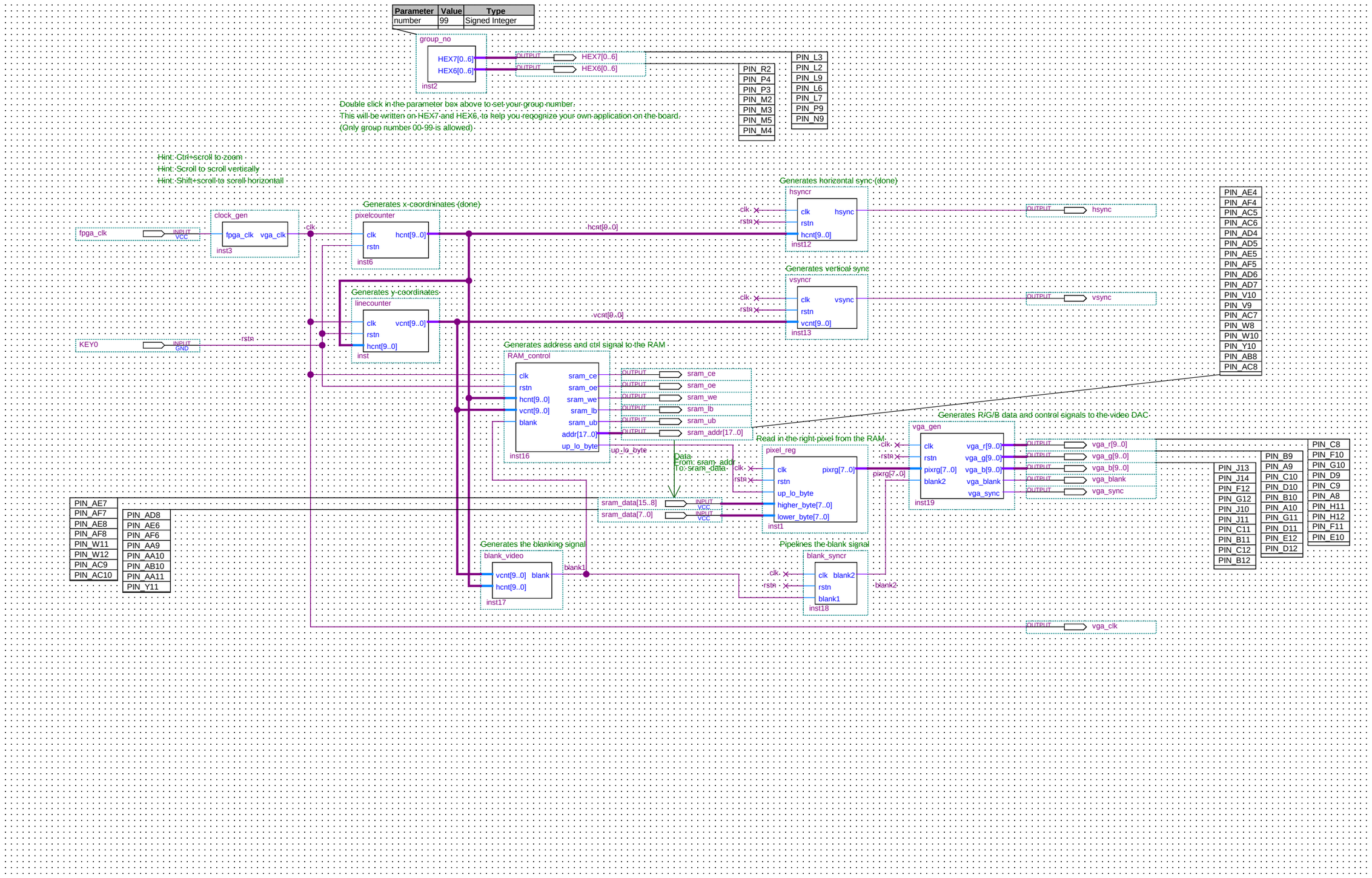
Parameter Value Type
number 99 Signed Integer
group_no
HEX7[0..6]
HEX6[0..6]
inst2
OUTPUT HEX7[0..6]
OUTPUT HEX6[0..6]
PIN_L3 PIN_L2 PIN_L9 PIN_L6 PIN_L7 PIN_P9 PIN_N9
PIN_R2 PIN_P4 PIN_P3 PIN_M2 PIN_M3 PIN_M5 PIN_M4
Double click in the parameter box above to set your group number.
