VGA Timing for 640x480, 75 Hz refresh rate

in periods of the pixel clock (31.5MHz)

640 160

HBLANK

Active video

HSYNC

96

Front Porch 16 48 Back Porch

in periods of the HBLANK

480 45

VBLANK

Active video

VSYNC

Front Porch 11 2 32 Back Porch
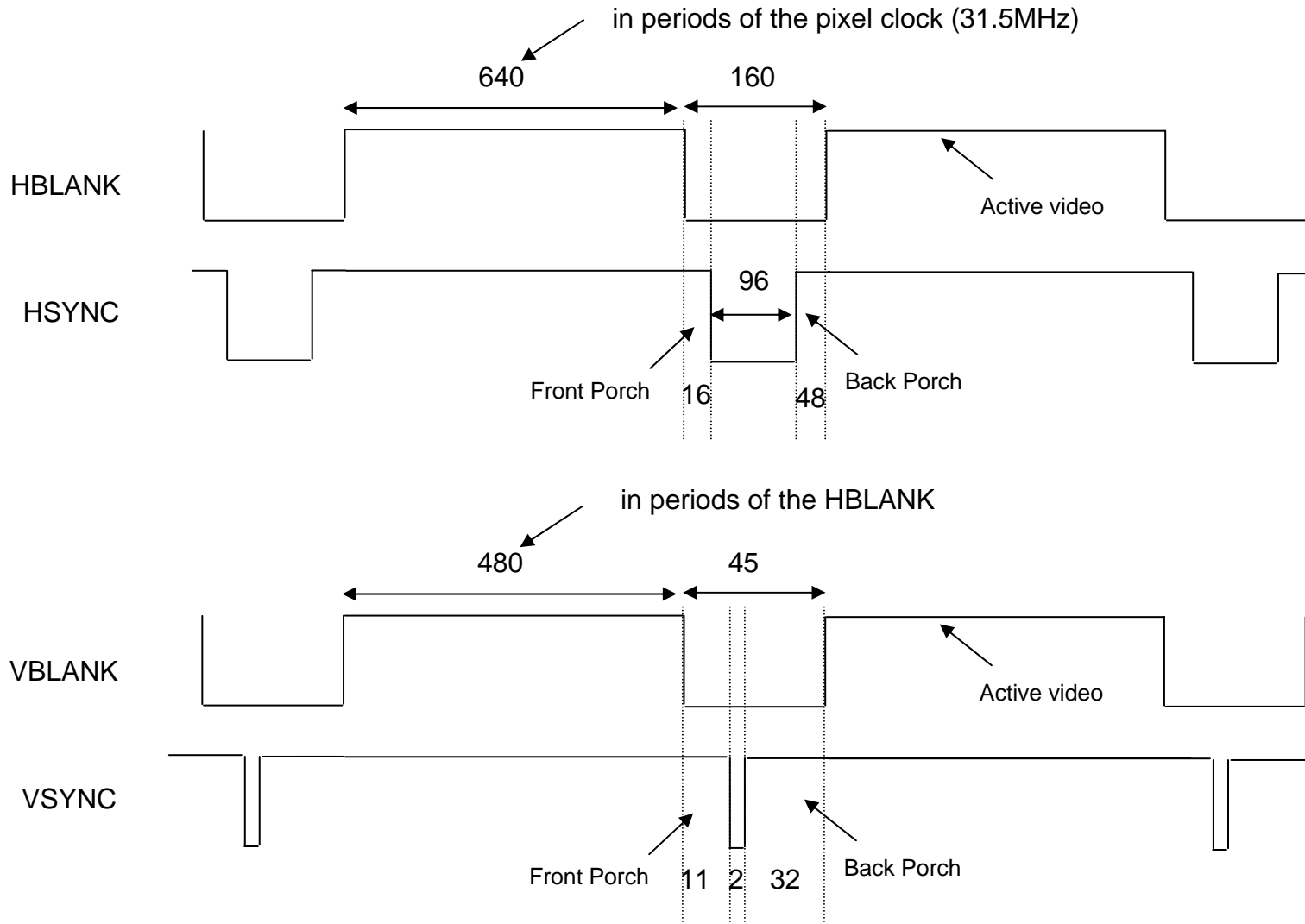
Notes:
1. **Composite sync (to VGA chip) tied to 1. ie., assign vga_out_sync_b = 1'b1;**
2. **Delay by 2 pixel clock the signal HSYNC and VSYNC going to VGA (i.e., two back to back registers)**
3. **Composite vga_out_blank_b to VGA chip is (HBLANK AND VBLANK)**