Video Signal Processor with Bitmap OSD, Dual HDMI Tx, and Video Encoder

Data Sheet **ADV8002**

FEATURES

- **Video signal processor**
  - Full 12-bit 4:4:4 YUV internal processing
  - Motion-adaptive de-interlacing with ultralow angle interpolation
  - Cadence detection for the recovery of original frames from film-based content
  - Two video scalers allow two different output resolutions simultaneously
  - Aspect ratio conversion/panorama scaling
  - Sharpness and detail enhancement
  - Noise reduction to reduce random, mosquito, and block noise
  - Frame rate converter
  - Picture-in-picture (PIP) support
- **On-screen display (OSD)**
  - Internally generated bitmap-based OSD allowing overlay on one or more video outputs
  - Overlay on 3D video formats
  - Dedicated OSD scaler
  - Alpha blending of OSD data on video data
  - Option of external OSD
  - Easy to use software tool for developing OSDs
- **HDMI® transmitters**
  - Dual HDMI transmitters enabling splitter capability
  - Content type bits
  - CEC 1.4 controller
  - Audio return channel (ARC) support
  - Supports standard S/PDIF for stereo LPCM compressed audio up to 192 kHz
  - 6-channel uncompressed LPCM I²S audio up to 192 kHz
  - 6-channel direct stream digital (DSD) audio inputs
- **6 NSV™ DAC video encoder**
  - 6 Noise Shaped Video (NSV®) 12-bit video DACs
  - Multiformat video output support
    - Composite (CVBS), S-Video (Y/C), and Component YPrPb (SD, ED, and HD)
  - Rovi® Rev. 7.1.L1 (SD) and Rev. 1.4 (ED) compliant
  - Simultaneous SD and ED/HD operation

APPLICATIONS

- High-end A/V receivers
- Upconverting DVD players/recorders
- Blu-ray players/recorders
- Set-top boxes
- Video conferencing
- Standalone video processors
- HDMI splitters

FUNCTIONAL BLOCK DIAGRAM

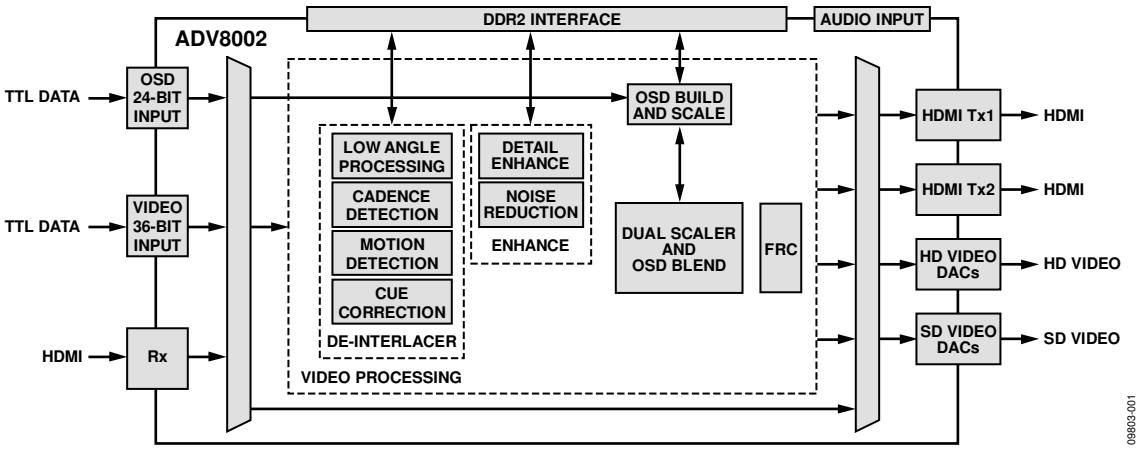

Figure 1.

For more information on the ADV8002, contact a local Analog Devices sales office.

Xpressview™
Fast Switching Technology by Analog Devices

Rev. SpA

One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.
Tel: 781.329.4700 www.analog.com
Fax: 781.461.3113

NOTES

I²C refers to a communications protocol originally developed by Philips Semiconductors (now NXP Semiconductors).
HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

D09803F-0-1/ /11(SpA)