

FEATURES

- 3D comb video decoder
- Overlay support for external graphical HMI/OSD
- Fastboot and bitmap load from external EEPROM
- LVDS transmitter and receiver (OpenLDI mapping)
- Hardware downscaling/upscaling to QVGA and WXGA panel resolutions
- Fully differential analog input
- LCD controller
- Qualified for automotive applications
- Video decoder
 - NTSC/PAL/SECAM color standards support
 - NTSC/PAL 2D/3D motion detecting comb filter
 - Advanced time-base correction (TBC) with frame synchronization
 - Vertical peaking and horizontal peaking filters
 - Any-to-any, 3 × 3 color space conversion (CSC) matrix
- Video signal processor
 - Edge adaptive interlaced-to-progressive conversion of 525i and 625i
 - Bitmap overlay from EEPROM
 - Low cost bitmap overlay requiring no external memory
 - Hardware downscaling/upscaling to QVGA and WXGA panel resolutions
 - Adaptive contrast enhancement (ACE)
 - Up-dither of coarse resolution input signals
 - Vertical flip/horizontal mirror orientation control
- Analog input
 - Single low power 10-bit analog-to-digital converter (ADC)
 - 6-channel analog input mux
 - Single-ended or fully differential input
 - 3-channel antialiasing filter
 - 525i-/525p-/625i-/625p-/720p-/1080i-component analog input
 - RGB graphics up to 800 × 600 at 60 Hz (SVGA)
- Digital input
 - Flexible 24-bit pixel input interface
 - LVDS receiver (OpenLDI mapping)

Digital output

- Flexible 24-bit pixel output interface
- LVDS transmitter (OpenLDI mapping)
- Independent BT.656 output channel

LCD controller

- Timing controller (TCON) for LCD panels PWM backlight control
- Programmable gamma correction

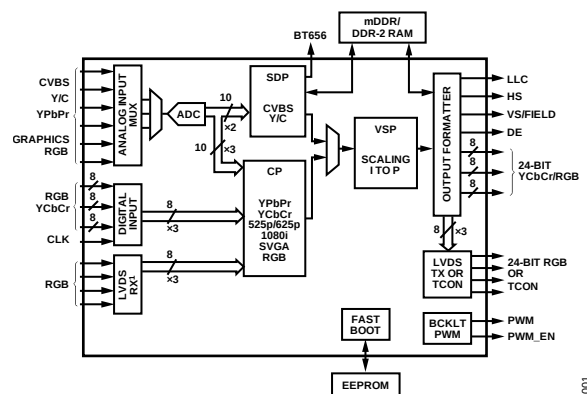
General

- Dual standard identification (STDI) function support
- 1 programmable interrupt request output pin
- Spread spectrum output pixel clock
- Support for low power mobile DDR (LPDDR) and DDR2 SDRAM
- LVDS Rx available on **ADV7186BBCZ** and **ADV7186BBCZ-T** only
- LVDS Tx available on **ADV7186BBCZ** only
- TCON available on **ADV7186BBCZ-T** and **ADV7186BBCZ-TL**

APPLICATIONS

- Navigation radios and infotainment head units
- Central console and rear seat monitors
- Parking guide and ADAS vision systems
- Pico and mini projectors
- Industrial monitors and displays

FUNCTIONAL BLOCK DIAGRAM



¹NOT AVAILABLE ON THE ADV7186-TL.

Figure 1.

For more information about the **ADV7186**, including the complete data sheet, contact your local Analog Devices, Inc., sales office at www.analog.com/sales.

Rev. SpC

Document Feedback

Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Analog Devices. Trademarks and registered trademarks are the property of their respective owners.

ADV7186* PRODUCT PAGE QUICK LINKS

Last Content Update: 02/23/2017

COMPARABLE PARTS

View a parametric search of comparable parts.

DOCUMENTATION

Application Notes

- AN-1256: Manual Scaling in the ADV7186
- AN-1260: Crystal Design Considerations for Video Decoders, HDMI Receivers, and Transceivers

Data Sheet

- ADV7186: Video Decoder and Display Processor Data Sheet

DESIGN RESOURCES

- ADV7186 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

View all ADV7186 EngineerZone Discussions.

SAMPLE AND BUY

Visit the product page to see pricing options.

TECHNICAL SUPPORT

Submit a technical question or find your regional support number.

DOCUMENT FEEDBACK

Submit feedback for this data sheet.

NOTES