

Color Space Converter(HSV2RGB)

Color Space Converter(HSV2RGB) Intellectual Property (IP).

Description

Color space is a simple and robust color definition used in computer systems and the Internet to help ensure that a color is correctly mapped from one platform to another without significant loss of color information. The converters are useful for a number of markets, such as image processing and filtering. Our Color Space Converters provide straight forward, accurate high performance conversion usable in a wide range of video/image applications

Features

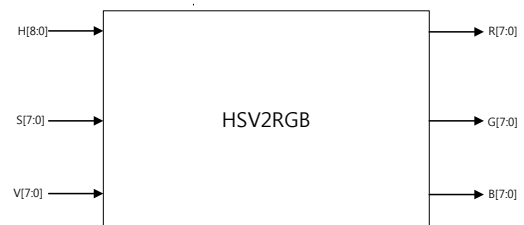
- No latency times.
- Simultaneously 3-Color conversion.
- Internal 18-bit precision for accuracy
- Optimized fixed-point conversion
- HSV2RGB

```
If(S == 0)
  R = G = B = V;
Else{
  if(H = 360)
    H = 0;
  (int)i = H / 60;
  f = H - i*60;

  VS = V*S;

  p = V - VS/255;
  q = V - (VS*f/divisor);
  t = V - (VS*60/divisor) - (VS*f/divisor);
```

```
switch(i){
  case 0:
    R = V; G = t; B = p; break;
  case 1:
    R = q; G = V; B = p; break;
  case 2:
    R = p; G = V; B = t; break;
  case 3:
    R = p; G = q; B = V; break;
  case 4:
    R = t; G = p; B = V; break;
  default:
    R = V; G = p; B = q; break;
}
```



Application area	: Wide range of video/image applications
Available documents	: Data Book
Design file formats	: EDIF File Format , VHDL/Verilog Code
Verification	: Verilog Testbench
Simulation tool used	: Model Technology ModelSim™ 6.4