

Advance Information

This document contains information on a product under development. The parametric information contains target parameters that are subject to change.



BtV2487

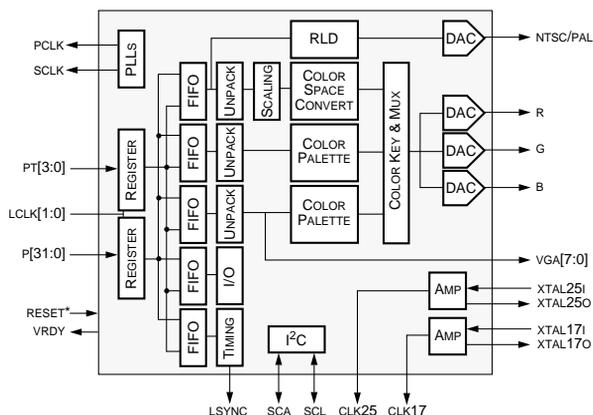
PACDAC™ Packetized Data DAC

The BtV2487 Packetized Data DAC (PACDAC™) when used in conjunction with the BtV2115 MediaStream Controller, provides a fully integrated graphics and video subsystem, specifically targeted at multimedia applications. The MediaBuffer (BtV multimedia sub-system memory) sits in between the BtV MediaStream Controller and the PACDAC. To maximize storage efficiency and bandwidth between the MediaBuffer and the PACDAC, the MediaStream family incorporates the MediaPacket Architecture, a patented technique for managing the flow of graphics, video, cursor and control to the PACDAC. This unique architecture incorporates packet-style data flow from the MediaBuffer to the PACDAC such that graphics and video can utilize the entire serial bandwidth available from the MediaBuffer. Normally during horizontal and vertical blanking, the serial port is not providing serial data to the DAC and is inactive. This inactive time can represent up to 30% of the total horizontal line time. To take advantage of this time, the PACDAC contains internal FIFO's that can be filled during this inactive time. Furthermore, color space conversion bilinear interpolative scaling filters on the PACDAC reduce CPU software overhead and minimizes both the MediaBuffer Storage and bandwidth requirements. This results in video playback capabilities beyond that which could otherwise be done as a result of increased effective bandwidth between the MediaBuffer and the PACDAC.

Distinguishing Features

- Bilinear Interpolative Scaling for Video
- YCrCb to RGB Color Space Conversion
- 1024x768x8 Graphics and 1024x768x24 30 fps Video in 1 MB of Memory
- Embedded Chroma/Color Keying for games development and virtual reality apps
- Two full screen, 30 fps Video Windows, Playback or Live
- NTSC/PAL Output Capability
- 4:2:2, 4:1:1 YCrCb or RGB 15,16,24-bit Video Support
- PLL Pixel and Serial Clock Generation
- 135 Mhz Operation
- Multiple Pixel Depths Supported, 4-bits to 32-bits per pixel
- True Color Cursor Support
- Asynchronous, Packetized Data Input Port
- VGA Output Port

Functional Block Diagram



Related Products

- BtV2115 – MediaStream Controller
- BtV2811 – VideoStream Decoder
- BtV2300 – AudioStream Interface

Applications

- Video for Windows
- Video Printing
- High Resolution Color Graphics
- Videoconferencing Display Systems
- Multimedia Applications
- Video Decompression Acceleration



Figure 2. BtV2487 Detailed Block Diagram

