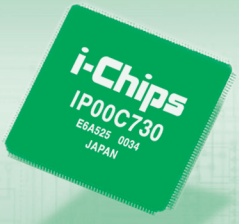
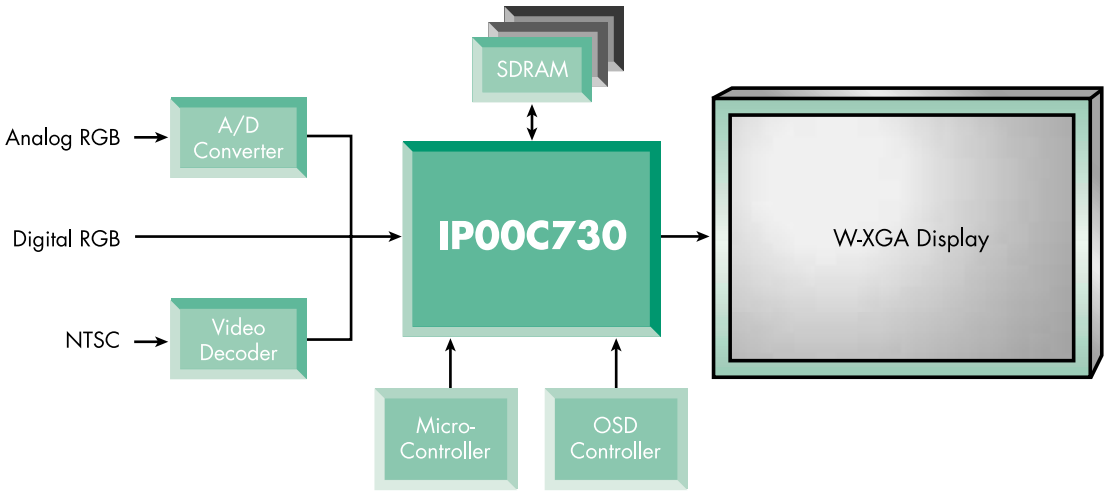


IP00C730

Image Scaling Device up to Wide-XGA With High Data Rate Input

General Description

The IP00C730 is an integrated one-chip solution for real-time image scaling, frame rate conversion and de-interlacing. It supports an output data rate of up to 85 Mpixels/sec., with an extended output port to allow for 30-bit color data. The image input port of the IP00C730 accepts RGB and YUV formats at up to a maximum of 162 Mpixels/sec. It makes use of an improved pixel interpolation algorithm based on the 4 neighboring pixels in each direction. The input and output ports are completed independent to allow image scaling even if the input and output images have different frame rates. The IP00C730 is ideally suited for applications such as front and rear projectors, video walls and LCD panels.



