

Product Description

The IP00C733A has 4 independent image processing channels with 4 input ports and 4 output ports at 166 MHz each. The IP00C733A can drive a Full-HD/WUXGA format with a single output or a UHDTV/WQXGA format or 4K60Hz with multiple outputs. The IP00C733A also features i-Chips's latest technology for picture quality control such as extended-range gamma correction and color uniformity correction, in order to meet the requirements for higher image quality.

The IP00C733A is an ideal solution for applications such as video wall, multi-viewers, converters and digital signage, thanks to its advanced and versatile overlay function that supports any combination of its 4 input channels with PiP/PoP, mirror/flip/90-degree rotation. Dot by dot uniformity correction required for an OLED/LED display is also implemented in this device

Features

Input/Output(4-port)

- 30-bit RGB/YUV4:4:4, 20-bit YUV4:2:2 @ 166MHz LVCMOS
- Dual (EVEN/ODD) Input/Output , DDR Input

Input & Output Image size(Max)

- Horizontal sync signal 16,384 pixels
- Horizontal image active area 2,176 pixels

External Memory

- DDR2-SDRAM 64bit PC667(512Mbit×16)×4

External/Internal Sync

- Output sync signal corresponds to External/Internal Sync
- 4-ch Independent sync mode is available to select.

Input/Output Sync/Asynchronous Behavior

- Frame rate conversion/Tearing portection
- External force synchronization

Scaler

- Zoom/Shrink 6 symbol FIR filter(10bit/pixel)
- Coefficient ROM (64sets)
- Independent vertical/horizontal magnification & panoramic view
- Horizontal zoom/shrink & Vertical zoom/shrink cannot operate at the same time
- 4-ch input image at zoom available add overlap

Image Manipulation

- Mirror/flip
- 90-degree rotation
- 4-ch overlay, Alpha blending, Chroma key blending

Image Quality Control

- 3×3 color conversion matrix
- Uniformity correction (by region & per pixel)
- Bias/Gamma correction

Bitmap OSD

- 256 colors
- Embedded font engine(65536 words)
- Blinking & Semi-transparent (4-colors OSD)
- Independent for each 4-ch output port
- Bitmap transfer from Serial flash

