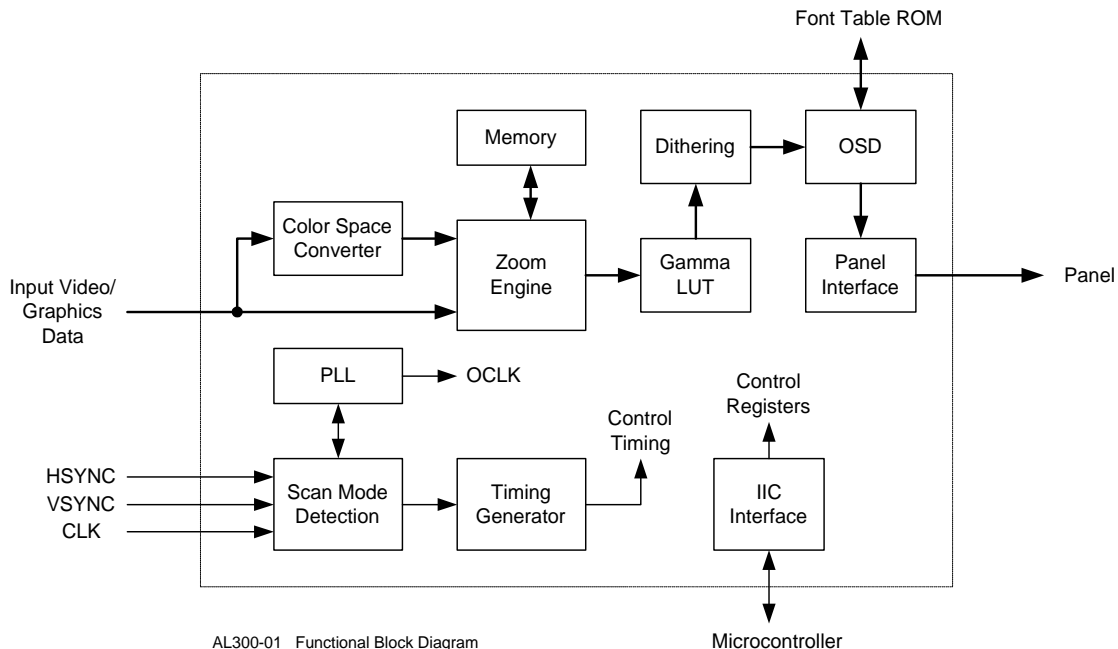# AVERLOGIC

# AL300

# LCD TV / Monitor Controller

## Applications

TFT LCD Monitor with PC and/or TV Input
LCD Projector with PC and/or TV Input
Other Flat Panel Displays
TV to PC Monitor Scan Converter
Progressive Scan TV

## Description

The AL300 is designed to enable simple connection from PC's or video devices to flat panel displays. It provides LCD/PDP monitor and projector manufacturers with a low-cost, easy solution to bring TV or PC videos to LCD panels.
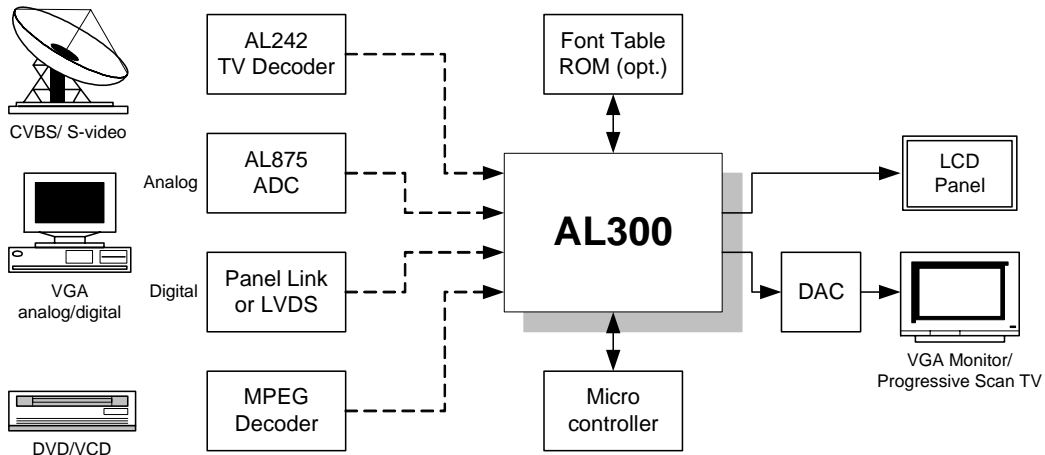
- Converts PC's or TV's signals for flat panel displays
- Supports active matrix up to 1280x1024 resolution
- De-interlacing support for CCIR601/656 video inputs
- Automatic screen positioning support
- Fully programmable zoom ratios
- Independent linear zoom in H and V directions
- Supports single and dual pixel per clock panels
- Dithering logic to enhance color resolution for 12-bit or 18-bit panels
- Built-in high speed PLL
- Built-in LUT RAM for gamma correction and color & brightness adjustment
- Two built-in OSD windows
- User-definable font table supporting different languages and font sizes
- I²C programmable
- No external memory required
- H/W and S/W controlled power down
- Single 3.3 volt power with 5 volt tolerant I/O



AL300-01   Functional Block Diagram

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AL300-03   Typical Application Diagram

The AL300 is equipped with a high quality zoom engine that automatically maintains full screen output display, regardless of the resolution of the incoming signals.  The input video can be linearly and independently zoomed in the x and y directions.  The AL300 also provides de-interlacing, filtering, and scaling support for interlaced video to be displayed on a LCD panel.

Two integrated On Screen Display (OSD) windows provide overlay of a control menu, text, or caption on the output display.  With the internal OSD RAM, OSD bitmaps of up to 8K pixels are supported.  With optional external user-defined font table ROM, the AL300 OSD function is very flexible with font size and display location; virtually all languages and fonts are supported.  Special OSD effects such as translucency and blinking offer the manufacturer a unique and vivid way of presenting monitor status, control menu, or other display.

Used with an AL875 (high speed 3-channel ADC, 100-pin QFP), the AL300 (in 160-pin QFP) offers the best cost-performance and total solution for LCD monitors, projectors, or other flat panel devices.

For more information about the AL300 or other AverLogic products, please contact your local authorized representatives, visit our website, or contact us directly.

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