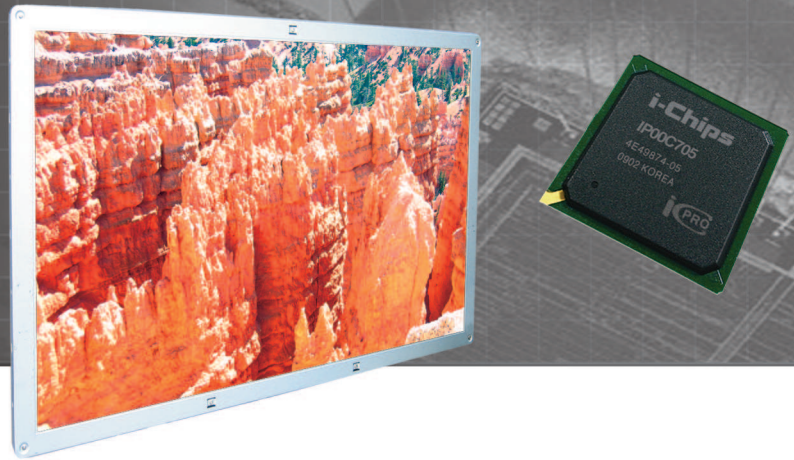


IP00C705

12-Bit De-interlacer/Scaler



Summary

The IP00C705 is an advanced image processor that performs scaling and de-interlacing in full 12-bit deep internal resolution. This allows you to process images in Deep Color, making it possible to render up to 68.71 billion colors.

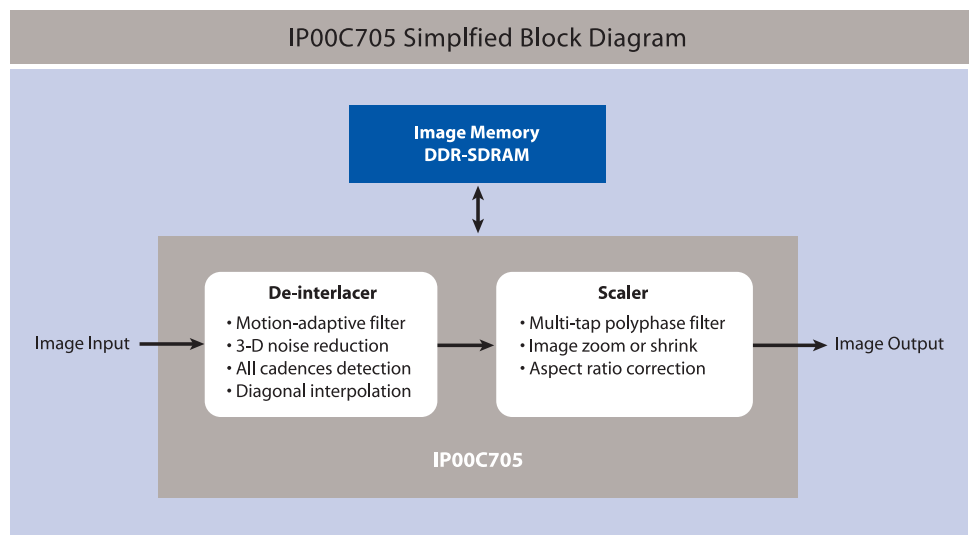
The IP00C705 also features extended internal line buffers to handle more than 2048 pixels per line. With its edge blending capability, it's easy to integrate multiple devices all working together. The IP00C705 supports image rotation, and vertical and horizontal image flip. It has an embedded On-Screen Display engine with font sizes up to up to 64x64 pixels.

The IP00C705 features i-Chips proprietary technology for high-quality de-interlacing with motion estimation at each pixel. Interlaced video formats can be converted to progressive-scan with only a single field of latency, without compromising the image quality. The IP00C705 automatically processes all cadences found in movie and video sources.

The new expanded scaling filter of the IP00C705 provides superior scaling quality, making it ideally suited for broadcast conversion products and high-end display systems.

Applications

- Format Converters
- Video Processors
- Projectors



IP00C705 Specifications

INPUT

36-bit RGB/36-bit YUV444/24-bit YUV422 at 166 MHz or 83 MHz in DDR mode
 12-bit YUV422 (Bt656) at 166 MHz
 Progressive or interlaced formats
 Up to 4096 pixels per line, with 2176 active pixels
 External synchronization

OUTPUT

36-bit RGB/36-bit YUV444/24-bit YUV422 at 166 MHz or 83 MHz in DDR mode
 12-bit YUV422 (Bt656) at 166 MHz
 Progressive or interlaced formats
 Up to 4096 pixels per line, with 2176 active pixels
 Internal/External synchronization

DE-INTERLACING

Temporal motion detection
 Enhanced diagonal interpolation
 All cadences supported

