

TW9910

Low Power NTSC/PAL/SECAM Video Decoder with VBI Slicer

FN7773

Rev. 1.00

October 10, 2012

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 inputs allow any of the following combinations, e.g. 4 CVBS or (3 CVBS and 1 Y/C).
- Built-in analog anti-alias filter
- Two 10-bit ADCs and analog clamping circuit
- 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
- ITU-R 601 or ITU-R 656 compatible YCbCr(4:2:2) output format
- VBI slicer supporting industrial standard data services
- VBI data pass through, raw ADC data output

Video Scaler

- High quality horizontal filtered scaling with arbitrary scale down ratio
- Phase accuracy better than 1/32 pixel
- Programmable output cropping

Miscellaneous

- Two wire MPU serial bus interface
- Support Real Time Control interface
- Power save and Power down mode
- Typical power consumption <100mW
- Single 27MHz crystal for all standards
- Supports 24.54MHz and 29.5MHz crystal for high resolution square pixel format decoding
- 3.3V tolerant I/O
- 1.8V/3.3 V power supply
- 44 pin LQFP, 48 pin QFN package

Functional Description

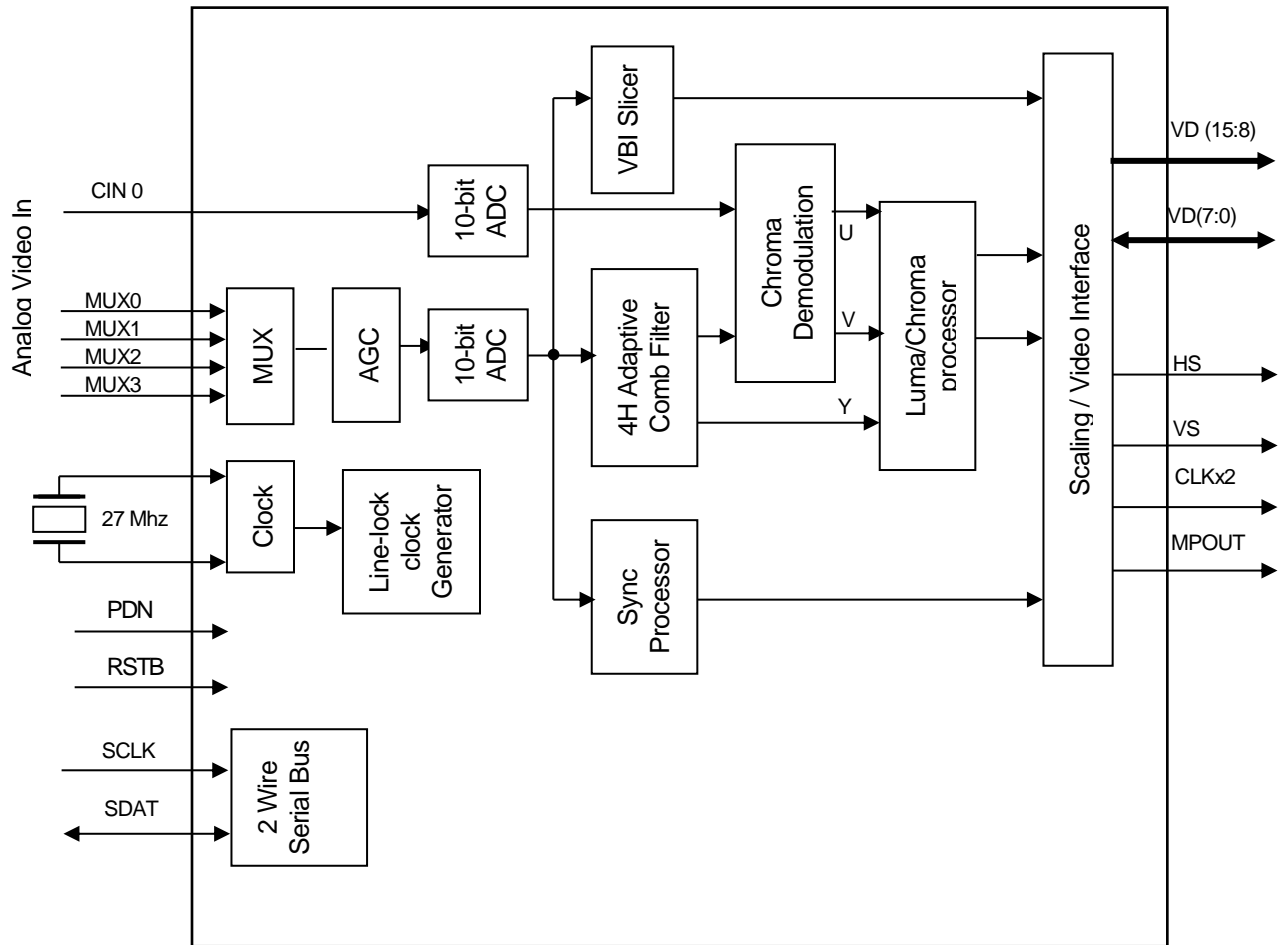


FIGURE 1. TW9910 BLOCK DIAGRAM

© Copyright Intersil Americas LLC 2010-2011. All Rights Reserved.
 All trademarks and registered trademarks are the property of their respective owners.

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 <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>