

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
 Robust synchronization extraction for poor video sources
 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

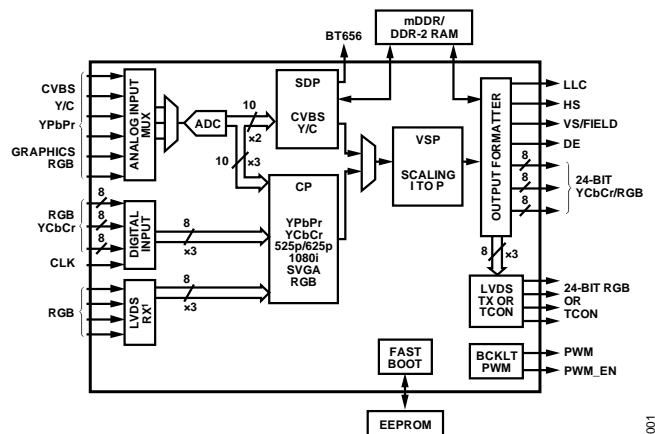
General

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 and 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-T OR 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.

NOTES

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