

## IMAGE PROCESSORS Dual Input De-interlacer/Scaler with Built-in Memory

### Product Description

The IP00C755 has 2 independent channels of de-interlacer and scaler, both with PiP output. One of the great features of this device is the embedded frame memory function that can make the overall design easier to implement and reduce the footprint. It can also be used as a downscaling scaler from 4K to 1080P.

### Features

#### Dual Input (2 out of 4 ports)

30-bit RGB/YUV4:4:4, 20-bit YUV4:2:2, 10-bit YUV4:2:2 (BT656) @166MHz LV-CMOS (2-port) supporting dual (EVEN/ODD) and DDR input @160MHz high speed LVDS (2-port)/83MHz x 2 LVDS (1-port)

#### Single Output (2 ports)

30-bit RGB/YUV4:4:4, 20-bit YUV4:2:2, 10-bit YUV4:2:2 (BT656) @166MHz LV-CMOS (1-port)/166MHz high speed LVDS (2-port)/83MHz x2 LVDS (1-port)

#### Scaling

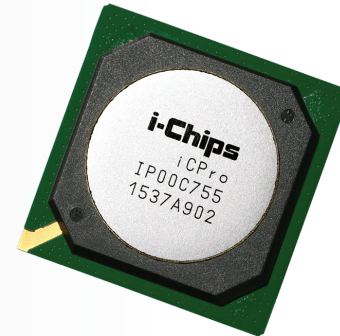
Zoom/Shrink: Polyphase, 10bit/pixel, embedded ROM (64 sets)

#### De-interlacer

All major cadences supported, motion adaptive filter based on Y, U, V

#### Image Quality Control

- Color management
- Uniformity correction (by region and per-pixel)
- Bias/Gain/Gamma
- H/V edge enhancement (9symbol)
- Dithering for 10 or 8bit output



#### Horizontal Active Pixels

2048 pixels

#### Noise Reduction

3D (H, V, Temporal)/Mosquito/Block NR, chroma error filter

#### Image Manipulation

Mirror/flip/90-degree image, vertical keystone, 2-ch overlay, alpha blending, color key blending

