4-in-1 Video Decoders with PCI Express Media Bridge

TW6865

The TW6865 is a highly integrated solution that supports multi-channel video and audio capture via PCIe x1 interface for PC DVR system and video analytic application. It contains high quality four-channel NTSC/PAL/SECAM video decoders that convert analog composite video signal to digital component YCbCr data, and utilize adaptive 4H comb filter for separating luminance and chrominance to reduce cross noise artifacts.

TW6865 contains a high performance proprietary DMA controller that fully optimizes the utilization of PCIe x1 bandwidth and enables it to transfer video and audio data at a high throughput rate that closely approaches the theoretical limit of PCIex1 interface. TW6865 is able to simultaneously decode and transfer 4 real time D1 video, or up to 16 channel non-real time D1, plus 8 channel audio.

TW6865 decreases the complexity and workload of client-side software development, and significantly reduces the strains on PC hardware and resources. TW6865 also includes a software development kit (SDK) with Windows and Linux compliant drivers and reference application software.

Features

Video Decoders

- Accepts all NTSC(M/N/4.43) / PAL(B/D/G/H/I/K/L/M/N/60) standards with auto detection
- Integrated eight video analog anti-alias filters and 10-bit CMOS ADCs
- IF compensation filter for improvement of color demodulation
- Color Transient Improvement (CTI)
- White peak AGC control
- Programmable hue, saturation, contrast, brightness and sharpness
- High quality proprietary fast video locking system for non-real-time application
- High performance adaptive 4H comb filters for all NTSC and PAL standards

Audio Codecs

- Integrated eight audio ADCs
- 8/16 bit audio word length
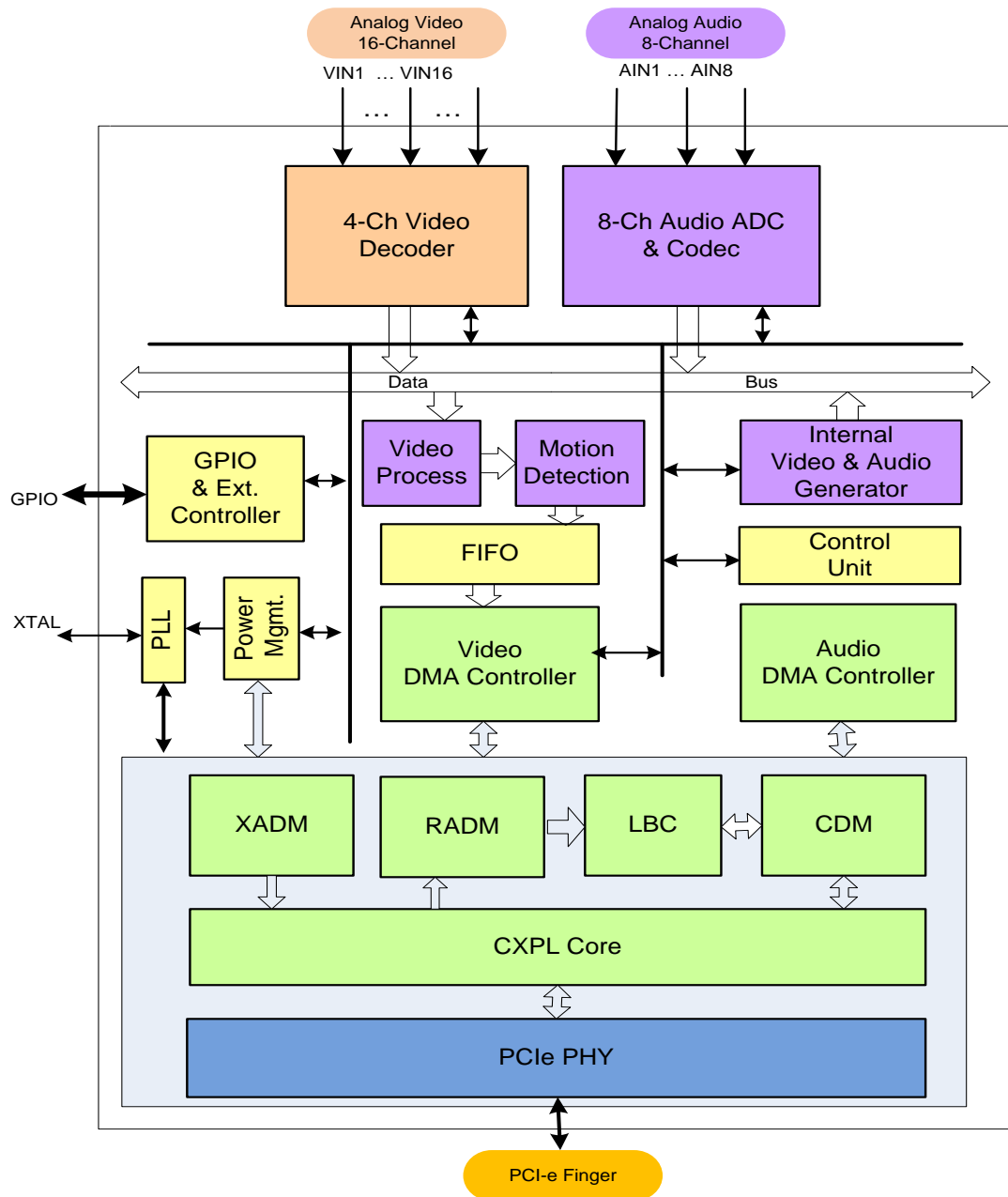- Sample audio with 8/16/32/44.1/48kHz

