TV Decoder

GENERAL DESCRIPTION

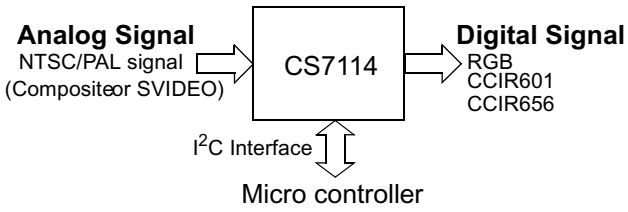
Analog NTSC/PAL decoders have been around for some time. However, they have been difficult to use, required adjustment and offered limited video quality. Using digital techniques to implement NTSC/PAL decoding offers many advantages, such as ease of use, minimum analog adjustments and excellent video quality. The use of digital circuitry also enables the design of much more robust and sophisticate Y/C separator and genlock implementations. The quality of Y/C separation plays a major role in the overall video quality generated by the decoder. However, S-video uses separate Y and C analog video signals so higher quality may be maintained by eliminating the composite endoding and decoding processes.

FEATURES

- CS7114Auto detection of NTSC and PAL video signal.
- A single input crystal, 27MHz.
- A line-locked PLL is used to generate pixel clock.
- Four analog compostie and Y/C s-video inputs.
- 2 channels of 9-bit integrated ADC and associated auto-clamping and AGC.
- Adaptive 2D comb filter for Y/C separation
- A chroma DLL is used to maintain chroma lock for demodulation of the color information.
- 2x over-sampling to simplify external analog filtering.
- Color enhancement — contrast, brightness, saturation and hue adjustment.
- “SLICED” VBI data decoder — closed caption, widescreen signal, teletext, clock regeneration and byte synchronization.
- 8-bit, 16-bit 4:2:2 YCbCr output or 24-bit RGB output.
- 100-pin LQFP.

APPLICATIONS

- Multimedia PC
- Video compression system
- Video conference
- Video security system
- VCR/Camcorder



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BLOCK DIAGRAM