#### xvYCC/Bt-2020

Fully supported

#### CPU Interface

8-bit parallel/4-wire serial

#### Frame Memory

DDR2-SDRAM 1Gbit embedded. No external memory

#### Bit Map OSD

256 color, OSD 90-degree rotation, OSD scroll

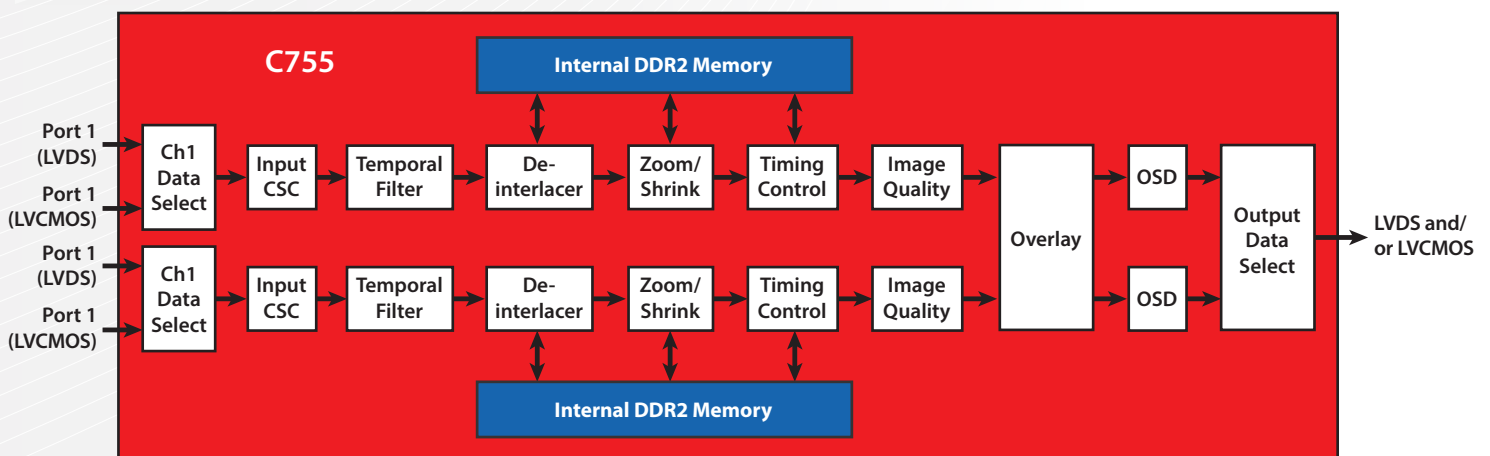
#### Power Supply

3.3V/1.8V/1.2V

#### Package

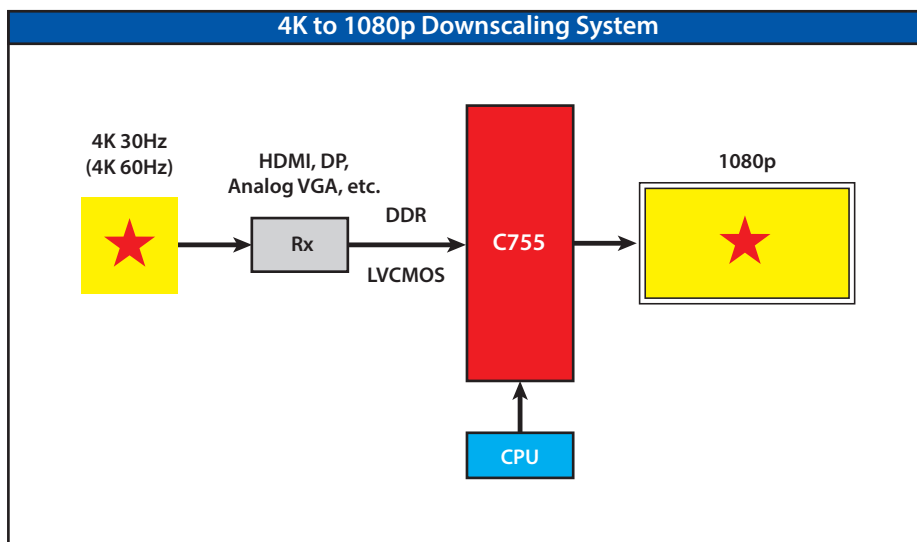
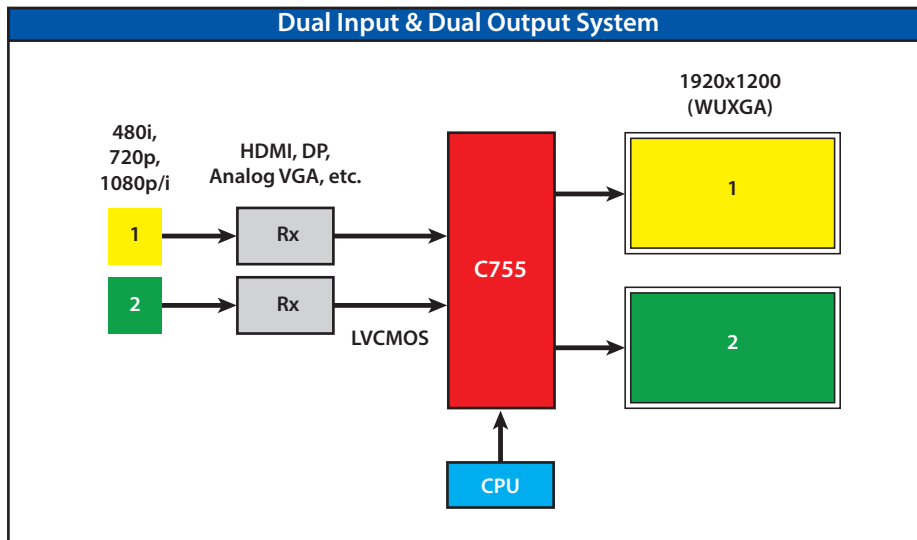
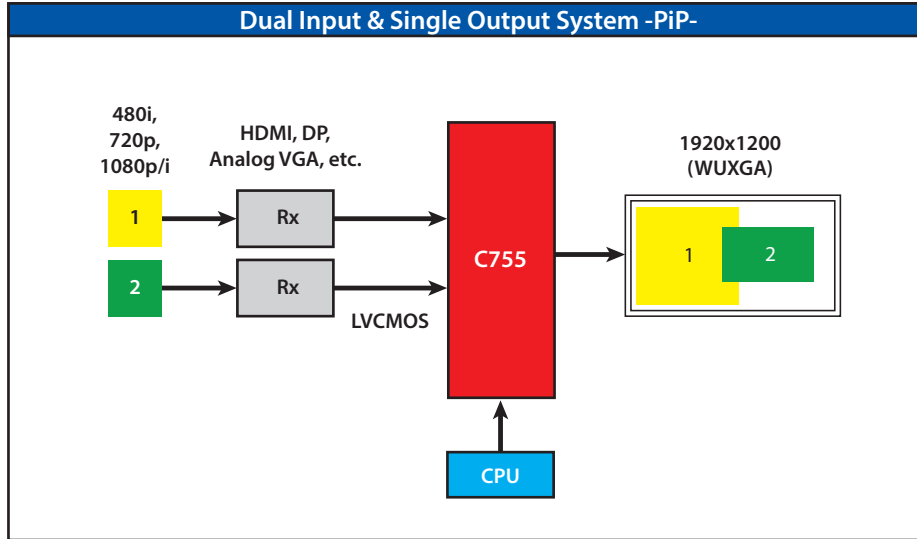
496-pin BGA (1.0mm pitch), 27mmx27mm

### IP00C755 Block Diagram



# IP00C755 Dual Input De-interlacer/Scaler with Built-in Memory

## Application Diagrams



For more information please visit:  
[www.i-chips.com](http://www.i-chips.com) or [info@i-chips.co.jp](mailto:info@i-chips.co.jp)

**i-Chips Technology, Inc.**

i-Chips Technology, Inc. • 1-2-6, Shioe Amagasaki Hyogo, 661-0976 Japan • Tel: 81-6-6492-7277 • Fax: 81-6-6492-7388