CPU Interface

- 8-bit parallel/4-wire serial

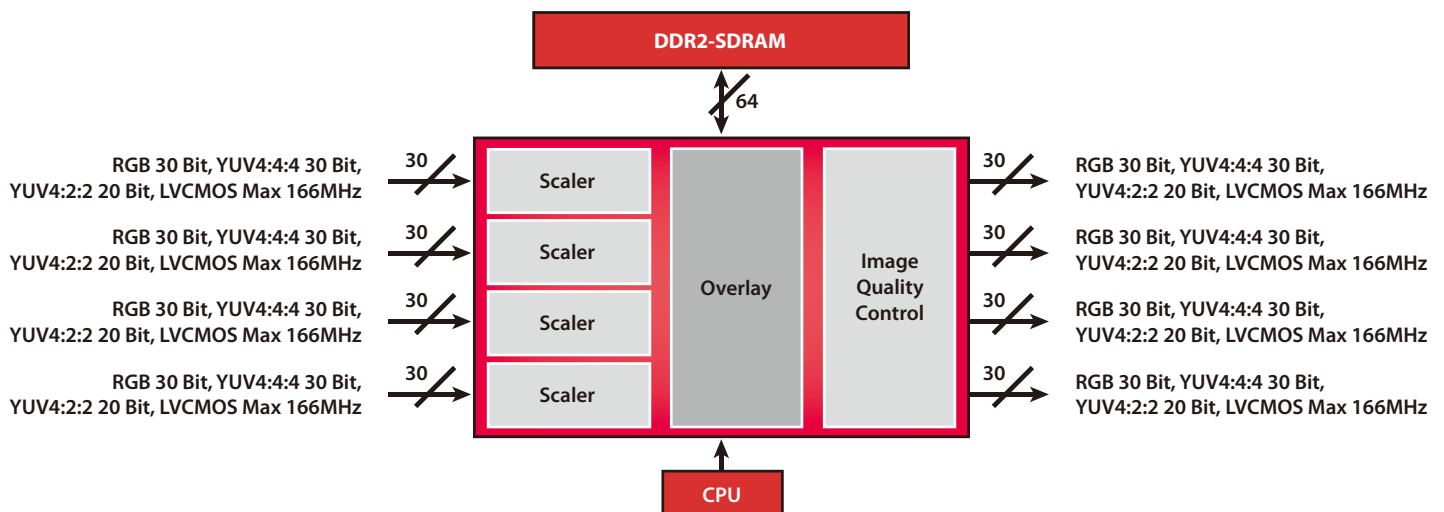
Power Supply

- 3.3V/1.8V/1.2V

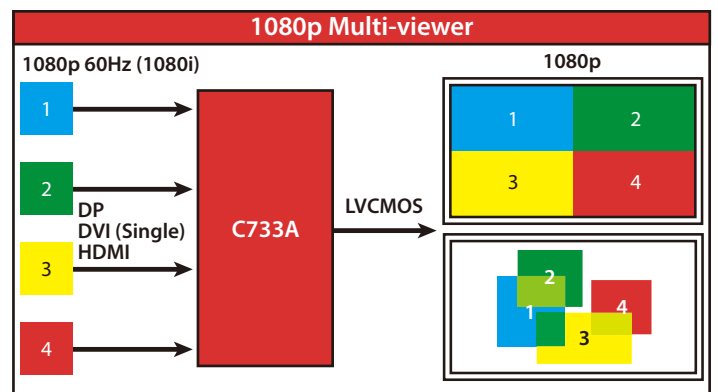
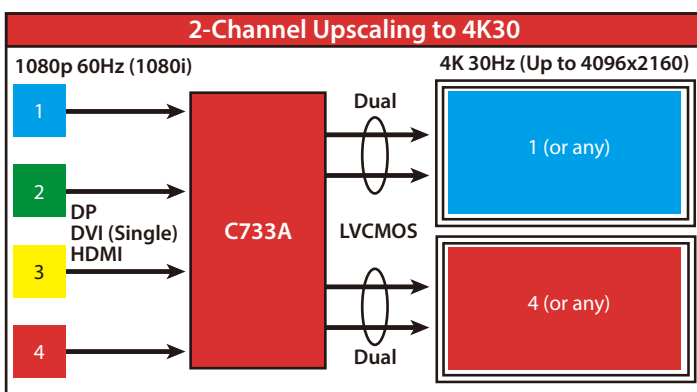
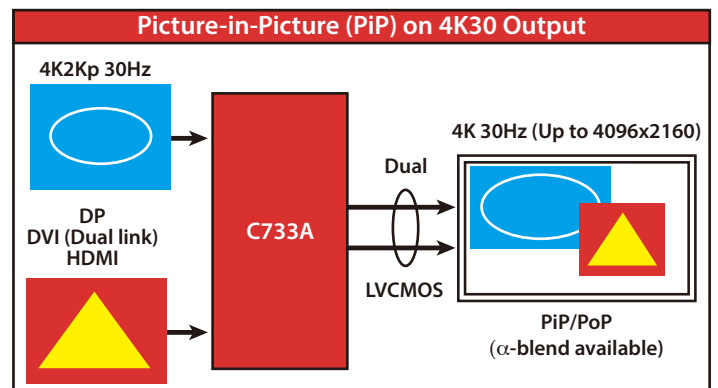
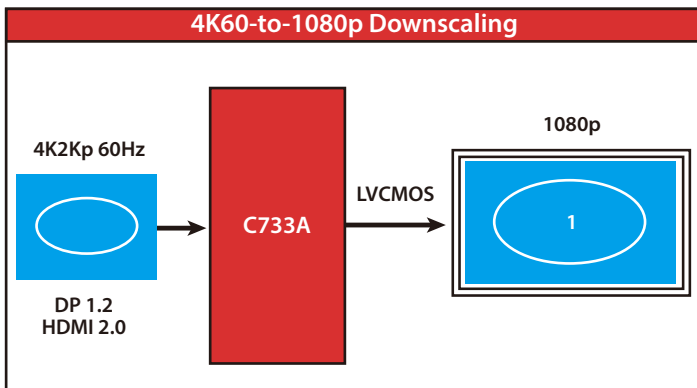
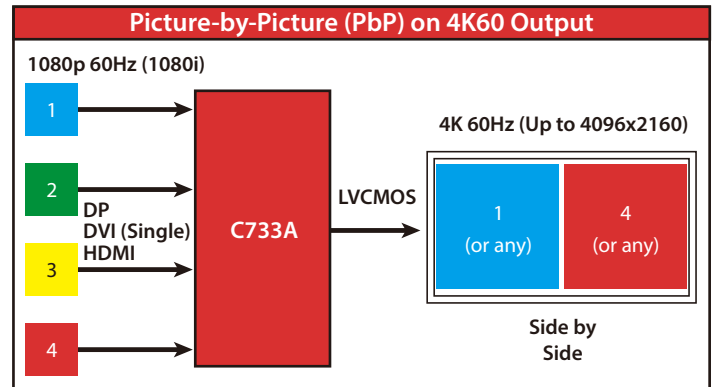
