

IP00C502

On-Screen-Display (OSD) Device

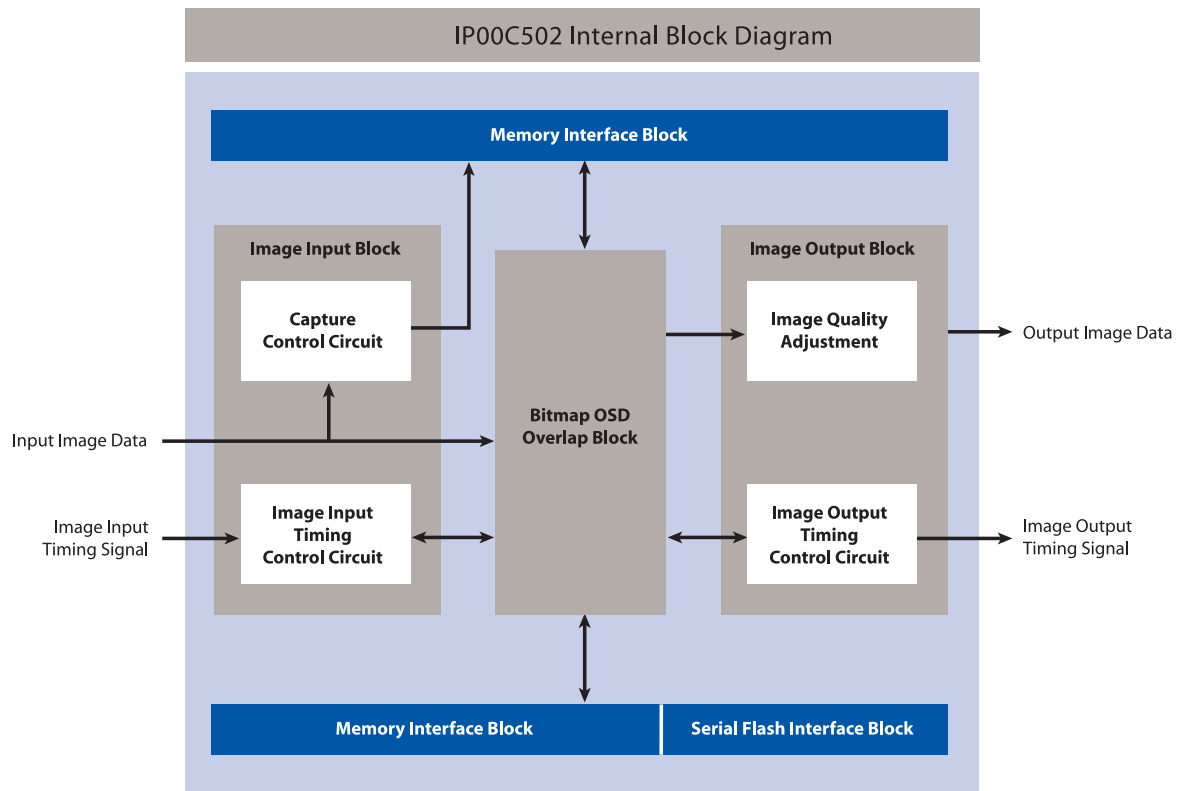


Summary

The IP00C502 is a highly-integrated 12-bit stand-alone OSD device that can overlap a bitmap OSD and fonts with a live image in 36-bit RGB/YUV format. The IP00C502 supports 2 independent OSD layers, one of 64K colors, and one of 256 colors, that can be programmed to blend together. The live image can be up to 1080p/WUXGA progressive or 1080i interlaced. The IP00C502 also allows scaling of the OSD, so that only a single OSD data is required in order to support multiple image resolutions.

