

# Low Power NTSC/PAL Video Decoder Supporting 960H Output

## TW9960

### 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 allow any of the following combinations, e.g. 2 CVBS or 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 656 like YCbCr(4:2:2) output format
- Programmable output cropping

#### Miscellaneous

- Two-wire MPU serial bus interface
- Power save and Power down mode
- Low power consumption
- Single 36MHz crystal for all standards
- 3.3V tolerant I/O
- 1.8V/3.3 V power supply
- 32 pin TQFP package

## Functional Description

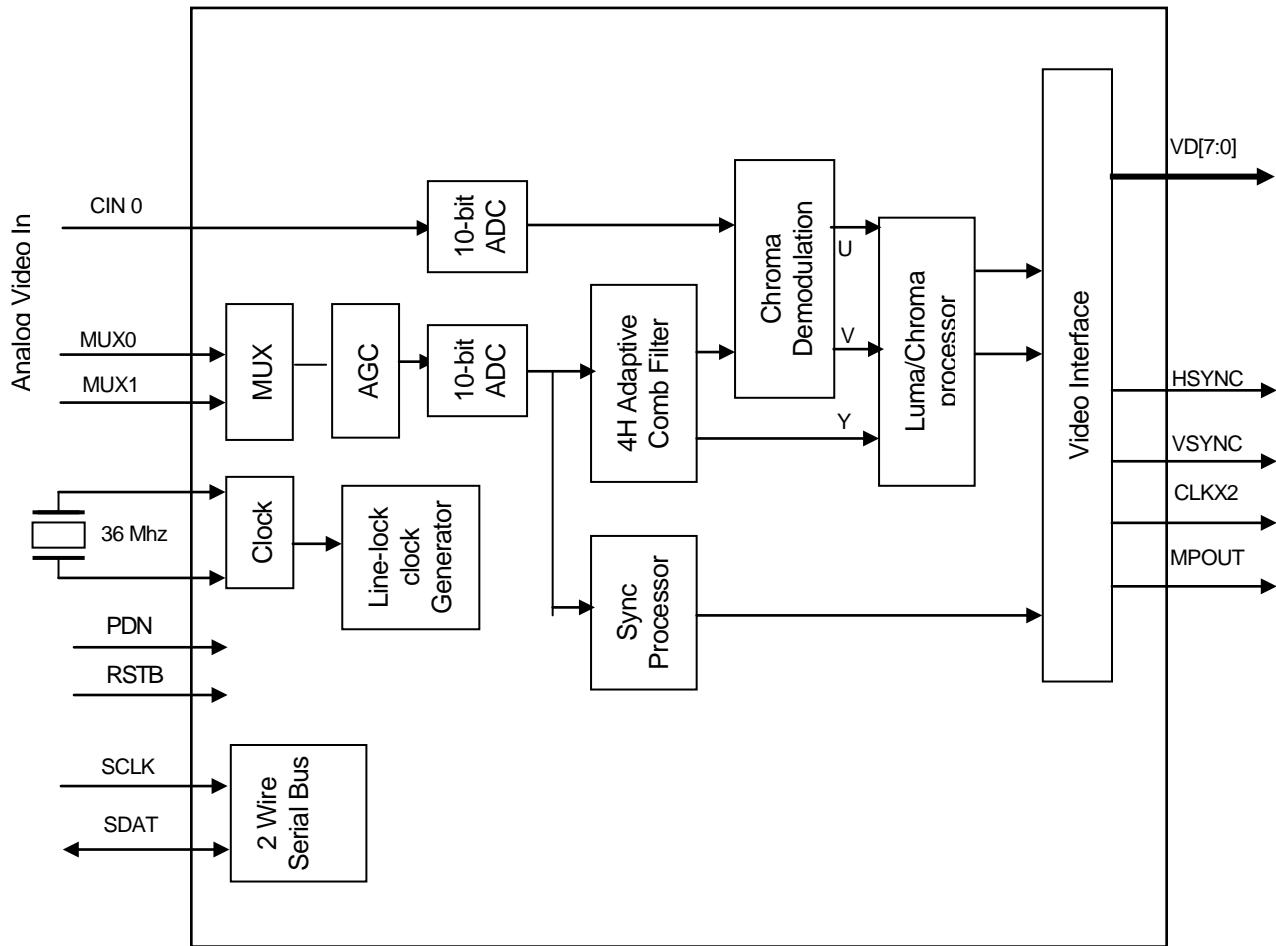


FIGURE 1. TW9960 BLOCK DIAGRAM

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