DMA Controller

- Highly-efficient DMA design can support up to 4 real time D1 video and 8 real time audio channels, or up to 16 non-real- time video with optimization of full PCIex1 bandwidth
- Multiple video format output support: UYVY/Y422, YUYV/YUY2, IYU1/Y411, Y41P, YUV420, RGB555 and RGB565
- Integrated internal video and audio generator simplifies system test and development
- Built-in motion detection engine for each video channel
- Hardware-friendly design enables smooth data transfer and virtually eliminates unwanted big-block data jamming among PC devices, resulting in optimized PC internal bandwidth consumption
- PCIe Configurations
- PCI Express Base Specification 1.1 Compliant
- Flexible PCIe packet size configuration: 128 byte, 256 byte and 512 byte options

Applications

- PC-based DVR system
- Video analytic system

FN8304.0
April 20, 2012

Block Diagram

Analog Video
16-Channel

VIN1 … VIN16

· · ·   · · ·

Analog Audio
8-Channel

AIN1 … AIN8

**4-Ch Video
Decoder**

**8-Ch Audio ADC
& Codec**

Data   Bus

**GPIO
& Ext.
Controller**

GPIO

**Video
Process**

**Motion
Detection**

**Internal
Video & Audio
Generator**

FIFO

**Control
Unit**

XTAL

PLL

**Power
Mgmt.**

**Video
DMA Controller**

**Audio
DMA Controller**

XADM

RADM

LBC

CDM

CXPL Core

PCIe PHY

PCI-e Finger

For information regarding Intersil Corporation and its products, see www.intersil.com

AMEYA360
Components Supply Platform

Authorized Distribution Brand :

ROHM	Sunlord	SSM SUSUMU	AVERLOGIC	NXP	Elprotronic
2Pai Semi	Ambarella	CanaanTek	Firstohm	GigaDevice	Vanguard Semiconductor

Website :

Welcome to visit   www.ameya360.com

Contact Us :

➤ ### Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd

Minhang District, Shanghai , China

➤ ### Sales :

Direct   +86 (21) 6401-6692

Email   amall@ameya360.com

QQ   800077892

Skype   ameyasales1 ameyasales2

➤ ### Customer Service :

Email   service@ameya360.com

➤ ### Partnership :

Tel   +86 (21) 64016692-8333

Email   mkt@ameya360.com