Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Security Surveillance IC Solutions

Target Applications

- Embedded DVR
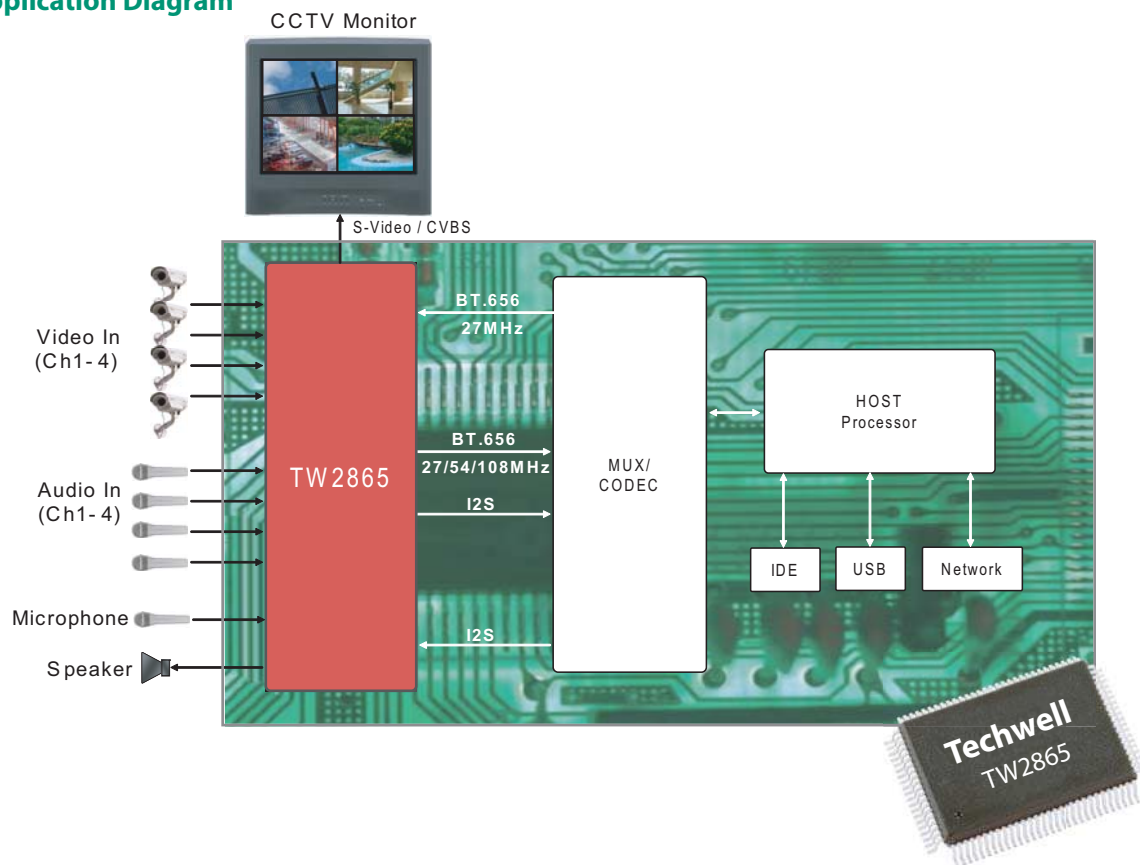- Video Server
- DVR PCI Card

TW2865
4-Channel Video Decoder and Audio Codec plus
Video Encoder for Security Applications

The TW2865 is a 4-in-1 video decoder and audio codec plus video encoder for security surveillance applications. The device includes four high quality NTSC/PAL/SECAM video decoders that convert analog composite video signal to digital component YCbCr data. Each channel contains a 10-bit ADC and proprietary clamp/gain controller and utilizes 4H comb filter for separating luminance & chrominance to reduce cross noise artifacts. The TW2865 adopts image enhancement techniques such as IF compensation filter, CTI and programmable peaking. In addition, TW2865 includes one NTSC/PAL video encoder with two 10-bit DACs to support CVBS and YC output. The TW2865 also includes an audio codec which has five audio ADCs and one DAC. A built-in audio controller can generate digital outputs for recording/mixing and accepts digital input for playback.

