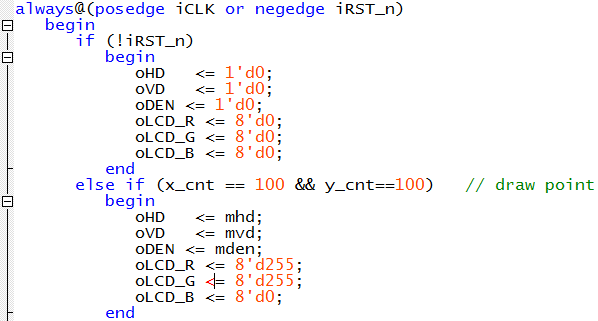
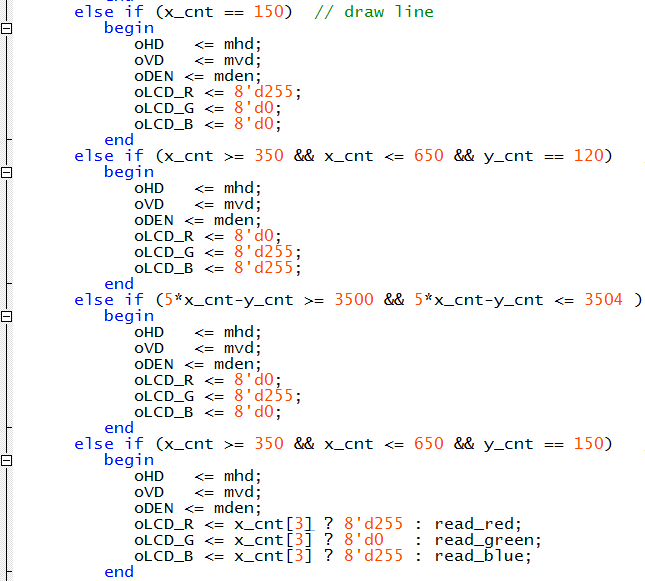
ltp\_controller.v　繪圖

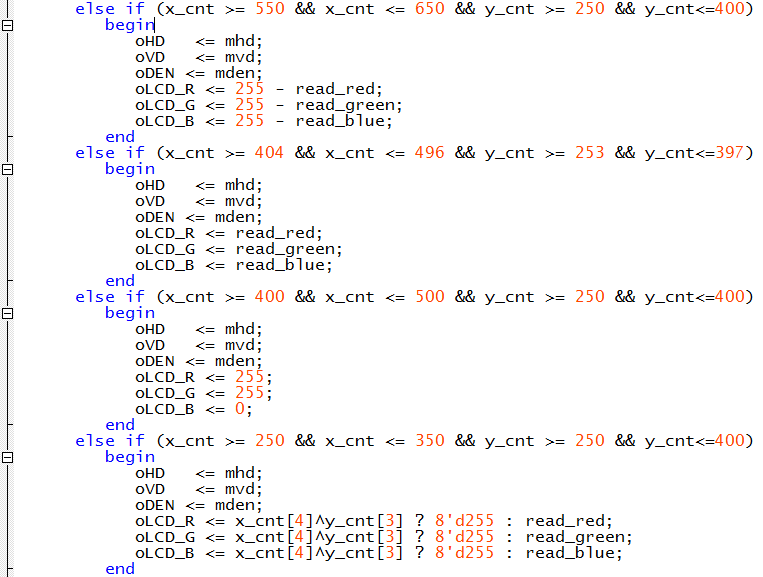
畫點



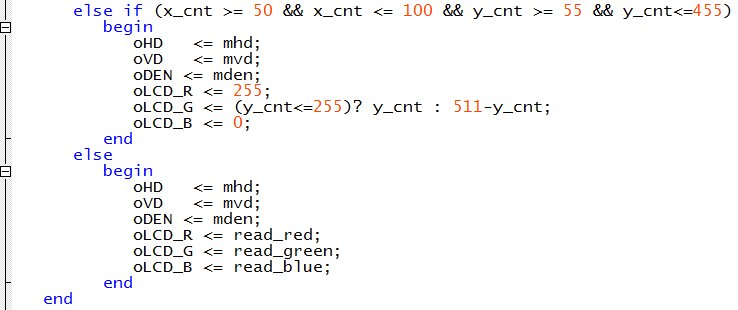
畫直線、線段、斜線



畫長方形、長方框、馬賽克填補



畫漸變色



//===============================================

always@(posedge iCLK or negedge iRST\_n)

begin

if (!iRST\_n)

begin

oHD <= 1'd0;

oVD <= 1'd0;

oDEN <= 1'd0;

oLCD\_R <= 8'd0;

oLCD\_G <= 8'd0;

oLCD\_B <= 8'd0;

end

else if (x\_cnt == 100 && y\_cnt==100) // draw point

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= 8'd255;

oLCD\_G <= 8'd255;

oLCD\_B <= 8'd0;

end

else if (x\_cnt == 150) // draw line

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= 8'd255;

oLCD\_G <= 8'd0;

oLCD\_B <= 8'd0;

end

else if (x\_cnt >= 350 && x\_cnt <= 650 && y\_cnt == 120) // draw line segment

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= 8'd0;

oLCD\_G <= 8'd255;

oLCD\_B <= 8'd255;

end

else if (5\*x\_cnt-y\_cnt >= 3500 && 5\*x\_cnt-y\_cnt <= 3504 ) // draw slope line

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= 8'd0;

oLCD\_G <= 8'd255;

oLCD\_B <= 8'd0;

end

else if (x\_cnt >= 350 && x\_cnt <= 650 && y\_cnt == 150) // draw line segment

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= x\_cnt[3] ? 8'd255 : read\_red;

oLCD\_G <= x\_cnt[3] ? 8'd0 : read\_green;

oLCD\_B <= x\_cnt[3] ? 8'd255 : read\_blue;

end

else if (x\_cnt >= 550 && x\_cnt <= 650 && y\_cnt >= 250 && y\_cnt<=400) // draw rectangle

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= 255 - read\_red;

oLCD\_G <= 255 - read\_green;

oLCD\_B <= 255 - read\_blue;

end

else if (x\_cnt >= 404 && x\_cnt <= 496 && y\_cnt >= 253 && y\_cnt<=397) // draw rectangular box

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= read\_red;

oLCD\_G <= read\_green;

oLCD\_B <= read\_blue;

end

else if (x\_cnt >= 400 && x\_cnt <= 500 && y\_cnt >= 250 && y\_cnt<=400) // draw rectangular box

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= 255;

oLCD\_G <= 255;

oLCD\_B <= 0;

end

else if (x\_cnt >= 250 && x\_cnt <= 350 && y\_cnt >= 250 && y\_cnt<=400) // draw Mosaic

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= x\_cnt[4]^y\_cnt[3] ? 8'd255 : read\_red;

oLCD\_G <= x\_cnt[4]^y\_cnt[3] ? 8'd255 : read\_green;

oLCD\_B <= x\_cnt[4]^y\_cnt[3] ? 8'd255 : read\_blue;

end

else if (x\_cnt >= 50 && x\_cnt <= 100 && y\_cnt >= 55 && y\_cnt<=455) // draw gradient color

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= 255;

oLCD\_G <= (y\_cnt<=255)? y\_cnt : 511-y\_cnt;

oLCD\_B <= 0;

end

else

begin

oHD <= mhd;

oVD <= mvd;

oDEN <= mden;

oLCD\_R <= read\_red;

oLCD\_G <= read\_green;

oLCD\_B <= read\_blue;

end

end