# iWave
## Embedding Intelligence



**YCbCr Input Interface**

**iW - Color Space Conversion**

**RGB Output Interface**
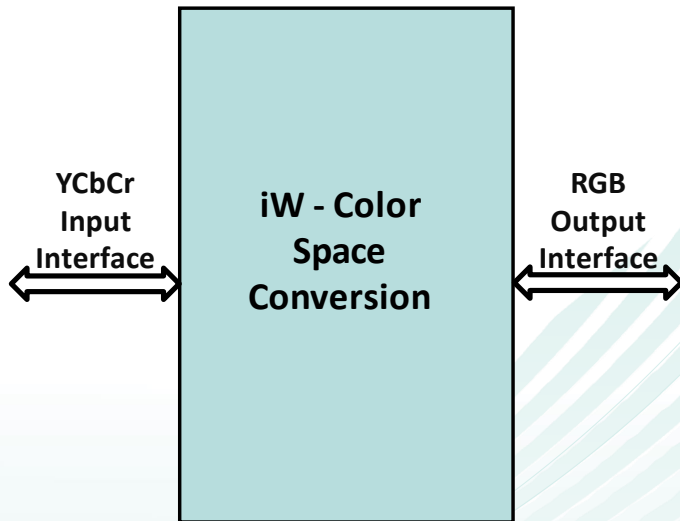
Color Space Converter converts video data from one color space format to another format. It is necessary to transfer data between devices which used different color space.

## Core Benefits

- Simple design makes it easier to integrate in many FPGA families

## Highlights

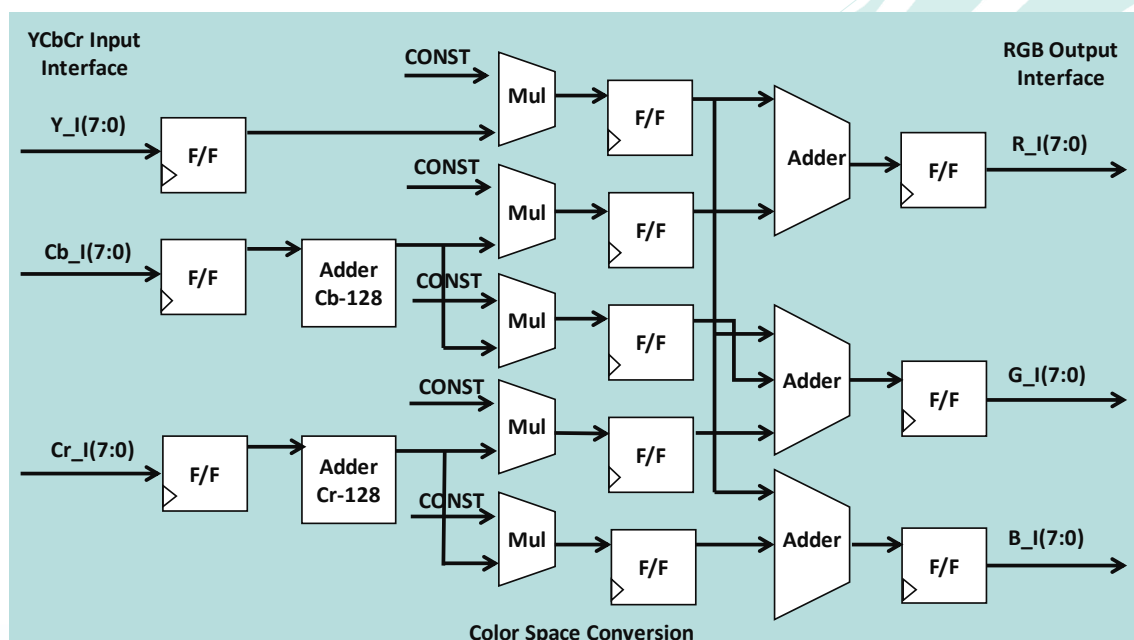- Core does color space conversion with latency of 4 clocks

## Applications

- Can be used in applications that require LCD Interface.

- Can be used in video applications such as image grabber, display systems and etc.

## Features

- Supports the following Color Space Converter Core:

  o RGB to YCbCr

  o YCbCr to RGB

- Format: 4:4:4

- Image size resolution can be from QCIF to Full HD

- Coefficients are software programmable

- Pipelined multiplier

- Latency of 4 clocks

- 8-bit per pixel per color

- 3 color plane in parallel processing

## iW - Color Space Conversion IP block diagram



**YCbCr Input Interface** — Y_I(7:0), Cb_I(7:0), Cr_I(7:0), F/F, Adder Cb-128, Adder Cr-128, CONST, Mul, F/F, Adder — **RGB Output Interface** — R_I(7:0), G_I(7:0), B_I(7:0)

Color Space Conversion

## Deliverables

- RTL source code or Netlist
- IP example design
- IP datasheet
- Integration Manual

## Licensing Options

- Non-Transferable: Single Project/Product Netlist License – Single Site or Multi Site
- Non-Transferable: Multi Project /Product Netlist License – Single Site or Multi Site
- Non-Transferable: Single Project/Product RTL Source Code License – Single Site or Multi Site
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## Technical Support

iWave provides comprehensive support during your system integration & validation.

- The Client may open a new support incident by emailing to a technical support engineer
- iWave's response time shall be within 24 hours of the initial call, with the details of the action plan to resolve
- Support assistance shall be delivered by telephone, email and/or remote assistance via a web meeting
- iWave shall provide remote debugging support irrespective of the time zone/ region

iWave Systems, a leading FPGA design house enhances your design productivity by providing an extensive suite of proven, optimized and easy-to-use FPGA IP Cores along with reference designs to complement and quicken your applications development. Our extensive suite of IP Cores covers all key markets and applications. Along with the rich set of FPGA IP cores, iWave offers custom FPGA designs tailored to meet the client specifications which includes RTL Design, Integration of iWave's or 3rd Party IP Cores on our FPGA SOMs with Carrier Card/ Custom Hardware/ Off-the-Shelf Evaluation Kits to provide end-to-end solutions targeting Low-Power, High-Performance and Optimized Designs

iW - Color Space Conversion  FPGA IP
The IP can be ordered online from the iWave Website  http://www.iwavesystems.com/product/color-space-conversion/
Or from our Local Partners in your region  http://www.iwavesystems.com/about-us/business-partner.html

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