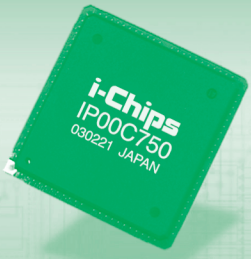
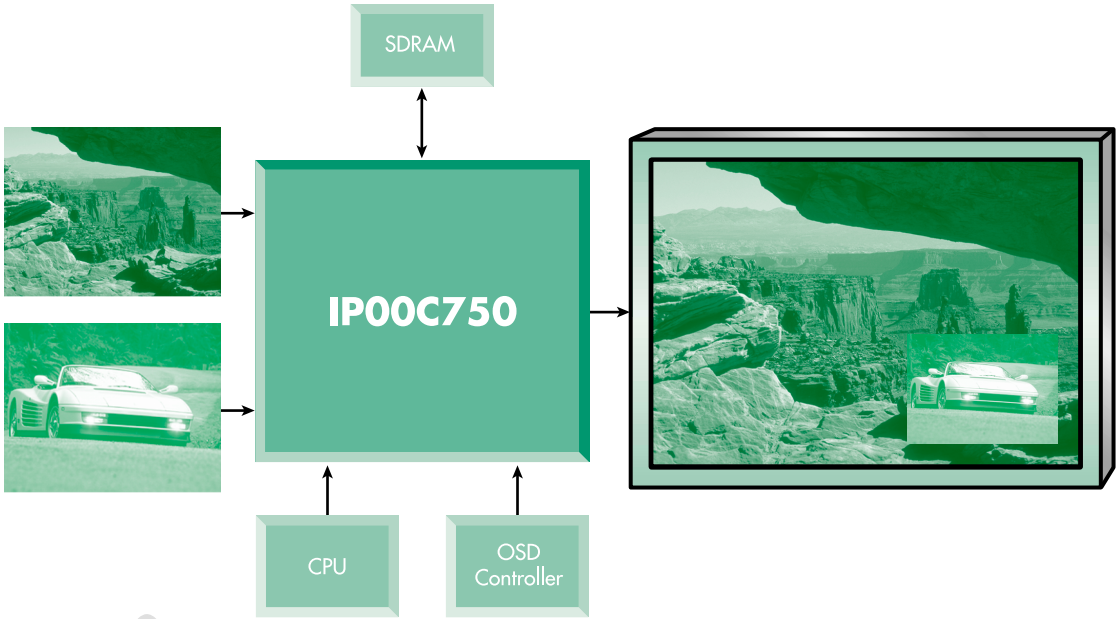


IP00C750

Digital Display Processor with PiP & PoP

General Description

The IP00C750 is a one-chip solution for Picture-in-Picture (PiP) and Picture-out-of-Picture (PoP) display up to Wide-XGA resolution. It has two (2) independent image input ports supporting image sizes from NTSC to SXGA at 108 MHz. The IP00C750 has two (2) scaling cores to perform simultaneous scaling of the 2 input images to produce an output image up to 85 MHz. The independent scaling cores are designed to avoid frame tearing on the output when the two input images have different frame rates. The IP00C750 smoothly integrates the 2 input images for PiP output, and provides an easy method for tiling the images on the output to create PoP.