This will be written on HEX7 and HEX6 ,to help you reqognize your own application on the board.
(Only group number 00-99 is allowed)
Hint: Ctrl+scroll to zoom
Hint: Scroll to scroll vertically
Hint: Shift+scroll to scroll horizontall
fpga_clk INPUT VCC
clock_gen
fpga_clk vga_clk
inst3
clk
Generates x-coordinates (done)
pixelcounter
clk hcnt[9..0]
rstn
inst6
hcnt[9..0]
Generates horizontal sync (done)
hsyncr
clk hsync
rstn
hcnt[9..0]
inst12
OUTPUT hsync
Generates vertical sync
vsyncr
clk vsync
rstn
vcnt[9..0]
inst13
OUTPUT vsync
Generates y-coordinates
linecounter
clk vcnt[9..0]
rstn
hcnt[9..0]
inst
vcnt[9..0]
KEY0 INPUT GND
rsta
Generates address and ctrl signal to the RAM
RAM_control
clk sram_ce
rstn sram_oe
hcnt[9..0] sram_we
vcnt[9..0] sram_lb
blank sram_ub
addr[17..0]
up_lo_byte
inst16
OUTPUT sram_ce
OUTPUT sram_oe
OUTPUT sram_we
OUTPUT sram_lb
OUTPUT sram_ub
OUTPUT sram_addr[17..0]
up_lo_byte
Data
From: sram_addr
To: sram_data
Read in the right pixel from the RAM
pixel_reg
clk pixrg[7..0]
rstn
up_lo_byte
higher_byte[7..0]
lower_byte[7..0]
inst1
pixrg[7..0]
sram_data[15..8] INPUT VCC
sram_data[7..0] INPUT VCC
Generates R/G/B data and control signals to the video DAC
vga_gen
clk vga_r[9..0]
rstn vga_g[9..0]
pixrg[7..0] vga_b[9..0]
blank2 vga_blank
vga_sync
inst19
OUTPUT vga_r[9..0]
OUTPUT vga_g[9..0]
OUTPUT vga_b[9..0]
OUTPUT vga_blank
OUTPUT vga_sync
PIN_AE4 PIN_AF4 PIN_AC5 PIN_AC6 PIN_AD4 PIN_AD5 PIN_AE5 PIN_AF5 PIN_AD6 PIN_AD7 PIN_V10 PIN_V9 PIN_AC7 PIN_W8 PIN_W10 PIN_Y10 PIN_AB8 PIN_AC8
PIN_C8 PIN_F10 PIN_G10 PIN_D9 PIN_C9 PIN_A8 PIN_H11 PIN_H12 PIN_F11 PIN_E10
PIN_B9 PIN_A9 PIN_C10 PIN_D10 PIN_B10 PIN_A10 PIN_G11 PIN_D11 PIN_E12 PIN_D12
PIN_J13 PIN_J14 PIN_F12 PIN_G12 PIN_J10 PIN_J11 PIN_C11 PIN_B11 PIN_C12 PIN_B12
PIN_AE7 PIN_AF7 PIN_AE8 PIN_AF8 PIN_W11 PIN_W12 PIN_AC9 PIN_AC10
PIN_AD8 PIN_AE6 PIN_AF6 PIN_AA9 PIN_AA10 PIN_AB10 PIN_AA11 PIN_Y11
Generates the blanking signal
blank_video
vcnt[9..0] blank
hcnt[9..0]
inst17
blank1
Pipelines the blank signal
blank_syncr
clk blank2
rstn
blank1
inst18
blank2
OUTPUT vga_clk