IP Module – Alpha Blender.

Overview:

Alpha Blender is used when two video sources have to be viewed at the same time. It is a process of combining an image with a background to create the appearance of partial or full transparency.
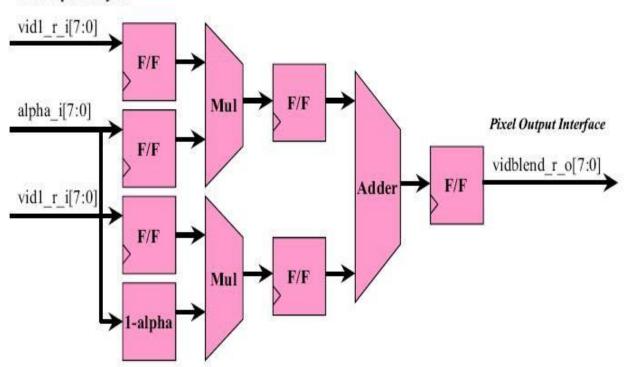
Block Diagram:

Fig. Block diagram of Alpha Blender.

Features:

- Blend 2 video source
- Input format for both the video source: RGB/YCbCr 4:4:4.
- Alpha value is programmable from the software.
- Pipelined multiplier.
- Latency of 3 clocks.
- Simple design makes it easier to integrate in many FPGA families.
- Can be used in On Screen Display and Picture in Picture applications.

Target Applications:

- Video and image processing applications in Aerospace and Defence, Automotive, Broadcast, Consumer, Industrial and Medical applications.

Resource Utilization:

Family	Device	Speed Grade	LUT[1]	DFF[2]	RAM	Performance
SmartFusion2	M2S050	-1	274	372	0	225 MHz
Igloo2	M2GL060T	-1	274	372	0	225 MHz

Deliverables:

- Design Document
- Verilog RTL or Netlist Source code
- Test Bench
- IP User Guide

Licensing:

1. Single Product Licensing - The single product license is valid for only one type of product, you cannot use the license for different product, but you can have the production of the same product. (Non-transferable and resell of the IP is not allowed)

2. Multi Product Licensing - Multi product license provides the freedom to use the license in any number of products. No restriction on the no of products. (Non-transferable and resell of the IP is not allowed)

3. Netlist Version - The Netlist version is the time limited evaluation version available with us using that you can evaluate before coming up the actual hardware

About us:

iWave Systems Technologies focuses on Product Engineering Services involving Embedded Hardware, Software & FPGA. The company designs and develops cutting edge products and solutions. iWave has been an innovator in the development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms. iWave's expertise has brought out multiple SOMs based on ARM, Freescale, Intel Atom, Marvell and TI Processors.

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[1] 4-input LUT(Look Up Table)
[2] D Flip Flops