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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Low Cost Video Format Converter

TW8809

The [TW8809](#) is a low cost video format converter that can take either analog CVBS or 24-bit digital RGB format video and output these signals in ITU-R.656 format. The video sources can be scaled and deinterlaced, so that the ITU-R BT.656 output is already formatted to the desired resolution and in progressive format. In addition, the TW8809 has built-in OSD and image enhancement capabilities.

Applications

- Rear seat entertainment
- Radio head unit

Features

Analog Video Decoder

- NTSC (M, 4.43) and PAL (B, D, G, H, I, M, N, N combination), PAL (60), SECAM with automatic format detection
- Selectable differential or single-ended CVBS input
- Supports two differential or 4 single-ended CVBS inputs
- 10-bit ADC and analog clamping circuit
- Fully programmable static gain or automatic gain control for the Y or CVBS channel
- Programmable white peak control for the Y or CVBS channel
- High quality adaptive 2D comb filter for both NTSC and PAL inputs
- PAL delay line for color phase error correction
- Image enhancement with 2D dynamic peaking and CTI
- Digital subcarrier PLL for accurate color decoding
- Digital horizontal PLL and advanced synchronization processing for VCR playback and weak signal performance
- Programmable hue, brightness, saturation, contrast and sharpness

Digital Input

- Supports YCbCr/RGB 24-bit input
- Supports both BT.656 and BT.601 video formats
- Supports input resolutions up to 720p

Digital Output

- ITU-R BT.656 compatible YCbCr (4:2:2) output format
- Progressive ITU-R BT.656 output format for both interlaced and progressive inputs
- Output resolution up to SVGA (pseudo BT.656)

On Screen Display

- 256 font RAM and 512 display RAM
- Four windows font OSD with bordering/shadowing
- 1/2/3/4 bits/pixel
- Supports variable width (12/16), height (2~32)

Image Processing

- High quality scaler with both up/down and nonlinear scaling support
- Panorama/water-glass scaling
- Built-in 2D deinterlacing function
- Programmable hue, brightness, saturation, contrast and sharpness
- Programmable cropping of input video and graphics
- Independent RGB gain and offset controls
- Programmable 8-bit Gamma correction for each color
- Operates in frame sync mode
- Black/white stretch

Clock Generation

- Spread spectrum clock
- Selectable modulation frequency and spread width

Power Management

- Supports functional based independent power-down
- 1.8/3.3V operation

Miscellaneous

- Short-to-battery detection test
- Short-to-ground detection test
- Supports 2-wire serial bus interface
- Single 27MHz crystal
- 56 lead QFN (with wettable flanks)
- TW8809AT-NA2-GR is [AEC-Q100](#) qualified

TW8809 Functional Block Diagram

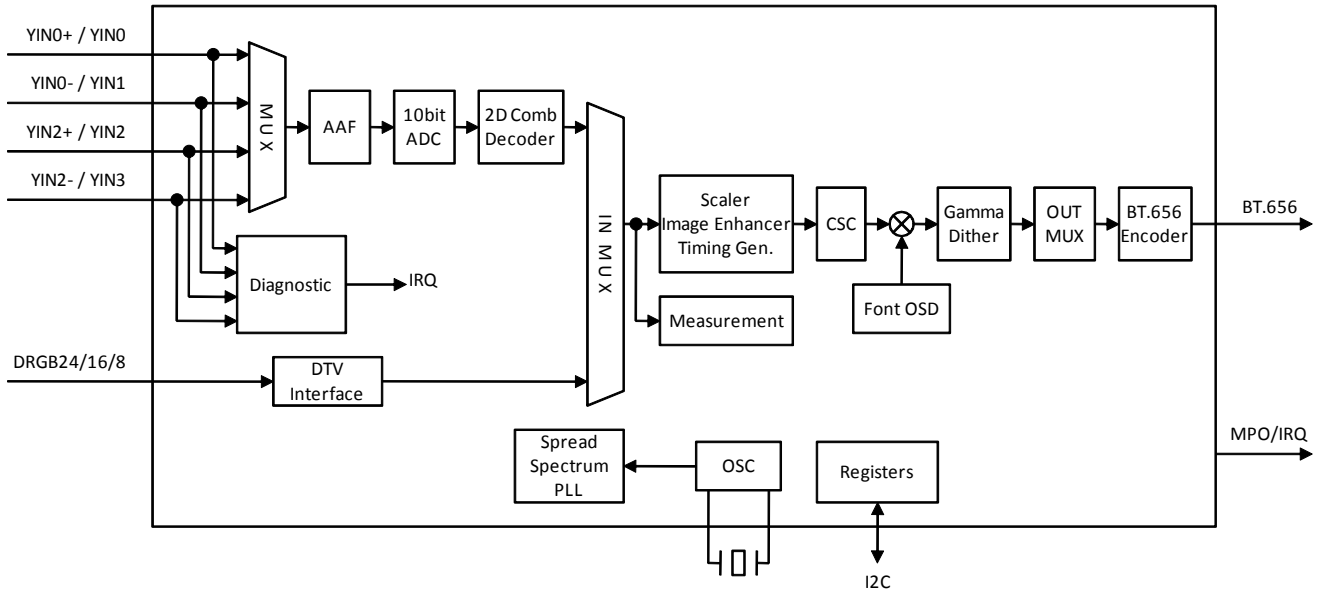


FIGURE 1. TW8809 FUNCTIONAL BLOCK DIAGRAM

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