New Features

- Integrated one video encoder and two 10-bit video CMOS DACs
- Proprietary fast video locking system for non-realtime application
- Integrated five audio ADCs and one audio DAC
- Low power consumption

Typical Application Diagram

CCTV Monitor

S-Video / CVBS

Video In
(Ch1-4)

Audio In
(Ch1-4)

Microphone

Speaker

TW2865

BT.656
27MHz

BT.656
27/54/108MHz

I2S

I2S

MUX/
CODEC

HOST
Processor

IDE   USB   Network
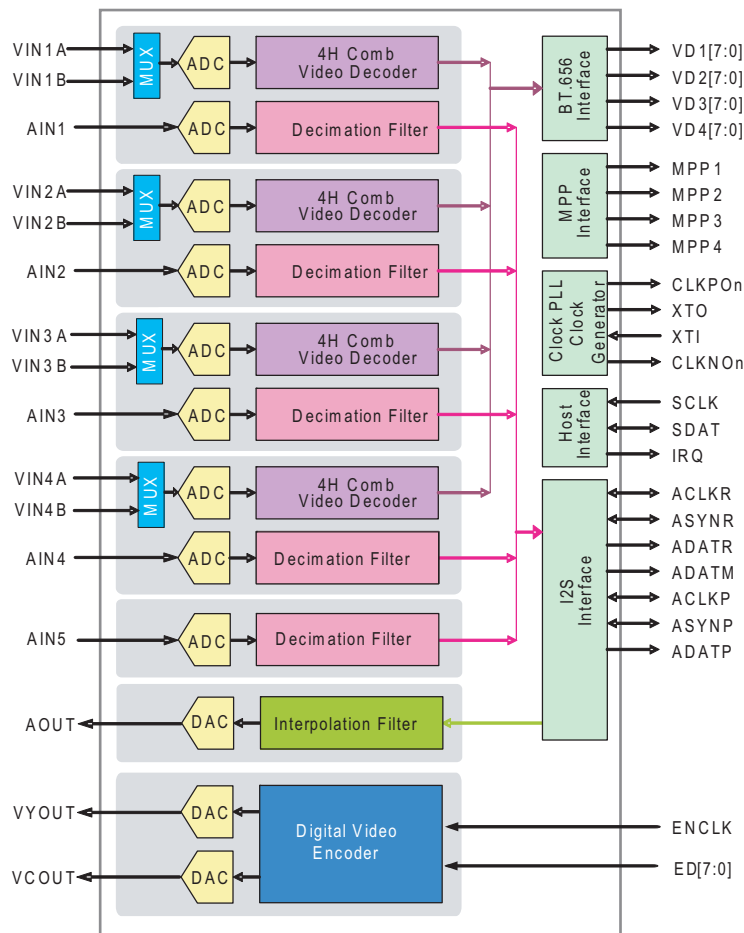
Techwell
TW2865

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TW2865

4-Channel Video Decoder and Audio Codec plus
Video Encoder for Security Applications

Video Decoders

- Accepts all NTSC(M/4.43) / PAL(B/D/G/H/I/K/L/M/N/60)/SECAM standards with auto detection
- Integrated four video analog anti-aliasing filters and 10-bit ADCs
- High performance adaptive 4H comb filters for all NTSC/PAL standards
- IF compensation filter for improvement of color demodulation
- Color Transient Improvement (CTI) and automatic white peak control
- Programmable hue, saturation, contrast, brightness and sharpness
- Proprietary fast video locking system for non-realtime application
- Supports the standard ITU-R BT.656 format or time multiplexed output with 54/108MHz.
- Provides simultaneous four channel Full D1 and CIF time-multiplexed outputs with 54MHz

TW2865 Block Diagram

Audio Codecs

- Integrated five audio ADCs and one audio DAC
- Provides multi-channel audio mixed analog output
- Supports I2S/DSP Master/Slave interface for record output and playback input
- PCM 8/16 bit and u-Law/A-Law 8bit for audio word length
- Programmable audio sample rate that covers popular frequencies of 8/16/32/44.1/48kHz

Order Information

- Part Number: TW2865
- Package: 128 pin LQFP

Video Encoder

- NTSC/PAL Video Encoder
- CVBS and S-video Support

Other Features

- 2x/4x analog clock PLL for 108MHz clock output
- Supports a two-wire serial host interface
- 1.8V Supply
- Low power consumption

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