

IP00C773

De-interlacer/Scaler up to 1080p



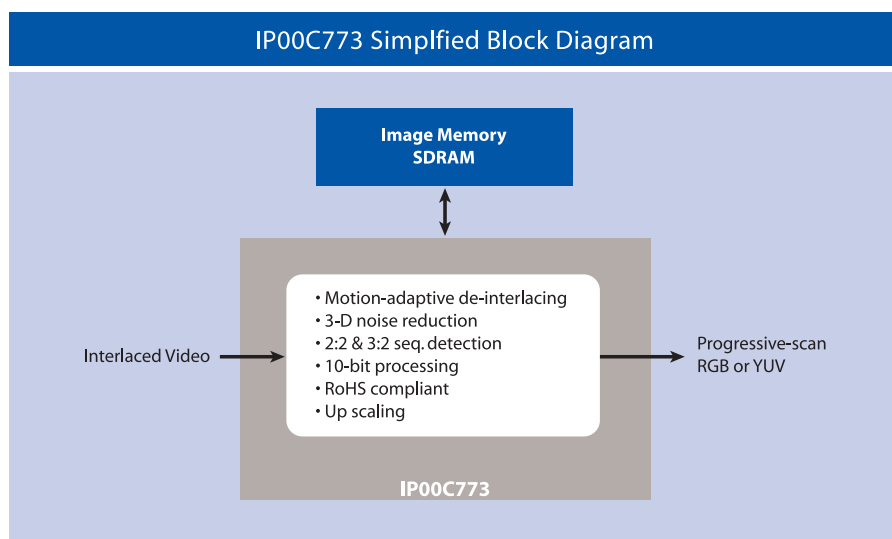
Summary

The IP00C773 is a highly-integrated 10-bit Display Processor featuring an advanced motion-adaptive de-interlacer and scaler. It converts an interlaced video source such as NTSC/PAL to a progressive-scan format and outputs up to 1080p. The IP00C773 also features an embedded bitmap OSD engine to create custom graphics easily. The IP00C773 is an ideal solution for low-cost designs, because it only requires one (1) SDRAM device of external memory.

The IP00C773 performs the conversion of interlaced signals from any standard-definition video source, such as NTSC or PAL, using an advanced technique based on detecting the motion at every point in the image. This allows to generate very high-quality progressive-scan images, without any artifacts and with a high level of detail. The technique also uses a proprietary algorithm to process the diagonal lines to guarantee smooth edges and natural motion in the output images. The output of the IP00C773 is either in an RGB or YUV format, and all internal processing is done in 10-bit resolution.

Applications

- Digital Displays
- Video Processors/Switchers
- Projectors



IP00C773 Specifications

INPUT

YUV4:2:2 20-bit @ 148.5 MHz
 YUV4:2:2 10-bit @ 27 MHz

OUTPUT

RGB/YUV4:4:4 30-bit @ 148.5 MHz
 YUV4:2:2 20-bit @ 148.5 MHz

IMAGE SIZE

Input: Sync Interval - 4096 pixels, Active Width - 2048 pixels
 Output: Sync Interval - 4096 pixels, Active Width - 2048 pixels

DE-INTERLACING

Motion-adaptive filter
 3D Noise reduction
 Diagonal line interpolation
 2:2 and 2:3 pull down sequence detection
 Combing filter for caption

IMAGE SCALING

6x6 interpolation with FIR filter

EXTERNAL MEMORY

With bitmap OSD: 64M/128Mbit SDRAM device, (32-bit memory bus, 166 MHz)
 Without bitmap OSD: 64M SDRAM device, (16-bit memory bus, 166 MHz)

CPU INTERFACE

4-line serial / 8-bit parallel / I2C

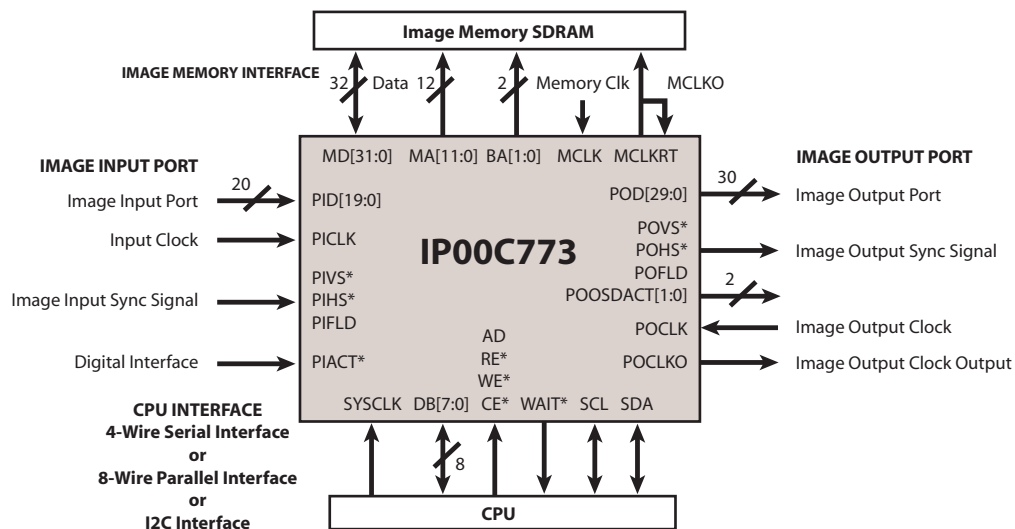
POWER SUPPLY

3.3V and 1.8V

PACKAGE

208-pin plastic QFP; mold: 28 mm (0.5mm pitch)

		Output						
		480i	480p	576i	576p	720p	1080i	1080p
Input	480i	✓	✓	✓	✓	✓	✓	✓
	480p	✓	✓	✓	✓	✓	✓	✓
	576i			✓	✓	✓	✓	✓
	576p			✓	✓	✓	✓	✓
	720p					✓	✓	✓
	1080i						✓	✓
	1080p						✓	✓



For more information please visit:
www.i-chips.com or info@i-chips.com



IMAGE PROCESSORS

i-Chips USA • 780 Montague Expy, Suite 308 • San Jose, CA 95131 • Tel: 408 577-1432 • Fax: 408 577-1560