



TECHWELL
SECURITY



Security Surveillance IC Solutions

Features

TW2834

4 Channel Video QUAD/MUX Controller
For Security Applications

Target Applications

- Analog Quad\Mux Security System
- 4/8/16 Ch. Digital Video Recorder (DVR)
- Car Rear Vision System

Four Video Decoders

- Four built-in analog anti-aliasing filters
- Accepts all NTSC/PAL standard formats with auto detection
- Integrated four anti-aliasing filters and 10-bit CMOS ADCs
- High performance adaptive comb filters for all NTSC/PAL standards
- IF compensation filter for improvement of color demodulation
- PAL delay lines for correcting PAL phase errors
- Programmable hue, saturation, contrast, brightness and sharpness
- Dual high performance horizontal and vertical scaler for each channel
- Four built-in motion detectors with 16X12 cells and blind detectors
- Fast video locking system for Non-real time system
- Auto cropping / strobe for playback input with Channel ID decoder
- Supports four channel full D1 record output and playback input

Dual Video Encoders

- 2 path digital outputs with ITU-R BT.656 standards
- 2 path analog outputs with all analog NTSC/PAL standards
- Supports CVBS or S-Video for each path
- Programmable bandwidth for luminance and chrominance path
- Four 10-bit video CMOS DACs

The TW2834 has four high quality NTSC/PAL video decoders, dual color display controllers and dual video encoders. The TW2834 contains four built-in analog anti-aliasing filters, four 10-bit Analog-to-Digital converters, proprietary digital gain/clamp controller, high quality Y/C separator to reduce cross-noise and high performance dual scaler. Four built-in motion and blind detectors can increase the feature of a security system. The TW2834 has a flexible video display controller including basic QUAD and MUX functions. The TW2834 also has excellent graphic overlay function that displays character/bitmap for OSD, single box, 2D array box, and mouse pointer. The built-in channel ID CODEC allows auto decoding and displaying during playback and the additional scaler on the playback supports multi-cropping function of the same field or frame image. The TW2834 contains two video encoders with four 10-bit Digital-to-Analog converters for providing 2 composite or S-video outputs. The TW2834 also can be extended up to 8/16 channel video controller using chip-to-chip cascade connection.

Dual Video Controllers

- Full Live/Strobe/Switch function
- Various channel attribute control
- Non-realtime application such as Pseudo 8 Channel or Dual page
- Horizontal / Vertical Mirroring for each channel
- Last image capture when video-loss detected
- Auto sequence switch with 128 queues and/or manual switch by interrupt for Y Path
- Channel skip in Auto sequence switch for Y Path when video-loss detected
- Image enhancement for zoomed or still image in X Path
- High performance 2X zoom to horizontal and vertical direction for X Path
- Supports save and recall function for X Path
- Extendable up to 8/16 channel video controller using cascade connection
- Quad MUX switch with 32 queues and/or manual control by interrupt for Y Path
- Character/Bitmap overlay for OSD with 720x480 resolution in NTSC / 720x588 in PAL
- Sixteen programmable single boxes overlay
- Four 2D arrayed boxes overlay with dual color for motion result or table display
- Mouse pointer overlay
- Analog/Digital Channel ID Encoder
- 208 pin PQFP Package



TW2834

4 Channel Video QUAD/MUX Controller
For Security Applications

TW2834 Block Diagram