Support Tools

- Evaluation Board
- Local Technical Support

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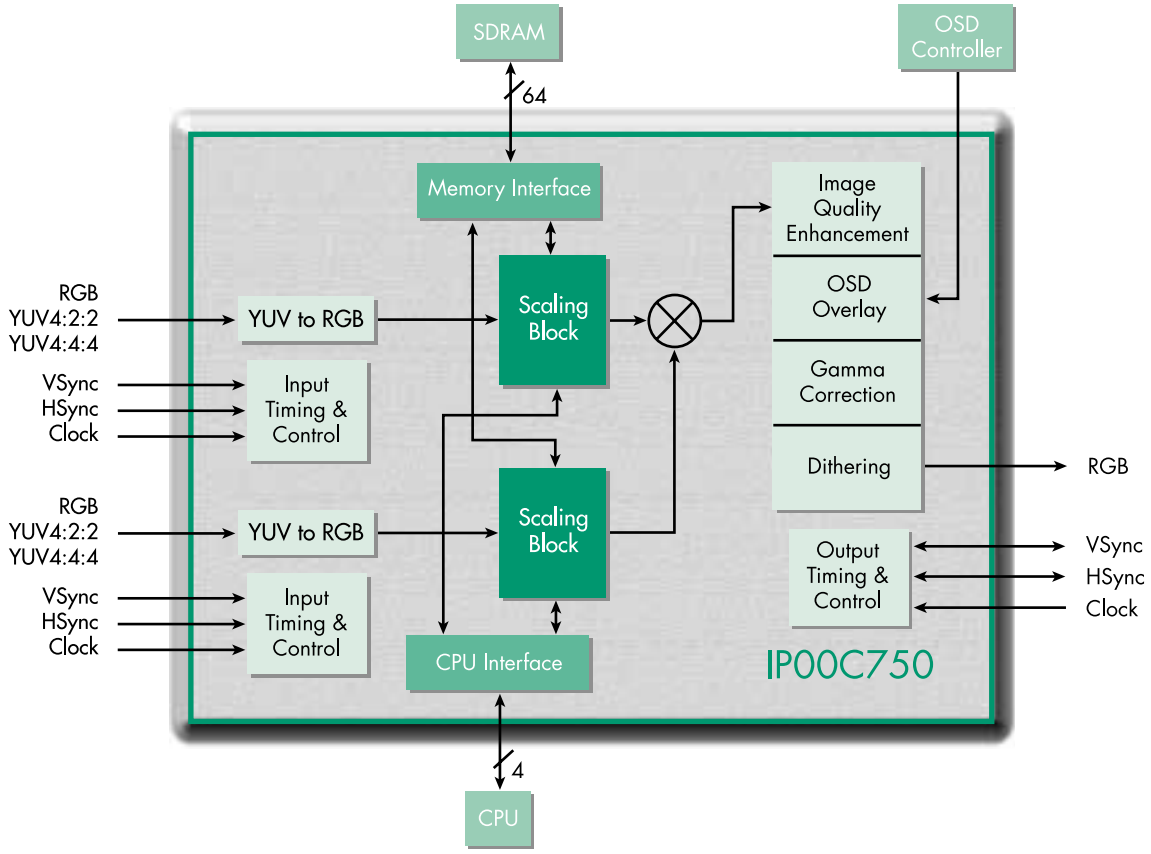

IP00C750 Features

Inputs (A and B)

- RGB 24bit / YUV4:2:2 16bit /YUV4:4:4 24bit, 108 Mpixels/sec.
- Up to 2400 pixels per line, with 1438 pixels of active video
- External synchronization

Output Image Formats

- RGB 24(30) bit, 85 Mpixels/sec.
- Up to 2048 pixels per line, with 1438 pixels of active video
- External or internal synchronization modes

Scaling

- 4x4 pixels advanced interpolation algorithm
- Independent H and V scaling ratios
- Scaling can be changed “on-the-fly” (Dynamic Scaling)

Frame Rate Conversion

- Independent sync. and clock signals for the input and output ports.
- Frame synchronization function to avoid frame tearing

Image Quality Features

- Embedded histogram
- Input signal auto-detection
- H and V edge enhancement
- 7 LUTs for Gamma correction (10-bit in, 12-bit out)
- Brightness and contrast adjustment

Other Features

- YUV-to-RGB conversion with 6 coefficients
- Input signal auto-detection
- 16-color OSD overlay

CPU Interface

- 4-line serial

External Memory

- SDRAM (SGRAM) with 64-bit memory bus interface

Power Supply Voltage

- Two sources: 3.3V and 1.8V

Package

- 352-pin PBGA (1.27mm pitch)

i-Chips

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