

## 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

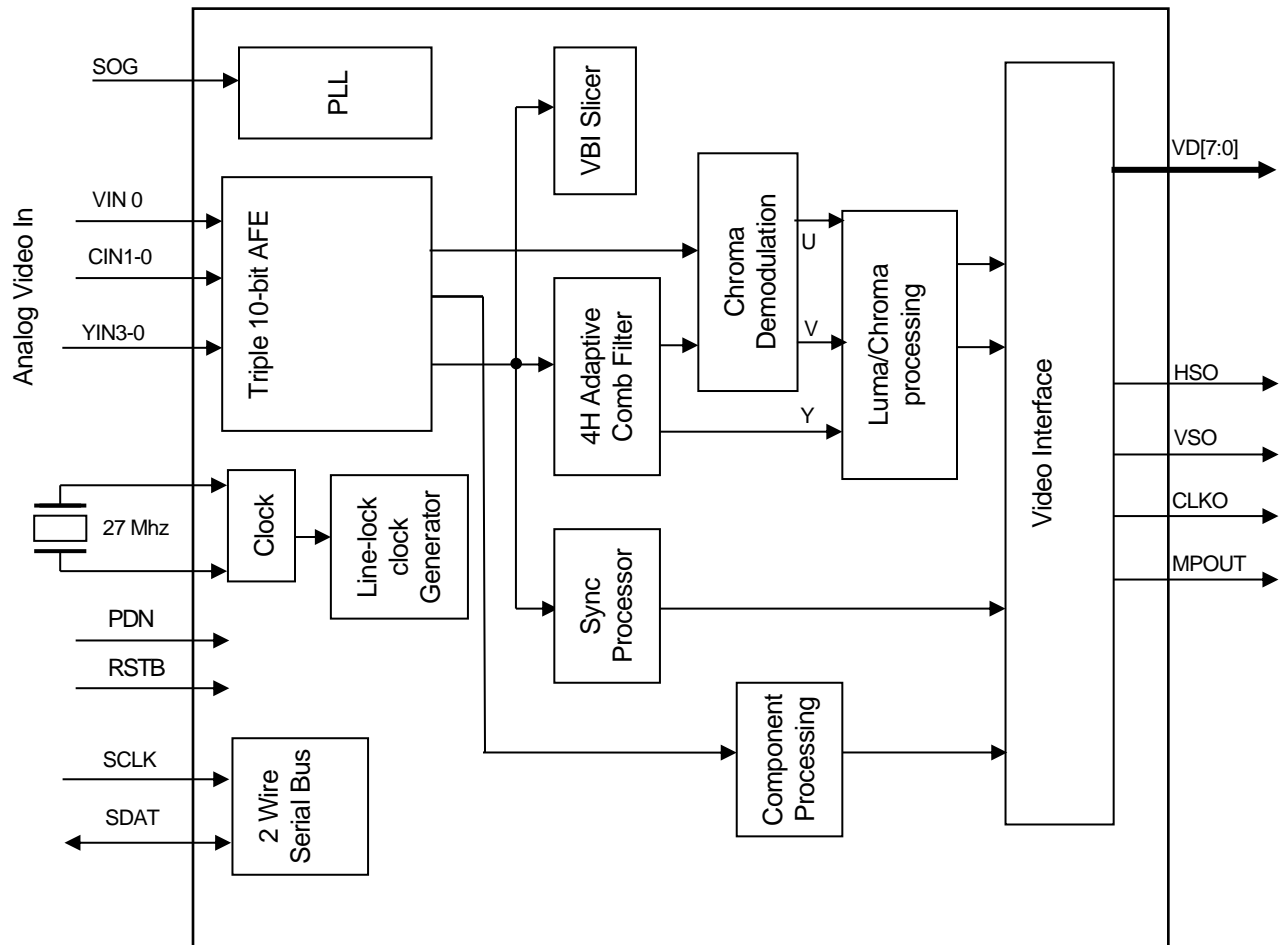


FIGURE 1. TW9912 BLOCK DIAGRAM

© Copyright Intersil Americas LLC 2012-2013. All Rights Reserved.

All trademarks and registered trademarks are the property of their respective owners.

For additional products, see [www.intersil.com/product\\_tree](http://www.intersil.com/product_tree)

Intersil products are manufactured, assembled and tested utilizing ISO9001 quality systems as noted in the quality certifications found at <http://www.intersil.com/en/support/qualandreliability.html>

*Intersil products are sold by description only. Intersil may modify the circuit design and/or specifications of products at any time without notice, provided that such modification does not, in Intersil's sole judgment, affect the form, fit or function of the product. Accordingly, the reader is cautioned to verify that datasheets 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 <http://www.intersil.com>