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 x 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 course 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 x 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

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