

## Product Bulletin

# TVP5150: Ultra-Low-Power NTSC/PAL/SECAM Video Decoder

New from Texas Instruments (TI), the TVP5150 digital video decoder (NTSC/PAL/SECAM) offers the industry's lowest power, smallest size and lowest cost—all vital characteristics for enabling cost-effective portable applications such as:

- Video capture
- PDAs
- Notebook/PCs
- Cell phones
- MPEG4 recorders
- USB-powered applications

The device, which is part of TI's comprehensive video product lineup, is a highly integrated video decoder. The device's optimized architecture allows for very low power consumption of 115 mW in typical operation. The device's very

low-power stand-by operation of 100  $\mu$ A further reduces power consumption, increasing battery life in portable applications. In addition, the decoder comes in a very small 32-pin thin quad flat-pack (TQFP), offering the smallest footprint available today. Again, this makes it ideal for space-constrained portable applications.

### **Advanced Features for Leading-Edge Portable Video Design**

In addition to having low power, small space and low cost, the TVP5150 is designed to be flexible enough to meet varying system requirements. The device outputs standard 8-bit ITU-R.BT656 video with embedded—or alternatively, component—video output

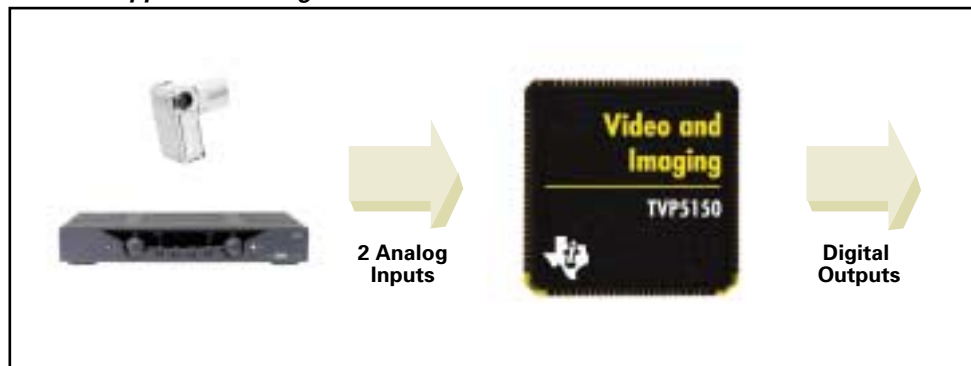
### **Key Features**

- Accepts two composite or one S-video input
- Ultra-low-power (115 mW)
- Industry smallest footprint (32-pin TQFP)
- Cost-optimized for portable multimedia applications
- New robust sync detector
- VBI data processor
- Macrovision™ copy protection detection

with dedicated sync. Using a 14.31818-MHz clock, the device supports NTSC, PAL and SECAM ITU-R.BT601 sampling output data rates.

For maximum flexibility, the TVP5150 features automatic switching between NTSC, PAL and SECAM with just one crystal at 14.31818 MHz. Four-line adaptive comb filtering is available for luma and chroma data paths to reduce the cross-luma and cross-

### **TVP5150 Application Diagram**



chroma artifacts. Designers can program video characteristics including hue, contrast, saturation and sharpness via the I<sup>2</sup>C interface.

The TVP5150 includes methods for advanced vertical blanking interval (VBI) data retrieval. The VBI data processor slices, parses and performs error checking on Teletext, closed caption and other data in several formats. A built-in

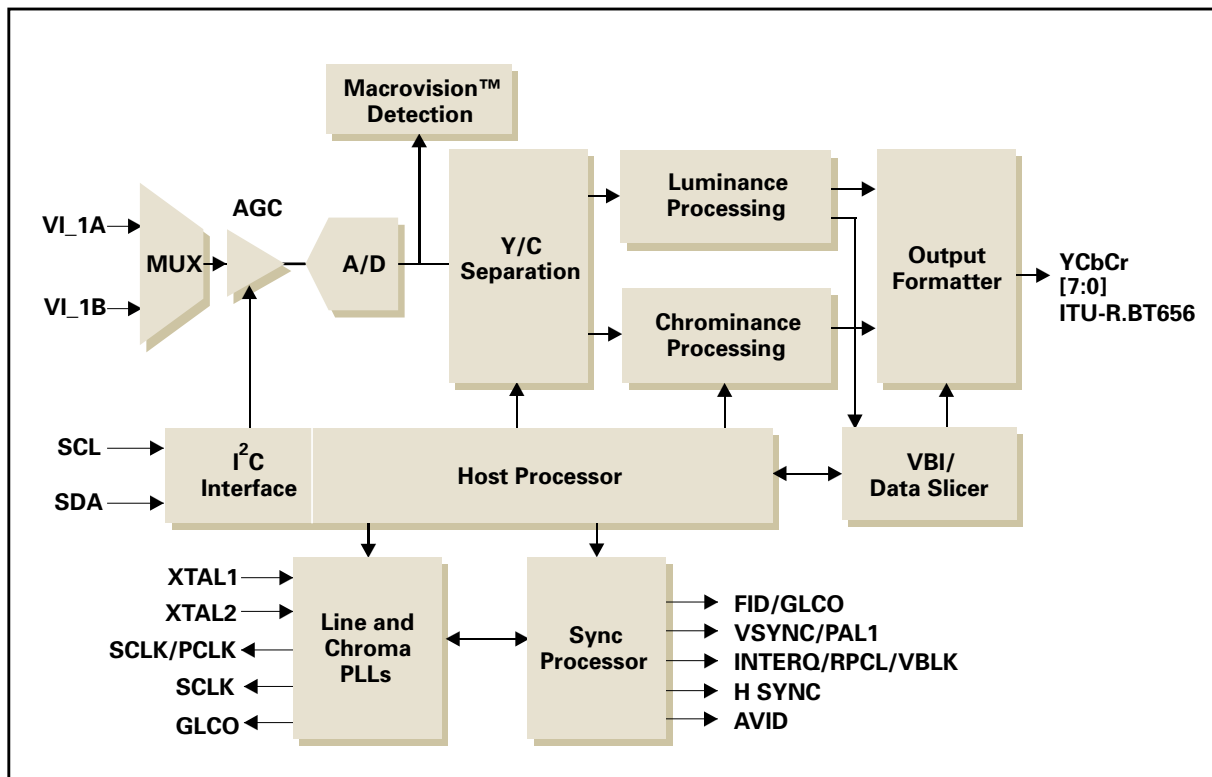
FIFO stores up to 14 lines of Teletext data; and, with proper host port synchronization, full-screen Teletext retrieval is possible.

The TVP5150 can pass VBI data through I<sup>2</sup>C or embedded in data stream. Additionally, the device features full support for the Macrovision™ copy protection standard.

### For More Information

For more information on enabling your next video application with the TVP5150, contact your local TI field sales office. To learn more about high-performance applications ask about the TVP5146.

## TVP5150 Block Diagram



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