

### DESCRIPTION

VX1521 is a highly integrated solution for progressive video displays nowadays. It accepts digitized interlaced video from NTSC/PAL/SECAM video decoder or MPEG video decoder, and converts it into non-interlaced formats for directly displaying on progressive devices, such as LCD displays, HDTV, projectors, or PC monitors. With no external SDRAMs, VX1521 can provide

high quality intra-field progressive-scan video with *Edge-Preserving Pixel Interpolation* for most cost-effective application. With the aid of optional external SDRAMs as frame memory, VX1521 can provide theater quality progressive-scan video with *Motion-Adaptive 3-D De-Interlace*, 50 Hz to 60 Hz frame rate conversion, and automatic video source mode detection.

The build-in picture enhancement unit let users manipulate all known image effects for displaying variation, such as Gamma correction and Color Temperature. Digital to analog output converters (DAC) and on-screen-display (OSD) are also built-in to support a direct connection to display devices. Various digital output formats are also provided for further digital video processing.

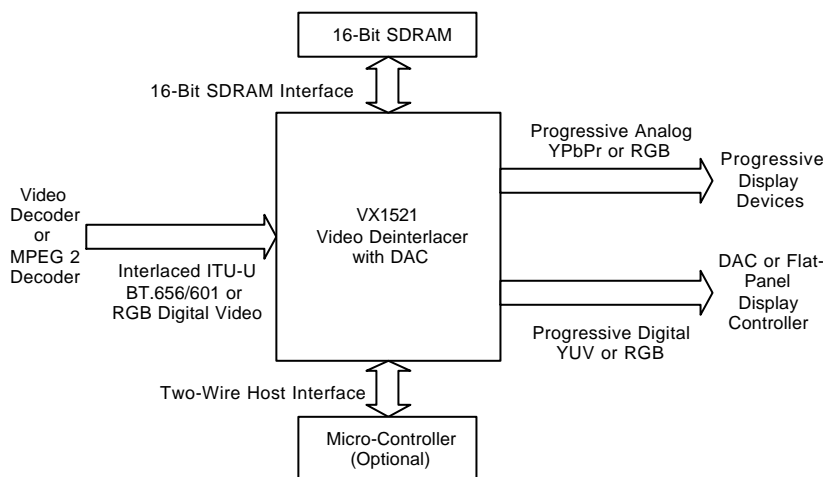
### APPLICATION

- Progressive TV
- Progressive DVD player
- LCD TV
- PDP TV
- Projection TV
- Multimedia PC

### PACKAGE

- 160-pin PQFP

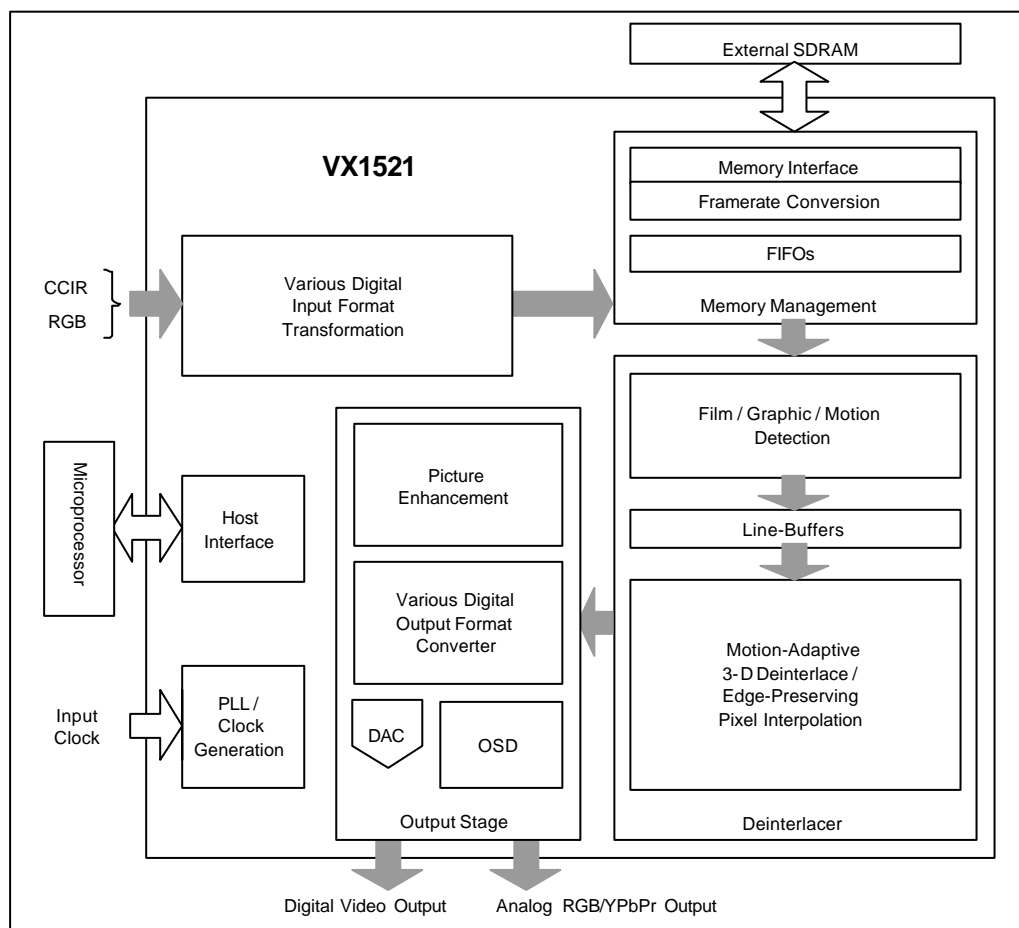
### APPLICATION DIAGRAM



## FEATURES

- Support Various Digital Video Input Formats
  - ITU-R BT.656
  - 8/16-Bit ITU-R BT.601 + Horizontal Sync + Vertical Sync
  - 24-Bit RGB + Horizontal Sync + Vertical Sync
  - 24-Bit 4:4:4 YUV + Horizontal Sync + Vertical Sync
  - NTSC/PAL/SECAM
  - Square Pixel
- Support Various Digital Video Output Formats
  - 24/18-Bit 4:4:4 YUV + Horizontal Sync + Vertical Sync
- 24/18-Bit 4:4:4 YPbPr (with Embedded Horizontal and Vertical Sync on Y)
- 30/24/18-Bit RGB + Horizontal Sync + Vertical Sync
- 3-Channel 10-Bit Build-In DAC which Provides Analog Video Output
- 50 Hz to 60 Hz Format Conversion
- Motion-Adaptive 3-D De-Interlace
- Edge-Preserving Pixel Interpolation
- Automatic Video Source Detection
- Brightness, Contrast, Saturation, and Hue Adjustment
- 3-Channel 10-Bit Build-In Color Look-Up Table for Programmable Gamma Correction
- Host Interface Compatible with Two-Wire IIC, Serial Interface
- Stand-Alone IC Configuration Through I/O Pins During Reset
- Build-In OSD with Programmable Font Table
- 5-Volt Tolerant Digital I/O

## BLOCK DIAGRAM



P2/P.2