NOISE FILTERING

Block noise, Mosquito, temporal noise filtering
 Chroma error filter

IMAGE SCALING

6x6 filter for image zoom
 12x12 filter for image shrink
 Independent H and V scaling ratios
 Non-linear H and V scaling (aspect ratio correction)
 Dynamic scaling

FRAME RATE CONVERSION

Independent clock, H and V sync. for the input and output ports
 Input/output frame synchronization

ON-SCREEN DISPLAY

Bitmap OSD featuring 256 colors, 64x64 pixels fonts

OTHER FEATURES

Support for xvYCC processing
 Horizontal and vertical edge enhancement circuits
 Brightness and contrast adjustments
 14-bit color Gamma correction tables (7 LUT's available)
 Dithering for 12, 10 or 8-bit output
 Color management
 Image flip (vertical, horizontal)
 90 deg. Rotation
 Edge blending
 Vertical Keystone

EXTERNAL MEMORY

DDR-SDRAM PC400 (256Mbit x32) x 2 or (256/128 Mbit, x16) x 4

CPU INTERFACE

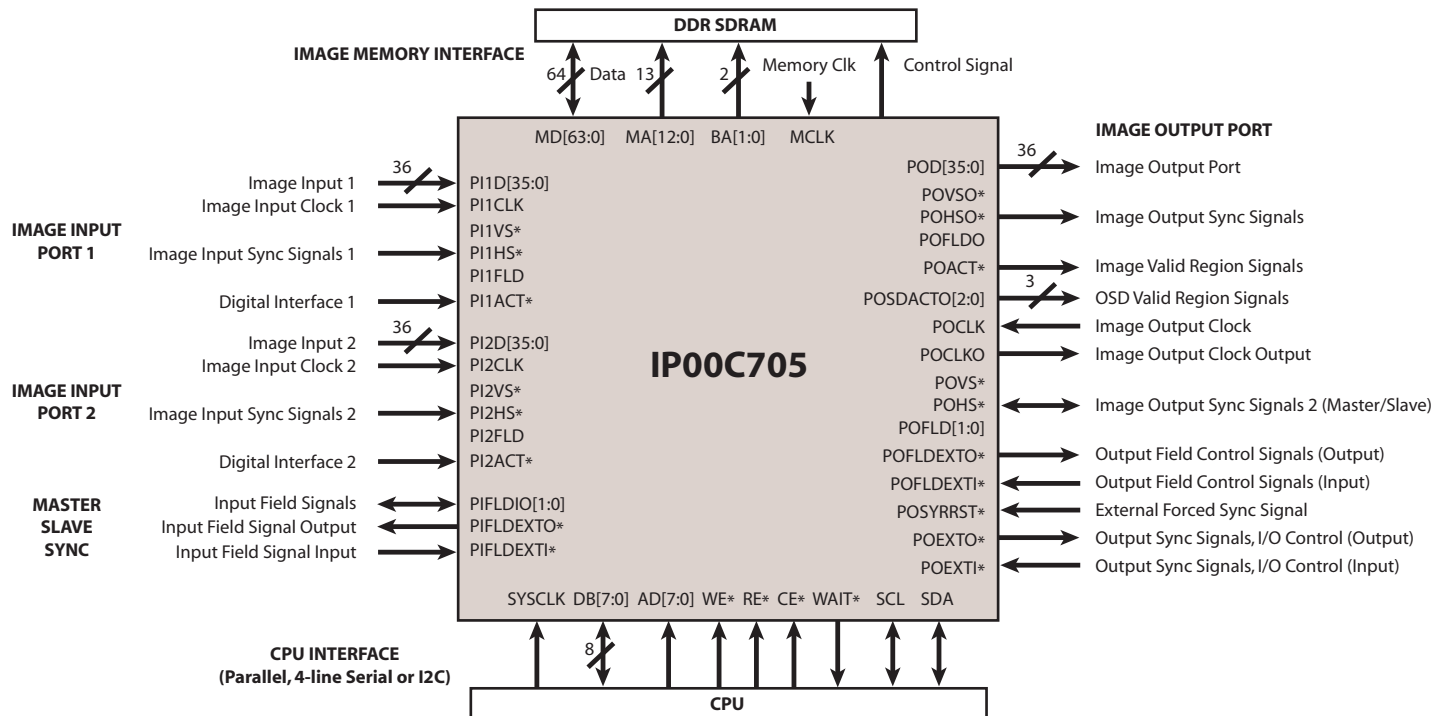
8-bit parallel/4-line serial/I2C
 Flash memory interface: SPI, 100 MHz, up to 128 Mbit

POWER SUPPLY

3.3V/2.5V/1.2V

PACKAGE

508-pin plastic BGA (Body size 27mm, Ball pitch 1.0mm)



For more information please visit:
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IMAGE PROCESSORS

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