

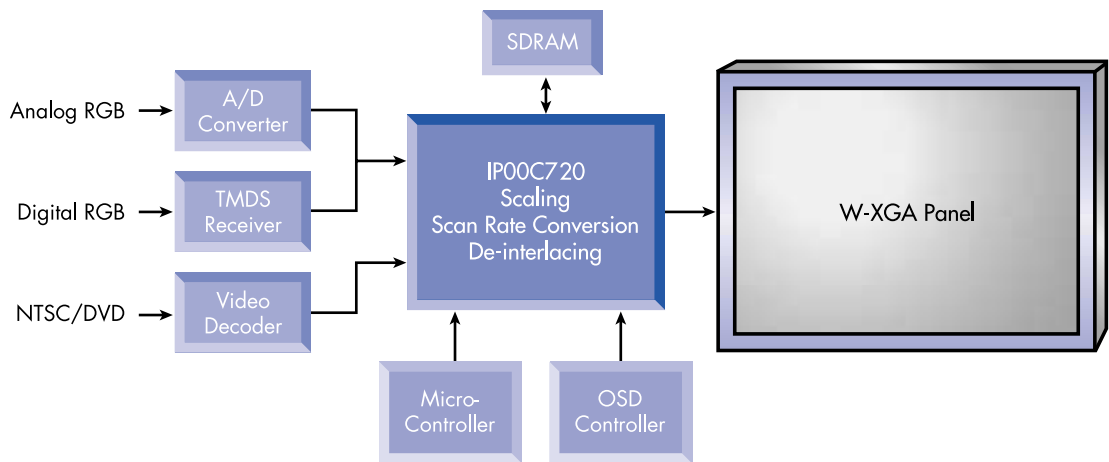
# IP00C720 (SCREEN-S1)

## Image Scaling Device up to W-XGA

**Low-Cost Image Scaler - Input range from NTSC to SXGA, output up to W-XGA resolution, single SDRAM device operation**

### General Description

The IP00C720 is a low-cost device for real-time image reduction and expansion up to W-XGA resolution. The IP00C720 supports input image sizes from NTSC to SXGA and output resolution up to W-XGA (1366 x 768 pixels) at 76 Mpixels/sec. It makes use of an improved pixel interpolation algorithm based on 4 pixels in the horizontal direction and 2 pixels in the vertical direction. It is ideally suited for low-cost applications because it can operate from one single SDRAM memory chip. The input and output ports are completed independent to allow image scaling even if the input and output images have different frame rates.

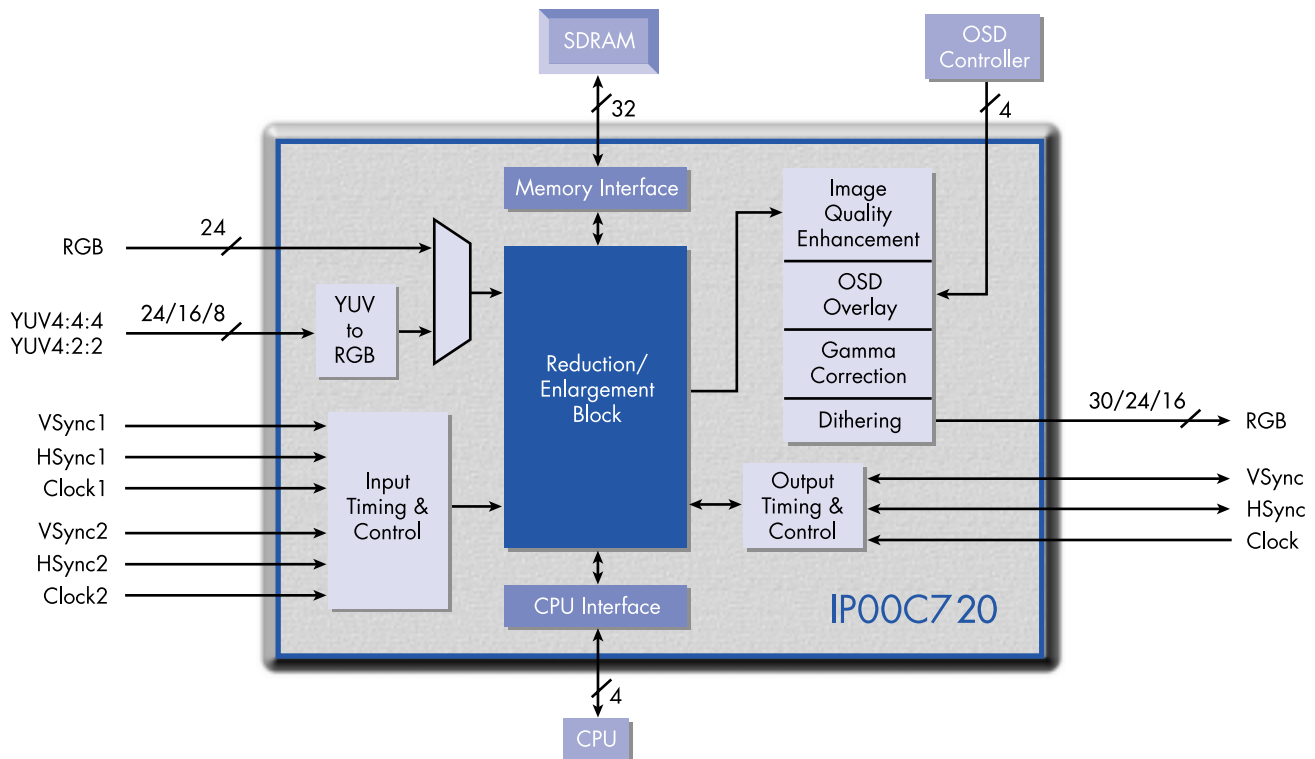


### Applications

- Plasma Display Panels
- LCD Projectors

### Support Tools

- Data Sheet and Application Notes
- Evaluation Board
- Technical Support by highly qualified engineers



## IP00C720 Features

### Input Image Formats

- RGB 24-bit @ 108 MHz
- YUV4:2:2 16-bit or YUV4:4:4 24-bit @ 80 MHz
- Image size up to 2400 pixels horizontally with 1438 pixels of active video
- External synchronization (Hsync, Vsync, Clock)

### Output Image Formats

- RGB 24/30 bits (non-interleave) 76 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
- 32-bit memory bus
- Can operate with a single 64Mbit memory device
- Independent clock and sync. signals for the input and output ports

### Scaling

- 4-adjacent pixels interpolation plus 4-pixel H filter
- Independent H and V scaling ratios
- Non-linear scaling

### Other Features

- 16-color OSD overlay (1.6 million colors palette)
- YUVto RGB conversion (6 programmable coefficients)
- Color dithering for 24/18 bits displays
- Edge enhancement
- Gamma correction
- Brightness and contrast adjustments
- Keystone correction
- Automatic detection of input image format
- LVTTL compatible inputs and outputs

### CPU Interface

- 4-wire serial bus

### Power Supply Voltage

- 3.3V/2.5V

### Package

- 208-pin Plastic QFP