

## Video Enhancement Processor

### Applications

- Low-Cost Scan Converter Box
- LCD TV, DTV & Front Projection/Rear Projection/Progressive Scan TVs
- TV to PC Monitor Format/Scan Rate Converter
- Video Enhancer/TV Tuner box

### Description

AL260 is a highly integration Video Enhancement Processor which supports video input with multiple video formats then output with De-interlacing and Scaling effects. It can be used for most video conversion and processing applications.

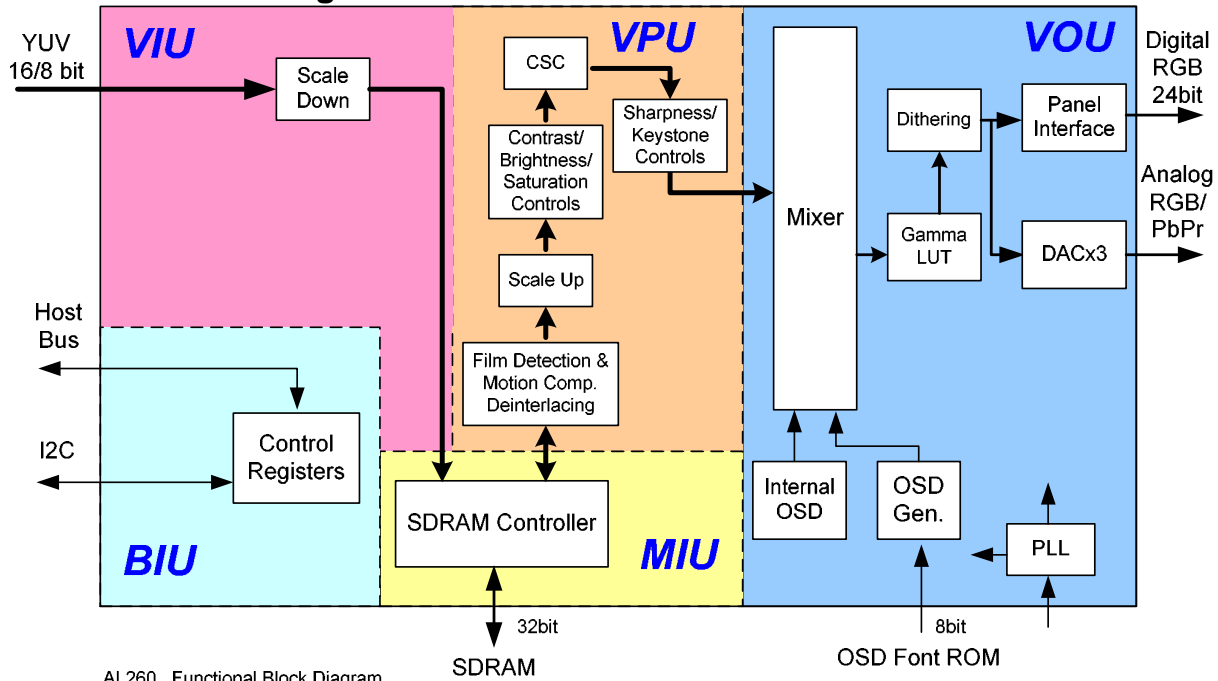
AL260 is equipped with a high quality scaling engine that automatically maintains full screen output display, regardless of the resolution of the incoming signals. Applying AverLogic's proprietary scaling algorithm, the primary input video can be scaled up and scaled down

independently in horizontal & vertical directions. It also provides film detection, advanced de-interlacing, filtering, and scaling which's able to convert and process the interlaced video to be displayed on progressive monitor or panel.

