

## High Speed Triple 8-bit ADC

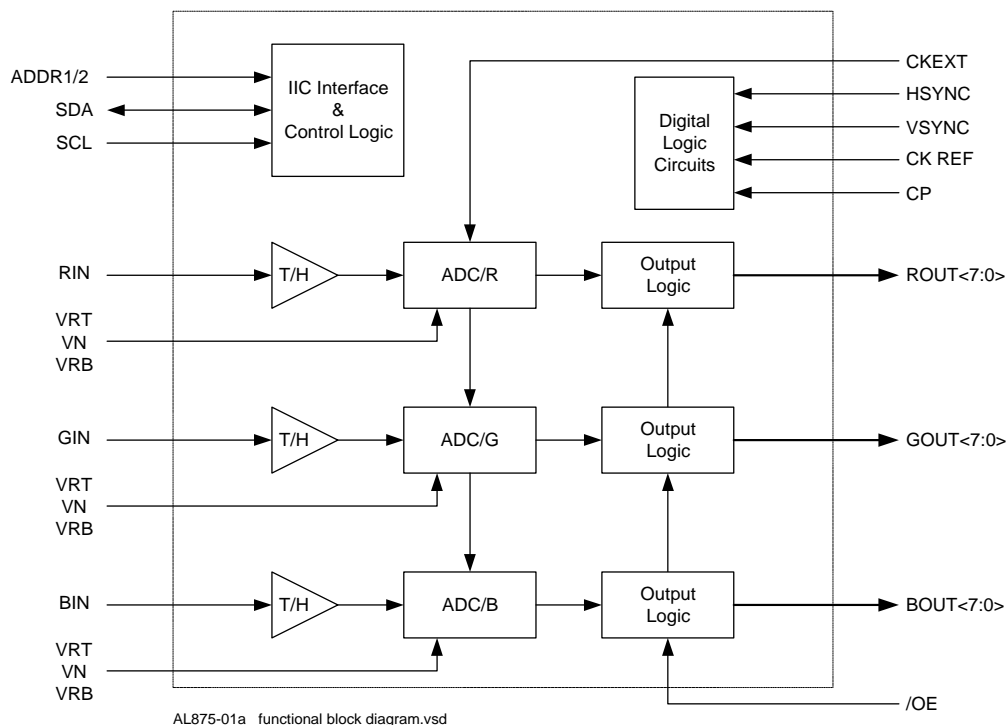
### Applications

- LCD/PDP Monitors
- LCD Projectors
- Other Flat Panel Displays
- High-end Video/Graphics Processing

### Description

The AL875 is a high-speed triple 8-bit monolithic analog-to-digital converter (ADC) designed for digitizing RGB graphics/video signal or other applications. Its 110 MHz conversion rate can support display resolution up to 1280x1024 at 60Hz.

- High speed 8-bit ADC up to 110MHz encode rate
- Support display resolution up to 1280x1024 at 60Hz
- Low power dissipation (0.8W typical at 3.3V, 110MHz)
- 0.6~2.0V p-p analog input range
- 10k~1MHz HSYNC locking range
- Full programmability via I<sup>2</sup>C interface
- Support automatic screen positioning
- Support automatic clock phase adjustment
- TTL compatible digital inputs and outputs
- High impedance tri-state output
- Power-down mode
- Single 3.3 volt power with 5 volt tolerant I/O
- 100-pin 14x20 mm PQFP package



The AL875 is a high-speed triple 8-bit monolithic analog-to-digital converter (ADC) designed for digitizing RGB graphics/video signal or other applications. Its 110 MHz conversion rate can support display resolution of up to 1280x1024 at 60Hz refresh rate.

The AL875 accepts 0.6~2.0V analog input range without using pre-amplifiers which may reduce the overall S/N ratio. Digitized data is piped at the full clock rate to the 24-bit output port. The AL875 uses 3.3V power with 5V tolerant I/O and low power dissipation.

The sampling clock is provided by an external clock source, usually a PLL, which multiplies the frequency of the input reference clock (usually a HSYNC signal) to generate the sampling clock. The AL875 provides a programmable PLL divider up to 4096.

In addition, the input active horizontal and vertical starting and ending positions can be detected to ensure that the whole picture fits into the displayable region of the screen. Through an I<sup>2</sup>C interface, the AL875 is fully programmable to support various graphic resolutions.

Analog graphic/video signals such as RGB, YCbCr and YPbPr can be digitized by the AL875. The digitized data can then be processed by the AL250/251 line doubler, AL300 LCD controller, or other proprietary designs for various applications.

## Ordering Information

Part number	Package	Power supply	Maximum Operating Frequency
AL875	100-pin QFP	+3.3 volt	110MHz

For more information about the AL875 or other AverLogic products, please contact your local authorized representatives, visit our website, or contact us directly.

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