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Techwell ™

PCI Decoder

Multistandard Decoders with PCI for Multimedia PC Applications

Features

TW6802
PCI Video Decoder with Audio Support
and Optional TS Input Support

Target Applications

- PCI DVR Card

Video Decoder

- NTSC (M, 4.43) and PAL (B, D, G, H, I, M, N, N combination), PAL (60), SECAM support with automatic format detection
- Software selectable analog inputs allows any of the following combinations, e.g. 4 CVBS or (3 CVBS and 1 Y/C).
- Two 10-bit ADCs and analog clamping circuit for CVBS and S-Video YC input selection.
- Fully programmable static gain or automatic gain control for the Y channel
- Programmable white peak control for the Y or CVBS channel
- 4-H adaptive comb filter Y/C separation
- PAL delay line for color phase error correction
- Image enhancement with 2D peaking and CTI
- Digital sub-carrier PLL for accurate color decoding
- Digital Horizontal PLL for synchronization processing and pixel sampling
- Advanced synchronization processing and sync detection for handling non-standard and weak signal
- Programmable hue, brightness, saturation, contrast, sharpness, Gamma control, and noise suppression
- Automatic color control and color killer
- Detection of level of copy protection according to Macrovision standard
- Programmable output cropping

PCI

- PCI Rev. 2.2-3.0 compliant
- ACPI support
- Integrated Video/Audio/TS DMA controller

Audio Capture

- Software selectable 4 channel analog sound inputs
- 10-bit ADC for Analog Sound digitizing
- Up to 24-bit I2S Stereo Digital input by I2S master or I2S slave
- I2S Audio output
- Programmable Sampling rate generation

Miscellaneous

- Programmable RGB and YCbCr color space conversion
- GPIO ITU-R BT656 data input/output
- 24 pin GPIO
- 400Kbps Two-wire MPU serial bus Master interface
- Remote control data receiver
- Power-down mode
- Field locked audio clock generation
- Single 27MHz crystal for all standards
- 5V tolerant I/O
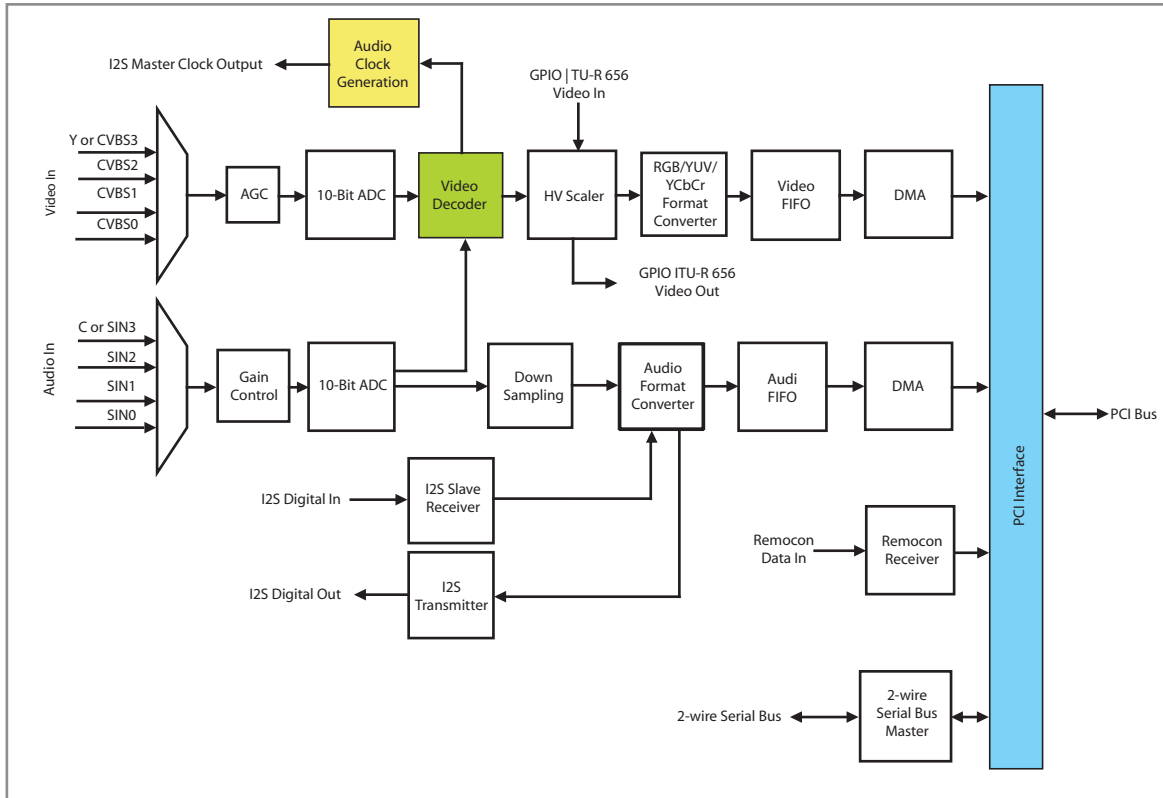- 2.5/3.3 V power supply
- 128-pin PQFP package

Video scaler

- High quality horizontal filtered scaling with arbitrary scale down ratio
- Phase accuracy better than 1/32 pixel
- Selectable anti-alias filter

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TW6802 Block Diagram

About Techwell

Techwell is a fabless semiconductor company that designs, markets and sells mixed signal integrated circuits for multiple digital video applications in the consumer, security surveillance and automotive markets, including advanced TVs, multifunction LCD monitors, DVD Recorders, security surveillance systems and in-car LCD displays. Founded in 1997, we currently have over 80 employees and are headquartered in San Jose, California, with additional R&D and sales activities in South Korea, Japan, Taiwan and China.   NASDAQ: TWLL

For more information on Techwell, please contact us at 1-408-435-3888

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