### General Features

- Support Digital YUV input and Non-interlaced Analog & Digital outputs
- Film Detection with Inverse 3:2/2:2 Pull Down supported
- Advanced De-interlacing with Motion Compensation
- AverLogic's Proprietary Scaling Algorithm for Scaling Up and Down
- Built-in 2K Bytes OSD RAM and support External OSD ROM
- Available in 208-pin PQFP
- 2.5V Core and 3.3V I/O power supplies with 5V input tolerant

## Function Block Diagram



## Features

### Input Interface:

- NTSC/PAL supported
- Video interface ITU-R 601/656(8/16bit), YUV422 supported

### Output Interface:

- Output resolution up to 1280x1024 @60Hz
- Analog Non-interlaced RGB/YPbPr and Digital RGB 24bit outputs supported

### SDRAM Interface:

- Support maximum 32bit bus width SDRAM interface, up to 100 MHz supported

### Scan Rate & Format Conversion:

- De-Interlacing for Interlaced Video Input
- Film Detection with Inverse 3:2 & 2:2 pull down supported
- Motion Compensation De-interlacing with Spatial and Temporal Filtering supported
- Frame Rate Conversion(FRC) from 50Hz up

to 120Hz

### Zoom engine and DSP:

- Independent Scale Up and Down in both Horizontal and Vertical direction with 4-line, high precision interpolation
- Digital Brightness/ Contrast/ Saturation Control
- Keystone Correction for Front-Projection Systems
- Sharpness Control
- Built-in LUT for Gamma Correction and Color Adjustment
- Dithering Logic for Color Depth Enhancement

### I2C or Parallel Port Registers Access:

- Registers can be accessed by serial I2C port or 8 bit parallel port for high speed registers data update

### On Screen Display (OSD):

- 2k Bytes Internal OSD RAM for fine bitmaps and text font
- Dual internal OSD windows supported with Alpha Blending/Transparency effect
- Support up to 64k Bytes External ROM for font and bitmap data

### Other Features:

- Input stream VBI pass through support
- Frame capture Mirroring support in Horizontal or Vertical direction
- NTSC/PAL Video Input Auto-Detection support
- Power Saving support
- Slave mode support

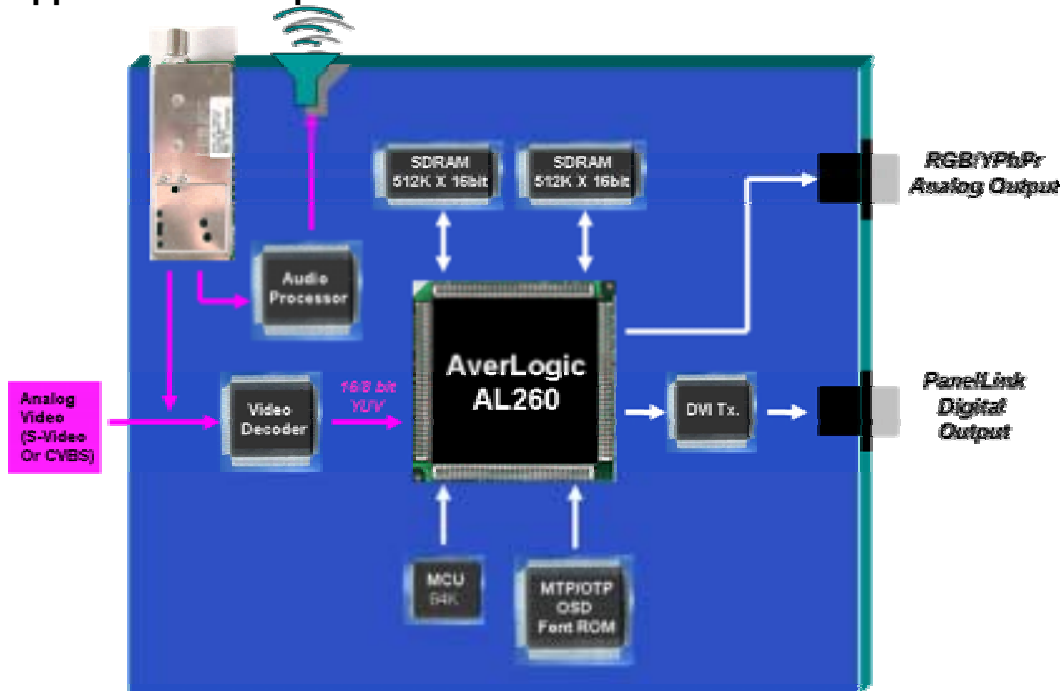
### Operating Power:

- 2.5V core and 3.3V I/O power supplies with 5V input tolerant

### Package:

- 208-pin PQFP

### Application Example



## **CONTACT INFORMATION**

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