

The gmZAN1 device utilizes Genesis' patented scaling technology as well as a proven integrated ADC/PLL to provide excellent image quality for a cost-effective XGA LCD monitor solution. The gmZAN1 incorporates many more features including 10-bit gamma correction, Adaptive Contrast Enhancement (ACE) filtering, and a flexible on-chip OSD.

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FEATURES

- Fully integrated 135MHz 8-bit triple-ADC, PLL, and pre-amplifier
- Genesis patented scaling algorithm featuring new *Adaptive Contrast Enhancement (ACE)*
- On-chip programmable OSD engine
- Integrated PLLs
- 10-bit programmable gamma correction
- Host interface with 1 or 4 data bits
- **Integrated Analog Front End**
 - Integrated 8-bit triple ADC
 - Up to 135MHz sampling rates
 - No additional components needed
 - All color depths up to 24-bits/pixel are supported
- **High-Quality Advanced Scaling**
 - Fully programmable zoom
 - Independent horizontal / vertical zoom
 - Enhanced and adaptive scaling algorithm for optimal image quality
 - Recovery (native) mode
- **Input Format**
 - Analog RGB up to XGA 85Hz
 - Input format detection

- **Output Format**
 - Support for 8 or 6-bit panels (with high-quality dithering)
 - One or two pixel output format
- **Built In High-Speed Clock Generator**
 - Fully programmable timing parameters
 - On-chip PLLs generate clocks for the on-chip ADC and pixel clock from a single reference oscillator
- **Auto-Configuration / Auto-Detection**
 - Phase and image positioning
 - Input format detection
- **Operating Modes**
 - Bypass mode with no filtering
 - Multiple zoom modes:
 - with filtering
 - with adaptive (ACE) filtering
- **Integrated On-Screen Display**
 - On-chip character RAM and ROM for better customization
 - External OSD supported for greater flexibility
 - Supports both landscape and portrait fonts
 - Many other font capabilities including: blinking, overlay and transparency

PACKAGE

- 160-pin PQFP

APPLICATIONS

- Multi-synchronous LCD monitors
- Other fixed-resolution pixelated display devices

Genesis Microchip

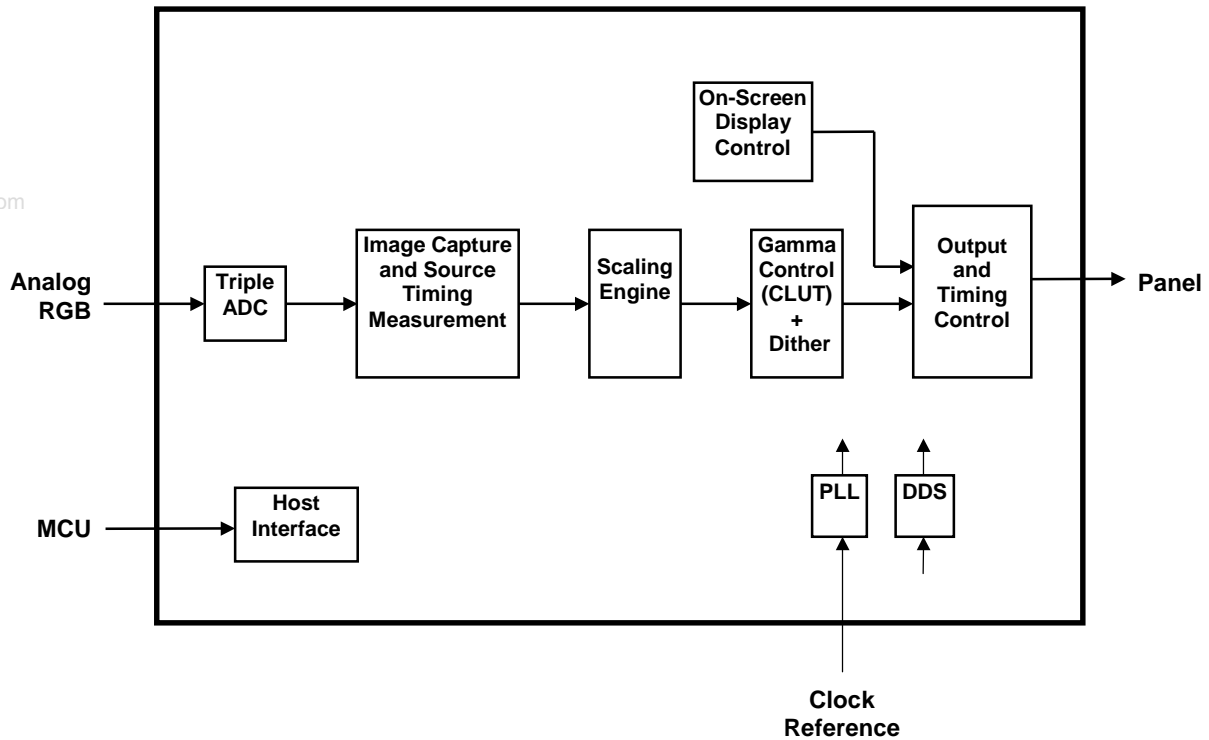
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gmZAN1 Functional Block Diagram



gmZAN1 System Design Example

