

# Techwell

# TW2824

## 4 Channel Video QUAD/MUX Controller

### For Security Applications

### Introduction

The TW2824 has four high quality NTSC/PAL video decoders, dual color display controllers and dual video encoders.

The TW2824 contains four 10bit 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 system.

The TW2824 has flexible video display controller including QUAD and MUX basic functions.

The TW2824 also has excellent graphic overlay function which displays character/bitmap, box and mouse pointer.

The TW2824 contains two video encoders with four 10bit Digital-to-Analog converters to provide 2 composite or S-video.

The TW2824 can be extended up to 8/12/16 channel video controller using chip-to-chip cascade connection.

### Features

#### Four Video Decoders

- 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

#### 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
- Horizontal Mirroring
- 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 2-D arrayed boxes for motion result display
- Mouse pointer overlay

#### Dual Video Encoders

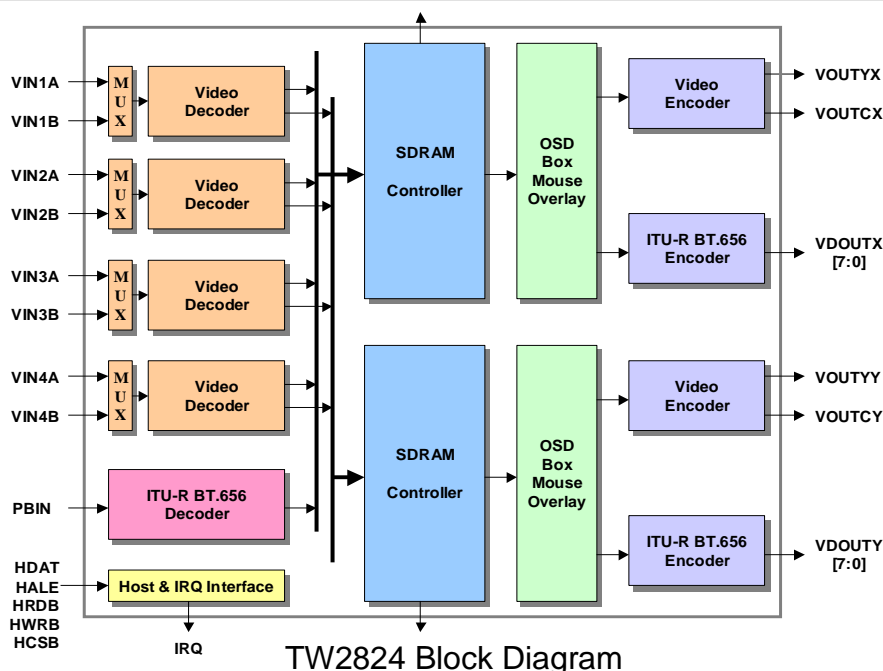
- 2 path digital outputs with ITU-R BT.656 standards
- 2 path analog outputs with all analog NTSC/PAL standards
- Supports CVBS or S-Video for each path
- Programmable bandwidth for luminance and chrominance path
- Four 10-bit video CMOS DACs
- 208-pin PQFP package

### Applications

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



TW2824  
208-pin PQFP package



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