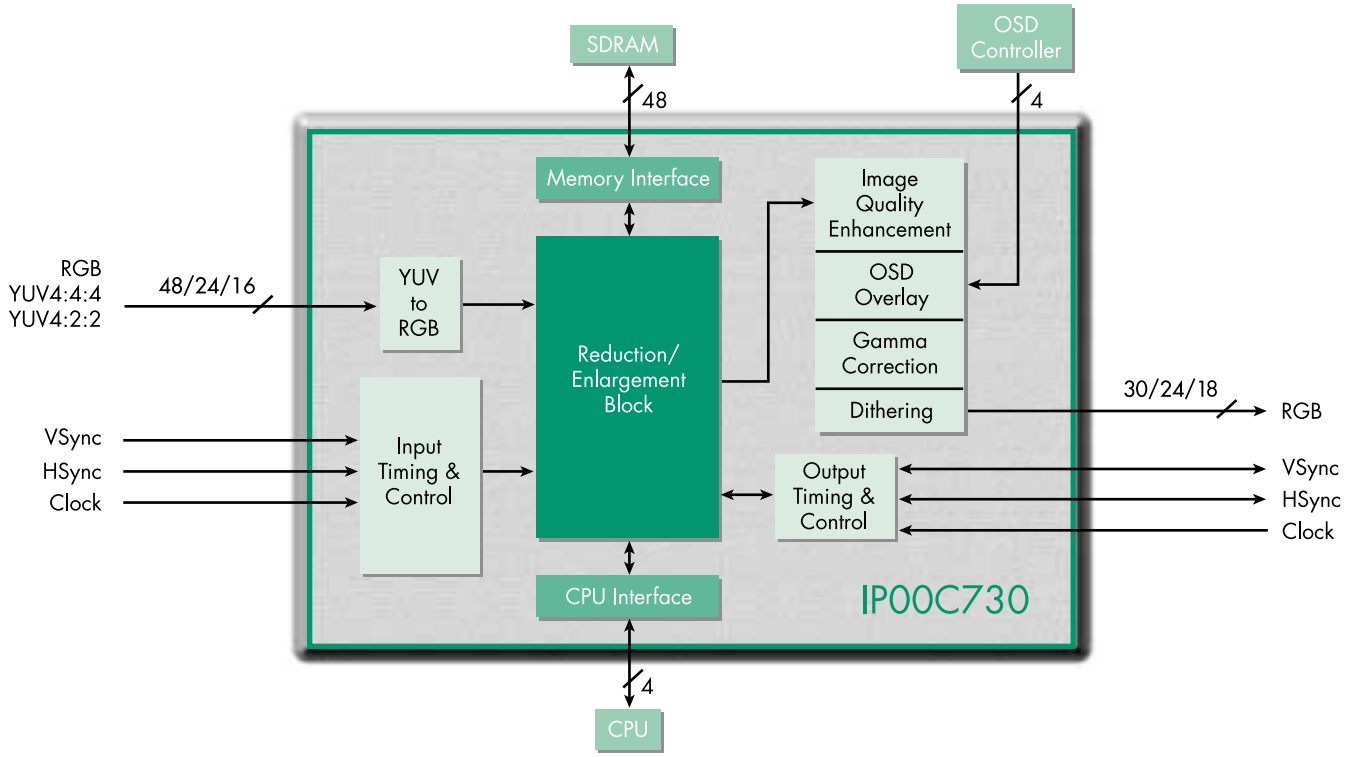
Applications

- Video walls
- LCD Panels
- Projectors

Support Tools

- Evaluation Board
- Local Technical Support

i-Chips



IP00C730 Features

Input Image Formats

- RGB 48 bits (2 pixels/clock) up to 162 Mpixels/sec.
- RGB 24 bits (1 pixel/clock) up to 80 Mpixels/sec.
- YUV4:2:2 (16 bits) and YUV4:4:4 (24 bits) at 81 MHz
- Image size up to 4000 pixels horizontally with 2000 pixels of active video
- External synchronization (Hsync., Vsync., Clock)

Output Image Formats

- RGB 24/30 bits (1 pixel/clock) up to 85 MHz
- Image size up to 2048 pixels horizontally with 1438 pixels of active video
- External or internal synchronization modes

Frame Rate Conversion

- External SDRAM (SGRAM) image memory
- 48-bit memory bus
- Independent clock and sync. signals for the input and output ports
- Frame synchronization function to avoid frame tearing

Scaling

- 4x4 pixels interpolation algorithm
- Independent H and V scaling ratios
- Non-linear scaling

Other Features

- 16-color OSD overlay (16 million colors palette)
- YUV to RGB conversion (6 prog. coefficients)
- Advanced error diffusion for 18 bits output
- Edge enhancement
- Gamma correction (10-bit in, 12-bit out)
- Brightness and Contrast adjustments
- Mirror image output
- LVTTL-compatible inputs and outputs

CPU Interface

- 4-line serial

Power Supply Voltage

- 3.3V and 2.5V dual source

Package

- 256-pin plastic QFP

i-Chips
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