VSDSquadron FM

```
//----------------------------------------------------------------------------
//                                                                          --
//                         Module Declaration                               --
//                                                                          --
//----------------------------------------------------------------------------
module top (
  // outputs
  output wire led_red  , // Red
  output wire led_blue , // Blue
  output wire led_green , // Green
  input wire hw_clk,  // Hardware Oscillator, not the internal oscillator
  output wire testwire
);

  wire        int_osc            ;
  reg  [27:0] frequency_counter_i;

  assign testwire = frequency_counter_i[5];

  always @(posedge int_osc) begin
    frequency_counter_i <= frequency_counter_i + 1'b1;
  end

//----------------------------------------------------------------------------
//                                                                          --
//                       Counter                                            --
//                                                                          --
//----------------------------------------------------------------------------

//----------------------------------------------------------------------------
//                                                                          --
//                       Internal Oscillator                                --
//                                                                          --
//----------------------------------------------------------------------------
  SB_HFOSC #(.CLKHF_DIV ("0b10")) u_SB_HFOSC ( .CLKHFPU(1'b1), .CLKHFEN(1'b1),
.CLKHF(int_osc));

//----------------------------------------------------------------------------
//                                                                          --
//                       Instantiate RGB primitive                          --
//                                                                          --
//----------------------------------------------------------------------------
  SB_RGBA_DRV RGB_DRIVER (
    .RGBLEDEN(1'b1                                            ),
    .RGB0PWM (1'b0), // red
    .RGB1PWM (1'b0), // green
    .RGB2PWM (1'b1), // blue
    .CURREN  (1'b1                            ),
    .RGB0    (led_red                        ), //Actual Hardware connection
    .RGB1    (led_green                       ),
    .RGB2    (led_blue                       )
  );
  defparam RGB_DRIVER.RGB0_CURRENT = "0b000001";
  defparam RGB_DRIVER.RGB1_CURRENT = "0b000001";
  defparam RGB_DRIVER.RGB2_CURRENT = "0b000001";

endmodule
```