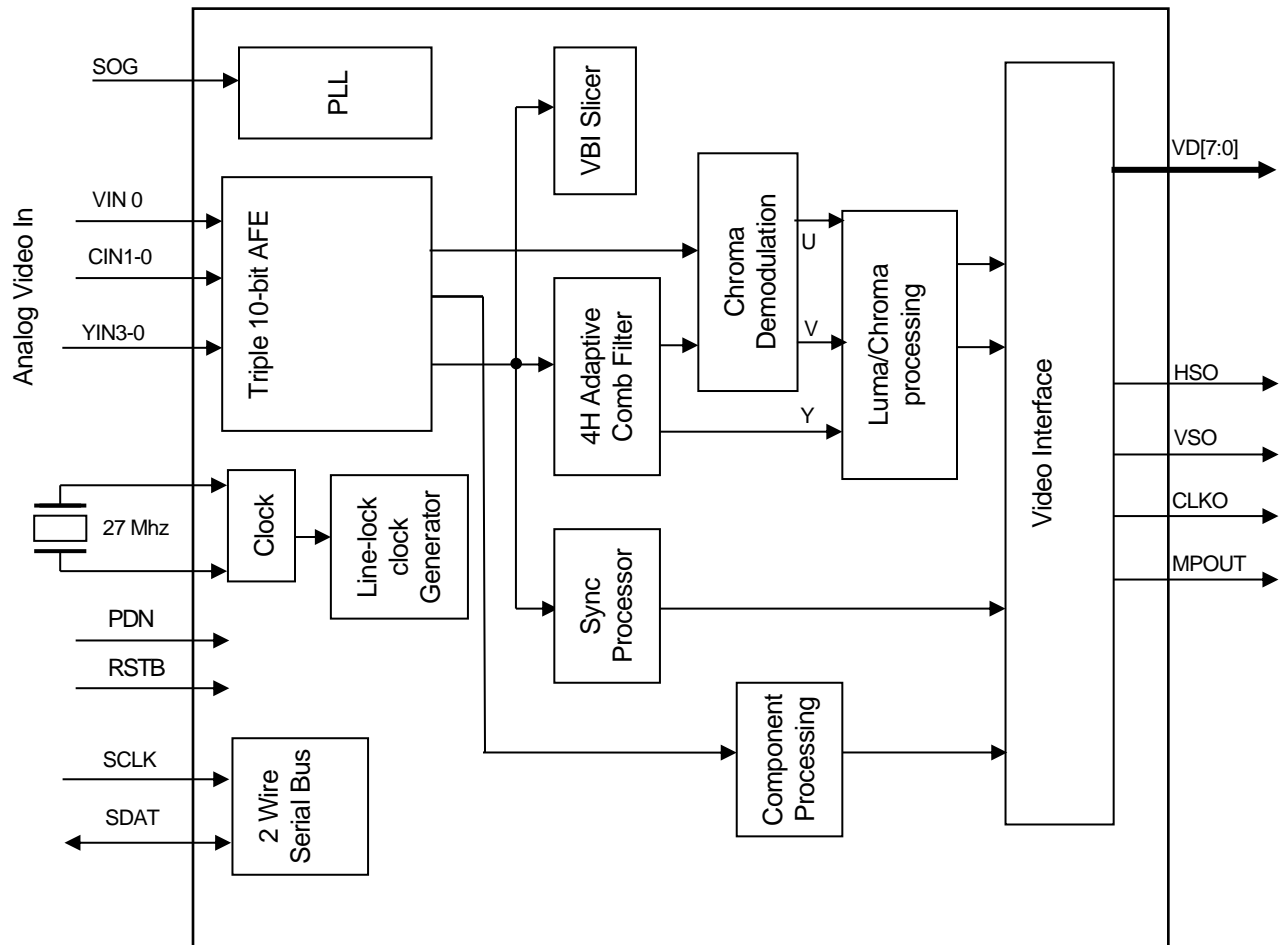


FIGURE 1. TW9912 BLOCK DIAGRAM

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