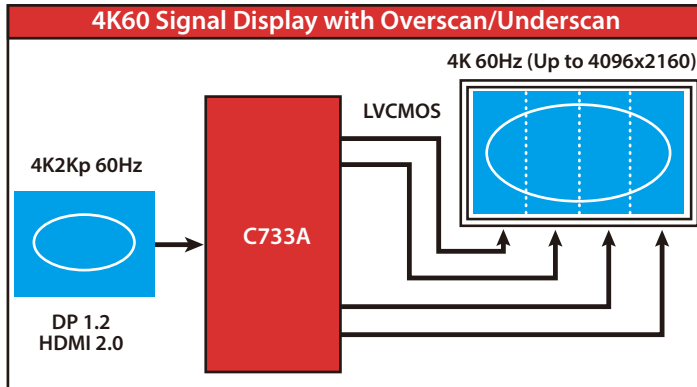
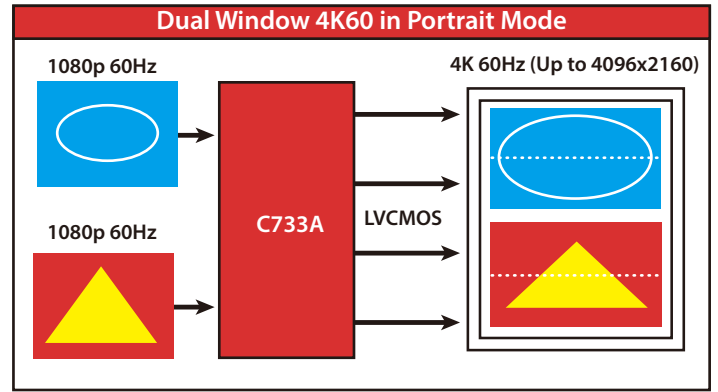
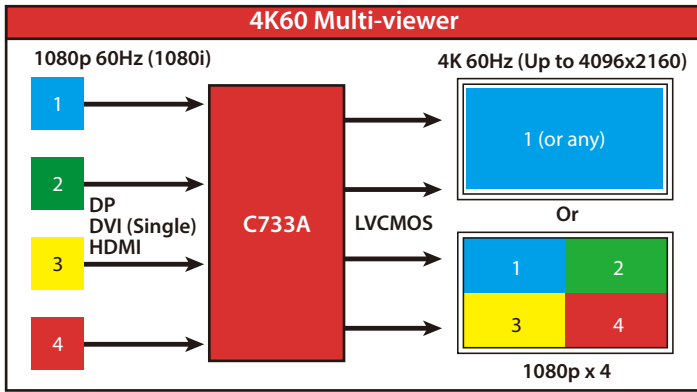
Package

- 544-pin BGA (1.0mm pitch), 27mm×27mm

IP00C733A Block Diagram



IP00C733A Quad Input/Output Scaler for 4K



For more information please visit:
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