

Bt852

Digital Video Encoder

Infotainment

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.

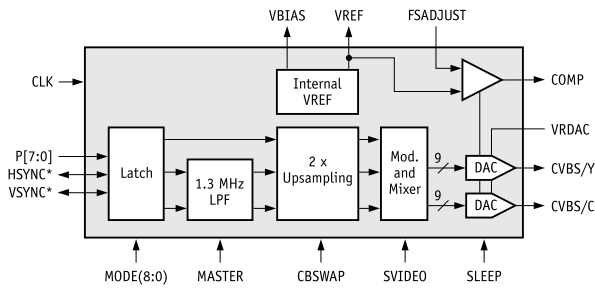
Flexible, Easy to Use Digital Video Encoder

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.



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

literature@conexant.com
 1-800-854-8099 (North America)
 33-14-906-3980 (International)
 DL.PB19 98-5843
 Digital Infotainment
 Printed in USA

Web Site

www.conexant.com

World Headquarters

Conexant Systems, Inc.
 4311 Jamboree Road
 P. O. Box C
 Newport Beach, CA
 92658-8902
 Phone: (949) 483-4600
 Fax: (949) 483-6375

U.S. Florida/South America

Phone: (727) 799-8406
 Fax: (727) 799-8306

U.S. Los Angeles

Phone: (805) 376-0559
 Fax: (805) 376-8180

U.S. Mid-Atlantic

Phone: (215) 244-6784
 Fax: (215) 244-9292

U.S. North Central

Phone: (630) 773-3454
 Fax: (630) 773-3907

U.S. Northeast

Phone: (978) 692-7660
 Fax: (978) 692-8185

U.S. Northwest/Pacific West

Phone: (408) 249-9696
 Fax: (408) 249-7113

U.S. South Central

Phone: (972) 733-0723
 Fax: (972) 407-0639

U.S. Southeast

Phone: (919) 858-9110
 Fax: (919) 858-8669

U.S. Southwest

Phone: (949) 483-9119
 Fax: (949) 483-9090

APAC Headquarters

Conexant Systems Singapore,
 Pte. Ltd.
 1 Kim Seng Promenade
 Great World City
 #09-01 East Tower
 Singapore 237994
 Phone: (65) 737 7355
 Fax: (65) 737 9077

Australia

Phone: (61 2) 9869 4088
 Fax: (61 2) 9869 4077

China

Phone: (86 2) 6361 2515
 Fax: (86 2) 6361 2516

Hong Kong

Phone: (852) 2827 0181
 Fax: (852) 2827 6488

India

Phone: (91 11) 692 4780
 Fax: (91 11) 692 4712

Korea

Phone: (82 2) 565 2880
 Fax: (82 2) 565 1440

Europe Headquarters

Conexant Systems France
 Les Taissounieres B1
 1681 Route des Dolines
 BP 283
 06905 Sophia Antipolis Cedex
 France
 Phone: (33 4) 93 00 33 35
 Fax: (33 4) 93 00 33 03

Europe Central

Phone: (49 89) 829 1320
 Fax: (49 89) 834 2734

Europe Mediterranean

Phone: (39 02) 9317 9911
 Fax: (39 02) 9317 9913

Europe North

Phone: (44 1344) 486 444
 Fax: (44 1344) 486 555

Europe South

Phone: (33 1) 41 44 36 50
 Fax: (33 1) 41 44 36 90

Middle East Headquarters

Conexant Systems
 Commercial (Israel) Ltd.
 P. O. Box 12660
 Herzlia 46733, Israel
 Phone: (972 9) 952 4064
 Fax: (972 9) 951 3924

Japan Headquarters

Conexant Systems Japan Co., Ltd.
 Shimomoto Building
 1-46-3 Hatsudai,
 Shibuya-ku, Tokyo
 151-0061 Japan
 Phone: (81 3) 5371-1567
 Fax: (81 3) 5371-1501

Taiwan Headquarters

Conexant Systems, Taiwan Co., Ltd.
 Room 2808
 International Trade Building
 333 Keelung Road, Section 1
 Taipei 110, Taiwan, ROC
 Phone: (886 2) 2720 0282
 Fax: (886 2) 2757 6760

Conexant and the Conexant symbol are trademarks of Conexant Systems, Inc.