

Bt852

Digital Video Encoder

High Performance and Low Cost for a Wide Range of Video Systems

High performance video combined with the right set of features make Conexant's Bt852 a versatile device for most video systems. High quality 9-bit DACs provide the clear, lifelike video required for modern satellite and cable television set-top boxes, VCD and Super VCD players, PC add-in cards, video conferencing systems and digital cameras. Power conservation modes extend portable system battery life and help to reduce system heating. Automatic mode detection and switching (in slave mode) are included for simple programming of the Bt852 outputs. The output section of the Bt852 contains current output DACs which require minimal external passive components to provide the best flexibility, functionality and video performance — all for a very low system design cost.

Flexible, Easy to Use Digital Video Encoder

The Bt852 is designed specifically for VideoCD, Super VCD, video games and other digital video systems which require the conversion of digital YCrCb (MPEG) data to analog NTSC/PAL video. The device supports a glueless interface with most popular MPEG decoder ICs. Worldwide video standards are supported, including NTSC (N. America, Japan) PAL-B, D, G, H, I (Europe, Asia), PAL-M (Brazil), PAL-N (Uruguay, Paraguay), and PAL-Nc (Argentina). Current output DACs provide sufficient output current to meet the requirements of any consumer video system. In addition, the device supports a switchable setup pedestal for use with NTSC applications in Japan.

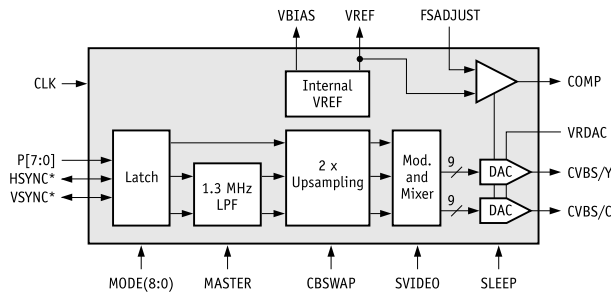


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What's next in communications technologies



Distinguishing Features

- 2x oversampling simplifies external filtering
- Master or slave video timing
- Interlaced and noninterlaced operation
- Automatic mode detection/switching in slave mode
- On-board voltage reference
- Extremely compact 32-pin TQFP package



Bt852 functional block diagram

The composite analog video signal is output simultaneously onto two outputs. This allows one output to provide baseband composite video while the other drives an RF modulator. Analog luminance (Y) and chrominance (C) information is available for interfacing to S-video equipment. As a slave, the Bt852 automatically detects the input data formats (PAL/NTSC, CCIR601/ square pixel, interlaced/noninterlaced) and switches internally to provide the proper format on the outputs. This feature, along with the on-board voltage reference and single clock interface, makes the Bt852 extremely simple to use. In addition, the use of a 2x oversampling on-chip simplifies external filter design resulting in reduced overall system cost.

Multiple Video Outputs for Televisions of All Varieties

The Bt852 provides analog luminance (Y) and chrominance (C) information in the Y and C outputs for interfacing with S-video equipment. Composite (CVBS) information is available on the two channels when S-video outputs are not required. The selection between S-video and CVBS outputs is determined by setting the SVIDEO pin high or low, respectively.

Implementation

The Bt852 is packaged in a 32-pin Thin Quad Flat Pack (TQFP) with a 7.0 x 7.0 mm body size. It requires only a minimum of discrete passive support components for external filtering. It is ideal for low cost, high performance video systems and consumer electronics.

Product Features

- 8-bit 4:2:2 YCrCb inputs for glueless interface to MPEG decoders
- NTSC/PAL/PAL-M/PAL-Nc (Argentina) composite video outputs
- CVBS or S-video outputs
- 5V supply voltage
- CCIR 601 or square pixel operation
- 2x oversampling simplifies external filtering
- 9-bit DACs
- Master or slave video timing
- Interlaced and noninterlaced operation
- Automatic mode detection/switching in slave mode
- On-board voltage reference
- Extremely compact 32-pin TQFP package

Applications

- Digital satellite television receivers (DBS/DVB/DSS)
- Digital and analog cable television receivers
- VCD players / Super VCD players
- Portable VCD and Super VCD players
- Digital cameras
- PC add-in cards with TV output
- PC video editing cards
- Karaoke/video game appliances

Related Products

- Bt856/857
- Bt860/861
- Bt864A/865A
- Bt866/867
- Bt868/869

Further Information

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