Applications

- LCD Monitors
- Projectors
- Broadcast Equipment



IP00C502 Specifications

LIVE IMAGE FORMAT

RGB/YUV 4:4:4 36-bit @ 162MHz
YUV4:2:2 24-bit @ 162 MHz

LIVE IMAGE SIZE

Horizontal sync signal interval: up to 4096 pixels
Horizontal active video: up to 2048 pixels

LIVE IMAGE SYNC SIGNAL

Image input port: External sync
Image output port: Image input port sync (internal sync if no signal)

OSD MAXIMUM SIZE

Horizontal: 2048 pixels; Vertical: 2048 pixels

OSD COLORS

256 colors (Layer 1)
RGB565 64K colors (Layer 2) (when live image is more than 110 MHz, needs to be scaled horizontally by 2)

OSD FONTS

Up to 65,536 words
Supports Unicode → FONT conversion

OSD FONT SIZE

Up to 32 x 32 pixels
Supports proportional font spacing

OSD MAIN FUNCTIONS

Rectangular fill/BitBLT
RGB → YUV color conversion
Up to 4 transparent colors
Blinking
Scaling
Up to 2 areas with separate color palettes
Alpha Blending (Main image/OSD/High-color OSD)

CAPTURE FUNCTION

Able to capture live image to SDRAM in RGB565 format and then transfer the captured data to serial flash

FLASH DMA

Supports DMA among SDRAM, internal register and flash

INPUT IMAGE CHARACTERISTICS DETECTION

IMAGE CORRECTION

Brightness and contrast adjustments

EXTERNAL MEMORY

SDRAM (x16, PC166 or more)
Memory bus: 16-bit

CPU INTERFACE

4-line serial

SERIAL FLASH INTERFACE

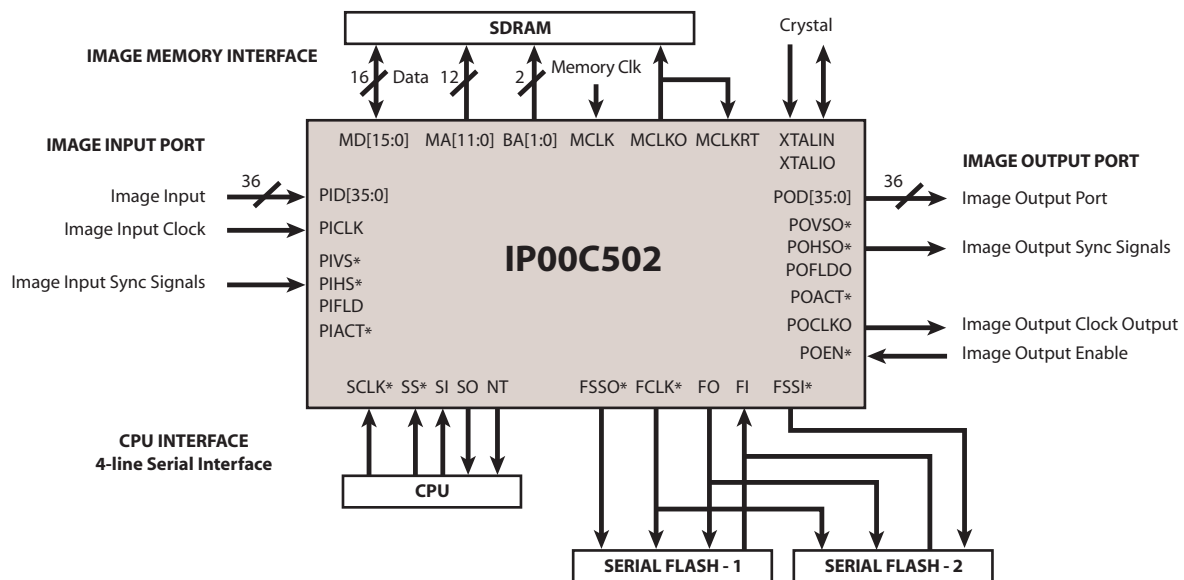
4-line SPI Mode 3 compatible
Operating Frequency: 83MHz
Maximum capacity: 128-bit x 2

POWER SUPPLY

3.3V/1.8V

PACKAGE

208-pin Plastic QFP (Package 28mm, Ball pitch 0.5mm)



For more information please visit:
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IMAGE PROCESSORS

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