



TECHWELL  
SECURITY



## Security Surveillance IC Solutions

### Features

# TW2824

4 Channel Video QUAD/MUX Controller  
For Security Applications

### Target Applications

- Quad/Mux Systems
- 4/8/16 channel DVR System
- Car Rear Vision System

### Four Video Decoders

- Accepts all NTSC/PAL standard formats with auto detection
- Four integrated 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

### 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 TW2824 has four high quality NTSC/PAL video decoders, dual color display controllers and dual video encoders. The TW2824 contains 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 to provide various pictures. Four built-in motion and blind detectors can increase the feature of security systems. The TW2824 has a flexible video display controller to support basic QUAD and MUX functions. The TW2824 also has an excellent graphic overlay function which displays character/bitmap, box and mouse pointer. The TW2824 contains two video encoders with four 10-bit Digital-to-Analog converters for providing 2 composite or S-video outputs.

### Dual Video Controllers

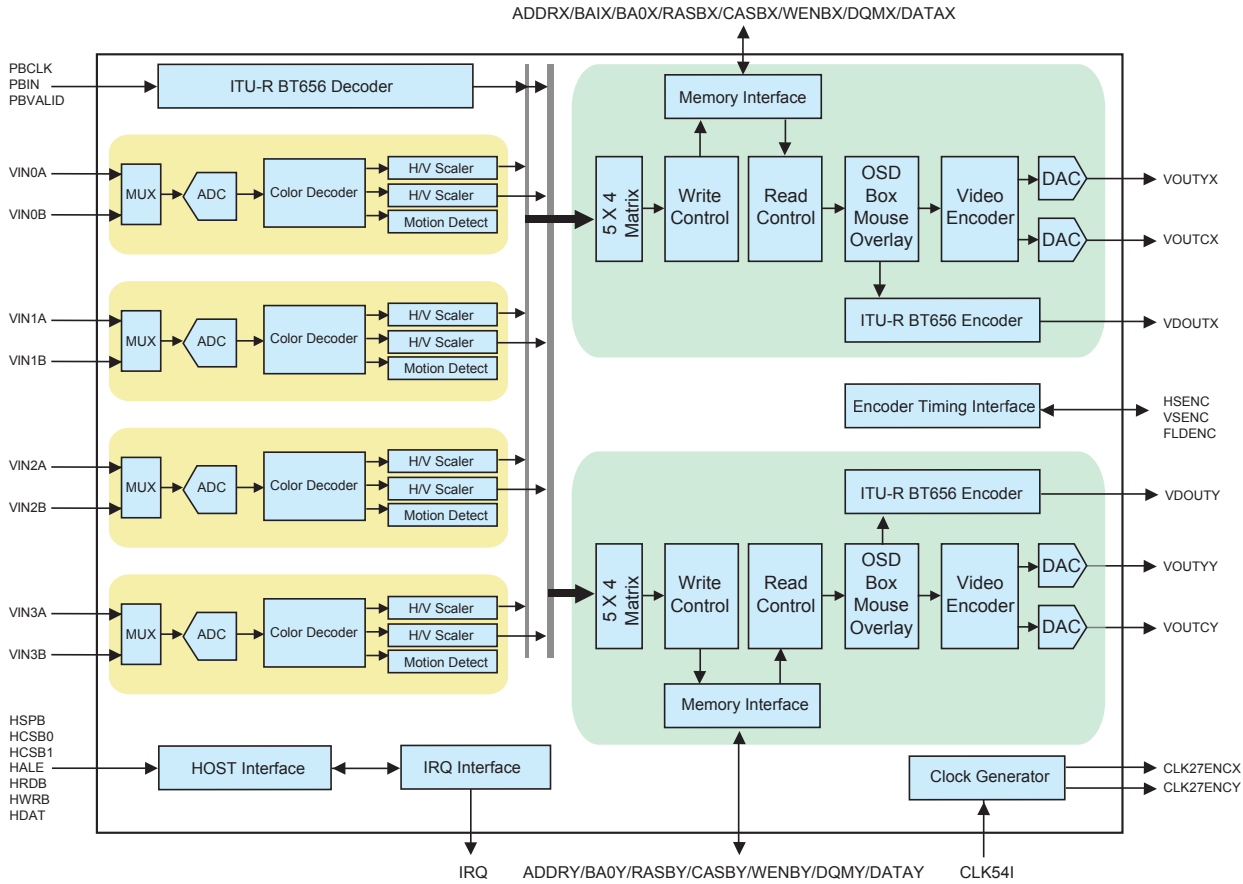
- Additional 1 channel digital input for playback or cascade operation
- Full Live/Strobe/Switch function
- Auto sequence switch with 64 queues and/or manual switch by interrupt
- Various channel attribute control
- Image enhancement for still image
- High performance 2X zoom for horizontal and vertical direction
- Supports save and recall function
- Last image capture when video-loss
- Extendable to 8/12/16 channel video controller using cascade connection
- Path-to-Path cascade
- Character/Bitmap overlay for OSD
- 16 programmable single boxes
- 4 2D arrayed boxes for motion result display
- Mouse pointer overlay



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## TW2824 Block Diagram



### About Techwell

Techwell designs and sells mixed signal semiconductor solutions for digital video applications. The company's products enable the conversion of analog video sources to digital form and facilitate the display, storage and transport of digital video, HDTV, and personal computer display information. Headquartered in San Jose, CA, Techwell currently has over 60 employees in the U.S., Korea, and Taiwan.

**Techwell**  
Mixed Signal Semiconductor Solutions

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